

# **The Border Regional Authority**

## *Údarás Réigiúnach na Teorann*



## **Draft Strategic Environmental Assessment (Environmental Report) of the Draft Regional Planning Guidelines (2010-2022)**

**January 2010**



## The Border Regional Authority

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## Non-Technical Summary

### Introduction

This is a Non-Technical Summary of the Environmental Report on the Draft Regional Planning Guidelines (RPG's) for the Border Region .

The Strategic Environmental (SEA) Directive requires that certain Plans and Programmes, prepared by statutory bodies, which are likely to have a significant impact on the environment, be subject to the SEA process. The SEA process is mandatory in the case of the Regional Planning Guidelines.

The preparation of the RPG's is a parallel process with the SEA and Habitats Directive Assessment and both assessments have significantly influenced the making of the Guidelines. In essence, the SEA process ensures that environmental considerations are built into the Guidelines so that new development delivers a good quality of life and that the quality of the environment of the Border Region is protected and enhanced - for existing and future generations.

A healthy environment is critical to our development and prosperity. Because of our ever increasing ability to interfere with the environment, reliance on a pristine environment can no longer be taken for granted. Accordingly, there is a responsibility on us all to ensure that the environment is not compromised by our actions or inactions.

The SEA process should therefore be viewed as a very positive planning instrument - an opportunity to secure economic, social and environmental prosperity.

The Environmental Report is the primary element in the SEA process.

The chapter headings in this Summary Report follow those of the parent Environmental Report.

### Steps in the Process

The SEA process is comprised of the following steps:

- 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 Plan or Programme  
**(Ongoing)**
- Consultation on the draft Regional Planning Guidelines and associated Environmental Report and Habitats Assessment Report  
**(Current Stage)**
- Evaluation of the submissions and observations made on the draft Border Regional Planning Guidelines, Environmental Report and Habitats Assessment Report  
**(To be completed)**
- Preparation of an SEA Statement identifying how environmental considerations and consultation have been integrated into the Final Plan/Programme  
**(To be completed).**



## Content of Environmental Report

An SEA must consider all, or a combination, of the following topics as listed in the SEA Directive:-

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

## Vision and Key Strategic Goals for the Region

The vision for the region as set out in the Draft Guidelines is as follows:

“By 2022 the Border Region will be a competitive area recognised as, and prospering from, its unique interface between two economies, where economic success will benefit all, through the balanced development model of the Atlantic Arc, the Eastern Corridor and Central Border Area, which will provide an outstanding natural environment, innovative people, which in themselves, will be our most valuable asset”.

The 2004 Guidelines set out a vision for the region and nine key strategic goals that are required to achieve that vision. It is considered that the vision generally remains valid and the key strategic goals have been updated to reflect the new circumstances that this Region faces over the period of the Guidelines of 2010 - 2022

The key strategic goals required to achieve this vision for the region are set out in the guidelines:

SG 1 To foster the development of the region's most important asset, its people by providing an improved quality of life for all people and communities living, working and visiting the region.

SG 2 The need to ensure the development of the key urban settlements and the links between them and to facilitate integrated sustainable development between urban and rural areas.

SG 3 To improve intra and inter regional connectivity and mobility throughout the region.

SG 4 To promote economic growth, competitiveness and development potential of the region and to facilitate emerging sectors in the region that will provide sustainable jobs for the future.

SG 5 To protect and enhance the quality of the natural environment and built heritage of the region.

SG 6 To co-ordinate a regional approach to the key environmental challenges facing the region.

SG 7 To co-ordinate and integrate key issues in national and regional spatial planning strategies and in particular, the National Spatial Strategy and the National Development Plan, and associated inter-regional development initiatives that support and promote strategic links.

SG 8 To co-ordinate and integrate key issues in cross border spatial planning strategies, and in particular, the Regional Development Strategy for Northern Ireland and associated inter-regional development initiatives that support and promote strategic links between the two economies.

SG 9 To exploit the regions unique location at the interface between two economies by putting in place the drivers for economic growth through the development of the Eastern Corridor, Atlantic Arc and the Central Border Area

### **Consultation**

A wide level of consultation has, and will continue, to take place as part of the SEA. To date, consultation has taken place with each of the six local authorities, the public and Environmental Agencies, both north and south of the border. The outcomes of this process have informed the making of the Guidelines.

Details of those consulted and a summary of and submissions received, and certain workshops/meeting held, is contained in Chapter 2 of the Environmental Report.

### **Policy Context**

The review of the RPG's must be considered within the context of a hierarchy of policies, plans and strategies which include international, EU, national, regional and local levels. This relationship is set out in figure 2 of the Environmental Report. The Regional Planning Guidelines are the key vehicle for the delivery of the National Spatial Strategy. The Guidelines will have an increasingly influential role with respect to all Development Plans within the Region as the Planning and Development (Amendment) Bill, 2009 reinforces their role within the spatial planning hierarchy.

The target of the RPG's is primarily County Development Plans and Local Area Plans. It is mainly through these plans that the RPG's will be implemented. Under the Planning Act 2009 the status of the RPG's have been given increased significance.

### **National Plans and Policies highlighted in the Environmental Report.**

The following is a list of some of the more relevant plans, policies or programmes that have been taken into consideration as part of the Environmental Assessment Process.

- The National Development Plan 2007-2013
- National Spatial Strategy
- Shaping our Future (RDS Northern Ireland)
- Ireland's Environment 2008
- Northern Ireland State of the Environment Report (2008)
- National Climate Change Strategy 2007-2012
- Delivering a Sustainable Energy Future for Ireland; The Energy Policy Framework 2007 - 2020
- Smarter Travel and Transport 21
- Innovation for a Green Economy - Environment and Technology
- Water Framework Directive 2000
- River Basin Management Plans
- Grid 25. A Strategy for the development of Electricity Supply Grid
- Waste Water Discharge (Authorisation) Regulations 2007
- Water Services Investment Programme 2010-2012 Needs Assessment 2009
- Coastal Zone Management Plans

- Irish Coastal Protection Strategy Study (ICPSS)
- Waste Management Plans

In addition, International, European National Plans/Programmes, including a wide range of Planning Guidelines issued by the Department of the Environment, Heritage and Local Government have been taken into consideration, where relevant. A list of some of these Plans/Programmes may be found in the main environmental report.

### **Habitats Directive Assessment**

A report referred to as a Habitats Directive Assessment (HDA), has also been carried out on the RPG review in accordance with Article 6 of the Habitats Directive. It is a parallel, but a separate process to SEA and will be documented as such. This assessment is an evaluation and assessment of the potential impacts of policies and objectives of the new Guidelines on European sites such as Special Areas of Conservation (cSACs) and Special Protection Areas (SPAs) both within, and outside the Region. These sites are generally known as Natura 2000 network. The HDA assesses how the Guidelines will impact on all Natura 2000 sites - the ultimate aim of which must be to avoid significant impacts on these sites. While an outline of the HDA may be found in the Environmental Report, the full report is available as a separate document, entitled Habitats Directive Assessment.

### **Alternative Approaches to the Making of the Guidelines**

The SEA process is required to consider 'reasonable alternatives' taking into consideration the objectives of the Guidelines and the significant environmental effects of the alternatives selected.

In selecting SEA Alternatives, cognisance must always be taken of parent strategies and documents which have a key influence on how alternatives will be framed. Certain strategic issues will therefore have already been determined at a higher level. In the case of the RPGs, the European Spatial Development Perspective at the European level, and the National Development Plan (NDP) and National Spatial Strategy (NSS) at the national level, are considered to provide the framework and guiding principles within which alternatives must be considered.

The following three alternatives were formulated and considered;

- Continuation of Current Trends;
- Predominantly Gateway Led Development Model;
- Balanced Development Model.

Table I provides a summary of the three alternative growth models and outlines the main features with respect to each.

**Table I. SEA Alternative Growth Models for Border Region**

Alternative	Main Features	Assessment
1.Continuation of current trends.	Minimal intervention in terms of spatial planning thereby allowing current trends to continue whereby market forces largely dictate the location of future growth and development.	<p>It is likely the future population growth would be concentrated in the eastern part of the region and there would be a greater dispersal of population into the rural areas</p> <p>It would lead to ad-hoc dispersed settlement pattern that would inhibit the development of strategically importance centres.</p> <p>New development would fail to be directed towards properly serviced and robust receiving environments.</p> <p>This model would result in a lack of long term strategic planning in terms of the delivery of key infrastructural services and facilities.</p> <p>It would not comply with the development framework outlined for the Border Region in the NSS</p>
2. Gateway Led Development Model	Focus primarily on development of a three centre as an engine for the overall development of the Region.	<p>The existing Gateways of Letterkenny/Derry, Sligo and Dundalk, are located towards the periphery of the Region and have a strong east/west divide. The centre of the region is structurally weak. In terms of their geographical location these centres are therefore poorly positioned to achieve the more balanced development of the Region.</p> <p>Weaker areas would become marginalised and would decline further.</p> <p>This alternative would give rise to political and public disquiet and would be difficult to implement.</p> <p>It would not comply with the development framework outlined for the Border Region in the NSS</p>
3. Balanced Development Model	Focus primarily on development of a number of strategically important centres which would act as engines for the overall development of the Region.	<p>This alternative offers a good geographical spread of key settlements that would facilitate more balanced regional development.</p> <p>It would enable key strategically important centres to coordinate their efforts, join forces and thereby act like a large urban entity that would punch above their individual weight.</p> <p>It would help sustain and stimulate the development of neighbouring areas and help secure the vitality and viability of rural areas.</p> <p>It would comply with the development framework for the Border Region as outlined in the NSS.</p>

Having regard to the principles of sustainable development, the overall aim of the NSS, and the vision and goals of the RPGs, it is considered that the Balanced Development Model is the most appropriate development model for the future development of the Border Region.

The development of the key urban centres of the Gateways, Hubs in addition to, Carrick-on-Shannon and Drogheda, are considered to be the most effective way of focusing future growth and development in the region. These settlements will be the engines for growth and will act as a stimulus to the growth of other urban centres and rural hinterlands.

The sustainability of rural areas depends to a large extent on strong urban centres. These centres are positioned to achieve a critical mass that will sustain strong economic activity and the development of strategically important services and facilities. This alternative is best placed to achieve more balanced Regional Development and secure the economic, environmental and cultural/social prosperity of the Region. This framework will in turn provide for the proper planning and sustainable development of the Region.

### **Current State of the Environment**

The Border Region is endowed with a wide range of environmental resources, which must be acknowledged and dealt with appropriately within the Guidelines. The current state of the Region's environment is considered in the Environmental Report under the following environmental headings:

- Biodiversity, Fauna and Flora
- Population
- Human Health
- Soil
- Water
- Air
- Climatic factors
- Material Assets
- Cultural heritage, including Architectural and Archaeological
- Landscape
- Interrelationship between the above topics

### **Significant Environmental Pressures**

The key aim of the SEA process is to identify the significant environmental issues facing the region, and to ensure that the long term development of the region is guided in a manner that protects, and where possible, enhances the natural and built environment.

The more significant environmental issues that are addressed in the Environmental Report include;

- |                                  |                          |
|----------------------------------|--------------------------|
| • settlement patterns            | • climate change and     |
| • water quality                  | greenhouse gas emissions |
| • biodiversity                   | • flood risk             |
| • landscape and cultural         | • waste management,      |
| heritage,                        | • coastal management.    |
| • built heritage                 |                          |
| • transportation                 |                          |
| • agriculture and afforestation, |                          |
| • energy resources               |                          |

Table II provides a general summary of the main Environmental Pressures within the Region.

**Table II. Summary of Environmental Issues within the Border Region**

<b>Topic</b>	<b>Environmental Pressures</b>
<b>Biodiversity, Fauna and Flora</b>	<p>Certain developments and activities associated with; agricultural activities, afforestation, urban developments, windfarms, quarries, tourism, peat extraction, commercial fishing, 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.</p> <p>There are a relatively high number of Natura 2000 sites (SAC's and SPA's) and Natural Heritage Sites located within the Region. These sites are particularly sensitive to certain development works and activities.</p> <p>Invasive non-native plant and animal species are one of the greatest threats to the biodiversity of the Region.</p>
<b>Population and human health</b>	<p>Increase in population, their activities and settlement patterns has 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.</p>
<b>Soil</b>	<p>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.</p>
<b>Water</b>	<p>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.</p>
<b>Air and Noise</b>	<p>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.</p>
<b>Climatic factors</b>	<p>Increased greenhouse gas emissions have been linked with climate change resulting in increases in the intensity and frequency of flooding. Of particular concern is the high dependency on the use of the car arising from a dispersed settlement pattern.</p>
<b>Material Assets</b>	<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, 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 Region. These properties represent an underutilized resource and if left idle,</p>

	they can over time deteriorate and detract from the character of urban areas.
<b>Cultural heritage, including Architectural and Archaeological</b>	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 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.
<b>Landscape</b>	Developments and activities can impact on visually sensitive areas including designated landscape and seascapes. A lack of uniformity between counties within and adjoining the Region towards their approach to the management of the landscape, has been highlighted as a key challenge facing the Region.
<b>Interrelationship between the above topics</b>	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 peoples activities and settlement patterns can impact on a wide range of the topics mentioned above.

Table III outlines some of the specific environmental issues within each constituent County that was highlighted during the SEA process.

**Table III. Summary of specific Environmental Issues within Counties**

<b>Donegal</b>
<ul style="list-style-type: none"> <li>• Many offshore islands covered by Natura 2000 sites</li> <li>• Shellfish growing areas posing threats to protected habitats</li> <li>• Off shore resource exploration posing threats to natural habitats</li> <li>• Infrastructural schemes such as the committed road line of the proposed A5/N2 dual carriageway and the potential routes for proposed new rail links</li> <li>• North West Gateway and associated supporting infrastructure such as broadband ducting</li> <li>• One-off housing in the Countryside.</li> </ul>
<b>Sligo</b>
<ul style="list-style-type: none"> <li>• One-off housing in the countryside</li> <li>• Infrastructural schemes such as expansion of Sligo Regional Airport (Strandhill), the Sligo outer bypass and potential realignments or deviations of the N16 road route</li> <li>• The Sligo Bay cluster of cSACs and SPAs provides added complexity to the protected habitat equation</li> <li>• Radon in buildings in certain areas of the County.</li> </ul>
<b>Leitrim</b>
<ul style="list-style-type: none"> <li>• High level of residential vacancy</li> <li>• Rural Communities in decline within certain areas of the county</li> <li>• Certain areas under pressure from one-off housing</li> <li>• Water pollution from afforestation, individual wastewater treatment systems and slurry spreading.</li> </ul>
<b>Cavan</b>
<ul style="list-style-type: none"> <li>• Water pollution arising from urban run-off and wastewater disposal</li> <li>• Dispersed settlement pattern and associated environmental pressures</li> <li>• Habitat loss and fragmentation including loss of hedgerows arising from rural settlement patterns</li> </ul>

<ul style="list-style-type: none"> <li>• Intensive farming</li> <li>• Disruption of hydrological regime – associated pressure on water quality</li> </ul>
<b>Monaghan</b>
<ul style="list-style-type: none"> <li>• One of housing in the countryside and urban sprawl</li> <li>• Limited capacity of municipal wastewater treatment systems</li> <li>• Pollution arising from intensive agricultural activities – slurry storage and spreading.</li> <li>• Diesel laundering washing</li> <li>• Illegal dumping</li> <li>• Draining and illegal filling of small scale wetlands</li> <li>• Depletion of water resources arising from increase in demand</li> <li>• Cumulative impacts from manmade development on habitats notably loss of hedgerows and wetlands.</li> <li>• Infrastructural works including new road works and mineral extraction.</li> </ul>
<b>Louth</b>
<ul style="list-style-type: none"> <li>• Settlement coalescence, ribbon development and one-off housing</li> <li>• Coastal flooding risk</li> <li>• Water supply constraints due to high demand in south Louth</li> <li>• Radon in buildings in certain parts of the County.</li> </ul>

Achieving a good quality of life for the people who live, work or visit the Region, while protecting and enhancing the environment is a key objective of the SEA process.

Securing economic development and social equity, together with preserving and enhancing the urban and rural character of the Region, are closely associated with environmental issues. The RPGs provide a spatial planning framework for the development of the Region over the next 12 years, particularly in respect to the development of key strategic centres and the provision of key infrastructural requirements as outlined in Table IV below.

**Table IV. Future Investment Priorities for Key Settlements**

Settlement	Future Investment Priorities	Time Scale	Progress
<b>Letterkenny</b>	Relief Road		
	Sewerage Scheme	Completion by 2011	Under Construction
	Water supply Scheme	By 2014	At planning stage
<b>Dundalk</b>	Western Infrastructure (Major Internal Distributor Road Network including Bus Corridor)	-	At Planning Stage
	Coastal Protection Measures	2015	In Capital Works Programme
<b>Sligo</b>	Western Distributer Road	2011	Phase one under construction
	Eastern Garavogue Bridge and Approach Roads	2012	Planning Complete – Awaiting Funding
	N4/N15 upgrade to Borough Boundary including widening of Hughes Bridge	2012	At planning stage
<b>Cavan</b>	Cavan and Cootehill Water Supply Scheme	2011	At planning stage
	Inner Relief Road into Town		



	Centre		
<b>Monaghan</b>	Extension of By pass onto N54, Cavan Road	-	At planning stage
	Sewerage Scheme Advanced Works	-	At planning stage
	Extend and Improve Sewerage Treatment Works in Castleblayney	-	At planning stage
<b>Drogheda</b>	Improve Port Access		
	Drogheda Sewerage Network Improvements		
	Water Supply Scheme		
<b>Carrick-on-Shannon</b>	Carrick-on-Shannon upgrading of Sewerage Scheme	Completion Mid 2011	Contractor appointed; work commended on DBO
	By pass	scheduled for 2015	Project upgrade at route selection stage

Table V outlines the key investment priorities for the Region as a whole.

**Table V. Future Investment Priorities for the Border Region**

Priorities for the Region (Intra & Inter-regional)	Time Scale	Progress
Development of the N2/A5 Dual Carriageway	Completion by 2015	At planning stage
Delivery and Completion of Project Kelvin	Completion by end of 2010	Under construction
Roll out of National Broadband Scheme	Completion by end of 2010	Under construction
Development of all Strategic Radial Corridors and Strategic Link roads (see transport section)	Period of the Guidelines 2010 - 2022	At planning and under construction
Development of Transmission Grid Network	Grid 25 Strategy extends up to 2025	At planning stage

Whereas, the development of key strategic centres and the provision of key infrastructural services and community facilities will have an overall positive impact in terms of social, economic and environmental considerations, it is likely that such development will, in certain instances, be accompanied by some adverse impact on the environment. The policies and objectives in the RPG's have been informed and honed by the SEA and Habitats Assessment process so as to avoid or mitigate any such adverse impacts. This ensures that the integrity of the environment is not compromised. The RPG's have indicated that the strategic centres have the capacity to accommodate the target populations set in the RPG's, subject to the sequencing of development with the provision of the necessary 'accommodation works', See box with **accommodation works** below.

### **Accommodation Works**

In order to secure the sustainable development of the Region it is of critical importance that the Planning Authorities ensure that all development works, proceed in tandem with the provision of key 'accommodation works' such as infrastructural works, social and community services and facilities. The development of the Region envisaged in the RPG's is predicated on the provision of such 'accommodation works'. In this regard where there are shortfalls, e.g., Wastewater collection treatment and disposal, Water Supply, Health Care, Sport, Recreation and Amenities, Pedestrian and Transportation facilities, Educational and Community facilities and so on, it is of critical importance that works do not proceed until such shortfalls have been properly addressed prior to receiving the consent of a planning authority. This requirement is particularly relevant in relation to the strategically important centres that have been identified in the Guidelines and to developments that raise significant planning concerns.

The delivery of all infrastructural accommodation works, services and facilities envisaged in the Guidelines is subject to review and is very much dependant on the response of a number of agencies including that of the local authorities.

The delivery of all development works, both private and public is also dependant on compliance with relevant legislative requirements, including in particular the requirements of EU Directives, and on resources becoming available.

It is worth highlighting the fact that issues in relation to water quality, climate change, flood risk and biodiversity have featured strongly in the SEA process to date.

The River Basin District Plans and accompanying programme of measures have been highlighted in the Environmental Report as having a key role to play in the management of water quality within the Region and the wider area. In this regard, the RPG's have fashioned to align with the aims and objectives of RBMPs.

Likewise, the National Climate Change Strategy 2007 – 2012 has been identified as having a major role to play in addressing and adapting to the challenge of climate change. The need to reduce greenhouse gas emissions has been raised as a significant issue. A flood risk assessment has been carried out and as a result policies and guidance in respect to managing flood risk have been incorporated into the RPGs.

Environmental pressure on landscape is of particular relevance considering the high scenic quality and rural character of the Region and the fact that these pressures relate to a wide range of environmental issues such as;

- One-off housing in the Countryside;
- Windfarms;
- Afforestation;
- Quarrying;
- Major infrastructural projects including roadworks;
- Agricultural activities, including changes in agricultural practices, and in some cases, the abandonment of farming.

Generally the environmental impacts often act across a number of environmental areas; e.g. the provision of infrastructure may impact on; cultural heritage, biodiversity, water quality and landscapes. The impacts can vary in scale and extent, some are short term and reversible, others are more long-term and irreversibly. Also, whereas individual impacts may be minor, the cumulative impacts, particularly when viewed over the longer term can be very significant.

### **Flood Risk Assessment**

In recent years, we have become increasingly aware of the importance of factoring the risk to people, property, the overall economy and the environment from flooding into the planning system, and the role that good planning has in avoiding and reducing such risk that could otherwise arise in the future.

There are many areas within the Region, including urban centers, that are already at risk from periodic flooding. The effects of climate change, such as more severe rainfall events and rising sea levels, will increase these risks and may put other areas at risk that may not have flooded in the past.

The Department of the Environment Heritage and Local Government Nov 09 (DEHLG Guidelines) Flood Risk Management Guidelines require the planning system at national, regional and local levels to:

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

Having regard to the DEHLG Guidelines, it is important to set out the key policy recommendations to avoid and manage flood risk within the Border Region. Regional Flood Risk Appraisal therefore includes:

- the identification of appropriate policy responses for priority areas, including areas that transcend administrative boundaries and where there appears to be significant flood risk
- Requirements on foot of the guidelines for co-operation, implementation and co-ordination of more detailed area level strategic flood risk assessment in development plans.

### **Likely Evolution of the Environment in the Absence of the Implementation of the RPG's.**

The Regional Planning Guidelines act as a vehicle for the consideration of a wide range of economic, social and environmental issues at a strategic level. The process provides an opportunity for participation of a wide range of parties with an interest and expertise in the strategic development of the region. The consideration of the

environmental issues is generally inextricably linked to the economic, social and cultural considerations. Accordingly, environmental considerations play a central role in shaping the guidelines and this is manifested through the relationship between the Guidelines and Strategic Environmental Assessment and Habitats Directive Assessment.

In the absence of the RPGs, the following outcomes are the most likely to arise in this region:-

1. No long term strategic planning framework for the region;
2. Further development of the Region in an unbalanced way;
3. No strategic identification of the key infrastructural requirements to help economic recovery;
4. No core settlement strategy which leads to a weakening of the urban structure and makes the region less attractive to invest in;
5. The socio-economic development of the region will occur on an ad-hoc basis;
6. Less protection for the natural receiving environment within the region;
7. The ecological, cultural, architectural and archaeological heritage will not be sufficiently protected at a strategic level;
8. Key environmental issues such as; the protection of water quality, flood risk or addressing the issue of climate change may not be sufficiently considered at county and local levels due to the absence of a parent document dealing strategically with the issue;
9. An increase in the travel to work patterns experienced in the region because in a 'laissez faire' situation development will be provided where the market dictates.

The policies and objectives that emerge in the review of the Guidelines will provide the framework for future County Development Plans and Local Areas Plans within the Region.

Having regard to the foregoing, it is reasonable to conclude that the RPGs will lead to the proper planning and sustainable development of the Region which would not occur to the same extent in their absence.

### **Monitoring, Environmental Objectives, Indicators and Targets**

Under Section 26 (1) of the Planning and Development Act 2000 – 2009 a Regional shall, not later than 6 years after the making of such guidelines and not less than once in every period of 6 years thereafter, review such guidelines and when so reviewing, it may revoke the guidelines or make new regional planning guidelines. In this regard the environmental indicators and targets presented below may be used to monitor the predicted environmental impacts of implementing the Plan.

Monitoring will be based around the objectives, indicators and targets for each of the topic areas such as; Biodiversity, Flora and Fauna, population and human health and Landscape. Monitoring at an early stage will help identify unforeseen adverse effects and in undertaking the appropriate remedial action. Monitoring measures over the period of the Guidelines can be geared towards addressing any gaps (where practicable) which are identified in the Environmental Report. It will also enable an assessment of whether the Guidelines is achieving its environmental objectives and targets and will help identify issues that be need to be revisited.

### **Assessment of Aims, Policies and Objectives**

All of the draft aims, policies and objectives contained within the Guidelines were assessed in terms of their likely impact on the environment. This assessment was in

addition to the Habitats Assessment which focused on the impact of the policies and objectives on Natura 2000 sites (SAC's & SPA's). Policies and objectives were amended or new ones added as part of both assessment processes.

In general terms, the policies and objectives in the Draft Plan were considered to be of positive nature in terms of the development of the Region and the protection of the environment. Where conflicts between the policies/objectives and environmental considerations were identified, it was considered that these impacts were likely to be rendered benign or acceptable through appropriate mitigation measures.

### **Mitigation Measures**

Mitigation involves ameliorating significant negative effects and enhancing positive ones. The EPA Guidelines on SEA (2003) state that mitigation; "may involve preventing impacts altogether, reducing their magnitude as much as possible and/or probability of occurrence, or putting in place measures to remedy effects after they have occurred, or to compensate for them by providing environmental benefits elsewhere.

The Guidelines have been formulated with the explicit intention of protecting the environment and avoiding potentially adverse environmental impacts. A number of meetings/workshops have taken place during the formulation of the Guidelines involving the groups such as; the RPG Technical Working Group, the SEA Team, the Habitats Directive Assessment Team, Department of Environment Heritage and Local Government, Environmental Protection Agency, National Parks and Wildlife Service, North South Share River Basin District Office, Northern Ireland Environmental Agency and Infrastructural Providers. At these meetings/workshops environmental considerations were central to the making of the Guidelines.

It is important to note in terms of environmental assessment, that certain individual plans and projects that provide the framework for development, including County Development Plans, Local Area Plans will be subject to SEA and Habitats Assessment Reports as the need arises. In addition, proposals for developments will be subject to detailed assessment in terms of normal planning requirements including where deemed necessary; Environmental and other Technical Reports, Environmental Impact Assessments and Habitats Assessments.

The measures referred to above will act to prevent, reduce and as fully as possible offset any significant effects of implementing the Guidelines.

### **Incorporating Environmental Issues into the RPG's**

Table VI provides an indication of how the environmental issues raised as part of the SEA process were incorporated into the Draft RPG's as policies, objectives or otherwise. The list may not be exhaustive and does not include reference to the statements within the Draft RPG's. The third column of the table includes some proposals for additional policies, objectives or references to be included in the RPG's. The latter represents the final phase of ensuring that the environmental issues raised during the SEA process are incorporated into the Draft RPG's.

**Table VI. Incorporating Environmental Issues into the RPG's**

Environmental Issue	Policy, Objective, or reference in RPG's	Additional Policy Objective or Reference Required (final check)
<b>Biodiversity, Flora &amp; Fauna</b>		
Impact of development works e.g. forestry, agricultural activities and wide range of infrastructural works	SG5, SG6 ESP 5 INFP 1, INFP 14, INFP 18 – INFP 22, INFO 6, INFP 23, INFP 28, ENVP 1 – ENVP 3, ENVP 4 – ENVP 6, ENVO 2 – ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVP 14, ENVO 29 – 31, ENVP 15,	
Protection of watercourses especially sensitive water bodies	ESP 8 INFP 18 – INFP 22, INFO 6, INFP 23, ENVP 4 – ENVP 6, ENVO 2 – ENVO 5, ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVP 15,	
Conservation of Fish Stock	Most water related policies and objectives apply to varying degrees	
Control of Invasive Species	ENVP 6, ENVO 2 – ENVO 5,	
Protection of Natura 2000 sites including certain sites within Northern Ireland	CSP 9, INFP 1, INFP 14, INFP 18, INFP 20 - INFP 22, INFO 6, INFP 23, INFP 28, ENVP 4 – ENVP 6, ENVO 2 – ENVO 5, ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVP 15,	
Alignment with “Green City Guidelines 2008”	ENVP 6, ENVO 2 – ENVO 5	
Protection of Annex 11 species such as Freshwater Pearl Mussel and Salmon	Biodiversity related policies and objectives apply to varying degrees	Make specific reference to protection of protection of Pearl Mussel.
Ramsar Sites and Statutory Nature Reserves	ENVO 2 – ENVO 5,	
Ecological Networks	ENVO 2 – ENVO 5, ENVP 15,	
Shellfish Waters	Biodiversity related policies and objectives apply to varying degrees	Make specific reference to protection of Shellfish Waters
<b>Population and Human Health</b>		
Quality of Life	Vision Statement and most policies and objectives apply to varying degrees.	
Population Trends and Regional Population Targets and Settlement Patterns	SG2, SG 7, Ch 3 (Table 3.1), Ch 3 Balanced Development Model, Settlement Strategy (Aims, Model, Framework,) and Policies CSP 1 – CSP 9	
Health and its relationship with environmental issues	Many policies and objectives apply to varying degrees - with particular reference to, drinking water quality, provision of; community related infrastructure,	

	services and facilities.	
Radon in buildings		* add statement to RPGs Refer to SEA.
Road Safety		Add reference to RPG's e.g. L A working in collaboration with other stakeholders have a key role to play in bringing Ireland's road safety record in line with 'best practice' countries throughout the World. Refer to SEA
Provision of infrastructure and community facilities	INFP 2 - INFP 22, INFP 23, INFP 24, INFP 25, INFP 27, INFO 12 – INFO 18, INFP 28, INFP 29, ENVP 13, ENVO 23 – 28, ENVP 15, SIP 1, SIP 2, SIO 1 – SIO 10,	
Flooding	FRP1 – FRP10.	
<b>Water</b>		
Impact of development works on water quality eg forestry, agricultural activities and wide range of infrastructural works	SG6, INFP 18 – INFP 22, INFO 6, INFP 23, INFP 28, ENVP 4 – ENVP 6, ENVO 2 – ENVO 5, ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVP 15,	
Alignment with aims policies and objectives of River Basin District Plans	SG6, INFP 18, INFO 6 ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVP 15,	
Wastewater and Drinking Water and Bathing Water requirements – with particular refer to recent EPA Reports on Wastewater Treatment and Quality of Drinking Water	SG6 ESP 8 INFP 3, INFP 1 – INFP 6, INFP 18 – INFP 22 INFO 1 – INFO 6, INFP 23, ENVP 4 – ENVP 6, ENVO 2 – ENVO 5, ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVP 15,	
<b>Air and Climate Change</b>		
Climate Change & Air Quality	SG 6, ENVP 1 – ENVP 3, ENVO 1, ENVP 15,	
Impact of Climate Change on Cultural and Natural Heritage, Coastal Flooding	ENVP 1 – ENVP 3, ENVO 1	
Limiting greenhouse gas emissions and reducing dependency on fossil fuels	ESP 7 INFP 6 INFP 7 - INFP 13, INFP 24 – NNFP 26, INFO 7 – INFO 11, ENVP 1 – ENVP 3, ENVO 1, ENVP 15,	
<b>Cultural Heritage</b>		
Impact of development works eg forestry, agricultural activities and wide range of infrastructural works	SG5, SG 6, INFP 23, ENVP 12, ENVO 13 – 22, ENVP 14, ENVO 29 – 31, ENVP 15,	
Identification and protection of Geological Sites.	SG5, ENVP 5, ENVO 1, ENVO 2.	Add statement outlining the need for L A to collaborate with each other and with the GSI in identifying and protecting geological sites of importance – refer to submission from GSI in SEA

Protection of items of Architectural and Archaeological Interest	SG5, INFP 23, ENVO 8 – ENVO 12, ENVP 14, ENVO 29 – 31, ENVP 15,	
Consideration of Marble Arch Caves Global Geopark	ESP 6	
<b>Landscape</b>		
Impact of development works e.g. forestry, agricultural activities and wide range of infrastructural works	SG5 SG 6 ESP 5, INFP 23, INFO 7, ENVP 7, ENVP 8, ENVO 6 – ENVO 7, ENVO 22, ENVP 14, ENVO 29 – 31, ENVP 15,	
Identification. classification and protection of landscape	SG6 ENVP 7, ENVP 8 ENVO 6 – ENVO 7, ENVO 22, ENVP 14, ENVO 29 – 31, ENVP 15,	
Lack of uniformity between Local Authorities towards management of landscape	SG6, ENVP 7, ENVP 8 ENVO 6 – ENVO 7, ENVP 14, ENVO 29 – 31, ENVP 15,	
<b>Other Issues</b>		
Urban Character, layout and Design	ENVP 12, ENVO 13 - ENVO 22	
One-off housing in the countryside	Many policies and objectives apply to varying degrees, CSP 8 in particular	
Cross border co-operation and collaboration in respect to spatial planning	SG6, SG8, INFP 29, ENVP 15, ENVO 23, SIO 2,	
Cumulative impact of off-shore wind farms		
Development of Recreation and Tourism Facilities	ESP 5, ESP 6	
Inter-county and Transboundary Environmental Pressures	SG6 SG8 ESP 6 INFP 1, ENVP 4 – ENVP 6, ENVO 2 – ENVO 5, ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVO 8 – ENVO 12, ENVO 23, ENVP 15,	
Coastal Management	SG6, ENVP 14, ENVO 29 – 31,	
Waste Management	SG6, INFP 28, INFP 29.	
Alternatives under Art 5 of the SEA Directive	CH 3 Settlement Strategy with particular reference to, Settlement Hierarchy and the Balanced Development Model)	
Level of Commercial and Residential Vacancy	CSP 3, Other measures including Economic Strategy, provision of key Infrastructural and Community related services and facilities.	
Sustaining Rural Communities	CSP 8, INFP 5 INFP 8, INFP 18, INFP 19, INFP 23, INFP SIP 1, SIP 2, SIO 1 – SIO 10, 27, INFO 12 – INFO 18,	



## Preamble

The Draft Regional Planning Guidelines 2010 – 2022 for the Border Region, together with this accompanying SEA Environmental Report and Habitats Assessment Report, should be read in the context of other relevant plans and policies relating to the Region. It is important to note that the management and care of the environment falls within the responsibility of a very wide range of Departments and Agencies. Within rural areas for instance, major land-uses can be entirely managed by Departments dealing with agriculture, forestry, the marine or energy – all of which have separate specialist approval and evaluation procedures that protect environmental resources. Similarly, it is important to note that other agencies make plans for the development of road, rail and energy infrastructure which must be accommodated by county and local plans. Such agencies are responsible for the separate environmental assessments in respect to the implementation of these plans.

Spatial plans are principally about the arrangement of land uses, to avoid conflicts and to protect amenities. Such plans exist as a series of layers that range from broad national policies – that have little spatial specificity – to regional plans, development plans and local area plans. Only the latter two types are likely to identify the locations where actual developments – and associated effects – are likely to occur. Each level of planning is subject to separate and appropriate levels of assessment.

There are significant bodies of European and National legislation that determine how environmental resources are to be managed. These exist and are implemented at a national level – with no local discretion. Such regulations cover a wide range of environmental concerns, including; the quality of air and water [surface, ground, drinking, marine and bathing waters], River Basin Districts, the management of ecological resources [habitats, species] and cultural heritage including archaeological and architectural heritage.

In order to secure the proper planning and sustainable development of the Region, it is of critical importance that the Planning Authorities ensure that all development works, proceed in tandem with the provision of key ‘accommodation works’ such as infrastructural works, social and community services and facilities. The development of the region envisaged in the RPG’s is predicated on the provision of such ‘accommodation works’. In this regard where there are shortfalls, e.g., wastewater

collection treatment and disposal, water supply, health care, sport, recreation and amenities, pedestrian and transportation facilities, educational and community facilities and so on, it is of critical importance that works do not proceed until such shortfalls have been properly addressed prior to receiving the consent of a planning authority. This requirement is particularly relevant in relation to the strategically important centres that have been identified in the Guidelines and targeted for growth and to developments that raise planning and environmental issues.

In promoting, facilitating or determining proposed development works, Planning Authorities must consider the cumulative short term and long term, direct and indirect impacts on the environment of existing, permitted and proposed development works.

The delivery of all infrastructural accommodation works, services and facilities envisaged in the Guidelines, is subject to review and is very much dependant on the response of a number of agencies including that of the local authorities.

The delivery of all development works will be subject to the availability of resources, including funding.

# 1 Introduction



This is an Environmental Report in respect to the making of the Draft Regional Planning Guidelines (RPG's) for the Border Region. The report forms part of the Strategic Environmental Assessment (SEA) process.

The Planning and Development (Strategic Environmental Assessment) Regulations 2004 requires that certain Plans and Programmes, prepared by statutory bodies, which are likely to have a significant impact on the environment, be subject to the SEA process. Under the Regulations the SEA process is mandatory in the case of the Regional Planning Guidelines.

The SEA process is designed to ensure that significant environmental effects arising from policies, plans and programmes are identified, assessed, mitigated, communicated to decision-

makers and monitored. The Environmental Report is required to identify, evaluate and describe the likely significant effects on the environment of implementing the RPG's. The Environmental Report is the primary element in the SEA process and is recognised as a key mechanism in promoting sustainable development.

In accordance with the European Directive (2001/42/EC) on the assessment of the effects of Certain Plans and Programmes on the Environment where certain strategic actions form part of a hierarchy of plans and or programmes and where matters are more appropriately assessed at a different level within the hierarchy, then additional assessment is not dealt with in this report.

The revised Guidelines will provide a strategic planning framework to deliver the above and will focus on the following:

1. A new Regional Settlement Strategy to structure and focus development potential across the region.
2. An updated regional and city/county level estimates of population and housing needs including specific estimates to be applied to future reviews of city and county development plans.
3. A new Regional Economic Strategy which outlines the future enterprise potential and related development, as and when they arise during the course of the life of the next regional planning guidelines.
4. Those strategic infrastructure investments, likely to be made within the life of each RPG, or that have been identified in national level plans and need to be provided for in the longer term in more local level planning.
5. An updated approach with regard to other important objectives for RPG's in relation to for example, climate change, sustainable development etc.
6. Carrying out of a complementary high-level Strategic Environmental Assessment, Appropriate Assessment and Strategic Flood Risk Assessment of the selected regional settlement and infrastructure strategies, and outlining where critical issues may arise to be dealt with in city/county plans.

Government policy in relation to balanced regional development outlined in the NSS, sets clear obligations on the development plan process to substantively engage with the regional planning guideline process and to move the implementation of the NSS forward. It is noted that the Planning and Development Bill 2009 is geared to ensure a close alignment between the NSS, RPG's, Development Plans and Local Area Plans.

Responding with the appropriate detailed land use planning policies to the trends, types of development and development issues described above, is a key element of local planning processes at city, county and local area levels. The development plan, as the planning policy framework at local level, sets both the policy context for initiating and taking forward individual development proposals by both private and public authorities and also the agenda in relation to the long term development of cities, counties and towns. Therefore, it is through the development plan process that RPGs will be substantively implemented.

The current RPGs were adopted in July 2004 giving the Border Regional Authority its first opportunity to put in place a cohesive strategic long-term framework for the development of the Region. The vision was that the RPGs would assist in achieving the potential of the Region, having due regard of its neighbours in Northern Ireland, other regions and internationally and ultimately to assist in the national objective of more balanced regional development, by providing a spatial framework at regional level which embraced the uniqueness of the Region and facilitated its development.

The RPGs were framed recognising the Border Region as being "is challenged by some of the most difficult socio-economic and physical barriers to development. The bulk of the Region has little natural geographic or economic cohesiveness or identity, and has always been characterised by peripherality and disadvantage. The distortion effect created by strong urban centres close to the border in Northern Ireland has been prominent, and the difficult and sensitive political situation has compounded the natural disadvantage of the Region. Persistent weaknesses in infrastructure have resulted in underperformance and the inability of the region to compete for employment on a national or international scale".<sup>1</sup>

Strategically the RPGs laid out a 20 year " Vision for the Region as follows:

**'By 2022, the Border Region will be a competitive area recognised as, and prospering from, its unique interface between two economies, where economic success will benefit all, through the implementation of the balanced development model, which will provide an outstanding natural environment and innovative people, which in themselves, will be our most valuable asset'**

### **The Strategic Environmental Assessment**

The Environmental Report is the primary element in the SEA process and is recognised as a key mechanism in promoting sustainable development.

A Scoping Report was prepared as a precursor to this Environmental Report on the Draft RPG's. The purpose of the Scoping Report was to identify, at an early stage in the SEA process, the significant environmental issues in the Region so that they can be given proper consideration in the Environmental Report .

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<sup>1</sup> Border Regional Authority Regional Planning Guidelines 2004

In accordance with the European Directive (2001/42/EC) on the Assessment of the Effects of Certain Plans and Programmes on the Environment (SEA Directive) environmental issues arising in the Environmental Report are considered under the following headings:

- Biodiversity (including flora and fauna)
- Population
- Human Health
- Soil
- Water
- Air
- Climatic factors
- Material Assets
- Cultural heritage, including Architectural and Archaeological
- Landscape
- the interrelationship between the above

Annex 1 of the SEA Directive also requires secondary and cumulative effects to be considered

The Environmental Report must include the following:-

- Alternative approaches to the making of the Guidelines;
- Information on the existing state of the environment,;
- The likely significant environmental impacts arising from implementation of the Guidelines;
- Where appropriate, outline mitigation measures to be introduced; and
- Outline how monitoring of the environmental impacts will take place during the life of the Guidelines.

The more significant environmental issues to be addressed in the Environmental Report include; settlement patterns, water quality, biodiversity, landscape and cultural heritage, built heritage, transportation, agriculture, 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 in, work in or visit the Region is considered to be a key objective of the SEA process. Securing economic development and social equity, together with preserving and enhancing the urban and rural character of the Region, are closely associated with environmental issues. It is worth highlighting that issues in relation to water quality and climate change have gained prominence since the drafting of the current Guidelines, and are likely to feature strongly during the review process. Mindful of the rich biodiversity in the Border Region, the protection of sites of significant ecological importance is also considered to be a key priority in the review process.

An Appropriate Assessment must also be carried out on the RPG review in accordance with Article 6 of the Habitats Directive. It is a parallel, but separate process to the SEA and will be documented as such. Appropriate Assessment is an evaluation and assessment of the potential impacts of policies and objectives in the new Guidelines on European sites such as cSACs and SPAs (also referred to as Natura 2000 sites) both within, and outside the Region. Like the SEA, a report will be prepared assessing how the Guidelines will impact on all Natura 2000 sites, with the ultimate aim of avoiding any negative impacts.

Ensuring that the RPG's integrate with existing plans and programmes is also considered to be of significant importance. Much work has already been carried out in this field, and it is important that the review process taps into that resource. Of particular importance in the Border Region, are the existing plans and strategies in Northern Ireland which deal with numerous cross border environmental issues that should be factored into the RPG review process. Also of particular importance is ensuring that the Guidelines support the aims and objectives of the River Basin Management Plans and the associated Programme of Measures (POM's).

The provision of strategic infrastructure services and facilities is considered critical for the future development of the Region. The provision of the infrastructure identified in the Guidelines will have positive socio-economic benefits for the Region. The Environmental Report has sought to ensure that the Guidelines direct and facilitate the provision of this infrastructure in the most environmentally sustainable manner possible.

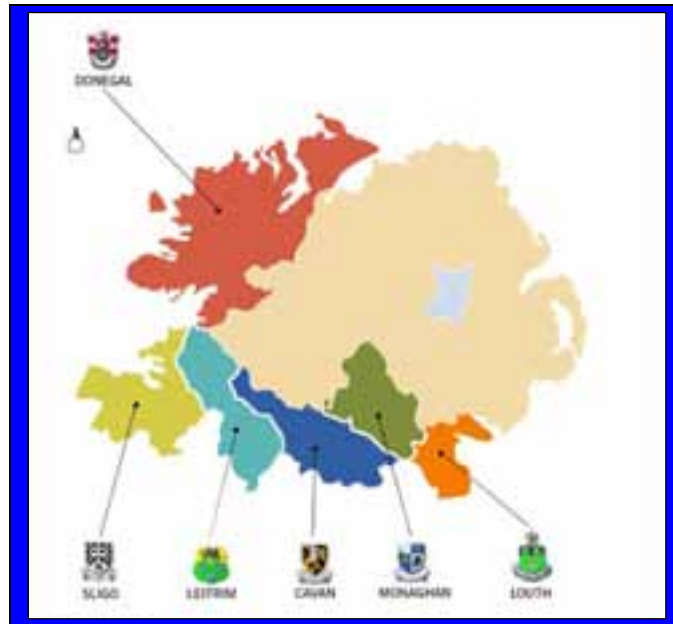
A significant level of consultation has and will continue to take place as part of the SEA process including consultation with the public and the environmental agencies both north and south of the border. This will be supported by use of the Border Regional Authorities web site and Local Authority web sites within the Region in terms of informing and engaging the public. A series of meetings/workshops have, and will continue to be held on an ongoing basis with selected groups as considered appropriate.

### **The Border Region**

The Border Region derives its name from its location relative to Northern Ireland. It comprises the six counties of Donegal, Sligo, Leitrim, Cavan, Monaghan and Louth.

The population of the Region is 468,375 (CSO, Census 2006) which accounts for 11.04% of the national population. It encompasses an area of 12,156 sq. km. from the Atlantic Ocean on the West Coast to the Irish Sea on the East Coast.

The Border Region is well endowed with a rich and diverse range of man-made and natural resources which needs to be acknowledged and dealt with appropriately within the new RPGs. One of the key strengths of the Region is its Areas of Outstanding Natural Beauty. Along with its strong cultural and heritage assets, it can be seen as an area very suitable for a strong tourism base. The Region is the source of Ireland's two longest rivers - the Shannon and the Erne. Both rivers are linked to form the 300km Shannon-Erne Waterway, which is one of the world's greatest waterways. It has a considerable coastal area and unique mountain ranges.



**Map 1 Border Regional Counties**

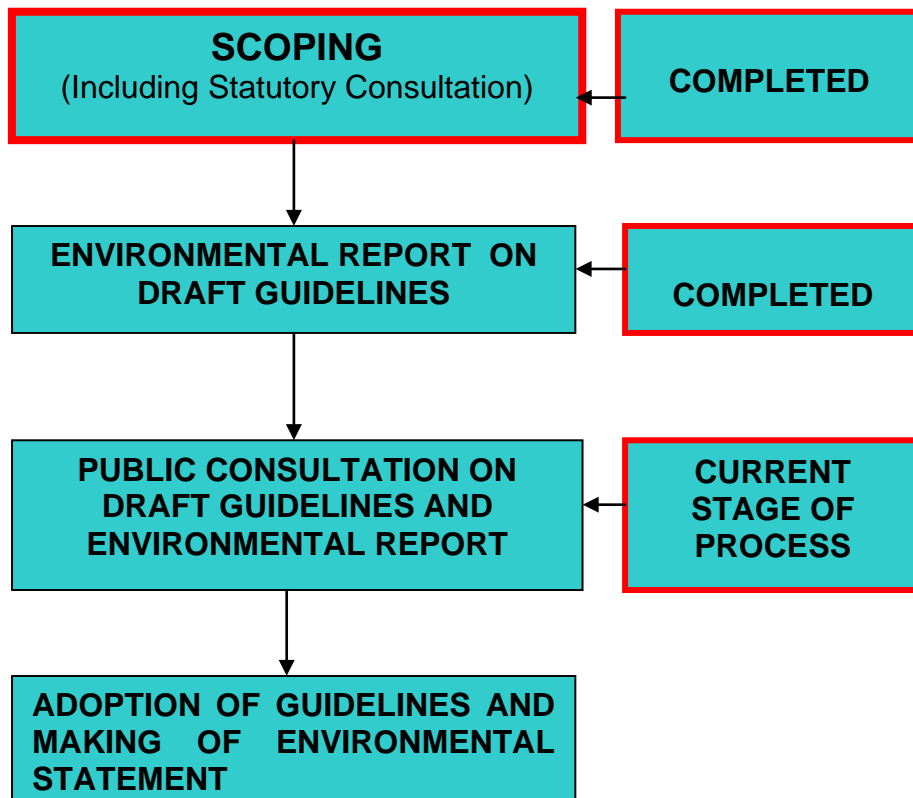
### **Legislative Background**

The European Directive (2001/42/EC) on the Assessment of the Effects of Certain Plans and Programmes on the Environment (the SEA Directive), was transposed into national legislation in Ireland by the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435/2004) and the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (S.I. 436/2004). The latter Regulation governs the review of the Guidelines.

The SEA Directive requires that certain plans and programmes, prepared by statutory bodies, which are likely to have a significant impact on the environment, be subject to the SEA process. The SEA process is comprised of the following steps:

- **Screening:** Decision on whether or not an SEA of a plan/programme is required;
- **Scoping:** Consultation with the defined statutory bodies on the scope and level of detail to be considered in the assessment;
- **Environmental Assessment:** An assessment of the likely significant impacts on the environment as a result of the plan or programme;
- **An Environmental Report ;**
- **Consultation** on the draft plan/programme and associated Environmental Report ;
- **Evaluation of the submissions and observations** made on the draft plan/programme and Environmental Report ; and
- **SEA Statement** identifying how environmental considerations and consultation have been integrated into the final plan/programme.

Figure 1 shows the key steps required to complete the statutory SEA process in accordance with the relevant national legislation.

**Figure 1      Stages in SEA Process**

### SEA Guidance

The following guidance/methodology documents will be amongst the documents referred to during the SEA process:

#### Ireland

- Development of Strategic Environmental Assessment (SEA) Methodologies for Plans and Programmes in Ireland. Synthesis Report. 2003. Environmental Protection Agency.  
<http://www.epa.ie/downloads/advice/ea/name,13547,en.html>
- Implementation of SEA Directive (2001/42/EC). Assessment of Certain Plans and Programmes on the Environment. Guidelines for Regional Planning Authorities. November 2004. Department of Environment, Heritage and Local Government.  
<http://www.environ.ie/en/Publications/DevelopmentandHousing/Planning/FileDownload,1616,en.pdf>
- Strategic Environmental Assessment (SEA) Checklist - Consultation Draft. January 2008. Environmental Protection Agency.  
[http://www.epa.ie/downloads/consultation/strategic\\_environmental\\_assessment\\_jan086.pdf](http://www.epa.ie/downloads/consultation/strategic_environmental_assessment_jan086.pdf)
- Guidelines on SEA. Department of Communications, Energy and Natural Resources.



<http://www.dcmnr.gov.ie/Marine/Environmental+Assessment/Environmental+Assessment.htm>

#### **Other**

- A Practical Guide to the Strategic Environmental Assessment Directive. September 2005. Office of the Deputy Prime Minister.  
[http://www.ehsni.gov.uk/bm\\_sea\\_practicalguide.pdf](http://www.ehsni.gov.uk/bm_sea_practicalguide.pdf)
- Strategic Environmental Assessment. Services and Standards for Responsible Authorities. Environment and Heritage Service.  
<http://www.ehsni.gov.uk/sea-servicesandstandards.pdf>
- Strategic Environmental Assessment Toolkit (Version 1). September 2006. Scottish Executive.  
<http://www.scotland.gov.uk/Publications/2006/09/13104943/0>
- Strategic Environmental Assessment and Biodiversity: Guidance for Practitioners. June 2004. Countryside Council for Wales, English Nature, the Environment Agency and the RSPB.  
<http://www.english-nature.org.uk/pubs/publication/PDF/SEAbiodiversityGuide.pdf>

#### **Methodology**

An outline of the methodology used in the preparation of the Environmental Report is given in the Table 1 below.

**Table 1      Outline of Methodology in preparing Environmental Report**

<b>Action</b>	<b>Comments</b>
<b>Screening</b>	An Environmental Report is mandatory for Regional Planning Guidelines, therefore no Screening was undertaken.
<b>Scoping Report</b>	A Scoping Report set out the policy context, baseline environmental data and highlighted significant issues to be addressed.
<b>Consultation with the Environmental Authorities</b>	The Environmental Authorities; Environmental Protection Authority, the Department of the Environment, Heritage and Local Government, The Department of Communications, Energy and Natural Resources as well as Geological Survey Ireland and the Northern Ireland Environmental Agency and a wide range of other agencies have been consulted in respect to the Scoping Report.
<b>Preparation of Environmental Report</b>	The current RPG's and relevant international, national, regional and local plans and guidelines have been considered as appropriate. A key part of the plan making process was the consideration of the outcome of workshops and meetings held with the selected groups and the pre draft submissions and interdepartmental consultations. At a regional level regular meetings were held with the Technical Working Group and at a National level, meetings were held with Department Officials, Regional Project Managers and SEA officers.
<b>Formulation and Assessment of Alternatives</b>	Alternative approaches to the making of the guidelines were considered and the most appropriate option selected.
<b>Mitigation</b>	Mitigation measures have been considered and suitable measures formulated. Mitigation measures have largely been built into the policies and objectives through a continual assessment process.
<b>Monitoring</b>	Environmental objectives, indicators and targets were formulated against which the implementation of the guidelines have been assessed.
<b>Ongoing consideration of the SEA process</b>	The submissions from environmental authorities and other notified bodies, the public and other interested parties have and will continue to be considered, as well as the outcomes from the workshops and meetings held during the course of the process. Also, other relevant plans/guidelines have been considered. During each stage of the making of the guidelines environmental issues were considered and policies and objectives formulated accordingly through an iterative process.
<b>Assessment of aims, policies and objectives</b>	Strategic Environmental Objectives have been developed against which the environmental impacts of each of the aims, policies and objectives of the plan are assessed.

## **Content of Environmental Report**

The content of an Environmental Report is outlined under Article 13E (1) of the Planning and Development (Strategic Environmental Assessment) Regulations 2004. For details refer to Appendix 1. An SEA must consider all, or a combination, of the following topics as listed in the SEA Directive:-

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

Annex 1 of the Directive also requires secondary and cumulative effects to be considered.

Table 2 is a checklist based on the contents of an Environmental Report as set out under Article 13E (1) of the SEA Regulations mentioned above. Column 1 sets out the requirements of the aforementioned Regulations. Column 2 outlines the relevant chapters where these requirements are addressed. Column 2 will be completed in the Environmental Report .

**Table 2 Checklist on Contents of Environmental Report**

<b>Requirement under Article 13E (1) of the SEA Regulations 2004</b>	<b>Relevant chapter within Report</b>
A non-technical summary of the information provided under the above headings.	Non-Technical Summary (separate document)
An outline of the contents and main objectives of the plan or programme, or modification to a plan or programme, and relationship with other relevant plans or programmes.	Refer to Chapters : 1 and 3
The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme, or modification to a plan or programme.	Refer to Chapters: 6, 8 and 9
The environmental characteristics of areas likely to be significantly affected.	Refer to Chapters: 7 and 8
Any existing environmental problems which are relevant to the plan or programme, or modification to a plan or programme, including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to the Birds Directive or the Habitats Directive.	Refer to Chapters : 7 and 8
The environmental protection objectives, established at international, European Union or national level, which are relevant to the plan or programme, or modification to a plan or programme, and the way those objectives and any environmental considerations have been taken into account during its preparation.	Refer to Chapter : 3
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.	Refer to Chapter : 11
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, or modification to a plan or programme.	Refer to Chapter : 12
An outline of the reasons for selecting the 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.	Refer to Chapter : 5
A description of the measures envisaged concerning monitoring of the significant environmental effects of implementation of the plan or programme, or modification to a plan or programme.	Refer to Chapter : 10

## Scoping

A Scoping Report was prepared as part of the SEA process and it evolved into the Environmental Report . The purpose of the Scoping Report was to identify the significant environmental issues so that they can be given proper consideration and assessment in the Environmental Report . Also, as part of the scoping process, consultation was undertaken with the three statutory bodies:

- The Environmental Protection Agency.
- The Department of the Environment, Heritage and Local Government (Planning and Environmental Section and Development and Applications Section)
- The Department of Communications, Marine and Natural Resources.

Consultations have also taken place with:

- The Northern Ireland Environmental Agency (NIEA)
- Geological Survey of Ireland.

The main objective of scoping is to identify key issues of concern that should be addressed in the assessment of the Plan and to determine the appropriate level of detail to be included. The scoping exercise, should as a minimum, answer the following questions:

What are the relevant significant issues to be addressed by the SEA?

Against what environmental objectives should the potential options be evaluated?

## Baseline Data

In order to facilitate the identification, evaluation and monitoring of the impacts of the RPG's, baseline data focused on relevant aspects of the environment which are likely to be significantly affected and will be presented in the Environmental Report .

## Transboundary Environmental Effects

Under Section 15 E(1) of the SEA Regulations a Regional Authority shall, following consultation with the Minister, forward a copy of the Draft Guidelines and associated Environmental Report to a Member State likely to be affected, (i.e. Northern Ireland), where the Regional Authority considers that the implementation of the guidelines is likely to have significant effects on the environment of such a Member State, or where a Member State is likely to be significantly affected, so requests.

Preliminary consultations have taken place with the Northern Ireland Environmental Agency (NIEA) and the Department of the Environment for Northern Ireland (DOENI). Close contact will be maintained with these agencies and Departments throughout the SEA process. As part of on-going consultation with the NIEA, this Report will be forwarded to the NIEA and DOENI for their consideration.

Having considered the requirements under section 15 E (1), as outlined above, and DEHLG Guidance, the Border Regional Authority has concluded that the implementation of the RPG's will not have significant adverse effects on a member state, in this case Northern Ireland. As a result, and in accordance with relevant procedures on transboundary impacts, the Border Regional Authority will formally notify the Minister of its findings and conclusions, that transboundary consultation is not required in this instance.

## **SEA Statement**

In accordance with Article 15 G (1) of the SEA Regulations it will be necessary to prepare a statement summarising -

- How environmental considerations have been integrated into the RPG's,
- How the Environmental Report and the outcome of consultations were taken into account, and the reasons for choosing the plan as adopted in the light of other reasonable alternatives considered,
- The measures decided upon to monitor the significant environmental effects of implementing the RPG's.

An SEA Statement will be prepared and made available for public viewing and referred to the relevant bodies subsequent to the adoption of the RPG's.

## **Difficulties Encountered**

The Environmental Report will be informed by existing data as provided for in the SEA Guidelines produced by the Department of Environment, Heritage and Local Government (DEHLG) 2004 which states that the SEA process "does not require major new research". In the absence of a centralised geographical information unit, access to relevant, up-to-date data/information in an easy to use format was a challenging task. Environmental issues are by their nature extensive and wide ranging. In this regard and considering the special extent of the area, determining the level of detail to be considered and confining it to strategic issues was also challenging.

## 2 Consultations

Consultations in respect to the Scoping Report formed two stages. The initial stage was accompanied by an Issues Paper with respect to the Guidelines and also a separate report on the Strategic Environmental Issues. The second stage was accompanied by a Scoping Report which formed the basis for the Environmental Report .

### Scoping Report - Stage 1 Consultations

The following is a list of bodies notified in accordance with Article 15C (1) of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SEA Regulations). This process formed the initial round of consultations in respect to the Scoping of the Environmental Report .

#### Ireland

- Environmental Protection Agency
- Department of the Environment, Heritage and Local Government (Planning and Environmental Section and Development and Applications Section)
- Department of Communications, Energy and Natural Resources
- Geological Survey Ireland

#### Northern Ireland

- The Northern Ireland Environment Agency (NIEA)

### Department of Communication, Energy and Natural Resources

The submission from the Department of Communication, Energy and Natural Resources pointed towards the need to comply with a wide range of environmental legislation. The Department provided a list of certain legislation in this regard and also a list of bodies that should be consulted.

### Eastern Regional Fisheries Board

The submission from the Eastern Regional Fisheries Board stated, inter alia, *“in order to protect and conserve fish and fish habitats it is vital that all potential developments are carried out in a sustainable fashion”*. The issue of *“policing pollution incidents or investigating more chronic problems”*, where rivers cross the boundary with Northern Ireland, was referred to and *“official coordination between the relevant authorities”* was called for.

Issues in respect to the capacity of municipal services (water, wastewater and waste treatment facilities), were raised. It was considered that *“the capacity of these facilities should be in line with demand in order to minimize potential negative impacts on the aquatic environment”*.

### North Western Regional Fisheries Board

The Fisheries Board highlighted the importance of considering the protection of particularly sensitive water-bodies in the Environment Report, the Habitats Report and in the development of the RPGs. The Board made recommendations as to the scope and level of detail to be included in these reports. In this regard, the submission made reference to the environmental concerns arising from, wastewater

treatment plants, ribbon development, road construction, water abstraction and renewable energies.

The Board stated that it had responsibility for the conservation, protection, development and management, promotion and marketing of fisheries in its region. The Board described the extent of the geographical area for which it had responsibility within the Border Region.

The following issues were mentioned in the submission;

- decline in Salmon stocks,
- the importance of achieving good quality water within and outside of the region,
- the contribution of angling, including sea angling, to tourism and recreation within the region,
- the promotion and marketing of angling,
- the proliferation of [individual wastewater treatment] systems and the build up of phosphorous and lack of statutory monitoring or maintenance of these systems,
- the impact of forestry on sensitive catchments,
- the need to control the run-off of nutrients from agricultural activities and combating the associated problems of eutrophication,
- achieving compliance with the Habitats Directive and Water Framework Directive,
- the impact of infrastructural works on the aquatic environment.

In conclusion the submission states; *“it very important that the guidelines reflect the need for the protection of the environment and ensure that development is carried out in a manner which is sustainable in the long term in accordance with Government policy”*.

### **Geological Society of Ireland (GSI)**

The submission from the GSI indicated that the majority of EIS that they deal with as a prescribed body rarely deal with geological heritage. The GSI outlined their role and responsibilities in respect to the geological heritage of Ireland. They also outlined details of ongoing works under the Irish Geological Heritage Programme in identifying and assessing sites of geological interest. These sites may be selected as NHA's, others may be promoted as County Geological Sites. The GSI referred to an audit of geological heritage sites at county level and the need for co-funding of these surveys. While an audit has been carried out in the case of County Sligo, the submission states that no such audit has been carried out in respect to Counties Donegal, Leitrim, Cavan, Monaghan and Louth. The submission includes a document entitled, *“Geology in Local Authority Planning, An outline guide to inclusion of geological heritage in County Development Plans and Heritage Plans”*. This document outlines, *inter alia*, how the GSI may be able to assist local authorities to prepare the geological dimensions of Heritage and Development plans. A number of policy objectives for inclusion in County Development Plans in respect to the protection of geological heritage sites are mentioned in the submission. Likewise specific guidance in the making of Heritage Plans is contained in the submission.



## **Northern Ireland Environmental Agency**

The Northern Ireland Environment Agency in their response raised issues in respect to the protection of natural heritage areas and the built environment within Northern Ireland. The submission acknowledged that the main environmental challenges facing Ireland and Northern Ireland will be shared by many of the areas adjoining the border. Among the challenges to be addressed included the spread of invasive species and changes to valued landscapes, rural character and adaption to climate change. It was considered that the new guidelines should contain a requirement that any development requiring an assessment under the Habitats Directive should include an assessment of the likely impacts on Natura 2000 sites in Northern Ireland.

## **Department of Environment, Heritage and Local Government - Heritage Council Section**

This submission contains the following points:

- The Regional Planning Guidelines (RPGs) must include a Strategic Environmental Assessment, under the provisions of the SEA Directive 2001/42/EC and SI 436 of 2004,
- The Regional Planning Guidelines should embrace the key tenets of the National Heritage Plan 2002 to ensure that the impacts on the historic environment are fully anticipated,
- Decisions on population centres, the location of infrastructure, and the impact of locational decisions in regard to these issues should fully take account of their effect on the historic environment,
- It is recommended that the Border Regional Authority take cognisance of an important EU Report from the European Landscape Character Assessment Initiative,
- A holistic regional spatial plan should be based on a robust landscape classification which identifies broad patterns of variation in landscape and seascape character,
- The new guidelines should specifically state a preference for a plan-led route rather than detached housing estates with few facilities onto the periphery of urban areas,
- The Regional Planning Guidelines must take into account the National Spatial Strategy (NSS) and it is imperative that there is close co-operation, collaboration and co-ordination between the Border Regional Authority and the Spatial Policy Section in the Department of Environment, Heritage and Local Government,
- The Heritage Council strongly supports sustainable policies dealing with the interdependent issues such as land use, transport and the environment and recommends that they should be given prominence in the new guidelines,
- Transport infrastructure and transport management proposals in relation to historic towns and cities and their public realm needs to be given specific consideration in the Regional Planning Guidelines,
- The Regional Planning Guidelines must contain regional climate change policies and strategies that take into account cultural and natural heritage,
- The new guidelines should state that all statutory and non-statutory spatial plans should be 'evidence-based', with a sequential approach to zoning and development objectives and policies,
- The Regional Planning Guidelines must strategically address the issues of biodiversity in the Border Region, and particularly in the Lakelands area of the region,

- The guidelines need to take account of the policies in the Green City Guidelines (September 2008),
- The future impacts of sea level rise, increased coastal erosion, and coastal flooding on activities along the coast must be considered at regional level within a regional Integrated Coastal Zone Management policy framework,
- There needs to be national policy on the impacts of offshore renewables and a national Strategic Environmental Assessment (SEA) on the cumulative effect of the ad hoc development of offshore wind farms is required,
- The renewed Regional Planning Guidelines should focus on the promotion of quality public realm and urban design for villages and small towns and should encourage the use of non-statutory plans and village design statements,
- There should be more investment in high quality, well-designed recreational facilities such as canals, rivers, and coastal areas,
- Waterways should be considered as the focus of a “corridor”, wider than the waterway, taking in the physical landscape, the towns and villages and their associated activities from farming, factories, tourism, and the policies and the recommendations from the Upper Shannon Study (2005) should inform the Regional Planning Guidelines,
- The Regional Planning Guidelines could set targets for the number and disposition of Architectural Conservation Areas to be put in place across the region,
- The emerging Department of Environment Heritage and Local Government consolidated National Monument Bill which provides for a new system for the identification, registration and conservation of historic landscapes must be considered.

### **Environmental Protection Agency**

The submission from the EPA included an EPA SEA Pack which sets out, in some detail, best practice in respect to the SEA process. The pack states that it is a matter for the Regional Authority and its SEA Team to ensure that the contents of the pack are taken into account and followed as appropriate during the SEA process.

The EPA suggest the convening of a scoping meeting/workshop with key staff within the Regional Authority and to consider having personnel from National Parks and Wildlife, Department of Communications, Energy and Natural Resources and the EPA attend such a meeting/workshop. The submission refers to the legislative requirements in respect to amendments to the Draft Plan. Also, the need to comply with requirements in respect to the Habitats Directive, the SEA Statement and consultation with the Environmental Authorities is highlighted.

### **Scoping Report Stage 1 - Meetings/Workshops**

#### **Meeting/workshop with Local Authority Planners and the EPA**

As part of the scoping exercise a meeting/workshop was held on 11th March 2009 at which a designated planner from each of the six local authorities within the Border Region attended. Each planner made a presentation and submission on the significant environmental issues relating to their respective counties that should be considered as part of the SEA process. A wide range of environmental issues were raised and discussed. The planners responded (by way of a short presentation and a subsequent submission) to a questionnaire which was prepared prior to the meeting. The meeting was also attended by a representative of the Environmental Protection

Agency who provided advice and guidance on the way forward. A report on this meeting entitled *“Report on SEA Scoping Meeting/Workshop held with Local Authority Planners in Athlone on 11 March 2009”*, has been compiled and will be made available on the Border Regional Authority web site at [www.border.ie](http://www.border.ie) along with the Scoping Report. The report includes a copy of each of the submissions made, the advice and guidance given and conclusions drawn from the meeting. The meeting raised a wide range of environmental issues under each of the topic headings and made comment on how these issues might be addressed in the RPG's. Recurring issues that were raised included surface water quality, groundwater quality, water conservation, waste management, human health & quality of life, population increase, infrastructure needs, loss of biodiversity, use of natural resources, energy conservation, urban air quality, traffic management, climate change, flood risk & coastal protection, landscape, loss of agricultural land and cultural heritage.

A meeting was held between the SEA Officer for the Border Region and a representative of EPA. The meeting was held on 26th June 09 at which a working copy of the Scoping Report was reviewed. A subsequent meeting was held on 12<sup>th</sup> Feb 10 during which a working copy of the Draft SEA was reviewed. The comments/advice of the EPA Officer was incorporated into the making of the Draft SEA Environmental Report .

### **Meeting with the NS Share River Basin District Project Team**

A meeting was held between the Border Regional Authority Project Manager, the SEA Officer and key environmental personnel involved in the NS Share River Basin District Project. The NS share project is the vehicle for delivering the three River Basin Districts Management Plans for the North Western International River Basin District, the Neagh Bann International River Basin District and the North Eastern River Basin District.

Following an introduction outlining the work of the RPG's, the NS representatives outlined details in respect to the Water Framework Directive and emphasised key aspects of the River Basin Project. The following objectives were highlighted by the NS team:

**Objective 1** - Enable 'protected areas' to achieve their stricter status standards.

In this regard the team considered the following items of particular importance:

- Drinking Water Abstractions
- Economically significant species (shellfish)
- Recreational and bathing waters
- Nutrient sensitive areas (Nitrates & Urban Waste Water Treatment Directive sensitive areas)
- Protected habitats and species (Freshwater Pearl Mussel)

The NS representatives considered that measures outlined in the management plans must be put in place in order to achieve these objectives in all protected area cases by 2015 (no derogations).

**Objective 2** - Prevent deterioration, and in particular maintain high or good water status.

The NS representatives considered that provided that the WFD objectives are reflected in linked plans and programmes (particularly development and land-use plans) this should provide protection against deterioration in status in all cases.

**Objective 3** - Improve waters where appropriate to achieve at least good standards.

The team outlined that supplementary measures will need to be considered in the case of key water pressures.

**Objective 4** - Progressively reduce chemical pollution.

The team gave outline details of a programme of measures (basic measures and supplementary measures) that needed to be carried out in order to meet the objectives.

The importance of protecting the Freshwater Pearl Mussel was highlighted by the team in some detail. In this regard the following pressures were identified:

- Hydrological & Morphological Pressures
  - Overgrazing
  - Peat Cutting
  - Urban Land Use
  - Abstractions
- Diffuse Pressures
  - Forestry
  - Agriculture
  - On-site Wastewater Treatment Systems
- Point Source Pressures
  - Municipal & Industrial Discharges
  - Quarries/ Mines/ Landfills/ Contaminated Land

A brief discussion on the Habitats Directive Assessment process took place and in particular, how it might be dealt with relative to the SEA process. The NS team offered assistance, particularly in respect to the provision of environmental information that might be used as part of the SEA process. In this regard the assistance of a GIS officer who works with Donegal County Council and has worked on the NS project was suggested.

#### **Attendees**

Padraig Maguire	Border Regional Authority
Paudge Keenaghan	Leitrim Co. Council and SEA officer for RPG's
Alan G Barr	RPS Consultants for River Basin Plans
Jennifer Haddow	RPS Consultants for River Basin Plans
Anthony Mc Nally	NS Share Project Officer

#### **Scoping Report - Stage 2 Consultations**

The following is a list of bodies notified in accordance with Article 15C (1) of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SEA Regulations). This processes formed the 2nd round of consultations in respect to the Scoping of the Environmental Report .

Name	Organisation
Roisin Jones	Northern Ireland Environment Agency
Louis Wildenboer	Eirgrid
-	Shannon Fisheries Board
Anthony McNally	NS Share Project on RBMP
William Cormican	NPWS
Sarah Morgan	RPG Project Manager, Midland Regional Authority
Deirdre Scully	RPG Implementation Officer, Dublin & Mid East Regional Authority
Jim McGovern	Director, West Regional Authority
Ms. Shirley Clerkin	Heritage Officer, Monaghan County Council
Ms. AnnMarie Curley	Acting Heritage Officer, Cavan County Council
Mr. Brendan McSherry	Heritage Officer, Louth County Council
Mr. Joe Gallagher	Heritage Officer, Donegal County Council
Siobhan Ryan	Heritage Officer, Sligo County Council
-	Shannon River Basin District Coordinator
-	Western River Basin District Project Office
Mr. Ger Finn, Mr. Peter Gallagher, Mr. Frank Gibbons, Mr. Joe McLoughlin, Mr. Eoin Doyle	Directors of Services, Cavan County Council
Mr. Francie Coyle, Mr. Michael Heaney, Mr. Liam Kelly, Mr. Peadar McRory, Mr. John G. McLaughlin, Mr. Seamus Neely, Mr. Sean Sheridan	Directors of Service, Donegal County Council
Mr. Martin Dolan, Mr. Joseph Gilhooly, Mr. John McGuinness, Ms. Mary Quinn	Directors of Service, Leitrim County Council
Mr. Michael Curran, Ms. Joan Martin, Mr. Joe McGuinness, Mr. Eamon Walshe	Directors of Service, Louth County Council
Mr. Paul Clifford, Mr. David Fallon, Mr. Michael Fitzpatrick, Mr. Adge King	Directors of Service, Monaghan County Council
Mr. Declan Breen, Ms. Dorothy Clarke, Mr. Bartley Gavin, Mr. Tom Kilfeather, Ms. Rita McNulty	Directors of Service, Sligo County Council

Tadhg O'Mahony	Environment Protection Agency
Mr Eoin Bennis	Department of Environment Heritage and Local Government
Mr James Fitzpatrick	Department of Environment Heritage and Local Government
Mr Frank O'Brien	Department of Communications, Energy & Natural Resources
Mr Ronnie Creighton	Geological Survey Ireland
Mr Pat Warner	National Parks and Wildlife Service
Mr Pat Doherty	CEO, Eastern Regional Fisheries Board
Mr Vincent Roche	North Western Regional Fisheries Board
Mr Milton Mathews	Acting CEO, Northern Regional Fisheries Board.
Mr Patrick O'Sullivan	Department of Environment, Heritage and Local Government.
Mr Jim Hetherington	Department of Regional Development Northern Ireland

The following is a summary of the submission received as part of Stage 2 of the Consultations on the Draft Environmental Report . The submissions have been considered and the relevant issues raised within this Report.

### **Stop Bungalow Chaos (The Campaign for Sustainable Rural Housing & Development)**

Stop Bungalow Chaos (The Campaign for Sustainable Rural Housing & Development) describe themselves as “a not-for-profit voluntary campaign group which has been established with the sole purpose of promoting national awareness of the widely misunderstood serious economic, social and environmental issues associated with rural ‘one –off’ dispersed housing, ex-urban and sub-urban development sprawl in Ireland, and to mobilise mainstream momentum for radically changed policy approaches to achieve a strong polycentric and efficient urban structure. Stop Bungalow Chaos does not advocate a blanket ban on one-off rural housing...”

This is a relatively lengthy submission that addresses the issue of the proliferation of one-off rural housing. The submission states at the outset that this issue is "one of the key environmental challenges facing Ireland and, particularly, the Border Region. The central issue for the achievement of sustainable development and environmental protection in Ireland is curbing sub-urban and ex-urban sprawl, the profligate waste of land resources and resultant greenhouse gas and other emissions". The submission elaborates on the key environmental challenges and makes a call for "quick and decisive policy action". "A laissez faire return to the business-as-usual politics of developer led land use planning and the all-to-evident and well documented past lessons of recent failure in the Irish planning system are redundant and no longer an option".

The following issues are dealt with in some detail:

- Critical Challenges
- Current Levels of One-Off Rural Housing in Ireland
- Economic Costs of One-Off Rural Housing
- Social Costs of One-Off Rural Housing
- Environmental Costs of One-Off Rural Housing
- Positive Policies for Sustainable Rural Housing Development

As a final note the submission requests that the following definition of sustainable development be inserted into the Regional Planning Guidelines:

*'Development without growth beyond environmental carrying capacity, where growth equals quantitative expansion and development equals qualitative improvement'*

### **Eastern Regional Fisheries Board**

The Board welcomes aspects of the Scoping Report including the inclusion of salmon as a protected species within the catchment, the presence of a number of overloaded public wastewater treatment plants (WWTP's) and the potential impact of many old WWTP's serving single houses. The submission considers that the following items should be given further consideration in the Environmental Report ;

- That the presence of impassable barriers, arising mainly from poorly designed culverts located along watercourses be recognised as a threat in Table 2 of the Scoping Report.
- That certain waterbodies do not have the volume to assimilate treated wastewater – Monaghan and Carrickmacross WWTP,s are given as examples.

### **Northern Ireland Environment Agency (NIEA)**

The submission from the Agency is particularly succinct and relevant; accordingly it is presented in its entirety below.

The Department welcomes the opportunity to comment on this scoping report. The Northern Ireland Environment Agency's (NIEA) response to your consultation on the scope of the SEA is set out below.

We expect that the SEA will cover the full requirements of Annex 1 and 2 of the SEA Directive including the consideration of reasonable alternatives, monitoring, mitigation, and interactions which may result in cumulative effects.

We are broadly content with the scoping report and are happy to see that points made in response to the consultation on 'Issues for Inclusion in the Environmental Report' have been taken forward.

We note that many significant environmental issues have been identified and that a cross border dimension is noted for a number of these. The implementation of River Basin Management Plans, invasive alien species, protection of Natura 2000 sites and relevant issues identified in the Northern Ireland State of the Environment Report 2008, we believe, should be considered in the Environmental Report.

We are of the opinion that geological interests should be considered in more detail within the Environmental Report. For example, we note that the Marble Arch Caves Global Geopark was the world's first international Geopark and shares a border with Co. Cavan.

We note that in Section 1.3 SEA Guidance, SEA Services and Standards for Responsible Authorities has been included. NIEA has recently revised and republished this document. It is available at <http://www.ni-environment.gov.uk/sea-servicesandstandards.pdf>

On Table 3 – Relevant National and International strategic policies and objectives, under the topic of Climate/Air, we believe the Gothenburg Protocol should also be included.

In Section 6.5 Climate change and Air Quality, there is no quantitative information presented for greenhouse gas or air quality pollutant emissions, which would enable more detailed consideration on relevant issues. A discussion on the sectoral split of greenhouse gas emissions (e.g. from transport, power generation etc.) would be helpful.

Table 20 Potential Inter-Relationships between SEA topics on page 84 – we believe this should show a link between Cultural Heritage and Biodiversity, flora and fauna. Cultural Heritage sites and landscapes are often important natural heritage habitats.

Section 7.10 Environmental Pressures in respect to each County – we are of the opinion that an additional section detailing the environmental pressures in respect to transboundary issues in Northern Ireland would be highly beneficial.

We note you have referred to 'Our Environment, Our Heritage, Our Future – State of the Environment Report for Northern Ireland' published in March 2008. Updated information is available from the Northern Ireland Environmental Statistics Report, published in January 2009. Both documents are available on the NIEA website [www.ni-environment.gov.uk](http://www.ni-environment.gov.uk)."

### **National University of Ireland Maynooth**

As part of a report submitted to the Border Regional Authority the National University of Ireland, Maynooth outlined the importance of meeting the challenges arising from greenhouse gas emissions and indicated how these challenges may be addressed in terms of meeting energy requirements within the Border Region. The submission set out the international and national context in terms of addressing the issue of climate change.

The report makes a number of recommendations in respect to policies to be considered for inclusion in the RPGs. General policies in respect to climate change are set out in the report and more specific policies in respect to an Energy Strategy for the Border Region are included.

The report is considered to be particularly relevant to the preparation of the RPG's. The recommendations made are of significant importance in terms of addressing the relationship between climate change and securing a sustainable energy supply

### **Department of Environment Heritage and Local Government**

This submission is focused on the archaeological and architectural heritage. The submission was received after the closing dated for submissions however it has been decided to present it as such in this report

In relation to archaeological heritage the submission considers that the Environmental Report should have regard to the Valletta Convention, the National Heritage Plan 2002 and a brief comment is made on each.

The submission refers to information in respect to archaeological heritage available at [www.archaeology.ie](http://www.archaeology.ie) and from the National Museum.

The submission considers that monuments in State or Local Authority ownership of guardianship within the region should be identified and that *"monuments subject to preservation orders should be identified and zones of visual amenity defined for them"*.

Reference is made to the requirement to submit development plans and local area plans to the department for comment and in a similar reference considers that there should be liaison with the National Monuments Section in respect to archaeological heritage.

The submission refers to the main objectives of the scoping report and in this regard considers that "limiting" what is to be considered in a SEA Scoping Report is likely to be less than satisfactory in terms of the eventual outcome, specifically in relation to architectural heritage. In relation to the Strategic Environmental Objectives the submission considers that the focus is on quantitative indicators rather than qualitative indicators. The submission elaborates on this issue and states *"While some structures may be included in the Record of Protected Structures (RPS), the contribution made by all structures of architectural heritage merit to the quality and sense of place of different areas within the region should also be given recognition in formulating the new regional planning guidelines. This goes considerably beyond simply maintaining or increasing the number of features which are to be protected in terms of any RPG"*. The submission stresses the importance of built heritage in giving areas a distinctive sense of place and identity and in encouraging inward investment.

With reference to the section of the Scoping Report entitled "Environmental Pressures" the submission states *"no assessment is offered at the performance of each planning authority in respect to these quantitative indicators or of any deficiencies in the qualitative policies set out in the relevant development plans"*

In calling for the draft RPG's and associated SEA to be accurate and relevant rather than being superficial the submission offers the following as an example; *"the*



*heading to Section 6.7 is titled 'Cultural Heritage including Archaeology and Architecture'. The heading should read, for instance, "... Architectural Heritage".*

The submission states; *"No evidence or information is provided in the Scoping Report to support the statement that the built heritage has been placed under "increasing threat" as a result of "building activity and natural resource exploration" in association with "afforestation and changing farming methods". It could actually be viewed that increased economic activity in the recent past has given an impetus to maintaining or returning to use structures of architectural heritage merit". It is noted that in an earlier reference in relation to development pressures, the submission stated "Increased development pressure increases the potential for impact on the archaeological resource".*

The submission refers to Strategic Objective (SEO) C1 and considers it *"lacks clarity" and in this states "reference is not even made to architectural heritage"*. It should be noted that SEO C1 as presented in Table 22 "Draft Environmental Objectives, Indicators and Targets" makes a clear reference to architectural heritage; however this has not transferred accurately into summary Table 24 "Strategic Environmental Objectives (SEO's)".

In conclusion the submission states; *"The practical achievement of any high level policies and objectives contained in the RPG will be given effect in future development plans and associated local area plans. Therefore, it is important that any high level policies and objectives have a relevance, clarity and sense of purpose. This in turn will set a positive tone for content of future development plans and associated local area plans".*

### 3 Policy Context

#### Content and main objectives of the Guidelines

The overall objective of Regional Planning Guidelines (RPGs) is to provide a long-term strategic planning framework for the development of a region over a period of 12-20 years, whilst working to implement the strategic planning framework set out in the National Spatial Strategy (NSS).

RPGs address a wide range of matters including, *inter alia*:

- Quality of Life
- Trends and issues in relation to employment, economic development, connectivity, population and housing;
- Settlement strategies and transportation including public transportation;
- Water services and waste management infrastructure;
- Energy and communications networks;
- Social infrastructure
- Conservation of the natural and cultural heritage.
- Climate Change
- Regional Flood Risk Appraisal

Government policy in relation to balanced regional development outlined in the NSS, sets clear obligations on the development plan process to substantively engage with the regional planning guideline process and to move the implementation of the NSS forward. It is noted that the Planning and Development Bill 2009 aims to ensure a much closer alignment between the National Spatial Strategy, Regional Planning Guidelines, development plans and local area plans.

Responding with the appropriate detailed land use planning policies to the trends and types of development and development issues described above, is a key element of local planning processes at city, county and urban levels. The development plan, as the planning policy framework at local level, sets both the policy context for initiating and taking forward individual development proposals by both private and public authorities and also the agenda in relation to the long term development of cities, counties and towns. Therefore, it is through the development plan process that RPGs will be substantively implemented.

The current RPGs were adopted in July 2004 enabling the Border Regional Authority to put in place a cohesive strategic long-term framework for its development. The vision was that the RPGs would assist in achieving the potential of the Region, having due regard of its neighbours in Northern Ireland, other regions and internationally and ultimately assist in the national objective of more balanced regional development, by providing a spatial framework at regional level which embraced the uniqueness of the Region and facilitated its development.

The RPGs were framed recognising the Border Region “is challenged by some of the most difficult socio-economic and physical barriers to development. The bulk of the Region has little natural geographic or economic cohesiveness or identity, and has always been characterised by peripherality and disadvantage. The distortion effect created by strong urban centres close to the border in Northern Ireland has been prominent, and the difficult and sensitive political situation has compounded the natural disadvantage of the Region. Persistent weaknesses in infrastructure have

resulted in underperformance, and the inability of the Region to compete for employment on a national or international scale.<sup>2</sup>

Strategically the RPGs laid out a 20 year "Vision for the Region" stating that the Border Region, would, by 2020, be a competitive area recognised as, and prospering from, its unique interface between two economies, where economic success will benefit all, through the building of distinct sub-regional identities, in an outstanding natural environment, with innovative people, which in themselves, will be our most valuable asset. It was hoped that this would principally be achieved through:

- concentration of critical mass and the promotion and development of the three new Regional Gateways of Dundalk, Sligo and Letterkenny, as a priority for investment, and as key employment locations, with appropriate first class infrastructure and with an indigenous, educated and skilled labour force;
- further enhancing the urban structure in the Region by building on the strengths of the Hubs of Cavan and Monaghan, the Primary Development Centre of Drogheda, the Regionally Strategic Town of Carrick on Shannon, and other key towns and villages;
- building on distinct sub regional identities and promoting strategic links with Northern Ireland;
- sustaining rural areas and rural communities;
- sustaining the uniqueness of the Gaeltacht;
- supporting the international marketing of the Region through distinct images of particular locations, with an emphasis on the quality of the natural environment and its benefits;
- targeting and coordinating key transport and communication links
- provision of a high quality built and physical environment, with essential infrastructure including housing, transport, water services, schools, healthcare, retail, community and recreational facilities.

## Vision and Key Strategic Goals for the Region

The vision for the Region as set out in the Draft Guidelines is as follows:

*'By 2022, the Border Region will be a competitive area recognised as, and prospering from, its unique interface between two economies, where economic success will benefit all, through the implementation of the balanced development model, which will provide an outstanding natural environment and innovative people, which in themselves, will be our most valuable asset'*

The 2004 Guidelines set out a vision for the region and nine key strategic goals that are required to achieve that vision. It is considered that the vision remains valid and the key strategic goals have been updated to reflect the new circumstances that this region faces over the period of the Guidelines of 2010 - 2022

The key strategic goals required to achieve this vision for the region are set out in the Guidelines:

SG 1 To foster the development of the region's most important asset, its people by providing an improved quality of life for all people and communities living, working and visiting the region.

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<sup>2</sup> Border Regional Authority Regional Planning Guidelines 2004

SG 2 The need to ensure the development of the key urban settlements and the links between them and to facilitate integrated sustainable development between urban and rural areas.

SG 3 To improve intra and inter regional connectivity and mobility throughout the region.

SG 4 To promote economic growth, competitiveness and development potential of the region and to facilitate emerging sectors in the region that will provide sustainable jobs for the future.

SG 5 To protect and enhance the quality of the natural environment and built heritage of the region.

SG 6 To co-ordinate a regional approach to the key environmental challenges facing the region.

SG 7 To co-ordinate and integrate key issues in national and regional spatial planning strategies and in particular, the National Spatial Strategy and the National Development Plan, and associated inter-regional development initiatives that support and promote strategic links.

SG 8 To co-ordinate and integrate key issues in cross border spatial planning strategies, and in particular, the Regional Development Strategy for Northern Ireland and associated inter-regional development initiatives that support and promote strategic links between the two economies.

SG 9 To exploit the regions unique location at the interface between two economies by putting in place the drivers for economic growth through the development of the Eastern Corridor, Atlantic Arc and the Central Border Area

### **Future Investment Priorities identified in the Guidelines**

The following key infrastructure projects that are considered strategically significant within the key settlements have been identified in the Draft Guidelines.

**Table 3 Future Investment Priorities for Key Settlements in the Region**

Settlement	Future Investment Priorities	Time Scale	Progress
<b>Letterkenny</b>	Relief Road		
	Sewerage Scheme	Completion by 2011	Under Construction
	Water supply Scheme	By 2014	At planning stage
<b>Dundalk</b>	Western Infrastructure (Major Internal Distributor Road Network including Bus Corridor)	-	At Planning Stage
	Coastal Protection Measures	2015	In Capital Works Programme
<b>Sligo</b>	Western Distributer Road	2011	Phase one under construction
	Eastern Garavogue Bridge and Approach Roads	2012	Planning Complete – Awaiting Funding
	N4/N15 upgrade to Borough Boundary including widening of Hughes Bridge	2012	At planning stage
<b>Cavan</b>	Cavan and Cootehill Water Supply Scheme	2011	At planning stage
	Inner Relief Road into Town Centre		
<b>Monaghan</b>	Extension of By pass onto N54, Cavan Road	-	At planning stage
	Sewerage Scheme Advanced Works	-	At planning stage
	Extend and Improve Sewerage Treatment Works in Castleblayney	-	At planning stage
<b>Drogheda</b>	Improve Port Access		
	Drogheda Sewerage Network Improvements		
	Water Supply Scheme		
<b>Carrick-on-Shannon</b>	Carrick-on-Shannon upgrading of Sewerage Scheme	Completion Mid 2011	Contractor appointed; work commended on DBO
	By pass	scheduled for 2015	Project upgrade at route selection stage

Table 4 outlines those projects that are considered significant to the overall development of the region and are therefore considered as investment priorities.

**Table 4      Future Investment Priorities for the Border Region**

Priorities for the Region (Intra & Inter-regional)	Time Scale	Progress
Development of the N2/A5 Dual Carriageway	Completion by 2015	At planning stage
Delivery and Completion of Project Kelvin	Completion by end of 2010	Under construction
Roll out of National Broadband Scheme	Completion by end of 2010	Under construction
Development of all Strategic Radial Corridors and Strategic Link roads (see transport section)	Period of the Guidelines 2010 – 2022	At planning and under construction
Development of Transmission Grid Network	Grid 25 Strategy extends up to 2025	At planning stage

**Relevant Policy, Plans, Programmes and Guidelines**

The review of the existing RPG's must be considered within the context of a hierarchy of policies, plans and strategies which include EU, international, national, regional and local levels. This relationship is set out in Figure 2.

**Figure 2 Hierarchy of Spatial Plans**

Table 5 presents a list of the national and international strategic policies and objectives under the various environmental topics that are relevant to the SEA process and will be taken into consideration as appropriate. The list is not exhaustive and is subject to change as the SEA process is advanced. Policies and objectives shown on a white background refer to European strategies. Those shown on a blue background refer to international strategies and those on grey background refer to national/regional strategies.

**Table 5 Relevant National & International Strategic Policies and Objectives**

Topic	Policy, Plan or Programme	Relevance objectives
<b>Biodiversity</b>	UN Convention of Biological Diversity (1992)	Maintain and enhance biodiversity.
	EU Biodiversity Strategy Communication on a European Community Biodiversity Strategy	Prevent and eliminate the causes of biodiversity loss and maintain and enhance current levels of biodiversity.
	European Union Habitats Directive (92/42/EEC)	Lists certain habitats and species that must be given protection.

	EU Birds Directive (as modified) (EU/78/409)	Designation of Special Protection Areas for birds.
	National Bio-diversity Plan 2002	To secure the conservation, including where possible the enhancement and sustainable use, of biological diversity in Ireland.
	Irish National Forest Standards (2000)	Aims to ensure sustainable forest management.
	European Communities (Natural Habitats) Regulations, SI 94/1997, as amended SI 233/1998 and SI 378/2005	These Regulations give effect to Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive) and the Minister to designate special areas of conservation (endangered species and habitats of endangered species) as a contribution to an EU Community network to be known as NATURA 2000.
<b>Human Health</b>	WHO Air Quality Guidelines (1999) and Guidelines for Europe (1987) Non Statutory	Seeks to eliminate or minimise certain airborne pollutants for the protection of human health.
	The Stockholm Convention (2001)	Objectives seek to protect human health and the environment from persistent organic pollutants (POPs).
	The EU CAFÉ Programme Commission communication of 4 May 2001 "The Clean Air for Europe (CAFE) Programme: Towards a Thematic Strategy for Air Quality".	Seeks to prevent and reduce air pollution and impacts on human health from air pollution.
	The EU Environment and Health Strategy 2004 - 2010	Seeks to prevent and reduce the impacts pollution on human health.
<b>Water</b>	EU Water Framework Directive (2000/60/EC) 2000	Aims to prevent any deterioration in the status of any waters and to achieve at least "good status" in all waters by 2015
	The Groundwater Directive (1980/68/EC) 1980	Seeks to maintain and enhance the quality of all ground waters in the EU.
	EU Urban Waste water treatment directive (91/271/EEC) 1991	Sets targets dates for the provision of specified waste water treatment infrastructure and services.

	EU Floods Directive (2007/60/EC)	The Floods Directive applies to river basins and coastal areas at risk of flooding. With trends such as climate change and increased domestic and economic development in flood risk zones, this poses a threat of flooding in coastal and river basin areas.
	The Nitrates Directive (91/676/EEC)	This Directive has the objective of reducing water pollution caused or induced by nitrates from agricultural sources and preventing further such pollution.
	Drinking Water Directive (80/778/EEC) as amended by	The primary objective is to protect the health of the consumers in the



	Directive 98/83/EC	European Union and to make sure drinking water is wholesome and clean.
	The Local Government (Water Pollution) Act, 1977 (Water Quality Standards for Phosphorous) Regulations, 1998	Rivers of good quality to be retained as such, rivers of poor quality to be improved.
	Managing Ireland's Rivers and Lakes: Catchment based Strategy Against Pollution (1997)	This document details a strategy to protect water quality against pollution by phosphorus from all sources.
	River Basin Management Plans for River Basin Districts (RBD's)	Seeks to establish an integrated monitoring and management system for all waters within an RBD, to develop a dynamic programme of management measures and to produce a River Basin Management Plan, which will be continually updated.
	OPW Guidelines on Flood Risk (2005)	Seeks to prevent development that is sensitive to the effects of flooding in flood prone or marginal areas. Must not reduce the flood plain or restrict flow across floodplains.
<b>Climate / Air</b>	Kyoto Protocol (1997)	Aim of the UN Protocol is to combat climate change. Industrialised countries will have to reduce their combined greenhouse gas emissions by a minimum of 5% by 2012.
	Second European Climate Change Programme (ECCP II) 2005	Seeks to develop the necessary elements of a strategy to implement the Kyoto protocol.
	White Paper on 'European transport policy for 2010', COM (2001) 370	Seeks to develop a modern sustainable transport system.
	"The IPPC Directive" Directive 96/61/EC concerning integrated pollution, prevention and control	Seeks to minimise pollution and maximize resource efficiency in industry through licensing and guidance.
	Ozone in Ambient Air Regulations 2004 (S.I. No. 53 of 2004).	Objectives include the reduction of certain airborne pollutants for the protection of human health and the environment.

	"Air Framework Directive" Directive on Air Quality, Assessment and Management (Framework Directive) (1996/62/EC)	Seeks the prevention and/or reduction of airborne pollutants for the protection of human health and environment.
	Directive on national emission ceilings for certain atmospheric pollutants (2001/81/EC)	Seeks to limit the national emissions of certain airborne pollutants for the protection of human health and the environment.
	EC Directive 2008/50/EC on ambient air quality and cleaner air for Europe	Replaces the air framework directive and the first three daughter directives. Sets standards and target dates for reducing concentrations of fine particles, which are among the most dangerous pollutants for

		human health.
	Adopting to climate change in Europe – options to EU action {SEC(2007) 849}	Seeks to initiate a Europe-wide public debated and consultation on developing responses to climate change at EU level.
	The Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone	The Protocol sets emission ceilings for 2010 for four pollutants: sulphur, NOx, VOCs and ammonia. The Protocol also sets tight limit values for specific emission sources (e.g. combustion plant, electricity production, dry cleaning, cars and lorries).
	National Climate Change Strategy 2007-2012	Established measures by which Ireland can meet its 2008-2012 targets in respect to green house gas emissions
<b>Cultural Heritage (Landscape Architecture Archaeology)</b>	European Landscape Convention 2000	Encourages public authorities to adopt policies at local, national and international level to protect and manage landscapes.
	Valletta Convention of 1992.	Requires that appropriate consideration be given to archaeological issues at all stages of the planning and development process.
	Granada Convention for protection of the Architectural Heritage of Europe 1985	Established common principles and strategy, informed Part IV of the 2000 Planning and Development Act 2000-2004.
	European Convention on protection of the Archaeological Heritage 1992	Requires that appropriate consideration be given to archaeological issues at all stages of the planning and development process.
	Architectural Heritage Protection-Guidelines for Planning Authorities 2004	The protection of structures, or parts of structures, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social, or technical interest, and; the preservation of the character of architectural conservation areas.
	National Heritage Plan 2002	Plan forms the basis of a strategic approach to the protection and management of heritage up to 2007.
	National Inventory of Architectural Heritage	To establish inventory of buildings of value.
	Framework and Principles for the Protection of the Archaeological Heritage (1999)	This document sets out the archaeological policies and principles which should be applied by all public bodies when undertaking or authorising development.
	Policy Paper on Ireland's Landscape and the National Heritage, The Heritage Council,	Policy paper sets out a vision for the Irish landscape to allow people to harness the landscape for economic

	(2002)	benefit whilst acknowledging that in the long run such benefits can only be sustained through an appreciation and awareness of the contribution of that landscape to our quality of life.
	Landscape and landscape and Assessment, Guidelines for Planning Authorities 2000	Sets out how a landscape character assessment should be conducted.
<b>Sustainable Development</b>	Agenda 21 (1992). Action for Sustainable Development	Aims to promote sustainable development at a local and regional level by taking into account environmental protection in the development process.
	"The Gothenburg Strategy" Communication from the Commission on Sustainable Europe for a Better World" 2001	Seeks to make the future development of the EU more sustainable.
	The Sixth Environmental Action Programme (EAP) of the European Community 2002- 2012 Statutory	Seeks to make the future development of the EU more sustainable.
	The SEA Directive (2001/42/EC)	Objective is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment.
	EIA Directive (85/337/EEC as amended by 97/11/EC and 2003/35/EC)	Requires that certain developments be assessed for likely environmental effects (commonly known as environmental impact assessment (EIA)) before planning permission can be granted.
	Guidelines for Planning Authorities on Sustainable Rural Housing 2005	To address the issue of sustainable rural housing.
	Wind Energy Guidelines 2004	To ensure a consistency of approach in the identification of suitable locations for wind farm development and the treatment of planning applications for wind farm developments.
	Sustainable development- strategy for Ireland 1997	To promote the consideration of sustainable principles in drafting and implementation of the Guidelines.
	Green Paper on Sustainable Energy 1999	The paper sets out how Ireland will progress to meeting its energy requirements. It concentrates on Ireland's need to limit CO2 emissions under the Kyoto Protocol.
	Transport 21 (2005)	Seeks to develop an integrated transport system across Ireland.

	Traffic Management Guidelines (2003)	Provides guidance on a number of traffic management issues including public transport.
	Making Ireland's Development Sustainable 2002	Linking economic, social and environmental objectives whilst considering long term consequences in drafting policy.
	Delivering A Sustainable Energy Future For Ireland – The Energy Policy Framework 2007 - 2020	Seeks to reduce energy demand and energy related emissions.
<b>Waste</b>	The Waste Framework Directive" Council Directive 75/442/EEC of 15 July 1975 on waste "the Waste Framework Directive" and amending acts.	Seeks to) minimise the quantities of waste production in the EU, reduce the environmental impacts from the management of these wastes and defines what constitutes a waste or hazardous waste.
	"The Landfill Directive" Council Directive 99/31/EC of 26 April 1999 on the landfill of waste	Seeks to) reduce the environmental impact from the landfilling of waste & divert certain quantities and types of waste from European landfills.
	"The WEEE Directive" Directive 2002/96/EC of 27 January 2003 on waste electrical and electronic equipment	Seek more environmentally sensitive management of waste electric and electronic equipment.
	Replacement Waste Management Plan for the Connacht Region 2006 -2011	The Plan adopts a regional approach to integrated waste management and sets targets for 2013 for municipal waste in the region.
	National Waste Prevention Programme	Seeks to decouple waste generation from economic activity in Ireland.
<b>Major Accidents</b>	EU Major Accident (Seveso) Directive (96/82/EC) 1996	Seeks to avoid and minimize the effects of major accidents.

White background refers to European strategies  
Blue background refers to international strategies  
Grey background to national/regional strategies

## Guidelines for Planning Authorities

The Department of the Environment, Heritage and Local Government publish a range of planning guidelines under Section 28 of the Planning and Development Act, 2000. These guidelines may be viewed on the Department web site at;  
<http://www.environ.ie/en/Publications/DevelopmentandHousing/Planning/>.

## National and Regional Context

The RPG's must conform to various national and regional plans and strategies. The Planning and Development Act, 2000 as amended, specifically requires planning authorities to have regard to ministerial guidelines from the Department of the Environment, Heritage and Local Government.

## The National Development Plan 2007-2013

The National Development Plan (NDP) 2007-2013 aligns the NSS centrally within it through a specific chapter on balanced regional development. This Government

commitment to aligning the regional development dimension of the NDP 2007-2013 with the NSS objectives and the prioritisation of capital investment in line with the NSS establishes the strategy as a viable and practical policy measure to encourage more balanced regional development. This places the NSS at the heart of capital infrastructure decisions over the next seven years.

The National Development Plan forms the basis on which national capital expenditure will be based over the next number of years. It sets out within a sustainable economic and budgetary framework indicative seven-year investment allocations for the various sectoral areas.

It includes the following objectives:

- Continuing sustainable national economic and employment growth,
- Consolidating and improving Ireland's international competitiveness,
- Fostering balanced regional development,
- Promoting social inclusion.

### **National Spatial Strategy**

The National Spatial Strategy ([NSS](#)) 2002-2020 (published on 28th November 2002) is a 20-year coherent national planning framework for Ireland. It aims to achieve a better balance of social, economic and physical development across Ireland, supported by more effective and integrated planning. The Minister for the Environment, Heritage and Local Government leads the strategy's implementation. The commitment to prepare the NSS was included in the National Development Plan 2000 – 2006.

In order to drive development in the regions, the NSS requires that areas of sufficient scale and critical mass be built up through a network of gateways and hubs. While the National Development Plan 2000-2006 identified Dublin, Cork, Limerick/Shannon, Galway and Waterford as existing gateways, the NSS designated four new national level gateways - the towns of Dundalk and Sligo and the linked gateways of Letterkenny/(Derry) and the midland towns of Athlone/Tullamore/Mullingar.

In addition, the NSS identified nine, strategically located, medium-sized "hubs" which will support, and be supported by, the gateways and will link out to wider rural areas. The hubs are Cavan, Ennis, Kilkenny, Mallow, Monaghan, Tuam and Wexford, along with the linked hubs of Ballina/Castlebar and Tralee/Killarney, working together to promote regional development in their areas. The role of the gateways acting at the national level, together with the hubs acting at the regional and county levels, needs to be partnered by the county towns and other larger towns as a focus for business, residential, service and amenity functions. The NSS also identifies an important need to support the role of smaller towns, villages and rural areas at the local level.

The NSS is being implemented through the translation of its strategic policies into regional and local planning by regional and local authorities. It is also being implemented through the uptake of its approach into national plans and the plans and programmes of Government Departments and agencies, particularly in their investment and other plans as they relate to regional development, for example, in Transport 21, extending and upgrading municipal wastewater treatment systems and the provision of schools and housing.

The NSS sets out the policies on spatial planning adopted by the Government at national level. At regional level, a key policy bridge between national development

priorities and local planning has been put in place with the adoption in mid 2004 of the Regional Planning Guidelines (RPGs). RPGs put in place policies to translate the overall national approach of the NSS into policies at regional and local level. While working within the national framework of gateways, hubs, other towns, villages and rural areas, the RPGs provide more detailed regional level guidance, assisting planning authorities in framing county, city and local area development plans. As well as overseeing the implementation of RPGs, the Department monitors the preparation of county, city and local area development plans to ensure that they are consistent with the objectives of the NSS.

The guiding principles of the strategy are:

- To bring people and their jobs closer together;
- To reduce the level of migration eastward;
- Facilitating north - south interaction;
- Providing a wider variety of employment and leisure options for smaller urban centres;
- Improving accessibility to facilities and services;
- Lower levels of congestion in major urban areas; and;
- Achieve a higher quality environment in both urban and rural areas.

### **National Spatial Strategy (NSS) Update and Outlook**

Since the beginning of 2009, the Department of the Environment, Heritage and Local Government has been undertaking an NSS update and outlook comprising of a detailed analysis of NSS implementation to date and ongoing challenges, effectiveness of planning and delivery mechanisms at central, regional and local levels and identification of critical investments necessary to grow the gateways' and regions' economic performance and competitiveness.

In view of the current challenges facing Ireland and planning for the medium to long term, the update and outlook is focusing on how the NSS can contribute to economic renewal and competitiveness, through:

- enhanced prioritisation of infrastructure investment;
- strengthening governance arrangements in gateways; and
- improved integration of environmental considerations within the planning process.

The Draft Report on the NSS update is at a very advanced stage and, Minister for the Environment, Heritage and Local Government is preparing to bring the final report to Government in early Autumn 2010.

### **Regional Development Strategy - Shaping our Future (Northern Ireland)**

Shaping Our Future is a Regional Development Strategy (RDS) to guide the future development of Northern Ireland to 2025 and help meet the needs of a fast growing region with a population approaching two million. The vision is to create an outward-looking, dynamic and liveable region and to sustain a high quality of life for all.

A long-term perspective is taken keeping the needs of future generations in mind. Thus, the recurring theme of sustainability runs through the Regional Development Strategy (RDS), with a strong emphasis on social cohesion and economic progress.

The pivotal section is the Spatial Development Strategy (Chapter 5) which is a hub, corridor and gateway framework for regional development. It is designed to promote balanced and integrated growth across the network of cities, main and small towns, and their rural hinterlands, to enhance equality of opportunity in all parts of the region, and offer the locational choice to meet the wider variety of needs in a divided society. The strategy encourages the creation of balanced local communities characterised by social mix, variety of uses and a focus on 'a sense of place'.

The Spatial Development Strategy is designed to reinforce and strengthen the hubs, corridors and gateways, making best use of key regional assets to accommodate growth, through:

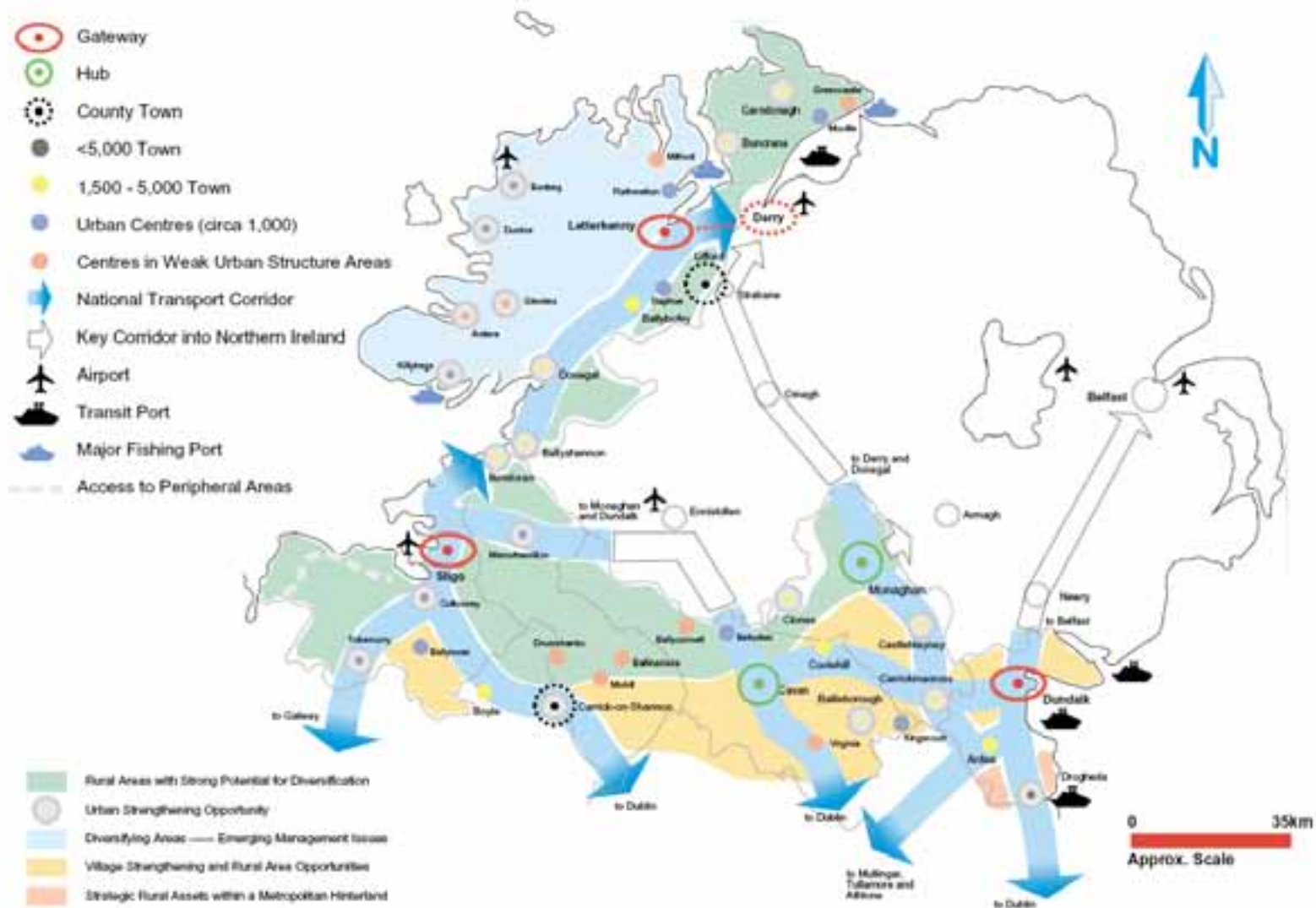
- Investing in the urban hubs,
- Creating an upgraded and integrated transport system,
- Enhancing the regional gateways.

In addition to the above objectives this document is relevant as it discusses the strengthening regional cohesion and co-operation in the protection and management of the environment through:

- The development of joint programmes of co-operation to share best practice in relation to the sustainable management of landscapes and ecosystems,
- Taking joint action in the environmental management of major river basins and water catchment areas such as the Foyle River Basin, the Erne/Shannon Waterway System, the Bann/Blackwater System and in Carlingford Lough,
- Making appropriate designations within the respective jurisdictions for cross-border areas requiring special protection,
- Expanding and developing cross-border cultural trails.

The RDS is currently under-going a substantial review and is due to be released in draft by the end of 2010.

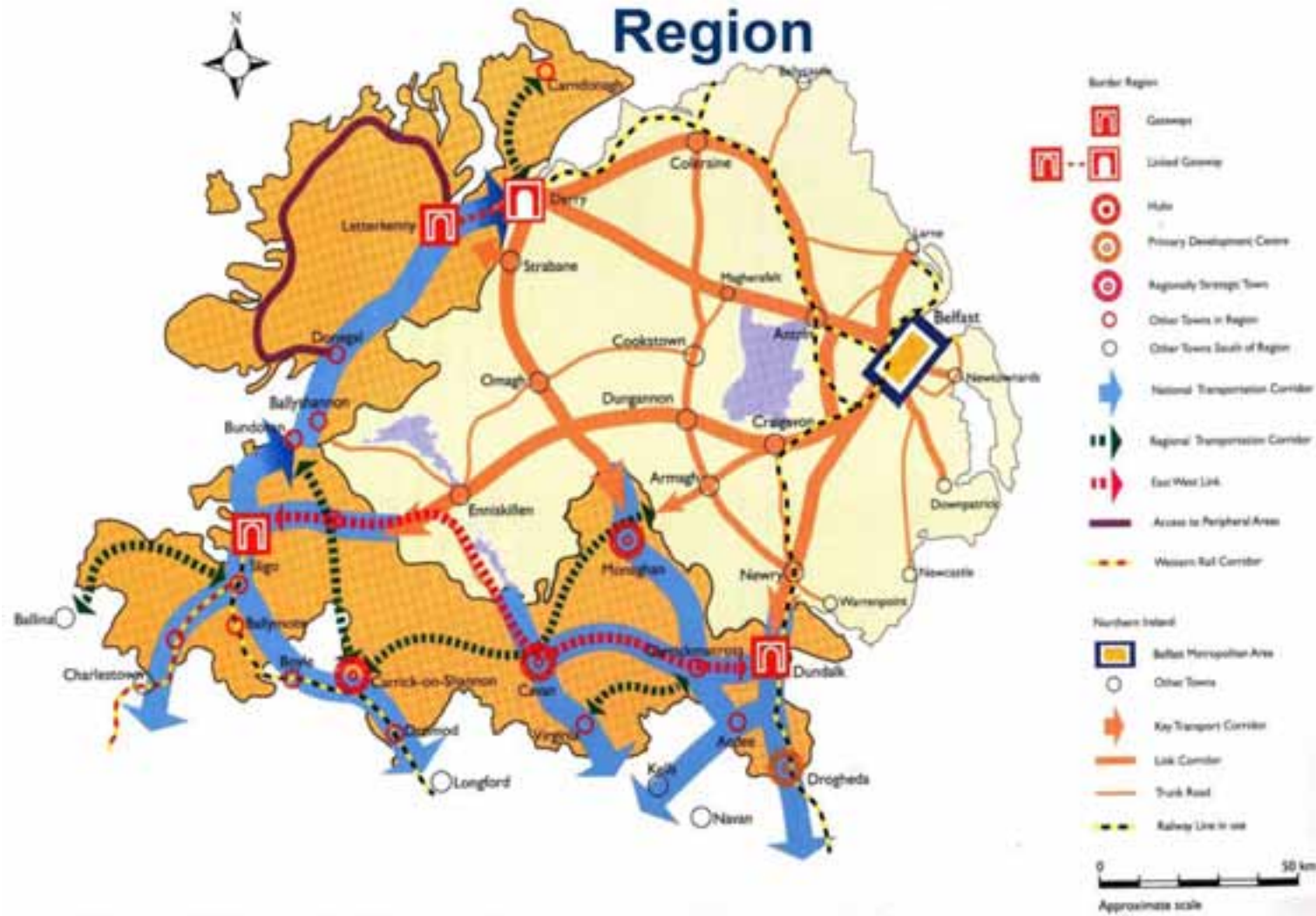
Map 2 and Map 3 are extracts taken from the NSS and the RDS respectfully. They indicate a hierarchy of Settlements within their respective areas. They also indicate major transport corridors linking the Border Region and Northern Ireland with further links leading southwards.



Map 2 Border Region in context of National Spatial Strategy 2002 – 2020



**Map 3**      **Spatial Relationship between National Spatial Strategy and Regional Development Strategy for Northern Ireland**



## **North South Environmental Co-Operation**

The North South Ministerial Council (NSMC), which was established under the Good Friday Agreement, comprises Ministers of the Northern Ireland Administration and the Irish Government, working together to take forward co-operation between both parts of the island to mutual benefit.

At the inaugural plenary meeting of the Council in December 1999 a range of areas for co-operation were agreed including environment and co-operation is ongoing on a range of environmental issues, including water quality, waste management research into environmental protection, informational exchange and environmental awareness, spatial strategy and natural heritage. Further details may be viewed at; <http://www.environ.ie/en/Environment/NorthSouthUnit/#Water%20Quality>

## **Ireland's Environment 2008**

Ireland's Environment 2008, the Environmental Protection Agency's fourth state of the environment report, provides an overall assessment of Ireland's environment. It reviews the quality of all aspects of the natural environment, identifies environmental pressures and provides an assessment of the impacts and potential responses. The overall conclusion of the report is that the quality of Ireland's environment is relatively good but that there are some key environmental challenges facing Ireland resulting from the major economic, social and demographic changes that have occurred in recent years. In addition, analysis of likely future developments across all sectors of the economy suggests that pressure on environmental quality will continue to build over the next two decades.

The EPA report identifies environmental policy obligations which include commitments on waste, nature, water and air emissions. According to the report those obligations that pose the most substantial challenges include the following:

- To prevent the deterioration of water quality in any water body and to achieve 'good' status or higher for all water bodies by 2015 under the Water Framework Directive.
- Under the Kyoto Protocol to the UNFCCC, to reduce of greenhouse gas emissions to 13 per cent over 1990 levels over the period 2008–2012, corresponding to average limit of 62.8 Mt CO<sub>2</sub>e annually.
- Under the European Commission's 'Climate Action and Renewable Energy Package', to reduce greenhouse gas emissions by 20 per cent in 2020 relative to 2005 levels (equivalent to a target of 37.9 Mt CO<sub>2</sub>e total emissions). If an international agreement is achieved, further reductions, up to 30 per cent, will be required.
- Under the Habitats and Birds Directives, to fulfil Ireland's obligations on the designation, classification, management and protection of sites.
- Under the National Emissions Ceiling Directive, to achieve the emissions reductions targets for transboundary gases, particularly with respect to nitrogen oxides (NO<sub>x</sub>) emissions.

- Under the EU Landfill Directive, progressively to reduce biodegradable municipal waste disposed in landfill to achieve a maximum of 451,000 tonnes landfilled by 2016.

### **Northern Ireland State of the Environment Report (2008)**

Among the more significant environmental issues outlined in the Northern Ireland State of the Environment Report (2008) are in respect to climate change, economic growth, rural land use and water quality.

#### **Climate Change**

There is a need to greatly reduce greenhouse gas emissions and to change the way the environment is managed in order to cope with predicted changes in climate such as extreme weather conditions.

#### **Economic Growth**

Many benefits have come with economic growth along with significant environmental costs. More sustainable ways of pursuing economic expansion and limiting the impact on the environment need to be found.

#### **Rural Land Use**

More sustainable agricultural and rural land use practices need to be adopted to allow for compatibility between modern agricultural practices and a high quality environment.

#### **Water Quality**

Nutrient enrichment, or eutrophication, is the greatest threat to the state of the Northern Ireland waters and their biodiversity. Positive steps to address the diffuse sources of pollution causing this issue are required.

The content of both reports, (Ireland's Environment 2008 and the Northern Ireland State of the Environment Report (2008)), will be taken into consideration in the formulation of the Environmental Report .

### **National Climate Change Strategy 2007-2012**

Under the Kyoto Protocol, Ireland agreed to a target of limiting its greenhouse gas emissions to 13% above 1990 levels by the first commitment period 2008 – 2012. Ireland ratified the Kyoto Protocol in 2002, along with the EU and all other member states and is legally bound to meet the challenging greenhouse gas emissions reduction target. To ensure Ireland reaches its target and building on measures put in place following the publication of the first National Climate Change Strategy in 2000, the Government has published the new National Climate Change Strategy 2007-2012.

Human-induced climate change is a global issue and is the primary environmental challenge of the twenty first century. Increased levels of greenhouse gases such as carbon dioxide are contributing to the natural greenhouse effect and accelerating irreversible changes in the climate. What is distinctive about the current period of global warming, compared to previous cycles of climate change, is the extent and rate of change, which exceeds natural variation. The impacts of climate change present very serious global risks and threaten the basic components of life, including health, access to water, food production and the use of land. As the earth gets warmer the damage from climate change will accelerate. In Ireland transport is by far

the fastest growing sector, with emissions more than double what they were in 1990. Irish per capita emissions of greenhouse gases remain among the highest in Europe, reflecting both the large contribution from agriculture and the almost total reliance on the private car and road haulage to meet transport needs.

This strategy and climate change in general, is relevant across a wide range of environmental topics, including energy, settlement patterns, transportation, biodiversity and flood risk management.

### **Delivering a Sustainable Energy Future for Ireland; Energy Policy Framework 2007 - 2020**

This White Paper sets out the Government's Energy Policy Framework 2007-2020 to deliver a sustainable energy future for Ireland. Ireland faces similar energy challenges to those being confronted worldwide. The Irish situation is made more acute by the small internal energy market, peripherality and limited indigenous fuel resources. Sustained economic and population growth during the Celtic Tiger period has also added to the challenges for Irish energy policy. There are however major opportunities to be realised in harnessing the full potential of renewable and bioenergy resources. The framework sets out plans for reducing energy demand and energy related emissions through ambitious renewable energy targets (including co-firing biomass with peat), new state-of-the-art power generation plants and interconnection to wider markets which will contribute in a major way to national climate change targets. The White Paper includes actions to ensure security of energy supply, actions to promote the sustainability of energy supply and use, actions to enhance the competitiveness of energy supply and an integrated approach to delivery. Energy supply actions include ensuring that electricity supply consistently meets demand, ensuring the physical security and reliability of gas supplies to Ireland, enhancing the diversity of fuels used for power generation, delivering electricity and gas to homes and businesses over efficient, reliable and secure networks, creating a stable attractive environment for hydrocarbon exploration and production and being prepared for energy supply disruptions. The actions to promote the sustainability of energy supply and use include addressing climate change by reducing energy related greenhouse gas emissions, accelerating the growth of renewable energy sources, promoting the sustainable use of energy in transport, delivering an integrated approach to the sustainable development and use of bioenergy resources, maximising energy efficiency and energy savings across the economy, accelerating energy research development and innovation and programmes in support of sustainable energy goals. The actions to enhance the competitiveness of energy supply include delivering competition and consumer choice in the energy market, delivering the all-island energy market framework, ensuring that the regulatory framework meets the evolving energy policy challenges, ensuring a sustainable future for semi-state energy enterprises, ensuring affordable energy for everyone and creating jobs, growth and innovation in the energy sector and an integrated approach to delivery. Finally, the integrated approach to delivery includes strengthening national capabilities in the energy policy field, ensuring a whole of Government approach to energy policy, reaching out to stakeholders in implementing the strategic goals for energy and ensuring accountability and transparency through regular progress reporting and review.

### **Smarter Travel and Transport 21**

Transport 21 forms part of the NDP and comprises a ten year investment programme for the development of the national road network, public transport and airports. It

aims to expand capacity, increase public transport use, increase accessibility and integration, enhance quality and ensure sustainability.

Smarter Travel (DEHLG 2009) is a policy document which sets out a broad vision for the future and establishes objectives and targets for transportation. The document examined past trends in population, economic growth and transportation and concludes that these trends are unsustainable into the future. The main objectives are to reduce dependency on car travel and long distance commuting, increase public transport modal share and encourage walking and cycling, improve quality of life and accessibility for all, improve economic competitiveness through maximising the efficiency of the transport system, alleviating congestion and infrastructural bottlenecks, minimising the environmental impact by reducing localised air pollutants and greenhouse gasses and improving security of energy supply by reducing dependency on imported fossil fuels.

The aim is that by 2020 future population and economic growth will have to predominantly take place in sustainable compact urban and rural areas which discourage dispersed development and long commuting. The document sets out ambitious targets which involve a complete turnaround on current trends. It is envisaged that these targets will be achieved through a number of key actions which can be grouped into four main areas:

- Actions to reduce travel by private car and encourage smarter travel
- Actions to provide alternatives to the private car
- Actions aimed at improving fuel efficiency
- Actions aimed at strengthening institutional arrangements to deliver the targets.

### **Innovation for a Green Economy - Environment and Technology**

On 29th June 2009, the Minister for the Environment, Heritage and Local Government, officially launched the report *Innovation for a Green Economy - Environment and Technology*. This report outlines some practical outcomes in the areas of environmental technologies and innovation from the investment made to date by the EPA, through its Science, Technology, Research and Innovation (STRIVE) programme. The environmental technologies' sector is one of the fastest growing markets internationally. Since 2005 the EPA has funded 189 research and innovation projects in the technologies area, representing an investment of €30 million. This has led directly to the engagement of 200 new researchers in full-time roles. This report profiles several successes and impacts of research and innovation undertaken to date.

These include high-value products from waste, energy from sewage treatment, smart filters that can remove metal ions from water, pollution sensors and a sustainable, ecological high-performance computer. A survey of 18 large-scale projects funded by the EPA in 2005 and 2006 found that the research investment had led to wider benefits including:

- the filing of five patents with seven additional patents in preparation;
- nine non-disclosure agreements;
- one licence agreement;
- one new spin-off company.

This return on investment compares very favourably to similar investments elsewhere in the EU and in the USA.

The report also provided a roadmap showing where further progress is required nationally to meet the environmental and economic challenges ahead. The EPA sees a strong need to continue to prioritise environmental research and innovation investment with the aim of:

- Supporting the continued development of the environmental goods and services sector;

- Contributing to environmental protection by delivering applicable and relevant solutions, information and knowledge;

- Supporting research and the integration of eco-innovation into all relevant sectors

The EPA is among the main bodies fostering growth in this area through the provision of funding for research and innovation. Aside from the academic excellence of this work and its contribution to building Ireland's reputation as a centre for research and innovation, the investment is also yielding wider economic benefits.

The report is available on the EPA website at;

[www.epa.ie/downloads/pubs/research/tech/](http://www.epa.ie/downloads/pubs/research/tech/).

### **Water Framework Directive 2000**

The Water Framework Directive (WFD) sets a framework for the comprehensive management of water resources in the European Community. It addresses inland surface waters, estuarine and coastal waters and groundwater. The fundamental objective of the Water Framework Directive aims at maintaining "high status" of waters where it exists, preventing any deterioration in the existing status of waters and achieving at least "good status" in relation to all waters by 2015. Member States will have to ensure that a co-ordinated approach is adopted for the achievement of the objectives of the WFD and for the implementation of programmes of measures for this purpose. Irrespective of political boundaries, the river basin is the natural unit for water management. Ireland is divided into eight (8) River Basin Districts. The bulk of the Border Region lies within two river basin districts shared with Northern Ireland. The bulk of County Louth falls within the Neagh Bann International River Basin District, much of which is shared with large areas of Northern Ireland. The remainder of the County, primarily to the south, lies within the Eastern River Basin District.



**Map 4 River Basin Districts on the Island of Ireland (Source: DELG and DEHLG, 2003)**

The North South (NS) Share River Basin District Project is the vehicle for delivering the objectives of the Water Framework Directive within the three River Basin Districts listed below. The project has been superseded by the NS SHARE2 project which operates until January 2010 and will deliver final River Basin Management Plans. The North South Share Project comprises three river basin districts.

1. North Western International River Basin District
2. Neagh Bann International River Basin District
3. North Eastern River Basin District

The North Western and Neagh Bann River Basin Districts are shared between the Republic of Ireland and Northern Ireland whilst the North Eastern RBD is completely within Northern Ireland. Further detail in respect to the NS Project may be viewed at: <http://www.nsshare.com/index.html>



The impact of RBMPs on regional planning is considered significant. RBDs include various counties due to their sheer size. It is considered appropriate that RBMPs are considered in parallel with regional spatial plans as they operate at similar spatial scales. The assessment of RBMPs in the Border Region will be closely linked and coordinated with the RPG review process.

## **Grid 25. A Strategy for the development of the Transmission Network**

It is generally acknowledged that a strong and reliable transmission network is essential to enable Ireland to prosper economically and to provide an enhanced quality of life for its people.

The transmission grid is considered strategic infrastructure, supporting balanced regional development, linking parts of the country rich in renewable energy or conventional generation, to the rest of the country, enabling all market users to benefit from reliable electrical energy at the most economical price. EirGrid<sup>3</sup> calculates that to facilitate the necessary increase in renewable generation and to adequately meet the demands of the electricity customer, the capacity of the bulk transmission system will need to be doubled by 2025. Grid 25 - EirGrid's strategy for the development of Ireland's electricity supply Grid<sup>4</sup> sets out how this will be achieved through major reinforcements to the existing network using the best technological solutions available.

The strategy envisages that the Grid will be developed taking account of the continuing need to balance the reliability and security objective with the costs and environmental impact of developments in a sustainable way. It is proposed under the strategy to upgrade the high voltage system and this will require an investment of approximately €4 billion over the period to 2025. The strategy divides the network into 7 regions - the Border Region as identified in the RPG's comprises two of the 7 regions, the North West and the North East as indicated on the map below.

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<sup>3</sup> EirGrid is a state-owned company and is the independent electricity Transmission System Operator (TSO) in Ireland and the Market Operator (MO) of the wholesale electricity trading system.

<sup>4</sup> Grid 25, EirGrid's Grid Development Strategy – To view the Strategy see; <http://www.eirgrid.com/media/Grid%2025.pdf>





**Map 5      Extract from Grid 25 – A Regional View**

### **North West**

The strategy outlined in Grid 25 envisages that the North West can become a net exporter of power to the rest of the island, reducing its reliance on generation from outside the region.

The strategy envisages that the Grid development in the region will include:

- An additional investment of approximately €750m to upgrade almost 700 km of the existing transmission network and to build new circuits;
- Extension of the 220 kV network into Sligo, already in progress;
- 110 kV reinforcements between Killybegs (Binbane station) and Letterkenny and Ballaghadreen (Tonroe station) and Castlebar;
- Major infrastructural development from Mayo to the main bulk transmission system in the eastern part of the region;
- Further integration of the Donegal and Northern Ireland networks.

The strategy considers that:

- The North West can become a net exporter of power to the rest of the island, reducing its reliance on generation from outside the region;
- Plans will facilitate the growth of renewable generation connections in the region;
- The increased power supply will accommodate and help attract future industry.

### **North East**

The strategy for the North East considers that the proposed interconnector that runs through it, is significantly important to the All-Island Single Electricity Market. Also, that the 220 kV and planned 400 kV transmission network in the region provides a strong power corridor between Dublin and Belfast.

The strategy envisages that the Grid development in the region will include:

- An additional investment of approximately €300m in the region;

- The North-South Interconnector (400 kV) connecting Kingscourt in Cavan to Turleenan in Tyrone;
- A new 400 kV circuit from Woodland in Meath to Kingscourt in Cavan;
- Strengthening of power circuits between the North West region and the North East region facilitating power flows;
- Reinforcement of 110 kV networks supplying Cavan and Monaghan;
- Upgrading about 240 km of the existing transmission network.

The strategy considers that:

- The North-South interconnector and the Woodland-Kingscourt line will provide long-term capacity between the Northern Ireland and the Republic of Ireland systems and ensure security of supply to the North East region;
- Provides for substantial increase in electricity demand in the region;
- There will be increased opportunities to provide renewable energy in the region;
- Increased opportunities for gas-fired generation technologies.

The development of the Grid as envisaged in the strategy may give rise to significant environmental issues for the Border Region and beyond where such works are located in environmentally sensitive areas. Such impacts may arise with respect to the landscape, ecologically sensitive areas and cultural heritage. It is understood from consultations with Eirgrid during the preparation of the RPG's, that an Environmental Assessment and a Habitats Assessment in respect to the strategy is being undertaken in order to inform the progression of the strategy. Having regard to the foregoing and considering that the works proposed are at a preliminary stage where there is an absence of any detailed proposals, it is considered that the necessary detailed environmental assessment can be more appropriately undertaken at project level.

### **Waste Water Discharge (Authorisation) Regulations 2007**

Circular PD/709 issued by the Department of the Environment, Heritage and Local Government to local authorities and dated 16th July 2009 sets out certain obligations on planning authorities under the Waste Water Discharge (Authorisation) Regulations 2007 (SI 684 of 2007) as well as the interrelationship between these requirements and investment plans under the Department's Water Services Investment Programme.

The effect of the 2007 Regulations is such that planning authorities must assure themselves that in approving development that would give rise to additional discharges to a waste water works or from storm water overflows governed by EPA licences, such discharges, taken in conjunction with discharges from other existing and/or already approved development, are capable of being treated in a manner that is compliant with the stricter of the requirements of:

1. The Urban Waste Water Regulations; or
2. The requirements of an EPA licence (which should already incorporate the requirements at (1) above) and which may incorporate more demanding requirements than (1) above depending on the assimilative capacity and the environmental quality objectives that have been established for the receiving waters in question.

## **Water Services Investment Programme 2010 – 2012 Needs Assessment 2009**

The following is an extract from Circular L 6 /09, issued by the Department of Environment, Heritage and Local Government dated 17 July, 2009. The circular sets out the need for investment in water services and to prioritise projects that secure value for money, target environmental compliance issues and support economic and employment growth as envisaged by Government policy.

1. The high level goal of the Water Services Investment Programme (WSIP) is to ensure that the timing and scale of water services investment facilitates economic and other development, compliance with statutory requirements for drinking water and wastewater treatment and the achievement of environmental sustainability objectives. In recent years, a multi-annual approach to investment has been adopted to aid the proper planning and delivery of required infrastructure to meet these goals. The current programme covers the period 2007 – 2009 and the Department has commenced work on the development of the Water Services Investment Programme (WSIP) 2010-2012.
2. With the changed economic climate and the finalisation of the first cycle of River Basin Management Plans by local authorities in October, the new programme must prioritise projects that target environmental compliance issues. It must also fully support economic and employment growth as envisaged in the Government's policy document 'Building Ireland's Smart Economy – A Framework for Sustainable Economic Revival' and offer best value for money. There is a need also to take into account relevant reports such as the EPA reports on drinking water and wastewater discharges, the 2008 Forfas Report – Assessment of Water and Wastewater Services for Enterprise - which recommended prioritisation of investment for key centres which are likely to require additional water and wastewater treatment capacity in the coming years - and the economic development in gateways and hubs (and in specific developing areas in these locations) in accordance with the National Spatial Strategy. The Needs Assessment undertaken by Water Services Authorities will be a critical input to the development of the new programme. Following discussions with the City and County Managers Association (CCMA) some changes have been agreed to the Needs Assessment Process to ensure the project selection is aligned with overall programme priorities.
3. Water services authorities are now required to undertake a Needs Assessment, as set out in this Circular, and to submit the completed assessment to the Department by 23rd October 2009.

## **Coastal Zone Management Plans**

Coastal Zone Management Plans are an innovative approach by involving maximum public participation, working for consensus with the local community and employing conflict resolution techniques. A regional approach to integrated coastal zone management (ICZM) is supported by the NSS and recommended by the EU. The ICZM model offers a means to sustainably manage the development of the coastal zone through a collaborative and community focused approach to planning and management of coastal resources. A formal ICZM strategy has not been developed, however, there is current activity ongoing that is exploring mechanisms to implement

the principles of ICZM in Ireland - most notably through involvement in EU research projects - COREPOINT, ENCORA and SPICOSA. The most relevant document to analyse strategic approaches to management of coastal zones is the National Spatial Strategy 2002-2020.

The aim of the European Union's ambitious Marine Strategy Framework Directive (adopted in June 2008) is to protect more effectively the marine environment across Europe. It aims to achieve good environmental status of the EU's marine waters by 2021 and to protect the resource base upon which marine-related economic and social activities depend. The Marine Strategy Framework Directive constitutes the vital environmental component of the Union's future maritime policy, designed to achieve the full economic potential of oceans and seas in harmony with the marine environment. The Marine Strategy Framework Directive establishes European Marine Regions on the basis of geographical and environmental criteria. Each Member State - cooperating with other Member States and non-EU countries within a marine region - are required to develop strategies for their marine waters.

### **Irish Coastal Protection Strategy Study (ICPSS)**

The Department of Agriculture, Fisheries and Food is currently engaged in a detailed study of possible coastal flooding scenarios for the entire Irish coast. The study, entitled the Irish Coastal Protection Strategy Study (ICPSS) will examine how to best manage the risks associated with coastal flooding and erosion. Among other aims the study will develop a GIS based coastal database, identify extreme flood outline scenarios for individual locations, identify indicative flood plains, identify erosion risk outlines for the years 2030 and 2050, provide an economic assessment of assets at risk from coastal flooding and erosion, develop a storm surge prediction model and a coastal flood warning system. The draft ICPSS reports are to be issued for consultation with local authorities during the course of the making of the guidelines. The initial findings of the ICPSS provide detailed scenarios for the east of the region centred upon County Louth.

The current ICPSS is helping to define more fully the extent of erosion risk in Ireland using modern survey and analysis methods (Lidar, Aerial Survey & GIS) and through the production of strategic erosion risk maps.

### **Waste Management Plans**

Under Part II of the 1996 Waste Management Act (as amended) local authorities are required to make waste management plans in respect of their functional areas. The Environmental Protection Agency is required to make a national hazardous waste management plan.

The statutory objective of these plans is to:

- prevent or minimise the production and harmful nature of waste,
- encourage and support the recovery of waste,
- ensure that such waste that cannot be prevented or recovered is safely disposed of, and
- address the need to give effect to the polluter pays principle, in relation to waste disposal.

## **Local/Regional Waste Management Plans**

All local authorities have now reviewed their Regional Waste Management Plans. It is evident from the plans that local authorities have been guided by the various policy statements on waste. In particular, these plans make provision for the development of an integrated waste management infrastructure, including:

- "kerbside" collection of recyclable materials in urban areas;
- "bring" facilities for recyclable materials in rural areas;
- civic amenity sites and waste transfer stations;
- biological treatment of "green" and organic household waste;
- materials recovery facilities;
- recycling capacity for construction and demolition waste; thermal treatment facilities; and
- residual landfill requirements.

Nationally there are 10 Waste Management Plans. Within the Border Region, Donegal is governed by the Donegal Waste Management Plan, Sligo and Leitrim are governed by the Connacht Waste Management Plan and Cavan, Monaghan and Louth are governed by the North East Waste Management Plan.

## **EPA National Hazardous Waste Management Plan**

Under the Waste Management Act 1996, as amended, the Environmental Protection Agency (EPA) is required to make a national hazardous waste management plan which, among other things, deals with the prevention of hazardous waste and the setting of targets towards this goal, identifying facilities currently available for the collection, recovery or disposal of hazardous wastes, and make recommendations regarding infrastructure, waste facilities and other physical resources considered to be necessary for the management of these wastes. The making of a hazardous waste management plan is a statutory requirement under section 26 of the Waste Management Acts 1996-2008, with this current plan being the second such plan made under the provision. Section 26(5) of the Waste Management Acts 1996-2008 requires local authorities to have regard to the plan, and in so far as it is appropriate to do so, to take measures to implement or otherwise give effect to, recommendations contained in the plan.

The objectives of the hazardous waste management plan are:

- To reduce the generation of hazardous waste by industry and society generally.
- To minimise unreported hazardous waste with a view to reducing the environmental impact of this unregulated waste stream.
- To strive for increased self-sufficiency in the management of hazardous waste and to reduce hazardous waste export.
- To minimise the environmental, social and economic impacts of hazardous waste generation and management.

It is noted that there are a significant number of recommendations in the plan which are deemed to be the responsibility of local authorities to implement. The recommendations in question are:

No. 4 – take account of the hazardous waste management plan in the implementation and revision of regional and local waste management plans, regional planning guidelines and regional and area development plans.

No. 7 – designate trained waste prevention officers to work with local businesses and communities towards achieving hazardous waste prevention, accessible and cost-effective collection services, and better compliance with regulation.

No. 10 – complete a programme by 2012 of providing drop-off facilities at appropriate civic amenity sites and/or suitable locations (including mobile collections) for use by householders and small businesses, and consider the use of collective tendering for waste contractor services with other local authorities with a view to reducing costs.

No. 12 – conduct local or regional awareness and information campaigns, to pro-actively inform individuals and businesses of available hazardous waste collection services and their obligations.

No. 15 – commence a programme of local and/or concerted enforcement actions in 2009 with regard to the management of hazardous waste at several categories of small business, including garages, mini-labs, construction sites, industrial, healthcare and others.

No. 25 – provide for, in regional planning guidelines and local area and county development plans, the co-ordinated management of contaminated soil where these plans include the redevelopment of docklands or other brownfield sites.

No. 28 – identify, assess and remediate sites where hazardous waste was, to a significant extent, disposed of in the past. These sites should be dealt with in accordance with the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008 (S.I. No. 524 of 2008) and the Departmental Guidance on these Regulations issued on 6 April 2009 with Circular No. WPRR 03/09.

#### **4 Habitats Directive Assessment under Article 6 of the Habitats Directive**

The aim of the European Habitats Directive (Council Directive 92/43/EEC on the Conservation of Wild Habitats and of Wild Fauna and Flora) is to create a network of protected wildlife sites in Europe, maintained at a good conservation status. Each member state must designate their most important natural areas as Special Areas of Conservation. The Directive specifies the scientific criteria on the basis of which SAC sites must be selected and very strictly curtails the grounds that can be used as justification for damaging a site. The network of sites is referred to as NATURA 2000 and includes SACs (Special Areas of Conservation) and SPAs (Special Protection Areas) for birds.

The European Habitats Directive (EHD) (Council of the European Communities 1992) was transposed into Irish legislation by the European Communities (Natural Habitats) Regulations 1997.

The SAC regulations also amends the Planning Act and requires planning authorities when considering an application for a development that is likely to have a significant effect on the SAC, to ensure that an appropriate assessment of the implications of the development for the conservation status of the site is undertaken.

Sites may contain priority or non-priority habitats and species. Priority habitats include raised and blanket bogs, some types of fens, bog woodlands and turloughs.

The only justifications for damaging a qualifying "priority" site are "considerations relating to human health and public safety, to beneficial consequences of primary importance of the environment, or further to an opinion from the European Commission, to other imperative reasons of overriding public interest" (IROPI), but this can only be allowed after an assessment is made in line with the article 6 procedure, and there are no other alternatives and an agreement is reached with the European Commission.

The European Parliament, in a communication to the European Council in September 2000, states: The implementation of the European Habitats Directive and Birds Directive, both with respect to species conservation and with respect to the establishment of the Natura 2000 network, is one of the most important tools for achieving the objectives of the Convention on Biological Diversity in the European Union and Member States (European Parliament 2000).

Article 6 of the Habitats Directive provides a strict assessment procedure for any plan or project not directly connected with or necessary to the management of the site but which has the potential to have implications for the site in view of the site's conservation objectives. The Regional Planning Guidelines for the Border Regional Authority, therefore, fall under the remit of Article 6.

#### **Guidance on the implementation of Article 6**

##### **European Guidance**

The European Commission methodological guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive sets out the four stages for the assessment. This guidance has been designed with practitioners in mind; it sets out flow charts of the various stages and provides worked and blank examples of matrices for each stage.

However, because the work involved can be very large in many cases, emphasis is placed on reporting only when necessary and to ensure transparency of decision making. Evidence of assessment matrices are required to be completed when no further assessment is required. For example, if it is concluded at stage one screening that significant effects are likely then there is no need to complete the evidence of assessment form at that stage, as it will be necessary to proceed to the next stage of assessment.

### National guidance

Circular Letter SEA 1/08 & NPWS 1/08 of the 15 February, 2008 **Appropriate Assessment of Land Use Plans** states that:

*Any draft land use plan (development plans, local area plans, regional planning guidelines, schemes for strategic development zones) or amendment/variation to it proposed under the Planning and Development Act 2000 (as amended) must be screened for any potential impact on areas designated as Natura 2000 sites (normally called Special Areas of Conservation (SACs) or Special Protection Areas (SPAs)).*

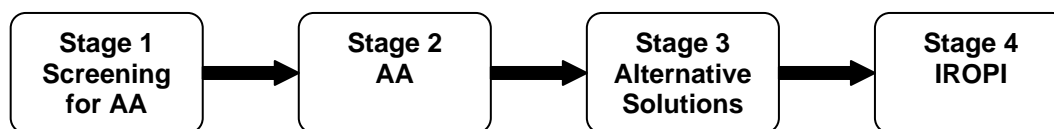
This HDA will be based on any ecological information available to the authority and an adequate description of the plan and its likely environmental impacts. This should take into account any Policies that will set the terms for future development. Up to date maps of Natura 2000 sites, or areas proposed for designation, are available on [www.npws.ie](http://www.npws.ie). The results of the HDA process will be recorded and made available to the public.

### DEHLG Guidance

A Guidance note issued by the DEHLG (July 2009) on Regional Planning Guidelines and Habitats Directive Assessment, outlines the following:-

*'Regional authorities are not consent authorities. Plans and projects are informed as a result of policies and objectives contained in the Regional Planning Guidelines. RPG's contain high level policies and objectives which do not contain the level of detail which are likely to trigger an extended Habitats Directive Assessment provided they do not have a significant effect on Natura 2000 sites.' The following guidance is also provided:*

The stages of HDA are summarised by the flowchart and text below



**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 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;

**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.

The DEHLG in association with the National Parks and Wildlife Service (NPWS) published Guidance for Planning Authorities in December 2009 entitled 'Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities'. This HDA will have regard to this guidance and supersedes the guidance of the DEHLG in July 2009.

### **Draft Habitats Assessment Report**

A Draft Habitats Assessment Report has been prepared in parallel with this document. This Report is being considered in conjunction with the SEA process and the outcomes will inform the making of the Draft Guidelines.

#### **Stage One: Screening.**

This stage examines the likely effects of the Regional Planning Guidelines on Natura 2000 sites in the Border Regional Authority area and within a 15km buffer of the area and considers whether it can be objectively concluded that these sites will not be significantly impacted upon.

#### **Stage One - Conclusion**

The Border Region comprises of a significant number of Natura 2000 sites in-situ and ex situ. The complexity of the sheer numbers of sites coupled with the range of habitats and species mean that it is almost impossible, to accurately state at this stage in the process, where specific impacts may occur and how sites may be significantly affected. **All sites must therefore be carried forward to Stage 2 Appropriate Assessment, to assess whether there will be a significant negative effect on the structure and function of the Natura 2000 site and consequently, on its conservation objectives.** Following stage 2, a determination must then be made as to whether, one should include appropriate mitigation measures or proceed to stage 3 of the process.

#### **Stage Two – Appropriate Assessment**

All Natura 2000 sites in-situ and ex-situ (within 15km of the Border Region) were identified as the first step in the Screening process. As it was not possible to eliminate potential/significant impacts on the Natura 2000 network in-situ and ex-site, at stage 1 of the process, it was considered that a full appropriate assessment should be carried out on the Guidelines.

## **Stage Two – Conclusion**

The Habitats Directive Assessment was carried out on the Draft Regional Planning Guidelines for the Border Region 2010-2022. The assessment involved stages 1 and 2 of the HDA process.

Preparation of the assessment involved preliminary discussions with the NPWS Regional Ecologists to identify general issues of concern for conservation in the Region. A review of conservation objectives and threats to site integrity for the range of Natura 2000 in the Region was undertaken to identify sites that may be impacted by policies/objectives in the Draft RPGs. Some of our key urban settlements such as our Gateways of Sligo, Dundalk and Letterkenny are located adjacent to river SACs and were considered to be the key areas for assessment, given that the RPGs direct additional population to the key settlements. In general, it was found that there were no direct, indirect or cumulative threats to Natura 2000 sites as a result of directing additional population growth to the 7 key urban settlements.

Screening for impacts on Annex II species occurring within the region was also carried out. All these species are water dependant and thus, protecting the habitat in which they occur will, by association, enable protection of their conservation status. Species such as the Freshwater Pearl Mussel are already the subject of Sub-Basin Management Plans and a range of environmental targets laid out in River Basin Management Plans (RBMPs) and Program of Measures (POMs) under the Water Framework Directive. These targets involve participation by local authorities and thus it is not considered that there are additional impacts arising from the Draft Regional Planning Guidelines that have not already been raised in the Sub-Basin Plans for the species.

### **Habitats Directive Assessment Conclusion**

This Draft Habitats Directive Assessment Report concludes 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 amendments of existing policies and objectives, and the addition of a number of policies. As a result, there is no requirement to proceed to stage 3 of the HDA Process.

## 5 Alternative Approaches to the making of the Guidelines

Article 5 of the SEA Directive requires an Environmental Report to consider “reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme” and the significant environmental effects of the alternatives selected.

In accordance with Article 5, the Report should ensure that:

- ‘Reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated’ (Article 5.1)
- The Environmental Report includes ‘an outline of the reasons for selecting the alternatives dealt with’ (Annex 1(h))
- A statement is prepared summarising ‘... the reasons for choosing the plan or programme as adopted, in the light of the reasonable alternatives dealt with.’ (Article 9.1(b))

It is a requirement under the Schedule 2B of the Planning and Development (SEA) Regulations 2004 to give; “an outline of the reasons for selecting the 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...”

### Context for Selecting Alternatives.

In selecting SEA alternatives, cognisance must always be taken of parent strategies and documents which have a key influence on how alternatives will be framed. Certain strategic issues will therefore have already been determined at a higher level. In the case of the RPGs, the ESDP at the European level, and the NSS at the national level, are considered to provide the framework and guiding principles within which alternatives must be considered. Another key document that must be considered in the review of the RPGs is the NDP which provides the vehicle for delivery of the NSS.

### National Development Plan

In respect to regional development, the National Development Plan 2007 – 2013 states, “...*this Plan will particularly focus investment around the NSS, especially around the network of the nine Gateways identified in the Strategy. The Plan will also support the concept of an urban-rural partnership by linking the focus on the Gateways with support for other urban centres and rural areas*”.

### National Spatial Strategy

The NSS 2002 envisages thriving Gateway centres driving the development of their wider regions, including surrounding towns, villages and rural areas. The NSS summarises balanced regional development as:

*“Developing the full potential of each area to contribute to the optimal performance of the State as a whole — economically, socially and environmentally”.*

## **Regional Planning Guidelines Review – Gateway and Hub Population Targets (2009)**

As part of the RPG review at the National Level, the DEHLG issued guidance to Regional Authorities which included an outline of the changed economic circumstances and the development of the regions.

*“A key issue in growing the Gateways and Hubs is ensuring that their infrastructural and investment requirements are addressed within a framework for overall national economic development and infrastructural investment. However, the economic landscape has altered markedly since the current RPGs were adopted.*

*The considerably more constrained financial situation, substantially higher levels of unemployment, lower economic growth as well as other consequent and related changes indicate that the context for the next round of new RPGs will constitute a more challenging environment at national, regional and local levels.*

*The challenging economic context has implications for the new RPGs by placing an even greater need to focus development into areas such as Gateways and Hubs because focusing development delivers both the improvements in critical mass and cost effectiveness in delivery of investments within constrained resources that are essential to economic recovery”.*

This much needed focus for development in the key settlements must be at the heart of all alternatives considered here.

### **Strategically Important Settlements within the Region**

The Gateways and Hubs listed below have been set out in the NSS as key settlements for the region. In addition to the Gateways and Hubs, the town of Drogheda has been defined as being a Primary Development Centre for the region, and the town of Carrick on Shannon has been identified as being a Regionally Significant County Town.

- Letterkenny: Gateway
- Sligo: Gateway
- Dundalk: Gateway
- Cavan: Hub
- Monaghan: Hub
- Drogheda: Primary Development Centre
- Carrick on Shannon: Regionally Strategic Town

These settlements must therefore form the core urban settlements which will be the focus of the Regional Settlement Strategy. Other settlements have important functions within their respective counties and these roles and functions will be looked more closely at, within respective county development plans and local area plans.

### **Alternatives**

The following are the three alternatives considered.

1. Continuation of Current Trends;

2. Predominantly Gateway Led Development Model;
3. Balanced Development Model

## **Introduction to Alternative Models**

As part of the process of considering SEA Alternatives, the RPG Technical Working Group<sup>5</sup> in conjunction with the SEA team formulated, considered and examined each alternative in detail. The alternatives were subsequently discussed with the Department of Environment, Heritage and Local Government and as a result the alternatives were further refined. Through the aforementioned process, it was considered appropriate to develop alternatives for this region based on; continuation of current trends, predominantly gateway led development model and balanced development model.

### **Alternative 1: Continuation of Current Trends**

This approach would involve minimal intervention in terms of strategic forward planning. It would involve allowing development follow market forces to a greater extent and would take more of a short term planning approach. It would most likely lead to a concentration of development in the eastern part of the region with a highly dispersed settlement pattern with future population growth would most likely to be located along the strategic radial corridors extending from Dublin into the region. This alternative would give rise to an increase in the numbers of persons commuting to the Greater Dublin Area, with increasing commuting times and distances posing significant problems for this region, and others, through increased congestion and significant infrastructure pressures in parts of the region.

Development would not be directed towards properly serviced, robust receiving environments; rather, development would be provided where the short term demand exists. This option would inhibit the development of the gateways, hubs and other towns and villages throughout the region and consequently inhibit the overall development of the region.

This approach would most likely have the following impacts.

- There will be no proper framework for improved connectivity across the region as growth would occur on an ad-hoc basis and most likely in the eastern part of the region.
- Dispersed settlements and development patterns leading to a negative impact on urban settlements in terms of their vitality and viability;
- Ad-hoc development patterns with continued pressure on the edge of urban settlements and areas within the countryside already under pressure from roadside development;
- Demand for the uneconomic extension of community services and facilities;
- The coalescence of certain urban settlements;
- Provision of higher cost services and facilities in an unplanned way – developer driven and occurring as the need arises;
- Lack of clear guidance to developers in terms of the preferred location for development with increased risk of difficulties in terms of securing desirable development and securing planning permission;

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<sup>5</sup> Technical Working Group consists of the six Senior Planners from each constituent County within the Region which have responsibility for Development Plan and Policy formulation within each of their respective Local Authorities

- Lack of integration with other development plans and programmes at local, regional, national and international level;
- Increased risk of non-compliance with Water Framework Directive, with damage to environmentally sensitive areas and negative impacts on cultural heritage.

Having regard to the foregoing, it is considered that this approach would not be considered acceptable and would not be compatible with the key aims of the NSS as outlined above.

### **Alternative 2: Predominantly Gateway Led Development Model**

This alternative would focus primarily on the development of the three gateways within the region centre. These centres would offer the potential to play a leading role towards the development of the region and would offer the prospect of delivering a high return on investment, however it would tend to do so in an unbalanced way. It should be noted that the three Gateways of Letterkenny/Derry, Sligo and Dundalk, are located towards the periphery of the Region and have a strong east/west divide. In terms of their geographical location they are therefore poorly positioned to achieve the more balanced development of the region. It is noted that the central area of the region has a relatively weak urban structure. Whereas Cavan and Monaghan are centrally located within the region they do not have the critical mass (either alone or as linked hubs) to act as a single centre and engine for the development of the region. Both the physical and virtual infrastructural links between key centres of the region are not currently of a quality that would support these centres as the focus for the overall development of the region.

This alternative would have the following impacts:

- It would not be compatible with the aims of the NSS as it would not realise the full potential of the whole region or the development of strong links with other urban and rural areas as well as other regions. Consequently it would fail to achieve more balanced regional development;
- It would fail to fully realise the potential for co-operation with Northern Ireland as it would, by its nature, have a light focus on the development of other strategically important centres within the region;
- Weaker areas within the region would increasingly become marginalised and continue to decline with consequent adverse impacts on their vitality and viability;
- It would lead to increased tensions between urban and rural interests and would most likely cause much political and public disquiet within the balance of the region which is distinctly rural in character. It would therefore be difficult in the extreme to implement.
- Considering that the Gateways have are located on the periphery of the Region, they would not provide a good geographical spread across the region and hence are poorly placed to provide balanced regional development.
- By focusing development in three key centres, this model would place considerable pressure on the carrying capacity of the Gateways in terms of their physical and social infrastructure and on the environment.

Having regard to the foregoing, it is considered that this would not be an acceptable option and would not be compatible with the key aims of the NSS as outlined above.

### **Alternative 3: Balanced Development Model**

This model addresses the weaknesses of the previous models by focusing development on the Gateways of Sligo, Letterkenny/Derry and Dundalk, the Hubs of Cavan and Monaghan and the strategically important towns of Drogheda and Carrick on Shannon.

These towns are the most significant urban centres within the region and they provide a significant regional strategic function within each of the respective counties that make up the area of the border regional authority and they have extensive links to Northern Ireland. This model would facilitate co-operation between settlements, and in so doing, would enable them to function as a larger urban entity (i.e. 'punch above their individual weights'), thereby securing and improving the social, cultural and economic wellbeing of the region. This model could further be developed by improving the physical and virtual connectivity between the above settlements which effectively brings them closer together and provides them with a platform on which they each can develop a complimentary role rather than competing with each other. This model will also promote more balanced development of the region which can further be developed through improving cross border links with Northern Ireland.

This alternative is likely to have the following impacts:

- These centres offer a good geographical spread across the region and hence the opportunity for more balanced regional development;
- This alternative recognises the importance of attaining critical mass and a focus for economic activity within the larger urban centres. It acknowledges the importance of these centres in terms of sustaining and developing key infrastructural and community services and facilities and the importance of developing strategic infrastructural and economic links between these centres and other such centres;
- Through the development of these centres, it is envisaged that a coherent planning framework, as envisaged in the NSS, will emerge under this alternative. In so doing, the region can best realise more balanced development and its potential for economic, social and environmental prosperity;
- It is envisaged that the development of these larger centres will attract and sustain a wide range of economic and social activities that will drive the development of the region as a whole. There is an acknowledged interdependency and a well established link between having strong urban centres and securing the vitality and viability of and rural areas. Accordingly it is considered that this alternative would be compatible with the well established principles of sustainable development and in particular, with the key aims of the NDP and NSS. It is considered that the development of these larger urban centres will provide the impetus for the development of other smaller scale urban centres and rural hinterland within the region.

Having regard to the foregoing it is considered that this alternative would be an acceptable option and would be compatible with the key aims of the NDP or NSS as outlined above.

### **Do Nothing Option**

The "do-nothing" option represents a continuation of present trends. This option factors in no future policy direction, planned infrastructural improvements, or the views of the public or other interested parties - which is considered and included in

the formulation of RPG's. It is acknowledged that the "do-nothing approach" can form the basis of comparison against which the environmental effects of the plan may be measured, however it is not a viable option. It would not be in keeping with the principle of sustainable development which requires positive action in terms of the protection of the environment and achieving social, cultural and economic prosperity. This approach has therefore been dismissed as a viable option.

### **Assessment and Selection of Alternatives**

Having regard to the principles of sustainable development, the characteristics of the overall aim of the NSS, and the vision and goals of the RPGs, it is considered that the Balanced Development Model is the most appropriate alternative for the future development of the Border Region. The development of the key urban centres of the Gateways, Hubs in addition to Carrick-on-Shannon and Drogheda, are considered to be the most effective way of focusing future growth and development in the region. These engines of growth can then act as a stimulus to the growth of other urban centres and rural hinterlands. This alternative is best placed to achieve more balanced regional development and to secure the economic, environmental and cultural/social prosperity of the region, and thereby provides a framework for the sustainable development of the region.

The priority for the Border Region is, in the first instance, to develop the gateways and other strategically important centres that can act as engines for growth and thereby facilitate the economic, social and cultural development of the region and wider areas as a whole. There is a strong interdependency between urban and rural areas in terms of securing the sustainable development of both. The sustainability of rural areas, depends to a large extent on strong urban centres that are positioned to achieve a critical mass that will sustain strong economic activity and the development of strategically important services and facilities. It is most likely that areas characterised by a dispersed settlement pattern, experience a further decline in the urban structures of that area. Whereas, it is recognised that structurally weak rural areas need support, it is equally recognised that the continued untrammelled pattern of ad-hoc dispersed development in the open countryside can have an adverse effect on the vitality and viability of existing urban areas, as well as carrying a heavy environmental burden. Development such as this would compromise the capacity of the region to realise its potential and thereby inhibit the prosperity of the people and communities of the region.

Spreading the focus of development and hence investment in infrastructure across both larger and smaller scale settlements within the region would inhibit the capacity of the larger centres to advance the overall development of the region.

It is recognised that in the aftermath of the recent economic boom many of the smaller scale towns and villages and certain rural areas within the region have surplus capacity in terms of residential and commercial units, with high levels of vacancies as outlined in Census Data 2006. It is therefore likely that much of this surplus capacity will adequately provide for and accommodate any future growth in those locations where it exists. It is important that any future plans and associated policy documents in the region consider this issue as further development will only exacerbate vacancy surpluses into the future.

The alternatives are further assessed using a set of Strategic Environmental Objectives (SEO's) and environmental criteria in Chapter 11, Table 46 of this report.



## Conclusion

In conclusion, Alternative 2 - the Balanced Development Model, is considered an appropriate growth model for the future development of the Border Region. This model promotes and encourages the development of the key urban centres to act as the main focus for population and economic development. These centres through their physical and virtual infrastructure links can then function more efficiently when developing in unison with each other and, in turn, stimulate the development of other urban centres and the rural hinterland of the region.

**Table 6 Summary of Alternatives**

Alternative	Main Features	Assessment
1. Continuation of current trends.	Minimal intervention in terms of spatial planning thereby allowing current trends to continue whereby market forces largely dictate the location of future growth and development.	<p>It is likely the future population growth would be concentrated in the eastern part of the region and there would be a greater dispersal of population into the rural areas.</p> <p>It would lead to ad-hoc dispersed settlement pattern that would inhibit the development of strategically importance centres.</p> <p>New development would fail to be directed towards properly serviced and robust receiving environments.</p> <p>This model would result in a lack of long term strategic planning in terms of the delivery of key infrastructural services and facilities.</p> <p>It would not comply with the development framework outlined for the Border Region in the NSS.</p>
2. Gateway Led Development Model	Focus primarily on development of a three centre as an engine for the overall development of the Region.	<p>The existing Gateways of Letterkenny/Derry, Sligo and Dundalk, are located towards the periphery of the Region and have a strong east/west divide. The centre of the region is structurally weak. In terms of their geographical location these centres are therefore poorly positioned to achieve the more balanced development of the region.</p> <p>Weaker areas would become marginalised and would decline further.</p> <p>This alternative would give rise to political and public disquiet and would be difficult to implement.</p> <p>It would not comply with the development framework outlined for the Border Region in the NSS.</p>
3. Balanced Development Model	Focus primarily on development of a number of strategically important centres which would act as engines for the overall development of the region.	<p>This alternative offers a good geographical spread of key settlements that would facilitate more balanced regional development.</p> <p>It would enable key strategically important centres to coordinate their efforts, join forces and thereby act like a large urban entity that would punch above their individual weight.</p> <p>It would help sustain and stimulate the development of neighbouring areas and help secure the vitality and viability of rural areas.</p> <p>It would comply with the development framework for the Border Region as outlined in the NSS.</p>

## **6 Current State of the Environment**

The Border Region is endowed with a wide range of environmental resources, which need to be acknowledged and dealt with appropriately within the guidelines. The current state of the environment of the region will be considered under the following environmental headings:

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

Annex 1 of the Directive also requires secondary and cumulative effects to be considered.

### **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 and EU Habitats Directive and also by the EIA Directive (85/337/EEC).

In 1997, the Habitats Directive was transposed into Irish national law and the relevant regulations. The European Union (Natural Habitats) Regulations, SI 94/1997 represent a fundamental shift in nature conservation policy and law. These Regulations have since been amended by SI 233/1998 & SI 378/2005. The requirements in respect to the Habitats Directive are dealt with in a separate section of this report.

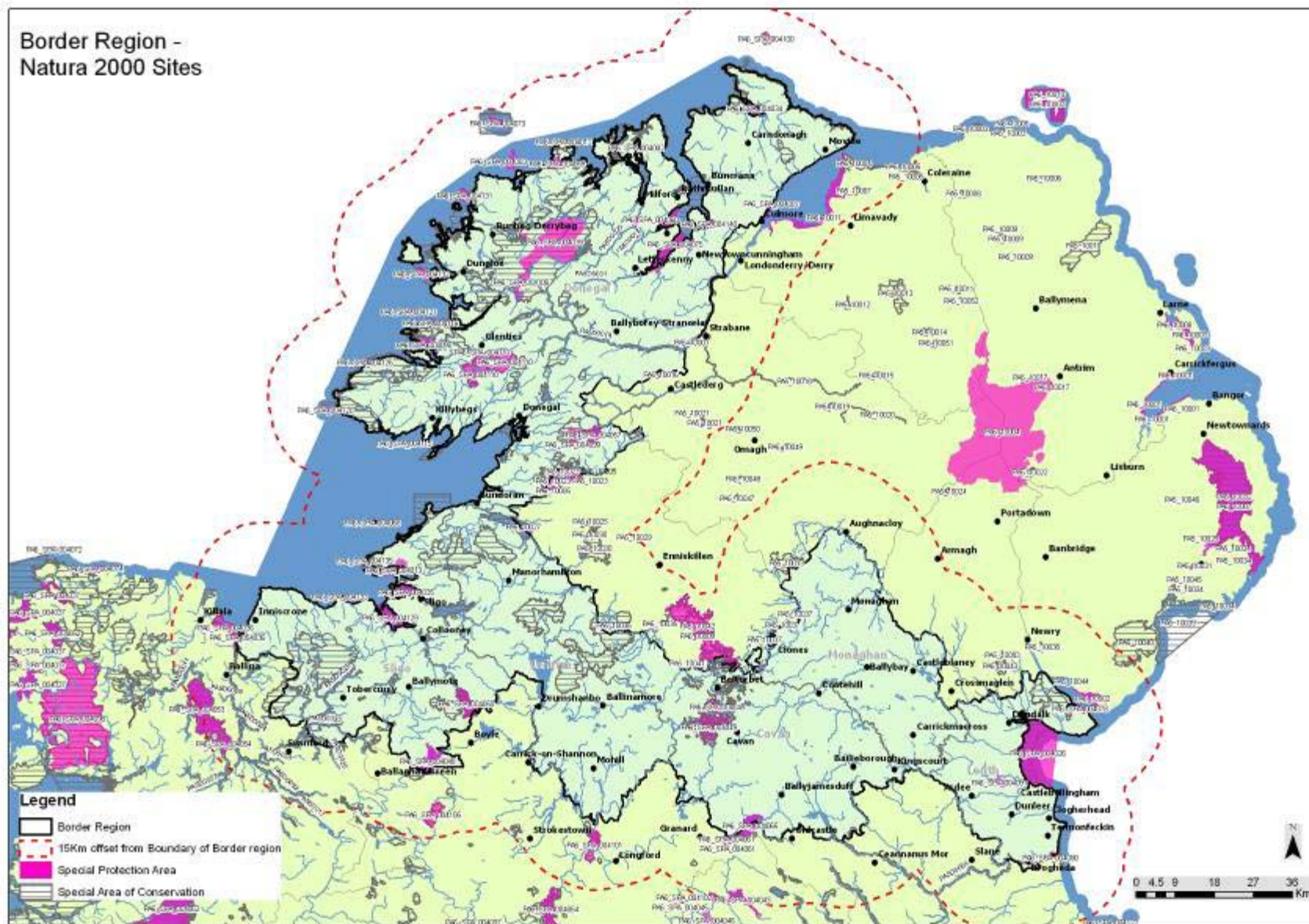
Council Directive 79/409/EEC on the conservation of wild birds, commonly referred to as the Birds Directive, is the EU's oldest piece of nature legislation and one of the most important, creating a comprehensive scheme of protection for all wild bird species naturally occurring in the Union. The Directive 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.

The landscape of the Border Region provides the setting for a range of wildlife habitats and species and many areas are designated or proposed as, Special Areas of Conservation (SAC's), Special Protection Areas, (SPA's) and Natural Heritage Areas (HNA's). In general terms SAC's and SPA's 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. Many habitats

associated with water were considered to be in bad condition. Planning for the conservation and protection of key habitats and species is important on a regional and catchment basis.

Site Synopses for SPAs, cSACs and NHAs are available from the National Parks and Wildlife Service at [www.npws.ie](http://www.npws.ie). The Habitats Assessment Report, which accompanies this report, outline details of Natura 2000 sites within the Border Regional Authority area and those within a 15 km buffer zone. The report includes the location of the site, site code/name, qualifying interest's conservation objectives and threats to site integrity.

Map 6 shows the location of Natura 2000 Sites (SAC's and SPA's). Map 7 shows the location of Freshwater Pearl Mussel Sites.



**Map 6**      **Natura 2000 Sites**





### Map 7 Location of Fresh Water Pearl Mussel Site

**Table 7      Number of NHA,s, pNHA's, cSAC's and SPA's in each County**

<b>County</b>	<b>NHAs</b>	<b>pNHAs</b>	<b>cSACs</b>	<b>SPAs</b>
<b>Cavan</b>	2	20	7	3
<b>Donegal</b>	13	74	46	22
<b>Louth</b>	0	24	6	4
<b>Monaghan</b>	1	19	1	1
<b>Sligo</b>	3	35	21	9
<b>Leitrim</b>	9	28	8	2
<b>Total</b>	<b>28</b>	<b>200</b>	<b>89</b>	<b>41</b>

The full extent of the regions 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 Glenveagh 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. Biological diversity means the variety of all life on earth from the smallest and simplest micro-organism to the complex system that is the rainforest. Biodiversity is the result of billions of years of evolution. In Ireland habitat and species diversity constitutes our national biodiversity. Biological diversity, or biodiversity, is the term given to the variety of life on earth and the natural patterns it forms. The biodiversity we see today is the result of billions of years of evolution, shaped by natural processes and, increasingly, by the influence of humans. It forms the web of life of which we are an integral part and upon which we so fully depend. 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.

Urban growth in the region has been accelerating at a greater rate over recent years as increased development expands city and town limits into the countryside. Artificial land cover throughout the region 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 region 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.

As we grow in awareness of how our activities affect the natural environment, we must rethink how our basic requirements of sanitation, transport and housing are provided. As a result, best practice measures are constantly evolving to better facilitate the incorporation of biodiversity into development. Recent policy and guideline documents from the Department of the Environment, Heritage 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 “Green City Guidelines” published by UCD, Urban Institute Ireland (2008) are designed to provide practical guidance for planners and developers on how to integrate biodiversity into new developments, specifically medium to high-density housing developments in urban areas.

The number of protected sites (including candidate designated areas and proposed natural heritage areas) in respect to each county within the region is set out in Table 7. In Northern Ireland there are over 350 protected areas (including candidate designated areas). 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. Within Ireland there are 18 species of plant or animal recorded as endangered, 52 recorded as vulnerable, 75 recorded as rare and 8 classed as intermediate (<http://www.epa.ie/environment/biodiversity/protectedareas/>).

Landscape 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. This is most relevant in County Donegal, which contains Ireland’s largest tracts of both Atlantic Blanket Bog and Mountain Blanket Bog. Areas of North Leitrim, such as Thur Mountain and parts of West Cavan have already been identified by the National Parks and Wildlife Service as being significant ecologically, and these locations have to be priority in conservation terms

Within Northern Ireland there are currently 272 plant and animal species that require conservation action and have been identified as Priority Species under the Biodiversity Action Plan. There are also 457 species on the Northern Ireland Species of Conservation Concern (SOCC) list. Those species under threat have been identified on a scientific basis. (<http://www.ni-environment.gov.uk/>).

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. Map 7 shows the location of Freshwater Pearl Mussel relating to the Border Region.

### Freshwater Pearl Mussel Sites

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.

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 once-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.

Table 8 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 Border Regional Authority area.

**Table 8 Freshwater Pearl Mussel Objectives and Threats**

SAC site code site name	Freshwater Pearl Mussel ( <i>margaritifera margaritifera</i> ) Population name	Conservation objectives	Threats to site integrity
<b>000140</b> <b>Fawnboy Bog / Lough Nacung SAC</b>	Clady	Maintain Clady population at a favourable conservation status, as prescribed by the third schedule of the regulations.  Achieve the Ecological Quality Objectives for the freshwater mussel habitat as prescribed by the fourth schedule of the regulations.	Siltation Peat extraction Afforestation Direct loss of habitat Discharges to water bodies in catchment
<b>000163</b> <b>Lough Eske and Ardnamona Wood</b>	Eske	Maintain Eske population at a favourable conservation status, as prescribed by the third schedule of the regulations.	Siltation Peat extraction Afforestation Direct loss of habitat Discharges to water bodies in catchment



		Achieve the Ecological Quality Objectives for the freshwater mussel habitat as prescribed by the fourth schedule of the regulations.	
<b>002047 Cloghernagor Bog and Glenveagh National Park</b>	Glaskeelan	<p>Maintain Glaskeelan population at a favourable conservation status, as prescribed by the third schedule of the regulations.</p> <p>Achieve the Ecological Quality Objectives for the freshwater mussel habitat as prescribed by the fourth schedule of the regulations.</p>	<p>Siltation</p> <p>Peat extraction</p> <p>Afforestation</p> <p>Direct loss of habitat</p> <p>Discharges to water bodies in catchment</p>
<b>002176 Leannan River</b>	Leannan	<p>Maintain Leannan population at a favourable conservation status, as prescribed by the third schedule of the regulations.</p> <p>Achieve the Ecological Quality Objectives for the freshwater mussel habitat as prescribed by the fourth schedule of the regulations.</p>	<p>Siltation</p> <p>Peat extraction</p> <p>Afforestation</p> <p>Direct loss of habitat</p> <p>Discharges to water bodies in catchment</p>
<b>002047 Cloghernagor Bog and Glenveagh National Park</b>	Owencarrow	<p>Maintain Owencarrow population at a favourable conservation status, as prescribed by the third schedule of the regulations.</p> <p>Achieve the Ecological Quality Objectives for the freshwater mussel habitat as prescribed by the fourth schedule of the regulations.</p>	<p>Siltation</p> <p>Peat extraction</p> <p>Afforestation</p> <p>Direct loss of habitat</p> <p>Discharges to water bodies in catchment</p>
<b>000197 West of Ardara / Maas Road</b>	Owenea	<p>Maintain Owenea population at a favourable conservation status, as prescribed by the third schedule of the regulations.</p> <p>Achieve the Ecological Quality Objectives for the freshwater mussel habitat as prescribed by the fourth schedule of the regulations.</p>	<p>Siltation</p> <p>Peat extraction</p> <p>Afforestation</p> <p>Direct loss of habitat</p> <p>Discharges to water bodies in catchment</p>

## **Clady**

The Clady River is the outflow from Lough Nacung, flowing for approximately 5 km in an east to west direction before entering the sea at Gweedore Bay. It runs through the towns of Gweedore (about 2 km below Lough Nacung) and Bunbeg (about 1 km 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.

## **Eske**

The 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.

## **Glaskeelan**

The Glaskeelan catchment lies in north west Donegal and is the smallest pearl mussel catchment in Ireland at 17.45km<sup>2</sup>. It incorporates Nambraddan and Inshagh Lough. The entire catchment is part of one of two SACs, Lough Akibbon and Gartan Lough and Cloghernagore Bog and Glenveagh National Park SAC. It is completely surrounded by pearl mussel catchments to the west by the Owencarrow and to the east by the Leannan. Over half of the catchment is contained in Glenveagh National Park.

The 2007 rapid assessment confirmed that the main population remains upstream of Glaskeelan Bridge at C05185 17370 and with a middle aged profile (Moorkens 2007). A few hundred mussels were seen upstream of the bridge, most in the lower part of the section, with mussels much sparser upstream. Downstream of Glaskeelan Bridge, adult mussels were scattered and infrequent. The two mussels seen that were sub-70mm in length places the population in a category “adults with some juveniles”, but clearly not much recruitment has occurred since the river was last surveyed in 1995, which is serious given its SAC status.

## 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. Ireland presently has 45 sites designated as Wetlands of International Importance, with surface areas of 66,994 hectares. There are 9 Ramsar sites designated within the region spanning 11,942 hectares of wetlands. Details in respect to each site may be viewed at; [http://195.143.117.139/profile/profiles\\_ireland.htm](http://195.143.117.139/profile/profiles_ireland.htm)

**Table 9 Ramsar Sites within the Region**

Location	Area (Ha)	Co-ordinates	Date Designated
<b>Donegal</b>			
Meenachullion Bog	194	54°54'N 008°07'W	30/05/90
Pettigo Plateau	900	54°37'N 007°57'W	31/07/86
Trawbreaga Bay	1,003	55°17'N 007°15'W	11/06/96
Lough Barra Bog	176	54°57'N 008°07'W	01/06/87
<b>Sligo</b>			
Cummeen Strand	1,491	54°17'N 008°30'W	11/06/96
Easky Bog	607	54°11'N 008°49'W	30/05/90
Killala Bay/Moy Estuary (Mayo, Sligo)	1,061	54°15'N 009°10'W	11/06/96
Lough Gara Sligo, Roscommon	1,742	53°56'N 008°25'W	11/06/96
<b>Louth</b>			
Dundalk Bay	4,768	54°00'N 006°20'W	11/06/96

## Ecological Networks

Article 10 of the Habitats Directive recognizes 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 Region 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:

- River Glyde
- River Dee
- River Fane System
- Castletown/Kilcurry River
- River Shannon System
- Ulster Canal
- River Boyne/River Blackwater System
- River Blackwater & River Cor (Lough Neagh)
- Lough Oughter System (including the Erne, Woodford, Finn, Annalee and Dromore Rivers)
- Shannon-Erne Waterway (Ballyconnell-Ballinamore Canal)
- Claddagh/Swanlinbar River System
- Bonet River System (including Garavogue River)
- Duff River
- The Drumcliff River (including Diffreen River)
- The Unshin/Owenmore River System
- Drowes River/Lough Melvin System
- River Moy System
- Bradoge River
- River Erne
- Abbey River
- Ballintra River
- Laghy River System
- River Eske System
- Eany Water
- Bunlacky River
- Oily River
- Bungosteen River
- Glenaddragh River
- Balladoo River
- Glen River
- Owenwee River
- Murlin River
- Bracky River
- Owentocker River
- Owennea River
- Gweebarra River System
- Owennamarve River System
- Gweedore River
- Clady River
- Owencronahulla/Corveen River
- Yellow & Glen Rivers
- Owenwillin
- Owentully
- Glenna River
- Tullaghobegly River
- Ray River System
- Lackagh/Owencarrow River System
- Bunlin River
- Burnside River
- Leannan River System
- River Swilly
- Mill River
- Crana
- Clonmany River
- Donagh River
- Gleannagannon River
- Ballboe River
- Culoort River
- Culdaff River
- Long Glen River
- Bredagh River
- Clare River
- Drung River
- Cabry River
- River Foyle/River Finn System

## 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 7 sites in Donegal and 2 in Sligo. Details in respect to each site may be viewed at the National Parks and Wildlife website at; <http://www.npws.ie/en/NatureReserves/>. The following is a list of the sites within the region.

**Table 10 Statutory Nature Reserves within the Region**

Location	Area (Ha)	Date Designated
<b>Co Donegal</b>		
Ballyarr Wood Nature Reserve	30	Established 1986.
Derkmore Wood Nature Reserve	7	Established 1988
Duntally Wood Nature Reserve	15.3	Established 1986
Lough Barra Bog Nature Reserve	176.4	Established in 1987
Meenachullion Nature Reserve Area	194	Established in 1990
Pettigo Plateau Nature Reserve Area	900	Established in 1984
Rathmullan Wood Nature Reserve Area	32.73	Established 1986
<b>Sligo</b>		
Ballygilgan (Lissadell) Nature Reserve Area	29.5	Established in 1986
Easkey Bog Nature Reserve Area	607	Established in 1990

Source: <http://www.npws.ie/en/NatureReserves/>

## 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 region. 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. Many species such as the Norway Rat have been here for centuries and are no longer considered non native. Other more recent

arrivals to Ireland such as the Zebra Mussel are considered both non native and furthermore, in this case, pose a direct threat to aquatic ecosystems and human activities by blocking water pipes and boat engines and affecting our native fish species.

Invasive species have been introduced to Ireland from other countries or continents by human beings, either intentionally or accidentally. In the absence of their natural predators or parasites, such introduced, invasive species are increasing in number and spreading “out of control” and are colonising and monopolising habitats vital to the survival of native, Irish wildlife. Such species are seen to be a threat to native biodiversity and warrant corrective action to prevent their further spread and the consequent loss of native biodiversity which is seen as having “more of a right to be here” in that Ireland provides its natural habitat. We do not however include economically important, commercial crops (e.g. cereals or conifers) or domesticated animals (man, cattle, sheep, goats, cats etc) unless these have formed wild-breeding, feral populations. The following is a list of the most common invasive species to be found in the Region.

Sycamore – native in France and mainland Europe, widespread in woodlands  
Non-native conifers (e.g. Sitka spruce) take up space that could be native woodlands and are also, to some degree, self-seeding on hillsides.

Rhodendron ponticum – native to Asia, widespread in woodlands.

Other non-native broadleaved trees, such as horse or sweet chestnut, lime or beech are generally deliberately planted. Though they can and do set seed and grow from seed in the wild, they do not usually grow in such numbers as to threaten native biodiversity. Gunnera, also known as giant hogweed, has poisonous qualities and is found across the region.

Other invasive species found in the region include; Japanese knotweed, Himalayan Balsam, Didemnum Spartina Anglica.

Table 11 presents a summary of the threats to the integrity of various categories of habitats (the list of threats is not exhaustive)

**Table 11 Threats to the integrity of different categories of Habitats**

Habitats	Threats
<b>Raised Bogs</b> <b>Blanket Bog</b> <b>Wet Heath</b> <b>Dry Heaths</b>	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
<b>Lakes &amp; ponds</b> <b>Watercourses/Rivers</b>	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
<b>Marine Habitats</b> <b>Bays/Inlets/ Estuaries</b> <b>Brackish Waters</b> <b>Open sea</b>	Water quality/pollution Development of marinas and ports Disturbance to marine mammals Dumping at sea Direct loss of habitat to development Recreational/Amenity Use
<b>Woodland/Scrub</b>	Direct loss of habitat to development Amenity/Recreational Use Invasive species Lack of/inappropriate woodland management Overgrazing (deer)
<b>Semi-natural grasslands</b> <b>Limestone pavement</b>	Agricultural Improvements/Reclamation Agricultural abandonment Overgrazing/Undergrazing Direct loss of habitat to development Quarrying on esker ridges and limestone pavement Bracken & scrub encroachment
<b>Marshes</b> <b>Swamps</b> <b>Fens</b> <b>Turloughs</b>	Agricultural Improvements/Reclamation Drainage/Changes in local hydrology Water 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 e.g. quarrying/rock blasting, for turloughs & groundwater fed fens
<b>Sand Dune Systems</b> <b>Salt Marshes</b>	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 & scrub encroachment Amenity/Recreational Use Tourism related development
<b>SPAs</b>	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, information gathered under the National Platform for Biodiversity Research and the EPA Environment in Focus 2006 document. In Northern Ireland further information may be obtained from the Centre for Environmental Data and Recording (CEDaR), information gathered under the Countdown 2010 programme. The Habitats Directive Assessment process will integrate with the Environmental Report and inform the making of the RPG's in respect to the management of the biodiversity, flora and fauna of the region.

## Population and Human Health

The Regional Planning Guidelines have a critical role to play in ensuring that the needs of future population growth is planned for and accommodated within the development plans of each Member Council.

Revised population targets from the NSS were circulated to the Regional Authorities by the Department of Environment, Heritage and Local Government on the 5<sup>th</sup> January 2009. Table 12 sets out the minimum population targets that must be incorporated into the revised settlement strategy in the new RPG's. An outline of how population targets in respect to gateways, hubs and strategically important centers, will be presented in the Environmental Report .

**Table 12 Regional Population Targets for the State and the Border Region 2010, 2016 and 2022**

	<b>2008</b>	<b>2010</b>	<b>2016</b>	<b>2022 (low / high) range</b>
<b>Border Region</b>	492,500	511,000	552,700	595,000 / 611,400
<b>State</b>	<b>4,422,000</b>	<b>4,584,900</b>	<b>4,997,000</b>	<b>5,375,200 / 5,523,000</b>

*DEHLG, 05 January 2009*

The January 2009 document set out high and low targets for 2022. Given the uncertain economic outlook in the short to medium term and associated migration impacts, the Department advises that the lower targets for 2022 should be included in the new RPG's, and are therefore the basis for the gateway/hub targets.

Through the implementation of the existing RPGs, it was found that some variance exists in population growth of the gateways and hubs in the region. In particular there was concern that some of the gateways and hubs are failing to develop the critical mass in line with the RPGs aims. The most noteworthy levels of population growth were in the gateway of Letterkenny, the hub town of Cavan and the regionally strategically town of Carrick on Shannon. The promotion of a balanced regional development must therefore be a priority for the new guidelines.

Reasons cited for poor growth in the main settlements may well be due to the fact that the Border Region is traditionally rural in nature with 305,252 persons (65.2% 2006 Census) of its total population living in rural areas. A breakdown of urban and rural population figures for the Border Region are provided in Table 13.

Table 14 outlines the residential vacancy rates within the Region. The Border Region has one of the highest rates of residential vacancy throughout the country and is a significant issue which must now be addressed in the Draft Guidelines.



**Table 13 Population and Percentage breakdown of Aggregate Town and Rural Area figures for Counties in the Border Region in 2002 and 2006**

County/ Region/ State	Year	Aggregate Town Area Population (Persons)	Aggregate Rural Area Population (Persons)	Total Population (Persons)	% of Population in Aggregate Town Area
Louth	2002	65,340	36,481	101,821	64.2
	2006	71,640	39,627	111,267	64.4
Leitrim	2002	1,842	23,957	25,799	7.1
	2006	2,595	26,355	28,950	9.0
Sligo	2002	19,735	38,465	58,200	33.9
	2006	19,402	41,492	60,894	31.9
Cavan	2002	9,502	47,044	56,546	16.8
	2006	16,913	47,090	64,003	26.4
Donegal	2002	32,788	104,787	137,575	23.8
	2006	36,585	110,679	147,264	24.8
Monaghan	2002	14,651	37,942	52,593	27.9
	2006	15,988	40,009	55,997	28.6
Border	2002	143,858	288,676	432,534	32.3
	2006	163,123	305,252	468,375	34.8
State	2002	2,334,282	1,582,921	3,917,203	59.6
	2006	2,574,313	1,665,535	4,239,848	60.7

Source CSO (2006)

**Table 14 Residential Vacancy Rates**

Area	Total Housing Stock (2006)	% Vacancy (2006)	*Estimated % oversupply to 2010
Leitrim	15282	29.3	45.48
Donegal	70526	27.0	35.23
Sligo	28751	23.1	23.98
Cavan	28250	21.2	26.84
Louth	45488	13.4	7.95
Monaghan	21658	12.8	11.24
Region	209955	21.1	23.88
State	1769613	15.0	12.41

Source CSO (2006)

\* Based on DoEHLG Population Targets and House Completions to end of 2008

Table 15 provides a breakdown of the population of each principal settlement, its environs and the catchment area as defined in the footnote of Table 15. The analysis indicates that over the period of 1996 – 2006 there has been significant growth within the environs and catchment areas of each principal settlement. This is an issue which must be addressed as the region has a very weak urban structure which is being further undermined by this pattern of growth.

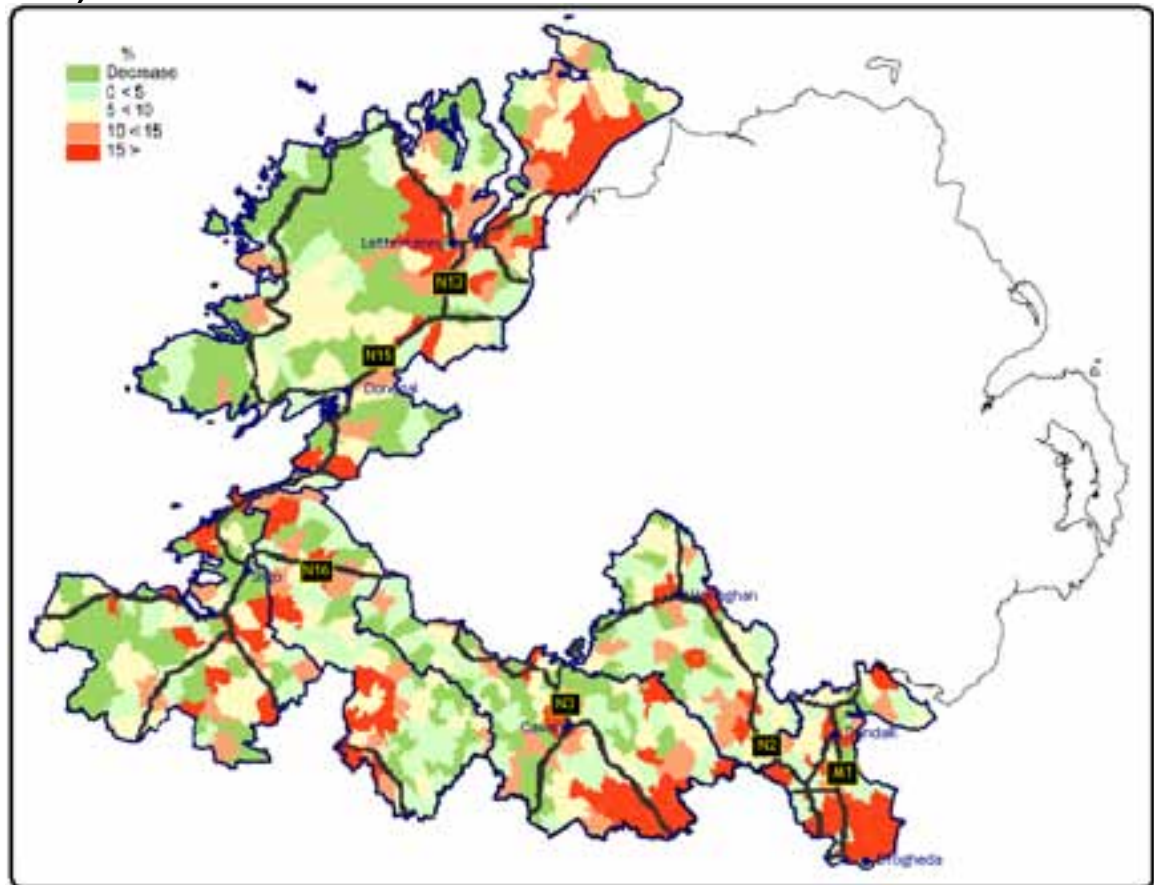
**Table 15 Distribution of Population Growth in Key Settlements and their Catchments in the Border Region between 1996 and 2006**

Settlement	Area	Population numbers			Rate of Growth (%pa)	
		1996	2002	2006	1996-02	2002-06
Dundalk	Town	25,762	27,385	29,037	1.0	1.5
	Environs	4,433	5,120	6,048	2.4	4.3
	20% Catchment	22,825	23,922	25,401	0.8	1.5
	<b>Total</b>	<b>53,020</b>	<b>56,427</b>	<b>60,486</b>	<b>1.0</b>	<b>1.8</b>
Sligo	Town	17,786	18,473	17,892	0.6	-0.8
	Environs	723	1,262	1,510	9.7	4.6
	20% Catchment	42,685	44,100	48,521	0.5	2.4
	<b>Total</b>	<b>61,194</b>	<b>63,835</b>	<b>67,923</b>	<b>0.7</b>	<b>1.6</b>
Letter-Kenny*	Town	7,606	7,965	15,062	0.8	17.3
	Environs	4,390	7,266	2,524	8.8	-23.2
	20% Catchment	33,799	35,632	38,691	0.9	2.1
	<b>Total</b>	<b>45,795</b>	<b>50,863</b>	<b>56,277</b>	<b>1.8</b>	<b>2.6</b>
Cavan	Town	3,509	3,538	3,934	0.1	2.7
	Environs	2,114	2,560	3,949	3.2	11.4
	20% Catchment	18,198	19,031	19,798	0.7	1.0
	<b>Total</b>	<b>23,821</b>	<b>25,129</b>	<b>27,681</b>	<b>0.9</b>	<b>2.4</b>
Monaghan	Town	5,628	5,717	6,221	0.3	2.1
	Environs	214	219	489	0.4	22.2
	20% Catchment	18,688	19,290	20,391	0.5	1.4
	<b>Total</b>	<b>24,530</b>	<b>25,226</b>	<b>27,101</b>	<b>0.5</b>	<b>1.8</b>
Drogheda	Town	24,460	28,333	28,973	2.6	0.6
	Environs [Louth only]	36	554	1,330	240	35
	[Meath only]	786	2,133	4,787	29	31
	<b>Total</b>	<b>25,282</b>	<b>31,020</b>	<b>35,090</b>	<b>3.8</b>	<b>3.3</b>
Carrick-on-Shannon	Town [Leitrim only]	1532	1842	2595	3.4	10.2
	[Roscommon]	336	395	568	2.9	11.0
	<b>Total</b>	<b>1868</b>	<b>2237</b>	<b>3163</b>	<b>3.3</b>	<b>10.3</b>

\* 20% catchment” refers to the EDs which had 20% or more of the employed persons in the ED who worked in the adjacent Gateway.

Map 8 below shows that population growth over the period 2002-2006 has been extensive, but is most pronounced in areas that are in closer proximity to the trunk roads leading to the Greater Dublin Area (N2, N3 and M1), the surrounding areas of the Letterkenny-Derry Gateway, the Sligo Gateway, and the hubs of Cavan and Monaghan. Large areas, including Western Donegal, Western Sligo, Leitrim (with the exception of Carrick-on-Shannon and environs) and West Cavan and Monaghan have seen decreases in population.

**Map 8**      **Percentage population change of electoral divisions (2002-2006)**



(Sources: CSO Census of Population; Ordnance Survey Ireland)

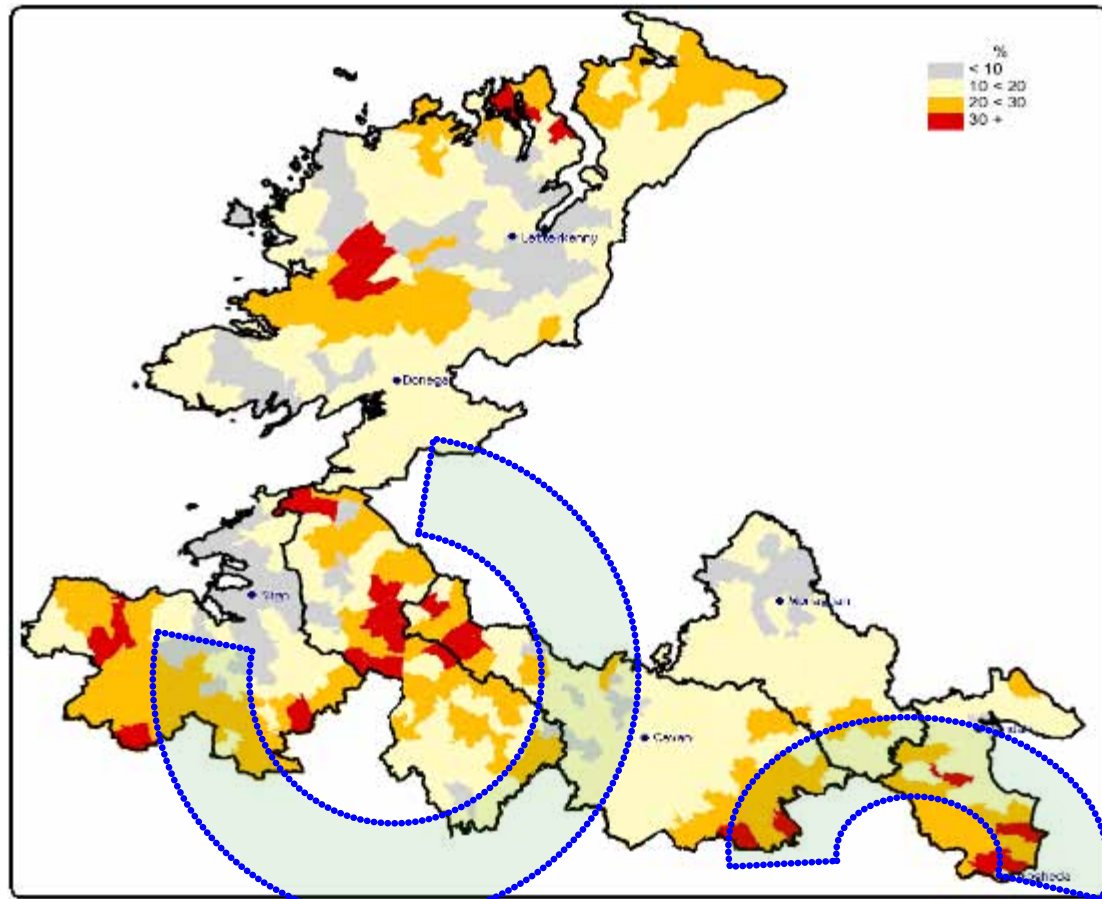
The spatial distribution of population across the Border region is illustrated in Map 9. Given the physical landscape, particularly in the North West Border Region, there are large areas where the population density is very low. The eastern part of the region is the most densely populated, particularly in Co Louth and in areas within commuting distance of the Greater Dublin Area. The sparse settlement pattern, while posing certain challenges in terms of infrastructure provision, is also a characteristic of the region which, along with its diverse landscape adds to the attractiveness and potential as a tourism and recreation destination.



## Travel to Work Patterns in the Border Region

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**Map 10 Percentage of Population that Travels 30km or more to Work**



(Sources: CSO Census of Population, Ordnance Survey Ireland, 2006)

All key settlements with the exception of Sligo experienced population growth during the census period 2002 – 2006. It should be noted that the catchment area of Sligo and other key settlements such as Monaghan and Cavan, experienced significant growth. This pattern of growth does not lead to sustainable urban settlements and should be addressed within the RPGs.

A key function of the RPGs is the setting of population targets and outlining the resultant likely housing demand and residential housing land requirements in accordance with National Guidelines and legislative requirements. These targets will then set the framework of population targets and housing land requirements for the constituent local authorities.

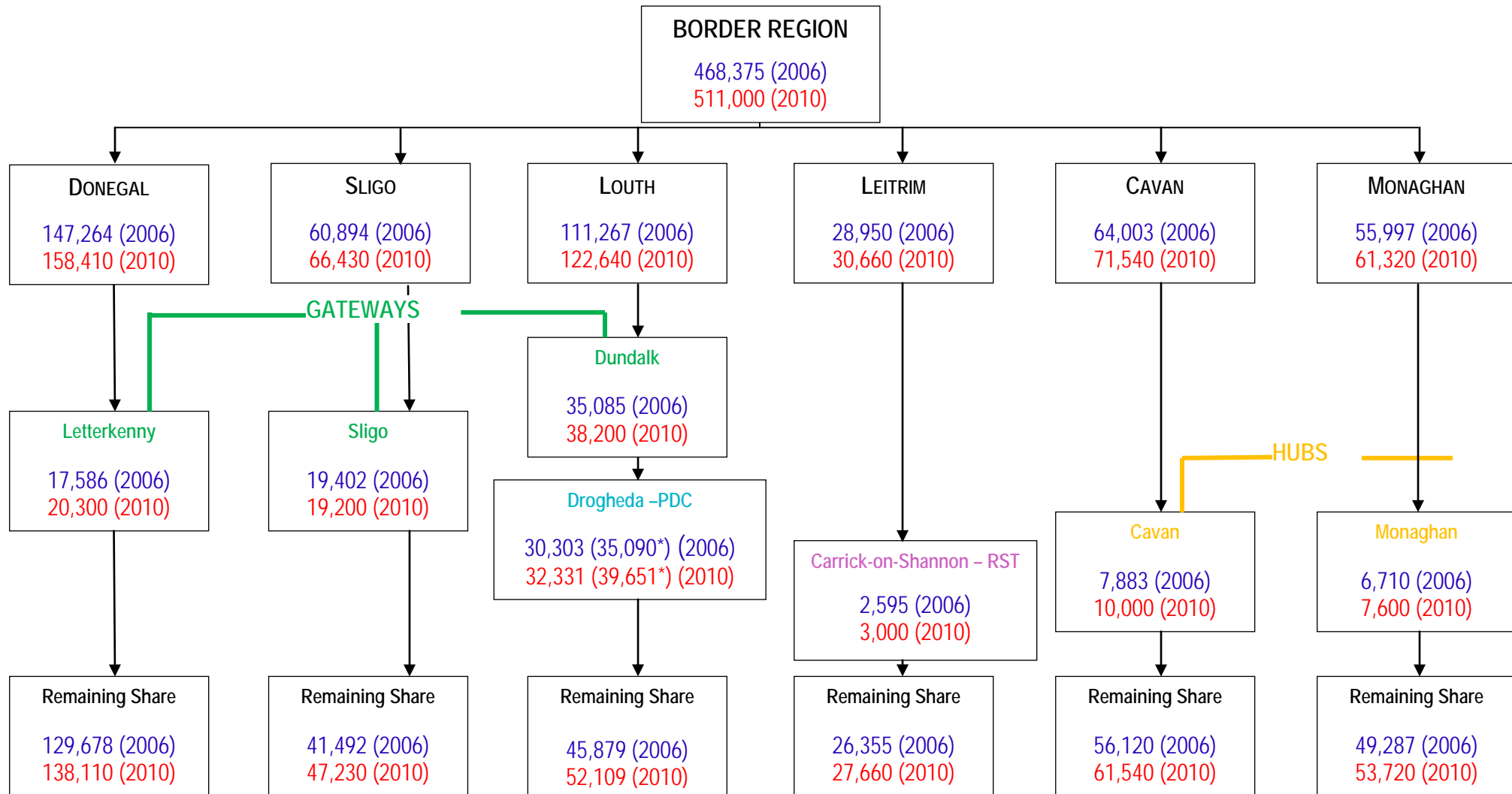
Figure 3 indicates the population of the region from the 2006 CSO population census data as well as a likely breakdown of the regions population in 2010 based on the DEHLG figures of October 2009. Figure 4 indicates and incorporates the minimum population targets for 2016 and 2022. These minimum population targets will form the basis of the settlement framework within the Guidelines. The settlement strategy will aim to provide an effective rural/urban balance that will provide for the proper planning and sustainable development of the Region.

Following the adoption of the RPG's, the population targets will inform the making of County Development Plans and Local Area Plans. Whereas the RPG's set out population targets for each County and key settlements, it will be the role of the

respective Local Authorities to distribute the remaining share to the balance of the urban centres and to the rural areas.

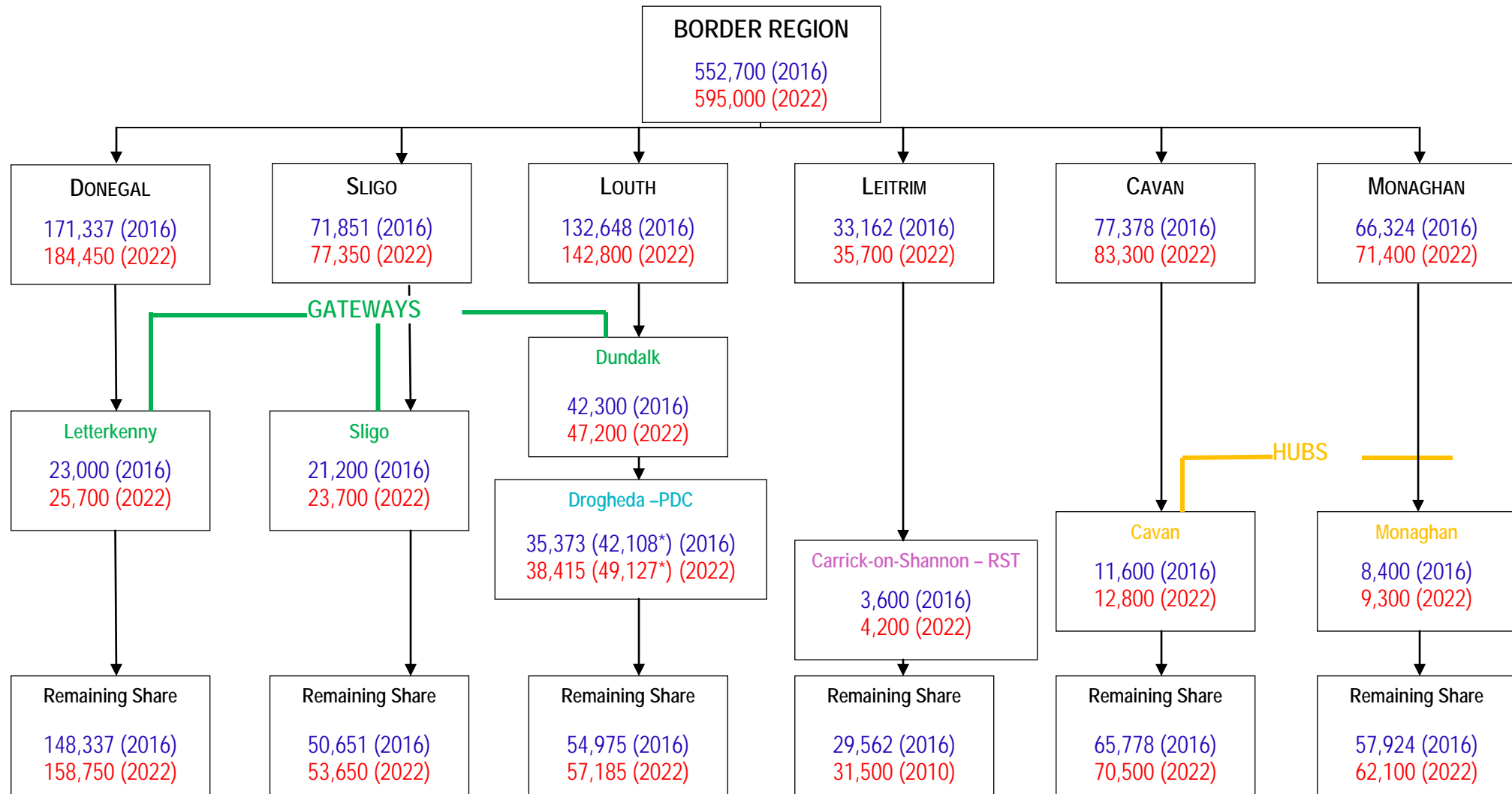
The short to medium term will present significant challenges in terms of both urban and rural population trends. Net outward migration is now a real prospect and in this regard the targets set may be considered ambitious, in the short term at least. In order to achieve a prosperous region it is critical that the population of key settlements is at least maintained. The Balanced Development Model outlined in Section 5, whereby development will be directed towards key settlements, is considered to be the most appropriate means of securing the prosperity and environmental integrity of the Region.

**Figure 3 Border Region Population Breakdown 2006 (CSO Data) & Targets for 2010**



(\*) refers to entire population of Drogheda and includes Meath environs

**Figure 4 Border Region Minimum Population Targets for 2016 & 2022**



(\*) refers to entire population of Drogheda and includes Meath environ



## **Socio-economic Characteristics of the Border Region**

### **Age Profile and Dependency Ratios**

The region has:

- the lowest percentage of its population in the age category 25 – 44 (working population)
- the highest percentage of its population in the category 65 and over (Highest elderly dependency ratio in Ireland)
- one of the highest youth dependency ratios in Ireland (category 0 – 14 years)

### **Migration**

- The Border Region has 9.13% of total non-nationals in Ireland.

### **Disposable Income**

- The region consistently has one of the lowest levels of disposable income in Ireland (2002 and 2006 Census).

### **Education**

- It has the lowest number of persons achieving below Junior Cert and Leaving Cert as a percentage of total population for persons aged 15+ for the census years 2002 and 2006.
- It has one of the lowest numbers of persons achieving third level qualifications (23.4%) as a percentage of total population for persons aged 15+ in 2006. The situation has however improved significantly since 2002 where the corresponding figure was 18.9% which was at the time the worst in the country.
- It is second only to the south east with the second highest percentage of early school leavers (18 – 24 year old) in the country.

### **Expenditure on Research and Development**

- It has the lowest percentage of expenditure on business expenditure on research and development in 2005 (3.9%) when compared to the rest of the country.
- It has the second lowest percentage of expenditure on higher education research and development in 2006 (0.8%) when compared to the rest of the country.

### **PC and Broadband Penetration**

- It is joint lowest region (with the Midlands) for both PC (53%) and Broadband (12%) penetration in Ireland.  
(Forfas, *Regional Strategic Agendas Report 2007+*)

### **Emerging Facts**

- County Louth has a higher average aggregate population in towns than both in the Border Region and the State.
- County Louth is an exceptional case with a much higher percentage of people living in towns when compared to the other counties in the Border Region. This is due mainly to a relatively large population living in, what is, physically the smallest county in Ireland. Louth is dominated by the two main urban centres of Dundalk and Drogheda.

- County Leitrim is also an exceptional case in that a very small percentage of its population live in towns (7.1% in 2002 and 9.0% in 2006). In 2006, the remaining counties of Sligo, Cavan, Donegal and Monaghan have similar percentages of the population living in towns with 31.9%, 26.4%, 24.8% and 28.6% respectively.
- The Border Region experienced a higher percentage increase in the numbers of persons living in towns in 2006 when compared to the state. This may be due to the fact that traditionally the population of the Border Region is predominantly rural. This is reinforced by the fact that the average population in 2006, living in towns in the Border Region, was 34.8% when compared to the states average of 60.7%.
- Sligo was the only county in the Border Region to experience a decline in the numbers of persons living in towns (-2.0%).
- County Cavan had the greatest increase in the numbers of persons living in towns between 2002 and 2006 with an increase of 9.6%.
- Based on the 2006 Census there is a relatively high residential vacancy rate within the Border Region, 21% as compared to 15% for the State. Vacancy rates are particularly high in Leitrim and Donegal, 29% and 27% respectfully. Table 14 presents vacancy rates for the state, the region and each county.

## Human Health

Availability of spatial data on human health on a regional basis is limited. However, a key area for consideration will be the interrelationships of human health and water quality to include drinking water, waste water treatment, recreational bathing waters, fisheries and shellfish waters. There will also be interrelationships with air quality and climatic factors such as flood risk.

## Soil and Geology

EU proposals are currently in train for a Directive that lays down a framework for the protection and sustainable use of soil. Our 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 humans<sup>6</sup>.

Geology is now 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 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 of The Department of Environment, Heritage and Local Government. 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 are being promoted as County Geological Sites (CGS). The IGH Programme has identified all sites of interest as CGS (including those to be designated as geological NHAs). The approximate number of sites in each county is given in Table 16 below.

<sup>6</sup>

Environmental Protection Agency (2008) State of the Environment Report

**Table 16 Geological Sites in each County**

<b>County</b>	<b>No of Sites</b>
Donegal	120
Sligo	58*
Leitrim	24
Cavan	19
Monaghan	13
Louth	35

\*includes Sligo-Leitrim sites

The following is a summary of the most prominent sites of geological heritage interest for each of the six border counties. Included also is a description of the Marble Arch and Cuilcagh Mountain, first international geopark.

### **Donegal**

Spectacular coastal sections (glacial sculpting of quartzites, schists and volcanics) such as at Malin Head and Inishowen Head; Carboniferous Limestone layered cliffs of St John's Point; fossiliferous limestones of Bundoran Bay; internationally important Precambrian boundary at Stralinchy; Errigal Mountain (glacial sculpting); Tremone Bay – internationally significant evidence of a 2nd Precambrian glacial period; Lough Greenan scheelite mineral; Crohy talc mine; Donegal granite/Precambrian schist contact, for example at Barnes Bog Gap; Karst and cave at Pollnapaste/Kilcrum – best developed in Precambrian marbles in Ireland;

### **Sligo** - (includes Sligo-Leitrim sites)

Inishcrone – igneous intrusions, minerals and glacial erosion; Glencarbery barite mine; Ben Bulbin limestone plateau; internationally important fossiliferous limestones at Streedagh Point – don't hammer!; Carboniferous deltaic sandstone layered cliffs of Mullaghmore Head; Precambrian serpentinite rock at Sliswood Gap in the Ox Mountains; the giant 'Split Rock' boulder deposited by glaciers at Easky; Dermot & Grainne's Cave at Gleniff; Glencar (Swiss Valley) – oversteepened and landslipped glaciated valley; (see 'Landscapes, Rocks and Fossils: The Geological Heritage of Sligo -Sligo County Council and Geological Survey of Ireland)

### **Leitrim**

The Doons – vertical limestone hills (best eg of relict tower karst in Ireland); Glencar waterfall; Largin/Gorteenaguinnell - east Truskmore upland plateau karst limestone; Manorhamilton metamorphic minerals; Corry shore Carboniferous fossils; Stony River Section internationally important Upper Carboniferous section and Slieve Anierin iron mine; Giants rock tonalite at Kilroosk; Finnalaghta Quarry - unusual folding and structures in Ordovician rocks;

### **Cavan**

Shannon Pot – the source of the R Shannon; Western Cuilcagh – extensive upland glaciated karst limestone area; Dowra artesian well; Pollprughlisk, E. Cuilcagh integrated cave system is one of the best examples in Ireland; Lower Lough Erne drowned morainic landscape; Redhills (Claragh) iron shales; Orlock Bridge/Slieve Glah Shear Zone, separating Ordovician and Silurian tracts and extending to Scotland (in plate tectonic reconstructions);

### **Monaghan**

Calliagh iron mineralisation; Carrickateel Hill - best exposed example of Ordovician volcanism south of Iapetus suture (Orlock Bridge Fault); Lemgare old lead mines; Knocknacran (Kingscourt) gypsum mine;

### **Louth**

Templetown raised beach (late glacial raised ridge related to re-advance ice sheet limits); Greenore raised beach showing post-glacial ice retreat elastic recovery of land; Clogher Head - important quaternary erosional feature with Silurian folded, faulted greywackes and igneous intrusions marking the zone of the ancient Iapetus suture; Carlingford granite and gabbro intrusions and metamorphic minerals;

### **The Marble Arch Caves Global Geopark**

The Marble Arch Caves Global Geopark shares an international border with Co. Cavan in the Republic of Ireland. This border runs along the top of Cuilcagh Mountain, an already established feature of the Geopark. A Geopark is an area recognised by UNESCO (the United Nations Educational, Scientific and Cultural Organisation) to have exceptional geological heritage. The Geopark is described as the world's first International Global Geopark.

West Cavan has much in common with the Marble Arch Caves Global Geopark in terms of geology, archaeology and culture and as a result of this a joint application by Fermanagh District Council and Cavan County Council was submitted to the European Geopark Network in March 2008 to expand the already existing Geopark across the border into selected sites in Co. Cavan. The initial application was accepted and an in depth inspection process followed in Aug 2008.

On the 19th September 2008 the Cavan extension of the Geopark was approved in the Czech Republic at a joint meeting of UNESCO and the European Geopark Network. It is a world first for a Geopark to cross an international border. Dramatic cliffs, rugged rocky outcrops and upland blanket bog dominates the north west of the expanded area, while the landscape in the south east of the area gives way to gently rolling drumlins and flooded hollows which are home to some of the finest examples of glacial geology in the world. Lakes are a particularly important part of the landscape of Fermanagh and Cavan with Co. Cavan alone claiming to have a lake for every day of the year. Many of the lakes have formed as over deepened glacial valleys or in hollows between glacial deposits as a result of flooding at the end of the last ice age.

### **Land Cover**

Land cover includes vegetation, man-made structures and surface water features. Agriculture is a significant land use within the region in terms of land cover, occupying approximately 61.030% of the region. Of this, some 44.005% is in use as pastures. Peat bog covers approximately 22.022%. Forests cover approximately 3.459% of the region, with 2.798% of this comprised of coniferous forests as opposed to approximately 0.338% broadleaf. A wide variety of uses including commercial, industrial and residential, exist in the urban areas of the region.

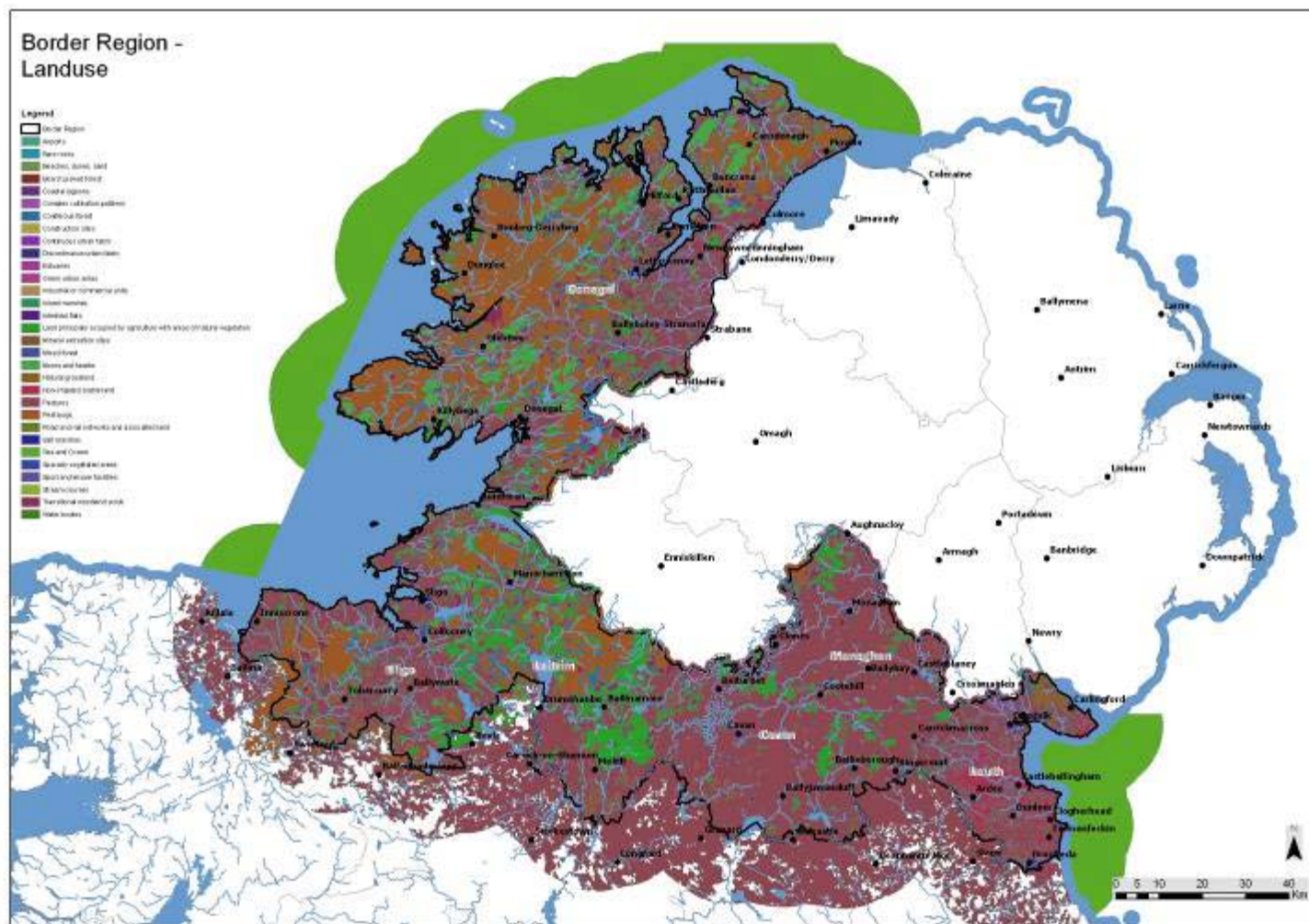
The total area covered and percentage cover for various categories of land use are given in Table 17. The distribution of land use cover is shown on Map 11.

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.

**Table 17 Land Use Cover**

<b>Class Name</b>	<b>Total Area Km2</b>	<b>% Cover</b>
Airports	1.615	0.013
Bare rocks	5.433	0.044
Beaches, dunes, sand	47.061	0.382
Board Leaved forest	41.639	0.338
Coastal lagoons	0.325	0.003
Complex cultivation patterns	141.898	1.151
Coniferous forest	344.967	2.798
Construction sites	2.562	0.021
Continuous urban fabric	3.045	0.025
Discontinuous urban fabric	109.281	0.886
Estuaries	1.844	0.015
Green urban areas	0.750	0.006
Industrial or commercial units	1.591	0.013
Inland marshes	21.689	0.176
Intertidal flats	17.548	0.142
Land principally occupied by agriculture with areas of natural vegetation	1371.785	11.127
Mineral extraction sites	7.496	0.061
Mixed forest	39.779	0.323
Moors and heaths	378.032	3.066
Natural grassland	290.272	2.355
Non-irrigated arable land	436.892	3.544
Pastures	5425.061	44.005
Peat bogs	2714.957	22.022
Road and rail networks and associated land	4.916	0.040
Salt marshes	5.561	0.045
Sea and Ocean	12.617	0.102
Sparsely vegetated areas	9.784	0.079
Sport and leisure facilities	19.540	0.158
Stream courses	8.965	0.073
Transitional woodland scrub	589.514	4.782
Water bodies	271.960	2.206
Total Area of Border Region	12328.379	100.000



Map 11 Distribution of Land Use Cover within the Border Region

## **Water**

The Water Framework Directive (WFD) marks a new approach to the protection and improvement of our water resources and aquatic ecosystems across Europe. In contrast to previous legislation, the WFD aims at protecting all waters and water dependent ecosystems: groundwaters, rivers, lakes, transitional waters (estuaries), coastal waters and wetlands. A primary environmental objective of the WFD is that all water bodies will be good or higher by 2015, and that in no case will this status deteriorate below its present condition. The main unit of management for the WFD is the River Basin Districts, which outlines details of which are referred to above.

In order to achieve the objectives of the WFD, risk assessments set out to:

- assess the risk that water bodies may not achieve good quality status;
- identify the pressures from human activities causing this risk, and
- develop strategies and management plans to minimise the risk.

Risk assessment procedures were developed at national level and applied across all River Basin Districts in order to analyse the impact of the pressures referred to under Section 3.5.2. The risk assessments were predictive, i.e. they examined each pressure and predicted the magnitude which would be likely to have a negative impact. Each water body has been assessed, on the basis of human activity, whether it is at risk or not at risk of failing to achieve the WFD's objectives by 2015. The classifications used for reporting this assessment are:

- (1a) At Significant Risk - water body is at risk of failing to meet good status in 2015;
- (1b) Probably at Significant Risk - water body is thought to be at risk of failing to meet good status in 2015 pending further investigation;
- (2a) Probably Not at Significant Risk – the water body is expected to meet good status in 2015; and,
- (2b) Not at Significant Risk - water body is expected to meet good status in 2015, pending further investigation.

Water bodies placed in the (1a) 'At Significant Risk' category will need improvement to achieve the required status while water bodies in the (1b) 'Probably at Significant Risk' category are likely to need improvement in order to achieve the required status.

Considerable threats from wastewater, afforestation and agricultural sources remain as a significant environmental issue within the region. In response to the Phosphorous Regulations, local authorities have operated effective measures to control phosphorous inputs to surface waters. 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.

Waters within the Region 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. Radioactive substances from the nuclear reprocessing plant at Sellafield in England continue to be discharged to the Irish Sea,

though exposure to these substances is not considered to pose a significant health risk to the public. 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 greatest human impact on marine environment continues to be commercial fishing. Most commercially targeted fish stocks in Irish waters are over exploited and are in decline. Cod stocks in the Irish Sea are considered to be in a stage of collapse. There is also mounting evidence that climate change has the capacity to alter the functioning of marine ecosystems by influencing the distribution and seasonality of a wide range of marine species<sup>7</sup>.

Groundwater is an important source of drinking water but also makes an important contribution to river flows and lake levels.

A new “water status” assessment approach was implemented over the past year on the island of Ireland as part of the Water Framework Directive. The approach incorporates chemical and biological monitoring into a status grade for each waterbody. These early results are based solely on one year’s data, reflecting the best current understanding of status; however, it is expected that this will improve over time as monitoring data, and the scientific tools used to interpret it, expand and improve in future river basin planning cycles.

The ground water status, surface water ecological status and surface water chemical status in relation to the Border Region is shown on

Map 12, Map 13 and Map 14 respectively.

### **Groundwater Status**

Both the chemical and the quantitative status must be determined for each groundwater body to allow it to be classed as either ‘good’ or ‘poor’ based on the criteria set out in the WFD. The classification process also takes account of the ecological needs of the relevant rivers and terrestrial ecosystems that depend on contributions from groundwater. Another key component of the groundwater classification is assessment of the impact of pollution on the uses (or potential uses) of the groundwater body, e.g. for water supply.

The overall aim for groundwater is to achieve at least ‘good quantitative status’ and ‘good chemical status’, by 2015, as well as preventing deterioration in those waters that have been classified as ‘good’ status.

The quantitative status of all the groundwater bodies in the border region is good, and there is no evidence of significant impact or damage resulting from human activity on groundwater levels.

Although the chemical status of groundwaters is also generally good, twelve groundwater bodies have been classified at overall poor status because of water quality issues. All of these are in karstic and fragmented bedrock areas particularly in counties Sligo and Leitrim, where the groundwater is contributing significant amounts of phosphorus to local rivers that are at less than good status.

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<sup>7</sup>

EPA, Ireland's Environment 2008. <http://www.epa.ie/downloads/pubs/other/indicators/irlenv/>



### Surface Water Status

Surface water status is determined by its chemical and ecological status, and is defined by whichever of these is lower. For assessment of chemical status, environmental quality standards have been set for priority action substances in Annex X of the WFD. 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 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', by 2015, as well as preventing deterioration in those waters that have been classified as 'high' or 'good'.

### Chemical Status

A surface water chemical monitoring programme is being carried out at approximately 300 stations nationally. Sites are to be monitored for a range of parameters on a monthly basis over one year in a given planning cycle. To date results have been good and few failures have been reported. In the Border Region, two failures have been recorded. The detection of PAHs (toxic compounds derived from burning) resulted in a failure at Moville in Inishowen. The source of these compounds will be investigated. In inner Dundalk Bay the presence of heavy metals in excess of the EQS also resulted in chemical status failure.

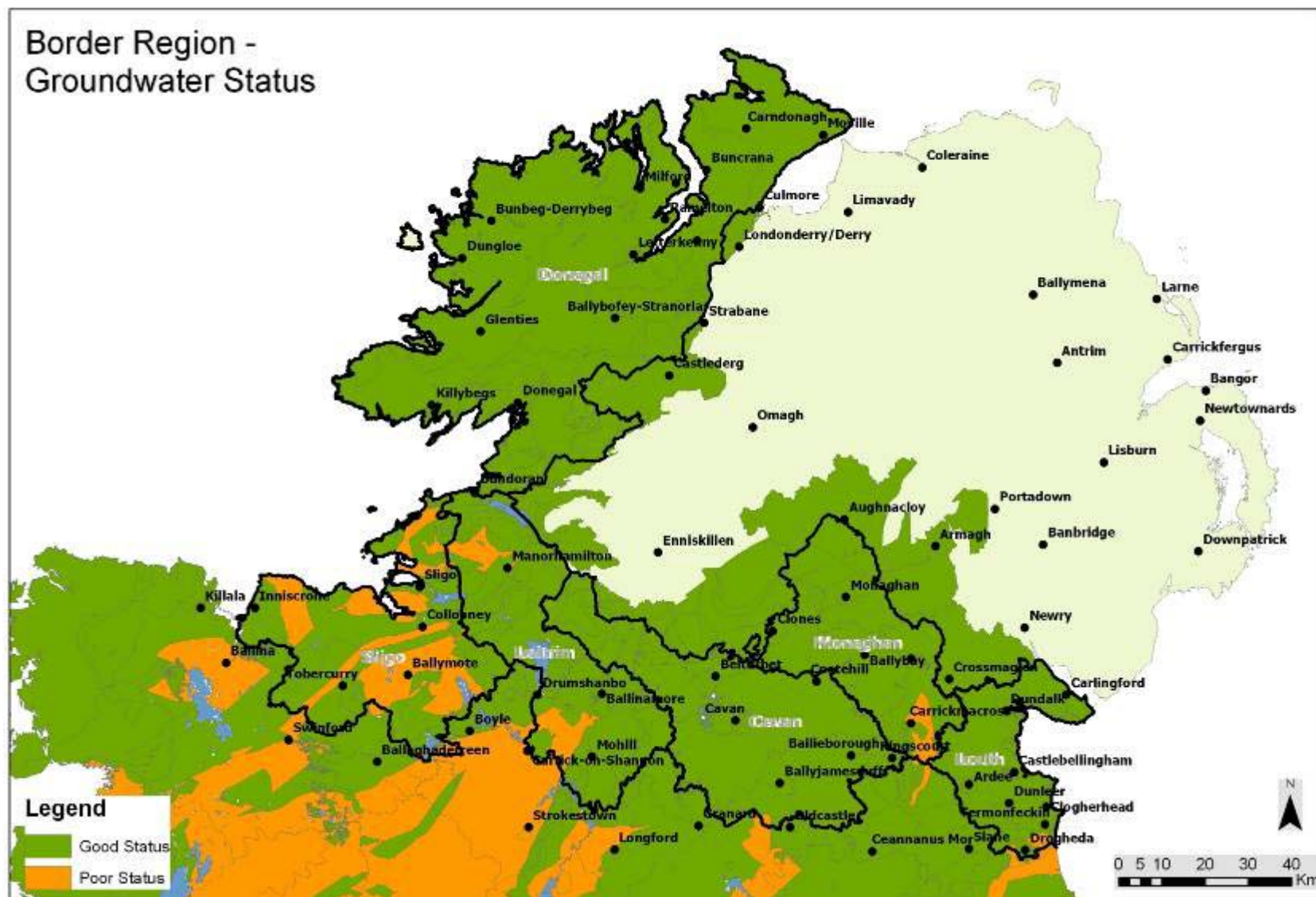
### Ecological Status

The number of surface water bodies that currently meet WFD status objectives are summarised by county for the Border Region in the table below. Over half the river waterbodies (58%) and lakes (52%) in the region are currently at high or good status. With regard to transitional and coastal (TRAC) waters 39% of those that have been classified are at high or good status. However, some TRAC waterbodies are as yet unclassified and if these are included the number at high or good is 28% of the total.

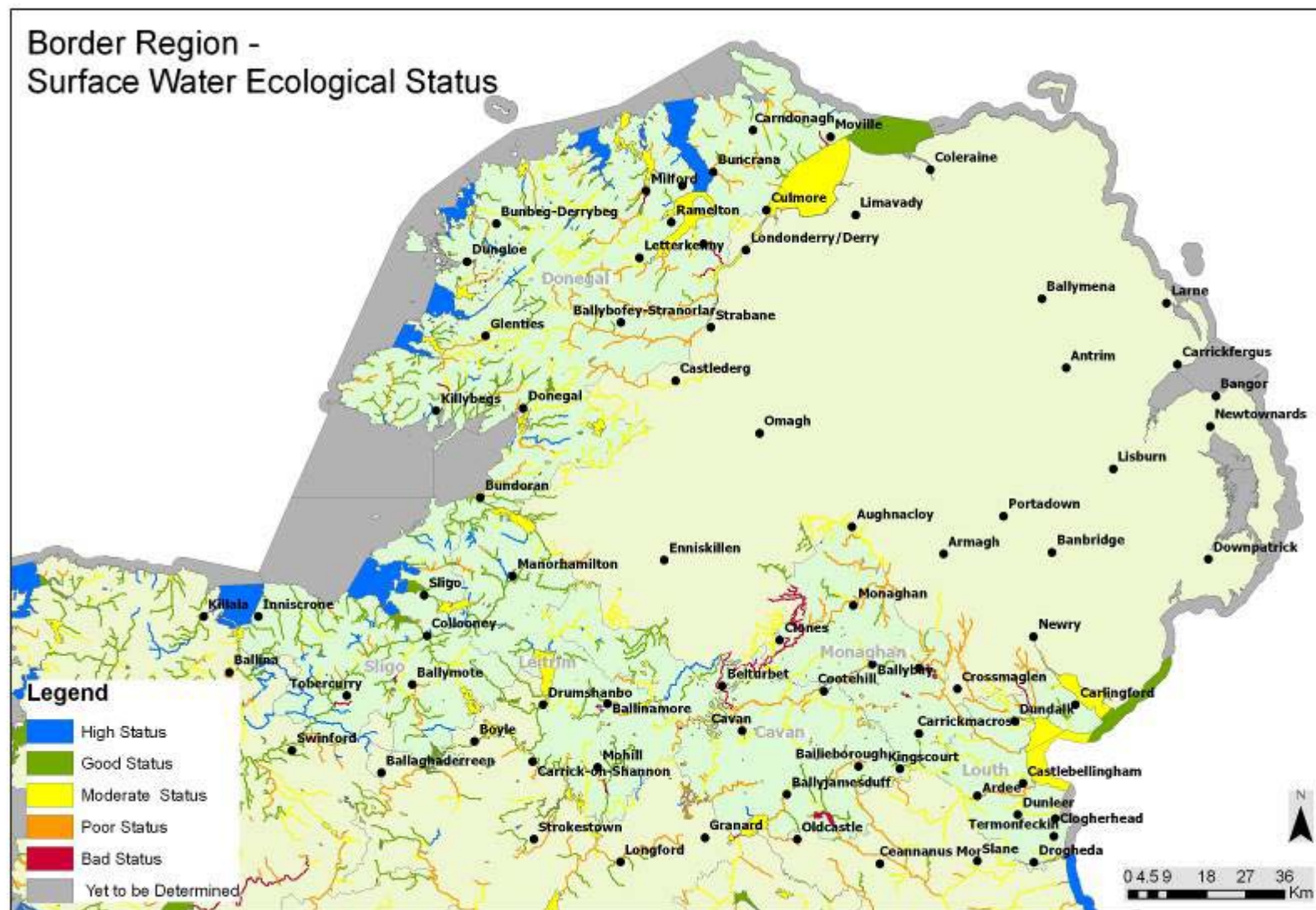
**Table 18 Surface Waters Status**

County	Rivers		Lakes		Transitional / Coastal		
	< Good	≥ Good	< Good	≥ Good	< Good	≥ Good	U/A
Donegal	209	306	14	112	15	13	15
Leitrim	44	85	17	11	3	0	0
Sligo	45	128	5	10	3	7	5
Cavan	59	37	74	12	0	0	0
Monaghan	46	24	30	4	0	0	0
Louth	28	9	0	0	12	1	2

The percentage of high and good status rivers and lakes is significantly greater in the western part of the region (Donegal, Leitrim, Sligo) while rivers and lakes of less than good status predominate in the eastern portion (Cavan, Monaghan and Louth). Given its substantially rural nature, the major pressure on the water environment throughout the region is agriculture. Other diffuse source pressures include forestry and on-site waste water treatment systems. Waste water treatment plants are the most significant point source pressure.

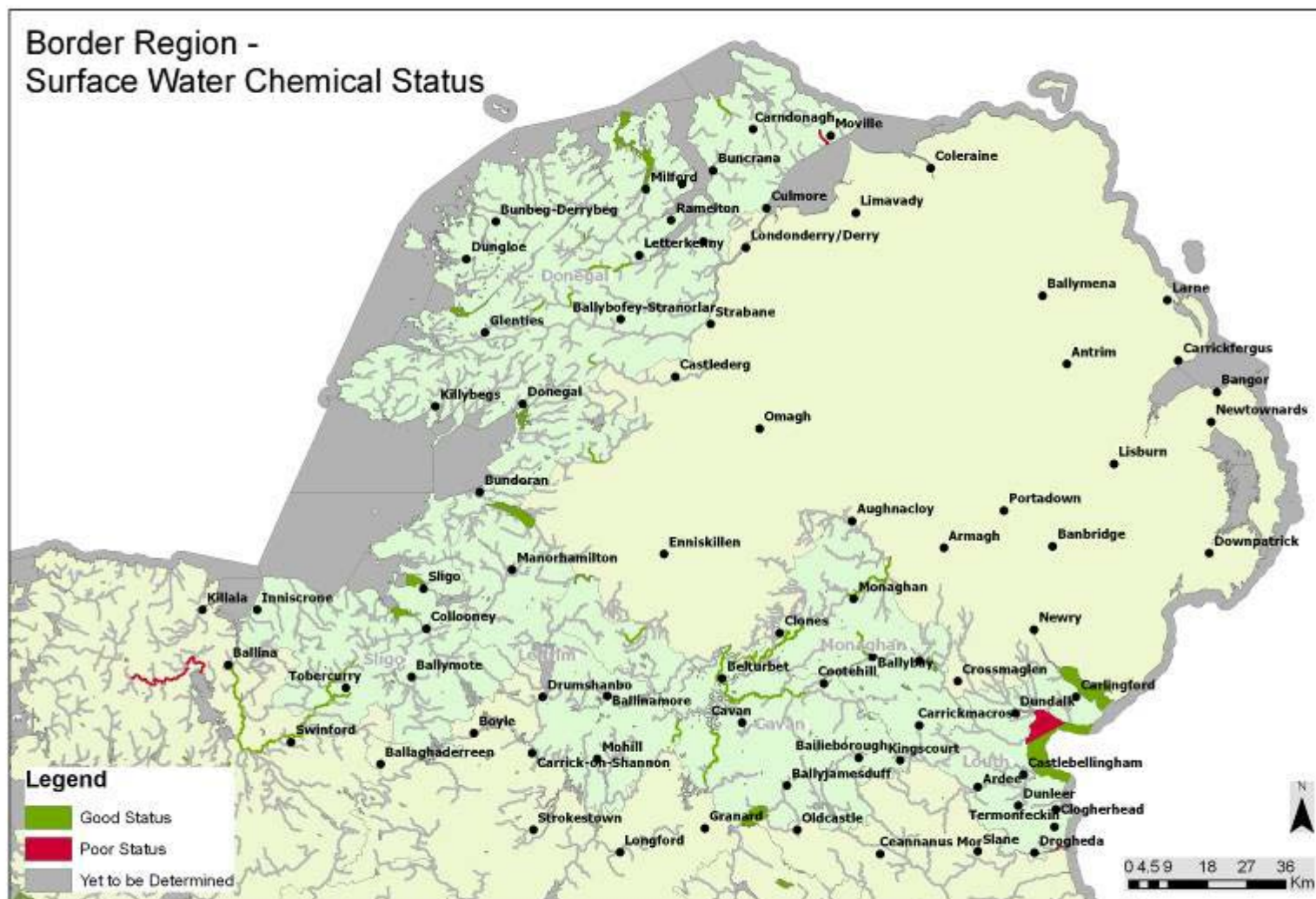


## Map 12 Groundwater Status



**Map 13**      **Surface Water Ecological Status**





**Map 14**      **Surface Water Chemical Status**

## Municipal Waste Water Treatment Plants

The following information which relates to the Border Region has been based on the "Urban Waste Water Discharges in Ireland for Population Equivalents Greater than 500 Persons – A Report for the Years 2006 – 2007, published by the EPA in 2009 (the EPA report 2009). The full report may be viewed at: [http://www.epa.ie/downloads/pubs/water/wastewater/web%20version\(low\).pd](http://www.epa.ie/downloads/pubs/water/wastewater/web%20version(low).pd)

**Table 19 A Summary of the Compliance of all Local Authorities within the Border Region with the Overall Requirements of the Urban Waste Water Treatment Directive**

Local Authority	Total number of Agglomerations greater than 500 p.e.	Number of Agglomerations with no treatment or only basic treatment	Number of Agglomerations with secondary treatment that failed Standards/Guidance Values	Total p.e
<b>Donegal</b>	34	22	11 (92%)	180,200
<b>Sligo</b>	11	3	7 (88%)	34,413
<b>Leitrim</b>	10	0	1 (10%)	19,360
<b>Cavan</b>	14	0	9 (64%)	29,500
<b>Monaghan</b>	16	0	11(69%)	74,215
<b>Louth</b>	13	2	7 (64%)	202,900

Table 19 indicates a high level of non compliance with the Urban Waste Water Treatment Regulations 2001. It should be noted that the level of non-compliance can vary significantly between plants and non-compliance can result from failure to submit to the EPA, the minimum number of samples required. The report indicated that a significant number of plants were operating above capacity; however based on limited research the data presented in the report in this regard would not appear to be entirely accurate and has not therefore been included in this report. For details of Waste Water Capacity in strategically important centres see Table 23.

During the reporting period 2006 – 2007 the following treatment plants within the region with population equivalents over 2,000, did not meet the overall requirements of the Urban Waste Water Treatment Regulations 2001.

### **Donegal**

Letterkenny  
Ardr  
Ballybofey/Stranorlar  
Milford

(There were 18 agglomerations served by primary treatment only and two agglomerations with no treatment).

### **Sligo**

Ballymote

(There were two agglomerations served by primary treatment only).

### **Leitrim**

All plants with a capacity above 2,000 p.e., were compliant with the Regulations.

### **Cavan**

Cavan  
Bailieborough  
Ballyjamesduff  
Cootehill  
Kingscourt  
Virginia

### **Monaghan**

Carrickmacross  
Castleblaney  
Clones  
Emyvale  
Knockaconny

### **Louth**

Dundalk  
Ardee  
Clogherhead  
Dunleer

(There were two agglomerations in Louth served by primary treatment only).

### **Recurring problems**

Recurring problems identified at waste water treatment plants audited by the EPA include inadequate collecting systems for waste water (e.g. poorly performing combined sewer overflows), insufficient treatment capacity, poor effluent quality, insufficient sampling frequencies, lack of training for plant operators, poor assimilative capacity for discharged effluent in the receiving waters and poor sludge management on site.

### **Agglomerations requiring Secondary Treatment**

By the 31st December 2007, a total of seven agglomerations requiring secondary treatment did not have the required level of treatment in place and were non-compliant with the requirements of the Urban Waste Water Treatment Regulations. It can be seen from Table 20 that significant progress has been made in the interim, with two sites in Donegal and one in Sligo having been commissioned. Construction is planned to start during the period 2011 – 2013 for the remaining four sites located in Donegal. It is noted that in the case of Killybegs, with a population equivalent of 92,000, construction is due to start in 2012. Killybegs is quoted in the EPA 2009 report as having the largest discharge to a sensitive area for which a treatment plant has not been provided.

**Table 20 Agglomerations for which Secondary Treatment was not in operation by the end of the reporting period 2006/2007**

Local Authority	Agglomeration *Secondary treatment required by 31st December 2000 Plant ID Number used in Fig. 2-1 to 2-4 of the EPA Report 2009 is in brackets	Population Equivalent (p.e.)	Receiving Water Type	Construction Start Date (Unless otherwise indicated)
<b>Donegal</b>				
	Donegal Town (608)	5,400	Estuarine	<b>Commissioned in 2008</b>
	Ballyshannon No. 2 Agglomeration (595)	2,000	Estuarine	<b>Commissioned in 2008</b>
	Dungloe (127)	2,000	Freshwater	<b>2011</b>
	Falcarragh (124)	2,000	Estuarine	<b>2013</b>
	Moville (765)	2,000	Freshwater	<b>2013</b>
	Killybegs* (116)	92,000	Estuarine	<b>2012</b>
<b>Sligo</b>				
	Sligo* (685)	20,000	Coastal	<b>Commissioned in 2009</b>

### Phosphorous Monitoring at Sensitive Areas

In addition to the limits set out in the Regulations for BOD, COD and TSS, limits for total phosphorus and total nitrogen also apply for discharges from waste water treatment plants to designated sensitive areas. Table 21 presents the results of phosphorus monitoring during 2007 at plants greater than 10,000 p.e discharging to sensitive areas as set out in the 2001 Regulations and the relevant catchment areas of such sensitive areas. The concentration limit (annual mean) for total phosphorus is 2mg/l P for plants from 10,000 to 100,000 p.e and 1mg/l P for plants greater than 100,000 p.e. The minimum number of samples is 12 for plants 10,000 to 49,999 p.e and 24 for plants greater than 50,000 p.e.

Table 21 indicates that plants at Carrickmacross returned 11 samples (shortfall of 1) and the plant at Dundalk returned 7 samples (shortfall of 5). The shortfall in the number of samples at Dundalk is significant, especially taking into consideration the level of the discharge and the sensitivity of the area of discharge. While insufficient samples were taken at the plants in Monaghan and Louth, the samples submitted to the EPA, met the required standards in respect to total phosphorus and total nitrogen.

**Table 21 Phosphorous Monitoring for 2007 at plants greater than 10,000 p.e. discharging to sensitive areas.**

Local Authority	Treatment Plant	No of samples Total P	Annual mean Total P m/g/l
<b>Cavan County Council</b>	Cavan	13	0.37
<b>Monaghan County Council</b>	Carrickmacross	11	1.14
<b>Monaghan County Council</b>	Castleblaney	12	0.77
<b>Monaghan County Council</b>	Monaghan	12	1.33
<b>Louth</b>	Dundalk	7	1.70

**Table 22 Seriously Polluted Rivers Impacted by Municipal Waste Water at the end of the Reporting Period 2006/2007**

County	River Name	Location	Q value <sup>8</sup>
<b>Donegal</b>			
	Maggy's Burn	Just u/s Lough Fern	2
	Bredagh	Moville Bridge	2
	Swilly Burn	Br. 1.5km SE of Raphoe	2
<b>Sligo</b>			
	Tubbercurry	Br. 1km W. of Tubbercurry	2

**Recommendations made by EPA Urban Waste Water Discharges in Ireland – A report for the Years 2006 – 2007 and published 2009.**

**Level of Treatment Provided**

1. The provision of secondary treatment for the twenty four<sup>9</sup> agglomerations that did not have the required level of treatment at the end of the reporting period should be progressed as a matter of priority. Highest priority should be given to those where serious pollution is occurring.
2. The discharge of untreated waste water to the aquatic environment should become a practice of the past and local authorities should provide appropriate treatment at the 112 locations identified where waste water is being discharged with either no treatment or just basic treatment.

**Treatment Plant Operation**

3. Local authorities should review the operation of all urban waste water treatment plants in their functional areas including those below 500 p.e. Corrective action programmes should be developed and implemented for those plants that are failing to meet the effluent quality standards set by the regulations. Particular priority should be placed on correcting plants whose discharges are causing environmental pollution in the waters to which the effluents discharge. Local authorities need to improve their management and operation of waste water treatment plants in order to prevent water pollution and the health risks associated with the discharge of untreated or poorly treated sewage.
4. Local authorities should invest in the training and re-training of plant operators in order to improve the management and operation of waste water treatment plants.
5. The frequency and volume of storm overflows within each collecting system should be assessed, mapped and ranked in order of polluting potential.
6. Local authorities should determine whether all trade effluent discharges are appropriately licenced and the licences should have requirements for review and improvement. Local authorities should regularly monitor the compliance of existing licences against their permitted discharge allowance.
7. Policy on the use of domestic and commercial food waste disposers (FWDs) should be developed in order to reduce the loading on already overloaded waste water treatment plants. The use of commercial and domestic FWDs and their impact on the environment was part of an EPA research project: EPA Strive Programme 2007-2013, Examining the Use of Food Waste Disposers, 2008.

<sup>8</sup> Q values' are determined by biological monitoring and are based primarily on the relative proportions of pollution sensitive to tolerant macroinvertebrates resident at a river site. Red Dot sites are seriously polluted river stretches of Q-value 2 or less and are so-called because they appear as red dots on the EPA *Water Quality in Ireland* maps.

<sup>9</sup> Table 2-1 of the EPA report provides a list of those agglomerations for which the required level of treatment has not been provided by the end of the reporting period.



### **Monitoring and Reporting**

7. Close communication and a follow-up procedure should be developed between those responsible for environmental monitoring and the operation and control of the treatment plant to ensure that corrective actions are taken where exceedances occur.

8. Local authorities should ensure that all monitoring and analysis is carried out in accordance with the Regulations for all treatment plants including those that are managed and operated by third parties on behalf of the local authority. A significant increase in compliance with the Directive would be achieved if monitoring frequencies met the minimum frequencies set out in the Regulations.

### **Management of Odour and Noise**

9. The management of odour and noise from waste water treatment plants should be given particular priority notwithstanding the statutory requirements conferred on local authorities under the European Communities (Waste Water Treatment)(Prevention of Odours and Noise) Regulations, 2005. Each local authority should prepare odour management plans for each treatment plant operated by or on its behalf.

Table 2-1 of the EPA report provides a list of those agglomerations for which the required level of treatment has not been provided by the end of the reporting period.

### **Seriously Polluted Waters**

10. The relevant local authorities should further investigate the causes of serious pollution in the stretches of river listed in Table 3-2 of the EPA report and take the necessary corrective action in relation to the discharge. In addition to the seriously polluted river sites, the bathing water sites failing the mandatory standards also need to be investigated and corrective actions put in place. Corrective actions should include in some cases the provision of waste water treatment and in other cases a review of the existing plant operation and performance.

11. In addition to the seriously polluted river sites identified by the EPA, the 'at risk waters' as defined by the Water Framework Directive, should also be a priority for protection. The principal waters at risk from discharges include those that have limited assimilative capacity, those that contain sensitive species or habitats and those waters that are used for water abstractions, fisheries, shellfish production or recreation. Discharges to these sensitive waters should be targeted for action by local authorities in the Programme of Measures (POMs) for each of the River Basin Districts. The protection of drinking water abstractions is an area that should be fully integrated into all relevant aspects of the Water Framework Directive including the monitoring programmes and programme of measures for improvements in waste water management and treatment.

**Table 23 Waste Water Capacity and Demand Information for Strategically Important Settlements-2010-2022 (November 2009 figures)**

Settlement	Position in RPG Settlement Hierarchy	Estimated Max. Capacity <sup>2</sup> [PE] <sup>3</sup>	Current Loading [PE] <sup>4</sup>	Current Spare Capacity or Shortfall [PE] <sup>5</sup>	Waste Water Infrastructure Priorities <sup>6</sup>	Predicted <sup>7</sup> Loading in 2022 [PE]	Predicted Future Spare Capacity ** Or Shortfall [PE]	Q Value of Receiving Water <sup>8</sup>	Risk Assessment <sup>9</sup>
Letterkenny	Gateway	6,000  40,000 under construct.	22,000	16,000	Letterkenny Sewerage Scheme DBO Letterkenny Sewerage Scheme Network Rehabilitation	30,000	10,000	Estuarine unpolluted	at risk (A,D)
Sligo	Gateway	50,000	27,000	23,000	Sligo Sewerage Scheme-Network improvements Carraroe Sewerage Scheme Cummeen Sewerage scheme Hazelwood/Ballinode sewerage scheme	33,480	13,600 (Rosses Point inc.)	Coastal Intermediate	At risk (A,D,
Dundalk	Gateway	179000	90,000	89,000	Coe's Road Pump Station Upgrade Dundalk Drainage Network Study Blackrock Sewerage Scheme - Dundalk Connector Phosphorous/Nitrate Treatment Dundalk WWTP Northern Sector Drainage Stage 2 South and West Sector Drainage Stage 1 Blackrock Network Rehabilitation	110,700	68,300	Estuarine Eutrophic	At Risk(1a)
Cavan	Hub	22,000	17,171	4,829	Cavan Sewerage Scheme	21,978	0	2-3	A,D
Monaghan	Hub	43,000	30,000	13,000	Monaghan Town Collection Network – Advance Works Contract 2	37,000	6,000	3	At Risk (1a)
Drogheda*	Primary Dev. Centre	101,000	70,000	31,000	Drogheda sewerage Network Improvement Scheme – Stages 1 & 2 Drogheda WWTP- Proposed Expansion to 125,000 PE Phosphorous/Nitrate Treatment Drogheda WWTP	86,800	14,200	Estuarine Intermediate	At Risk(1a)
Carrick on Shannon	Strategically Important Centre	3,000  11,500 Under Construct.	5,435	2,435	Carrick on Shannon Sewerage improvement Scheme. Currently under construction programmed for completion July 2011	7,609	3,900	4	risk status 1A (D)

\* Drogheda (Louth and Meath combined) are served by one treatment plant therefore combined population is considered.

\*\* Network expansion will impact on this figure.

2 Maximum capacity that the WWTP for each designated settlement can operate at while satisfactorily treating the water to the required legislative standards

3 Population Equivalent

4 The loading figure is the estimated average of the highest available current loading figure

5 Shortfall indicates unlikely to be compliance with Urban Waste Water Treatment Directive

6 These priorities are listed in the Department of the Environment, Heritage and Local Government's Water Services Investment Programme, ref. Section 5 of the Guidelines.

7 Predictions have been calculated by extrapolation of PE from Guidelines' target populations (for the year 2022) at same ratios as current populations (town + environs from 2006 census) to current PE figures

8 Source:

9 Source: River Basin District, October 2009 (<http://maps.epa.ie/InternetMapView/mapviewer.aspx>). Where they have been cited in the data, contributing point source factors are shown using the following codes: A= Combined sewer and treatment plant overflows; B= IPPC; C= Section 4 (Local Authority licensed discharges); D= Waste water treatment plants; and E= Water treatment plants and other pressures

## Maximising Use of Existing Water Services Infrastructure

Development objectives must provide sufficient water supply, wastewater treatment and disposal to meet target demands. Assessment of drinking water supply together with wastewater capacity has been prepared to establish the environmental beneficial and adverse impacts of the DEHLG minimum population targets.

## Wastewater

Information on current loading and capacity for wastewater has been provided by each local authority in the above table showing available wastewater treatment capacity. In light of the recently completed works at Sligo and current construction works at Letterkenny and Carrick-On –Shannon, it can be confidently stated that all the strategically important settlements in the Borders region will meet the UWWT Directive by the end of 2011. Predicted future loadings are calculated on DEHLG population projections to 2022 with reference to present loading trends. Significant additional capacity is likely to remain at Dundalk at the end of the guidelines period with Cavan likely to require augmentation. No significant adverse or uncertain impacts on the environment have been identified. All of the plants listed above will/ have treatment to required effluent standards and also with reference to assimilative capacity of receiving waters. Sludge Management Plans in each local authority are insuring that treated sludge's from all plants in the counties are produced to Class 'A' Biosolid before disposal and are in accordance with the 'Code of Good Practice for the Use of Biosolids in Agriculture' issued with circular L9/99.

### **Wastewater Treatment systems serving single houses.**

The issue of wastewater treatment systems serving single houses has been highlighted as a significant issue within the Region 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 unserved 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).

As an interim response to the ruling the DoEH&LG have issued Circular PSSP 1/10 dealing with Development Plan and Development Management responses. The Department has indicated that they will be issuing further Guidance and developing legislation in order to fully respond to the ruling.

The Circular weights heavily on the implementation of the new EPA code of Practice in respect to Wastewater Treatment systems and states that the code should apply to all applications received after the 8<sup>th</sup> Jan 2010.

Considering the poor percolation characteristics in many part of the Region, the application of the code is likely to have a significant impact on the development of one-off housing where a connection to the public sewer is not an option.

It is considered important in terms of public health and pollution control that Local Authorities within the Border Region implement the measures outlined in the Circular and EPA Code of Practice.

### **Drinking Water**

The following is a summary of the status of drinking water supplies in each of the counties within the region. The summary is based the Environmental Protection Agencies report entitled 'The Provision and Quality of Drinking Water in Ireland - A Report for the Years 2007 – 2008'. The report assesses the safety and security of drinking water supplies covered by the European Communities (Drinking Water) (No. 2) Regulations, 2007.

#### **Donegal**

The overall rate of compliance in County Donegal (95.3%) was below the national average during 2007 but improved slightly from 95.1% in 2006

The report states that there are currently 30 public water supplies operated by Donegal County Council on the Remedial Action List (RAL29) of public water supplies. One supply in Donegal County was added to the RAL in 2008 while four were removed. Of the supplies on the RAL, Donegal County Council indicates that thirteen supplies will be upgraded, twelve will be replaced and five will have operations improved to ensure the supply can produce safe and secure water.

As of August 2008, Donegal County Council had installed chlorine monitors and alarms on twenty six of the forty two supplies.

The EPA received eleven notifications of the failure to meet the parametric value from Donegal County Council in the period March 2007 to September 2008. The

notifications were due to the failure to meet the E. coli (5), lead (3), copper (1), trihalomethanes (1) and antimony (1) parametric values.

During this period one boil water notice was put in place in part of the Pollan Dam supply due to contamination with E. coli. One Direction was issued by the EPA to Donegal County Council which required the installation of disinfection at one treatment plant. An action plan for completion of this has been submitted.

### **Sligo**

The overall rate of compliance in Co. Sligo (96.9%) was slightly below the national average but did rise from 96.5% in 2006.

The report states that there are currently eight public water supplies in Sligo on the Remedial Action List (RAL71) of public water supplies, however, two of these originate from Roscommon. No supplies in Sligo County were added to or removed from the RAL in 2008. Of the supplies on the RAL, Sligo County Council indicates that five supplies will be upgraded, one will be replaced and two will have operations improved to ensure the supply can produce safe and secure water.

As of August 2008, Sligo County Council had installed chlorine monitors and alarms on ten of the eleven supplies.

The EPA received eleven notifications of the failure to meet the parametric value from Sligo County Council in the period March 2007 to September 2008. The notifications were due to failures to meet the E. coli (1), coliform bacteria (4), Cryptosporidium (1), aluminium (3), colour (1) and iron (2) parametric values.

During this period five boil water notices were put in place in the following supplies; Calry (December 2007), Kilsellagh (August 2008), North Sligo (July 2007), Rosses Point (August 2008) and South Sligo (July 2008). Arising from these notifications one Direction was issued by the EPA to Sligo County Council which required the preparation of action programme.

### **Leitrim**

The overall rate of compliance in Co. Leitrim (97.4%) was close to the national average during 2007 and improved from 96.4% in 2006.

The report states that there are currently two public water supplies operated by Leitrim County Council on the Remedial Action List (RAL49) of public water supplies. One supply in Co. Leitrim was added to the RAL in 2008 while one was removed. Of the supplies on the RAL, Leitrim County Council has indicated that one supply will be replaced and one will have operations improved to ensure the supply can produce safe and secure water.

As of August 2008, Leitrim County Council had installed chlorine monitors and alarms on five of the six supplies.

The EPA received thirteen notifications of the failure to meet the parametric value from Leitrim County Council in the period March 2007 to September 2008. The notifications were due to the failure to meet the E. coli (1), coliform bacteria (3), aluminium (3), lead (2), iron (2), turbidity (1) and colour (1) parametric values.

During the period one restriction of use was put in place in Dowra supply arising from excessive levels of aluminium in the drinking water. The treatment plant for this supply originates in Cavan.

### **Cavan**

The overall rate of compliance in Co. Cavan during 2007 was slightly below the national average at 96.5%, though it has improved from 94.3% in 2006.

The report states that there are currently nine public water supplies operated by Cavan County Council on the Remedial Action List (RAL17) of public water supplies. One supply was removed from the list in 2008 and none were added. Of the supplies currently on the RAL, Cavan County Council indicates that two supplies will be upgraded, three will be abandoned/replaced and four will have operations improved to ensure the supply can produce safe and secure water.

As of August 2008, Cavan County Council had installed chlorine monitors and alarms on one of the fifteen supplies.

The EPA received four notifications of the failure to meet the parametric value from Cavan County Council in the period March 2007 to September 2008. The notifications were due to the failure to meet the E. coli (1), aluminium (2) and manganese (1) parametric values.

During this period one restriction of use was put in place in the Dowra supply in May 2008 due to the presence of high levels of aluminium. Arising from this notification a Direction was issued by the EPA to Cavan County Council, which required the preparation of an action programme. This programme was later submitted to the EPA.

### **Monaghan**

The overall rate of compliance in Co. Monaghan (96.7%) was close to the national average and unchanged from 2006.

The report states that there are currently eight public water supplies operated by Monaghan Council on the Remedial Action List (RAL) of public water supplies. No supplies in Co. Monaghan were added to the RAL in 2008 while four were removed. Of the supplies on the RAL, Monaghan County Council indicates that four supplies will be upgraded and four will have operations improved to ensure the supply can produce safe and secure water.

As of August 2008, Monaghan County Council had installed chlorine monitors and alarms on eight of the twelve supplies.

The EPA received seven notifications of the failure to meet the parametric value from Monaghan County Council in the period March 2007 to September 2008. The notifications were due to the failure to meet the Clostridium perfringens (3) and aluminium (4) parametric values.

### **Louth**

The overall rate of compliance in Co. Louth (97.1%) was close to the national average.

The report states that there are currently three public water supplies operated by Louth County Council on the Remedial Action List (RAL57) of public water supplies. No supplies in Co. Louth were added or removed from the RAL in 2008. Of the supplies on the RAL, Louth County Council indicates that all three supplies will be upgraded to ensure the supply can produce safe and secure water.

The EPA has advised all local authorities to install chlorine monitors and alarms at all treatment plants. As of August 2008, Louth County Council had installed chlorine monitors and alarms on five of the fifteen supplies.

The EPA received four notifications of the failure to meet the parametric value from Louth County Council in the period March 2007 to September 2008. The notifications were due to the failure to meet the E. coli (2), Clostridium perfringens (1) and lead (1) parametric values. Louth County Council has prepared and is implementing an action programme to deal with lead in the distribution network in the supplies in question.

**Table 24 Summary of Compliance of Drinking Water - Public Schemes.**

County	% Overall Compliance 2006	% Overall Compliance 2007	No of public schemes on Remedial List	Notifications of failure to meet parametric values
Donegal	95.1	95.3	30	11
Sligo	96.9	96.5	8	11
Leitrim	96.4	97.4	2	13
Cavan	94.3	96.5	9	4
Monaghan	96.7	96.7	8	7
Louth	97.3	97.1	3	4

In terms of overall compliance with Drinking Water Standards from public supplies during the period 2006 to 2007 there has been a slight improvement in Leitrim and Cavan, while there has been no significant change elsewhere in the region. The number of public supply schemes in Donegal that were on the remedial list is relatively high. The level of notifications for failure to comply with certain quality standards in Counties Donegal, Sligo and Leitrim is also relatively high.

#### **Group Water Supply Schemes**

As of March 2007, the local authority has been designated as the supervisory authority in respect of private water supplies, which includes group water schemes. The principal risks to drinking waters are those that have a health impact, particularly contamination of supplies associated with E. coli and Cryptosporidium. The EPA report states; "The percentage of group water scheme samples contaminated with E. coli in the majority of local authority areas is unacceptable". Ultimately the enforcement options available to local authorities under the March 2007 Regulations must be used to eliminate the supply of water to members of the public from private group water schemes that is unfit for human consumption.

**Table 25      Number of Private Group Water Schemes Contaminated with E. coli during 2007 as a Proportion of the Total Number of Schemes.**

<b>County</b>	<b>Number of Private Group Water Schemes Contaminated with E.coli during 2007 as a proportion of the Total Number of Schemes</b>
<b>Cavan</b>	5/22
<b>Donegal</b>	12/18
<b>Louth</b>	3/9
<b>Leitrim</b>	10/16
<b>Monaghan</b>	1/14
<b>Sligo</b>	3/13

**Recommendations made by the EPA report; 'The Provision and Quality of Drinking Water in Ireland - A Report for the Years 2007 – 2008'**

**Public Water Supplies - Recommendations**

- Local authorities with supplies on the Remedial Action List, must develop an appropriate solution that will involve abandoning or replacing the source, upgrading the treatment facilities or improving management and operational practices.
- Local authorities should carry out the cryptosporidium risk assessment and, if a supply has been identified as high risk, then the local authority should take action to reduce the risk. Furthermore, local authorities must review operations of all other plants to ensure that the turbidity levels are below 1.0 NTU (and preferably below 0.2 NTU).
- Local authorities should install continuous turbidity monitors on each filter and the final treated water at water treatment plants. These monitors should be linked to a recording device and alarm in the event of a deviation from the acceptable operating range of the filters.
- Local authorities should review all e. coli exceedances reported in public water supplies to ensure that the root cause of the non-compliance is rectified. As a minimum this should include a review of the disinfection contact time to ensure the World Health Organisation guidelines are being met, the operation of monitors and alarms to control the disinfection process, and a review of dosing arrangements and integrity of the distribution system.
- Local authorities should ensure that each exceedance of the parametric values is investigated and notified to the EPA as outlined in the Guidance Booklet No.1 published by the EPA. Actions taken to address the cause of the non-compliance must include actions to prevent the exceedance occurring in the future.
- Local authorities should ensure that fluoridation is carried out in accordance with the Code of Practice for Fluoridation of Water Supplies and that levels in the final waters do not exceed 0.8 mg/l.
- Local authorities should carry out a lead survey to determine the extent of lead piping in the distribution network and in the population served. Dosing



with phosphate should be considered where the local authority is unable to ensure compliance with the lead standard in the short/medium term.

- Local authorities must prepare action programmes to deal with the exceedances of the bromate and trihalomethane parametric values. Such action programmes should consider the use of alternative disinfection chemicals where this has been identified as contributing to the exceedances. The standards for these parameters are currently being breached in a significant number of samples. The standards for these parameters will become more stringent on 25 December 2008 and local authorities must prepare action programmes to ensure that they can comply with these standards prior to their entry into force. Disinfection should not be compromised in attempting to control disinfection by-products.
- Local authorities should respond positively to all complaints received by members of the public in relation to the organoleptic quality of drinking water and should strive to reduce these exceedances as much as possible. Records should be kept of all responses to complaints about poor quality drinking water.

#### **Additional Recommendations**

The EPA report makes further recommendation in respect to the management of group water supply schemes and small private schemes, monitoring, safe and secure drinking water and reporting and communication.

**Table 26 Drinking Water Supply and Demand for Gateway and Principal Towns (Nov 2009 figures)**

Settlement	Position in RPG Hierarchy	Supply Capacity (m3/day approx.)	Current Demand (m3/day approx.)	Current Capacity Shortfall or Spare Capacity - based on available highest current loading	Water Supply Infrastructure priorities <sup>10</sup>	Predicted future capacity in 2022 (m3/day approx.)	Predicted Future Demand (m3/day approx.)
<b>Letterkenny</b>	Gateway	9,700	9,200	<b>500</b>	County Donegal Water Conservation Project Cranford Regional Water Supply Scheme Works for Letterkenny WS Lough Mourne/Letterkenny Water supply scheme Dams & Source Dev. Lough Mourne/Letterkenny Water supply scheme Treatment Capacity	9,700	9,700
<b>Sligo</b>	Gateway	25,000	19,500	<b>5,500</b>	County Sligo water Conservation & Network management	25,000	25,000
<b>Dundalk</b>	Gateway	27,400	20,000	<b>7,400</b>	Cavanhill WTP Upgrade Dundalk Water Conservation Rehabilitation Bundle No 1 Dundalk Strategic Water Study- Network Reinforcement -Priority 1 & 2 Measures	27,400	27,400
<b>Cavan</b>	<b>Hub</b>	<b>4,500</b>	<b>4,200</b>	<b>300</b>	<b>Upgrading of treatment plant to meet compliance issues</b>	<b>8,000</b>	<b>8,000</b>
<b>Monaghan</b>	Hub	6,200	3,000	<b>3,200</b>	Co. Monaghan Water Conservation Project	6,200	6,200
<b>Drogheda</b>	Primary Dev Centre	20,000	20,000	0	Drogheda Water Conservation- Rehabilitation Bundle No 1 EMSL&DWSIS- Staleen WTP Expansion Staleen- Donore Watermain Drogheda Water Network- Ring main	25,000	25,000
<b>Carrick on Shannon</b>	Strategically Important Centre	12,000	9,200	<b>2,800</b>	South Leitrim Regional Water Supply Scheme	12,000	12,000

## Water

Augmentation schemes at Cavan, Drogheda and Dundalk together with spare capacity in the network and water conservation measures addressed during the life of the guidelines will meet future expected demand. The strategy detailed in Chapter 5 of the Guidelines on water services shows the need to move water conservation policy to one of the top priorities. The target set to reduce Unaccounted For Water to 25% should be achieved before implementation of new abstraction demands from surface or ground water sources. This will ensure no further unnecessary impacts on biodiversity.

<sup>10</sup> These priorities are listed in the Water Services Investment Programme

## Water and Waste Water Services

Water services in the Border Region have seen unprecedented investment and progress over the last number of years. In many instances however, growth has taken place in areas that did not have the necessary infrastructure to support it. Contrary to this, there are also areas that have experienced significant investment in infrastructure but do not have the necessary loadings required for the effective running of the plant machinery. Moving forward, water services will need to be closely linked with future growth and development across the region. Table 27 below outlines those significant developments in water services post 2004.

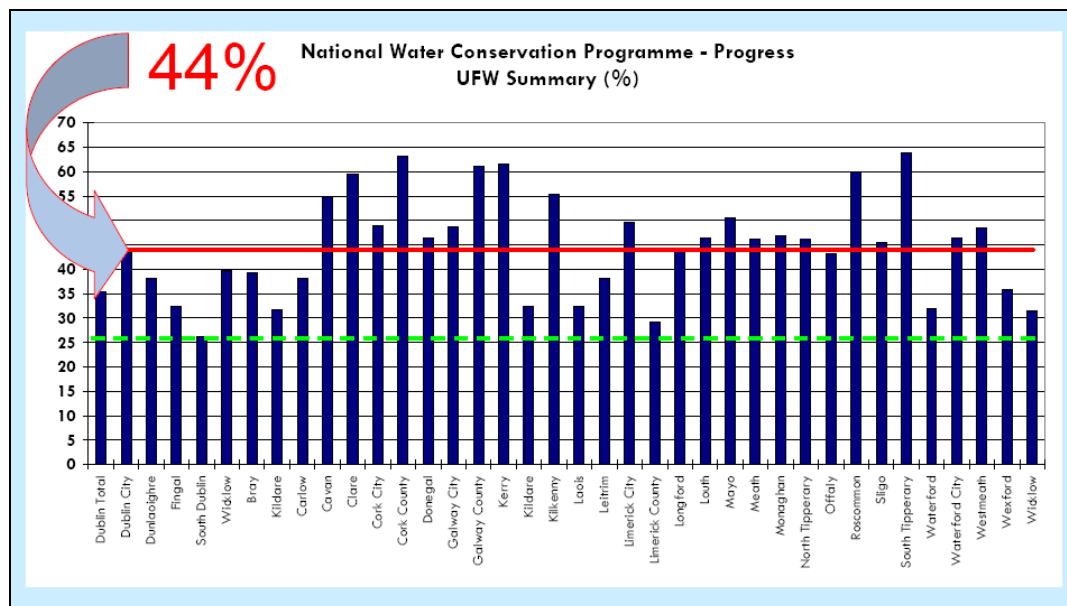
Significant additional water capacity can be delivered through water conservation measures.

### Water Conservation Measures

Water conservation measures have the potential to deliver significant additional water supply and a greater financial returns on investment. Levels of Unaccounted For Water (UFW) are high in Ireland and is a significant issue in the Border region as indicated in Figure 1 below. Leitrim with 37% UFW is closest to meeting a target of 25% which is considered a reasonable UFW.

Water Loss in Local Authorities in Ireland

**Figure 5 Water Losses in Local Authorities in Ireland**



In the case of water supplied from a public source the metering of all users and billing of non-domestic users has a key role to play in avoiding wastage and securing the efficient use of resources.

All Local Authorities are required to prepare a Drinking Water Incidence Response Plan (DWIRP) and to appoint an DWIRP Manager in order to minimise the damage of any potential incidents, DoEHLG Circular L4/09 refers.

The environmental impacts of works involving abstractions and discharges should be assessed with particular reference to ecologically sensitive sites and in particular Natura 2000, Ramsar Sites, Shellfish Growing Areas, Pearl Mussel Sites and NHA's.

**Table 27 Developments in Water Services in the Region Post 2004**

COUNTY	PROJECT	STATUS
<b>CAVAN</b>	Kingscourt Sewerage/Water Supply Scheme	Advanced works completed
	Cavan & Cootehill Regional water Supply Scheme	Advanced works completed
	Cavan Sewerage Scheme	Advanced works completed
	Ballyjamesduff RWSS Extension to Ballinagh	Completed
	Crossdoney/Stradone/Mountnugent Wastewater Treatment Plant	Completed
<b>DONEGAL</b>	DBO (Design, Build & Operate) Group A, comprising of Donegal, Rosstown and Ballyshannon Wastewater Treatment Works	Completed
	Letterkenny Sewerage Scheme	Network Completed
	Letterkenny Water Supply Scheme	Bore Holes Completed
	Ardara Waste Water Treatment Plant	Completed
	Malin Town Sewerage Scheme	Completed
<b>LEITRIM</b>	Carrick- On- Shannon Wastewater Treatment Plant	Under Construction
	Drumkeeran /Manorhamilton/Dromahaire Water Supply Scheme	Under Construction for completion end 2009
	Leitrim Towns & Villages Phase II	Preliminary Report Completed
	North Leitrim RWSS Phase I	Completed
<b>LOUTH</b>	Drogheda Wastewater Treatment Plant Extension	Completed
	Baltray Termonfeckin Sewerage	Completed
	Dundalk and Drogheda Sludge Drier	Completed
	Mid Louth RWSS Emergency Works	Preliminary Report Completed
	Dundalk Northern Environs Water Augmentation/Drainage Stage I	Completed
	Cooley RWS Stage II	Preliminary Report Completed
	Dundalk & Environs Strategic Water Study	Completed
	Ardee Sewerage Scheme	Preliminary Report Completed
	Tallonstown/Collon/Knockbridge/Louth Waste Water Treatment	Completed
<b>SLIGO</b>	Sligo Wastewater Treatment Plant	Completed
	Teesan/ Lisnalgur Sewerage	Completed
	Sligo and Environs water Supply Scheme Stage 2	Completed
	Enniscrone Sewerage Scheme	Completed
<b>MONAGHAN</b>	Carrickmacross Sewerage Scheme	Under Construction
	North East Service land Initiative	Completed
	Castleblaney Road / Old Armagh Road Service Initiative	Completed
	Castleblaney, Clones & Ballybay Sewerage Schemes	Preliminary Report Complete

Priorities in respect to Water Services Investment Programme for the Region during the period 2010 – 2012 are shown in Table 28 below

**Table 28 Priority Projects identified in the Water Services Investment Programme for the Region**

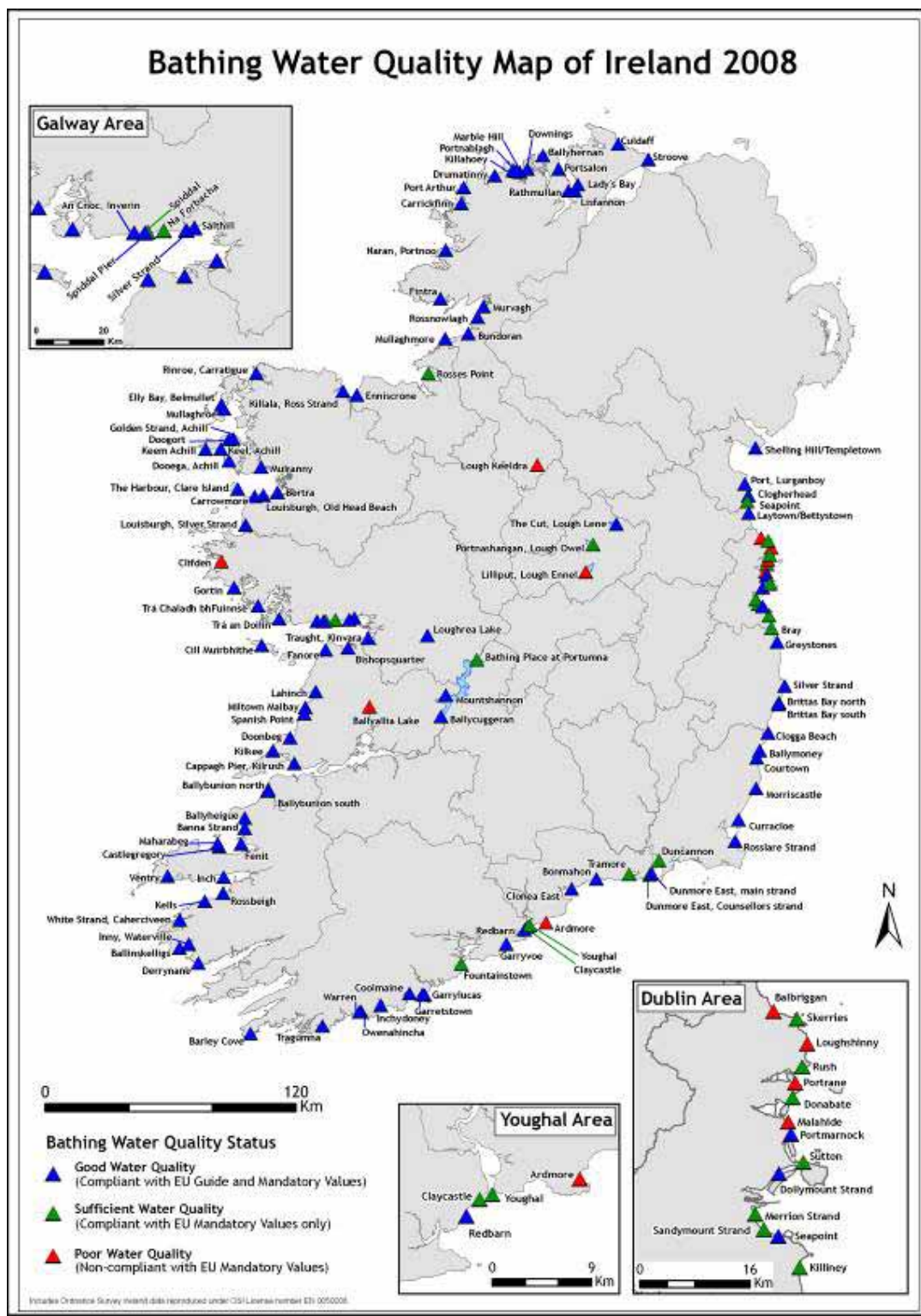
<b>County/ Settlement</b>	<b>Priority Projects from WSIPs 2010 – 2012</b>
<b>Donegal</b>	<ul style="list-style-type: none"> <li>- Water Conservation Programme</li> <li>- Letterkenny Sewerage Scheme</li> <li>- Letterkenny Water Supply Scheme</li> <li>- Lough Mourne/Letterkenny Water Supply Scheme</li> <li>- Bridgend Sewerage Scheme.</li> </ul>
<b>Cavan</b>	<ul style="list-style-type: none"> <li>- Water Conservation Programme</li> <li>- Cavan and Cootehill Regional Water Supply Scheme. Stage 2</li> <li>- Cavan Sewerage Scheme inc. Sludge Management.</li> <li>- Swellan, Latt Area and Drumalee Sewerage Scheme</li> </ul>
<b>Monaghan</b>	<ul style="list-style-type: none"> <li>- Co.Monaghan Water Conservation Programme</li> <li>- Monaghan Town Sewerage Scheme-Advance Works</li> <li>- Castleblayney Sewerage Scheme</li> </ul>
<b>Louth</b>	<ul style="list-style-type: none"> <li>- Water Conservation –Network Management</li> <li>- Dundalk Water Supply-Cavanhill Upgrade</li> <li>- Dundalk South and West Sewerage Scheme Phase 1</li> <li>- South Drogheda Water Supply Scheme</li> <li>- Drogheda Sewerage Network Improvements</li> </ul>
<b>Leitrim</b>	<ul style="list-style-type: none"> <li>- County Leitrim Water Conservation Project</li> <li>- Carrick-on-Shannon Sewerage improvement Scheme -including Satellite Dewatering</li> <li>- South Leitrim Regional Water Supply Scheme</li> <li>- UV Equipment Carrick on Shannon Water Treatment Plant</li> </ul>
<b>Sligo</b>	<ul style="list-style-type: none"> <li>- County Sligo Water Conservation &amp; Network Management Project.</li> <li>- Sligo and Environs Water Supply Scheme Stage 2</li> <li>- Sligo Wastewater Treatment Plant</li> <li>- Sligo Sewerage Scheme(Network Improvements)</li> <li>- Sligo &amp; Environs Water Supply Scheme Stage 3</li> </ul>

Upgrades/operational improvements in terms of the provision of water and wastewater infrastructural works should receive priority through the Water Services Investment Programme. Major developments should be directed towards key settlements that have the spare capacity, or can provide such capacity at an economical cost.

The works proposed under the Water Services Investment Programme as outlined above will have an overall positive impact on the environment of the region, subject to compliance with the relevant EU Directives, national legislative requirements and national and regional guidelines.

### **Bathing Water Quality**

The monitoring of water quality at designated bathing areas is governed by the European Council Directive (976/160/EEC). The Directive aims to ensure that the quality of bathing water is maintained and, where necessary, improved so that it complies with specified standards designed to protect public health and the environment. Map indicates the water quality status of each designated bathing area in respect to year 2008.



**Map 15 Bathing Water Quality Map of Ireland 2008**

Source:

<http://www.epa.ie/downloads/pubs/water/bathing/name,26130,en.html>

The Environmental Protection Agency Report (2009) 'Quality of Bathing Water in Ireland' stated that at a national level, of the nine bathing areas that failed to achieve sufficient water quality status in 2008, six were seawater and three were freshwater. This included Keeldra Lough, Co. Leitrim. It is noted in the report that the lower proportion of bathing areas achieving sufficient and good water quality status is due, in general, to the higher than usual rainfall that occurred during the summer of 2008. The status of the bathing areas within the region is outlined in Table 29 below.

**Table 29 Status of Bathing Areas within the Region**

Responsible Local Authority	Bathing Area	Quality Water Status	Compliance with EU	
			Mandatory	Guide
<b>Donegal Co Council</b>	Ballyhernan, Fanad	Good	√	√
	Bundoran	Good	√	√
	Carrickfinn	Good	√	√
	Culdaff	Good	√	√
	Dowlings	Good	√	√
	Drumatinny	Good	√	√
	Fintra	Good	√	√
	Killahoey	Good	√	√
	Lady's Bay, Buncrana	Good	√	√
	Lisfannon	Good	√	√
	Marble Arch	Good	√	√
	Murvagh	Good	√	√
	Naran, Portnoo	Good	√	√
	Port Arthur, Derrybeg	Good	√	√
	Portsalon	Good	√	√
	Rathmullan	Good	√	√
	Rosnowlagh	Good	√	√
	Shroove	Good	√	√
<b>Sligo Co. Council</b>	Enniscrone	Good	√	√
	Mullaghmore	Good	√	√
	Rosses Point	Sufficient	√	X
<b>Leitrim Co. Council</b>	Keeldra Lough	Poor	X	X
<b>Louth Co Council</b>	Clogherhead	Good	√	√
	Port, Lurganboy	Good	√	√
	Seapoint	Sufficient	√	X
	Shelling Hill/Templetown	Good	√	√

## Blue Flag Beaches and Green Coast Awards

### Blue Flag Awards

The Blue Flag is an international award for beach excellence which is operated in Ireland by An Taisce, with support from the Department of the Environment, Heritage and Local Government and by Tidy Northern Ireland with the support of the Northern Ireland Environment Agency in Northern Ireland.

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.



The Blue Flag programme has been operating in Ireland since 1988. This year there has been an overall decrease in the number of blue flags awarded, with six being awarded in Northern Ireland (a decrease of two) and seventy seven being awarded here (a decrease of three). The flag losses were due to deterioration in water quality attributable to the exceptionally heavy rainfall during the 2008 bathing season.

#### 2009 Blue Flag Awardees <sup>11</sup>

##### Donegal – 12 Flags

Bundoran Town Council receives the flag for its beach at Bundoran.

Donegal County Council receives 11 flags for Murvagh, Rossnowlagh, Fintra, Narin-Portnoo, Carrickfinn, Marble Hill, Lisfannon, Portsalon, Killahoey, Shroove and Culdaff

##### Sligo – 1 Flag

Sligo County Council retains one flag at Mullaghmore.

##### Louth – 3 Flags

Louth County Council retains both its blue flags at Shellinghill/Templetown and Port and gained a flag for Clogherhead

#### **Green Coast Awards**

In the case of the Green Coast Awards scheme<sup>12</sup>, forty beaches have been awarded the Green Coast Award for 2009. This compares with 33 for 2008. 2009 is the second year that the Green Coast Award has been conducted nationwide. Green Coast Awardees for 2009 that are located within the Border Region are listed below:

##### **County Donegal**

Ballyhernan

Drumnatinney

Ladies Bay

Port Arthur

Rathmullan

Dooey Beach

Magheroarty Beach

##### **County Sligo**

Streedagh

Dunmorán Strand

#### **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.

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<sup>11</sup> Minister Gormley presents Blue Flag and Green Coasts Awards 2009  
Statement Issued: 03 June 2009

<sup>12</sup> An Taisce have awarded 75 International Blue Flags and 40 National Green Coast Awards for 2009.  
posted on June 03, 2009 04:01

The Directive sets physical, chemical and microbiological requirements that designated shellfish waters must either comply with or endeavour to improve. The Directive also provides for the establishment of pollution reduction programmes for the designated waters.

Responsibility for the Shellfish Waters Directive in Ireland transferred from the Department of Agriculture, Fisheries and Food to the Department of the Environment, Heritage and Local Government on 5 November 2008. The Directive is implemented in Ireland by the European Communities (Quality of Shellfish Waters) Regulations 2006 (SI No 268 of 2006).

Pollution reduction programmes (PRP's) were established for fourteen sites already designated under these Regulations.

The Minister for the Environment, Heritage and Local Government, on 10th February 2009, signed the European Communities (Quality of Shellfish Waters) (Amendment) Regulation 2009, SI 55 of 2009. This SI amends the 2006 Statutory Instrument by providing for designation of an additional number of important shellfish growing areas.

The boundaries of the forty nine additional areas have been drawn to ensure that they encompass all of the active licensed aquaculture being carried on within them. The additional designated areas together with their boundaries are shown on the maps that have been drawn up for each of the areas.

<sup>13</sup>Designated sites within the Region are as follows:

**Existing Designated Shellfish Waters (Pre 2009)**

Mulroy) Donegal  
Carlingford Louth

**Newly Designated Shellfish Waters (2009)**

**County Sligo**

Sligo Bay  
Drumcliff Bay

**County Donegal**

Donegal Bay  
Inver Bay  
McSwynes Bay  
Loughros Beg  
Gweebarra Bay  
Trawenagh Bay  
Dunglow  
Gweedore Bay  
Sheephaven  
Lough Swilly  
Trawbreaga Bay

**County Louth**

Dundalk Bay

Pressure on shellfish growing areas can come from any source which discharges into water. Table 30 below indicates the wide variety of potential threats to these areas.

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<sup>13</sup>

<http://www.environ.ie/en/Environment/Water/WaterQuality/ShellfishWaterDirective/>

**Table 30 Potential Threats to Shellfish Growing Areas**

<b>Pressures arising from structural changes</b>	<b>Point source pressures</b>	<b>Diffuse source pressures</b>
<b>Channelisation and dredging</b>	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)
<b>Flood Protection and embankments</b>	Discharges licensed by the EPA	Drainage from roads and railways
<b>Dams, Locks and weirs</b>	Discharges licensed by local authorities	Forestry
<b>Intensive land use (land drainage)</b>	Overflows from sewerage systems that by-pass treatment plants, caused by rain storms, usually referred to as combined sewer overflows (CSOs).	Septic tanks
<b>Built structures e.g. ports and harbours</b>	Discharges from water treatment plants	Activities which use dangerous substances (forestry and agriculture)
<b>Deposition of dredge spoil</b>		
<b>Coastal defences</b>		

To view the maps and other details in respect of the designated sites listed above visit the following Department of Environment Heritage and Local Government web site:

<http://www.environ.ie/en/Publications/Environment/Water/>

### **Climate change and Air Quality**

Climate change is recognised as the greatest threat to the planet and the greatest challenge facing humanity. The need for major reductions in greenhouse gas (GHG) emissions is now an accepted priority for most countries. Ireland's commitment under the Kyoto Protocol is to limit GHG emissions over the 2008–2012 period to no more than an annual average of 62.8 M tonnes CO<sub>2</sub>e (13 per cent above 1990 levels). However, the most recent data show that Ireland faces a major challenge to meet this target and reduce what is one of the highest levels of per capita emissions in the EU. The more stringent targets proposed by the EU for 2020 pose even greater challenges for the country, and there is an urgent need to implement effective long-term strategies to achieve the necessary emissions reductions across all economic sectors. Current projections show that even if all projected reductions from existing and planned policies are delivered, and forest sinks and Kyoto mechanisms purchases are used as envisaged, Ireland will still exceed its Kyoto Protocol limit by an average of 1.4 Mtonnes of CO<sub>2</sub> equivalent per annum in the period 2008-2012. Additional domestic policies and measures and/or additional Government purchases will be required to bridge this gap. In particular, Ireland will have to reduce its dependence on fossil fuels while at the same time ensuring that very significant increases are made in both energy efficiency and in the use of alternative energy sources such as wind, ocean and biomass. The impacts of climate change are projected to increase in the coming decades. Research commissioned by the EPA has demonstrated that action is required on a national basis to prepare for adverse

impacts in areas such as flooding, water management during dry spells, sea-level rise and coastal erosion. Efforts will also be required to protect native species and manage changes in vulnerable natural and managed ecosystems<sup>14</sup>.

The report by the EPA entitled “Ireland’s National Greenhouse Gas Emissions Projections to 2020 (2008)” presents three scenarios which show three potential outlooks to 2020 depending on policy development and implementation. The scenarios are called

- (i) *Baseline*
- (ii) *With Measures*
- (iii) *With Additional Measures*

Figure 6 shows the projected contributions from each of the sectors to total national emissions for each scenario averaged over the 2008 – 2012 period. Agriculture and transport sector emissions account for 45 – 47% of emissions under all three scenarios.



**Figure 6** Projected share of total greenhouse gas emissions by sector averaged over the period 2008 – 2012

Source:

[http://www.epa.ie/downloads/pubs/air/airemissions/Projections\\_Publication%20September%202008%20PDF%20\(2\)2.pdf](http://www.epa.ie/downloads/pubs/air/airemissions/Projections_Publication%20September%202008%20PDF%20(2)2.pdf)

Coastal Flooding is becoming more frequent and widespread in Ireland and is even occurring in areas which have no prior history of flooding. Coasts are projected to be exposed to increasing risks, including coastal erosion, due to climate change and sea-level rise, effects exacerbated by increasing human - induced pressures on coastal areas. Coastal wetlands projected to be negatively affected by sea-level rise especially where they are constrained on their landward side, or starved of sediment.

Summary Findings – Intergovernmental Panel on Climate Change AR4 Report – 2007

- Many millions more people are projected to be flooded every year due to sea-level rise by the 2080s. Densely populated and low-lying areas where adaptive capacity is relatively low are especially at risk.
- Nearly all European regions are anticipated to be negatively affected by some future impacts of climate change and these will pose challenges to many economic sectors.
- Negative impacts will include increased risk of inland flash floods, and more frequent coastal flooding due to storminess and sea-level rise.

<sup>14</sup>

EPA, Ireland's Environment 2008. <http://www.epa.ie/downloads/pubs/other/indicators/irlenv/>

- A portfolio of adaptation and mitigation measures can diminish the risks associated with climate change. One way of increasing adaptive capacity is by consideration of climate change impacts in development planning.
- Sustainable development can reduce vulnerability to climate change by enhancing adaptive capacity and increasing resilience.
- A wide array of adaptation options is available, but more extensive adaptation than is currently occurring is required to reduce vulnerability to climate change.
- There is high confidence that there are viable adaptation options that can be implemented in some sectors at low cost and/or with high benefit cost ratios.
- There is high agreement and much evidence of substantial economic potential for the mitigation of global GHG emissions over coming decades that could offset the projected growth of global emissions or reduce emissions below current levels.

**Source:** *Flood Defences and Coastal Structures Seminar, UCC/HMRC, 30 January 2009*

In 2006, measured sulphur dioxide, nitrogen dioxide, carbon monoxide, lead and benzene concentrations in Ireland were all below their individual limits, as designated under the 2002 Air Quality Standards Regulations. In addition, particulate matter (PM10) concentrations in 2006 were similar to those measured in 2005, with all stations compliant with the standard introduced from 2005. However, ozone concentrations measured in Ireland in 2006 were higher than recent years.<sup>15</sup>

Northern Ireland has a relatively good network of air quality monitoring sites, which have been established to ensure the standards of the National Air Quality Strategy are met. Data from the monitoring sites show that in general there has been a long term decline in the average number of air pollution days in Northern Ireland, reaching an all-time low of only three days in 2006. This is largely because of a reduction in particles and sulphur dioxide, but fluctuations from one year to the next can occur, as in 2003, because of differences in weather conditions. In rural areas the series can be volatile from one year to the next, and the downward trend is less clear. This reflects the variability in levels of ozone, the main cause of pollution in rural areas.<sup>16</sup>

It is only recently that radon gas has been identified as being a hazard to Public Health. Consequently the Radiological Protection Institute of Ireland (RPII) undertook a comprehensive survey of radon in Irish dwellings. Approximately 11,500 houses were surveyed nationally and the results suggest that approximately 7% of houses have radon concentrations in excess of the Maximum Acceptable Limit. The Building Regulations were amended in 1998 in order to deal with radon in buildings.

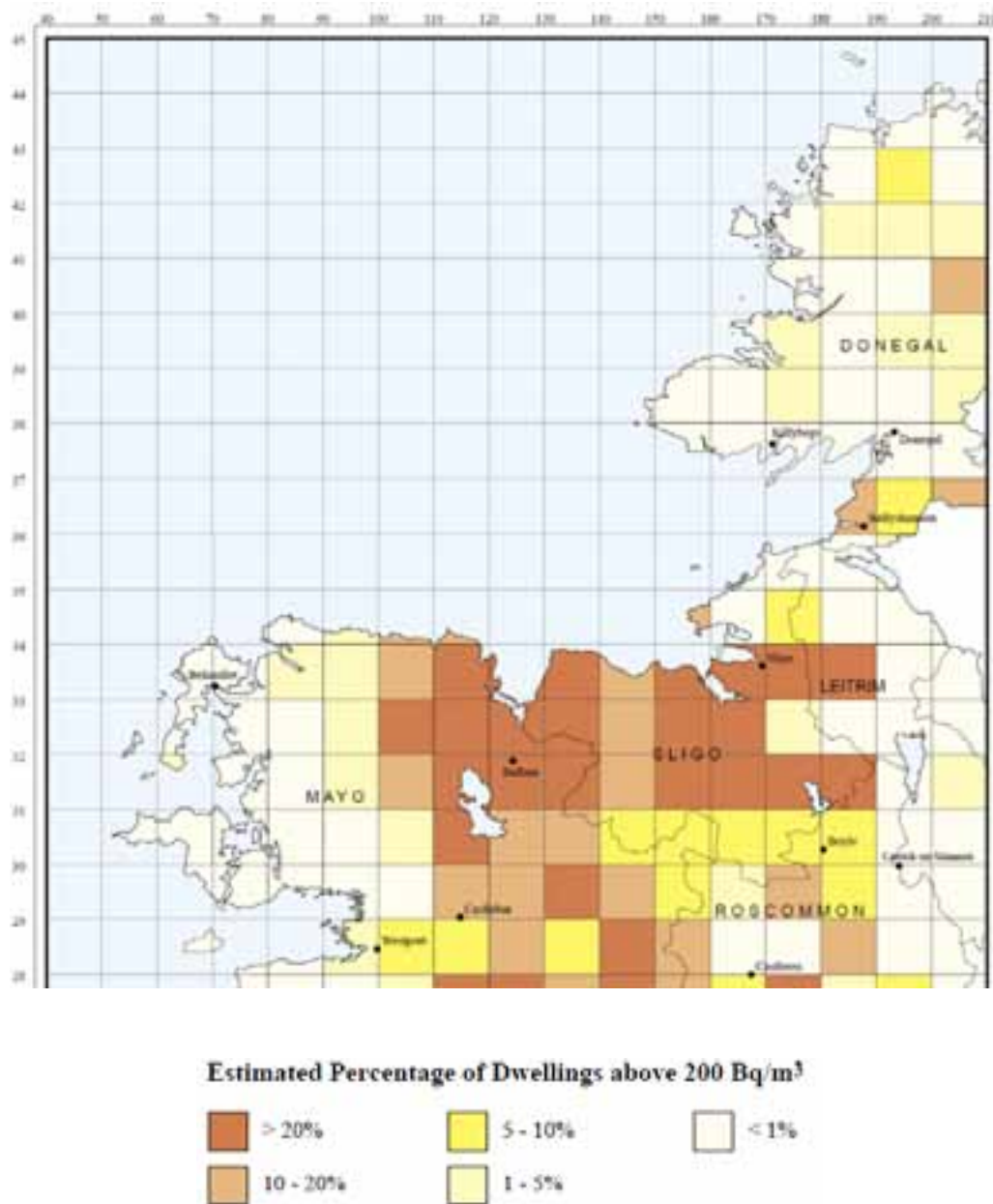
Further details on radon and related matters, including maps indicating the predicted radon levels in dwellings throughout the country, may be found on the RPII website ([www.rpii.ie](http://www.rpii.ie)).

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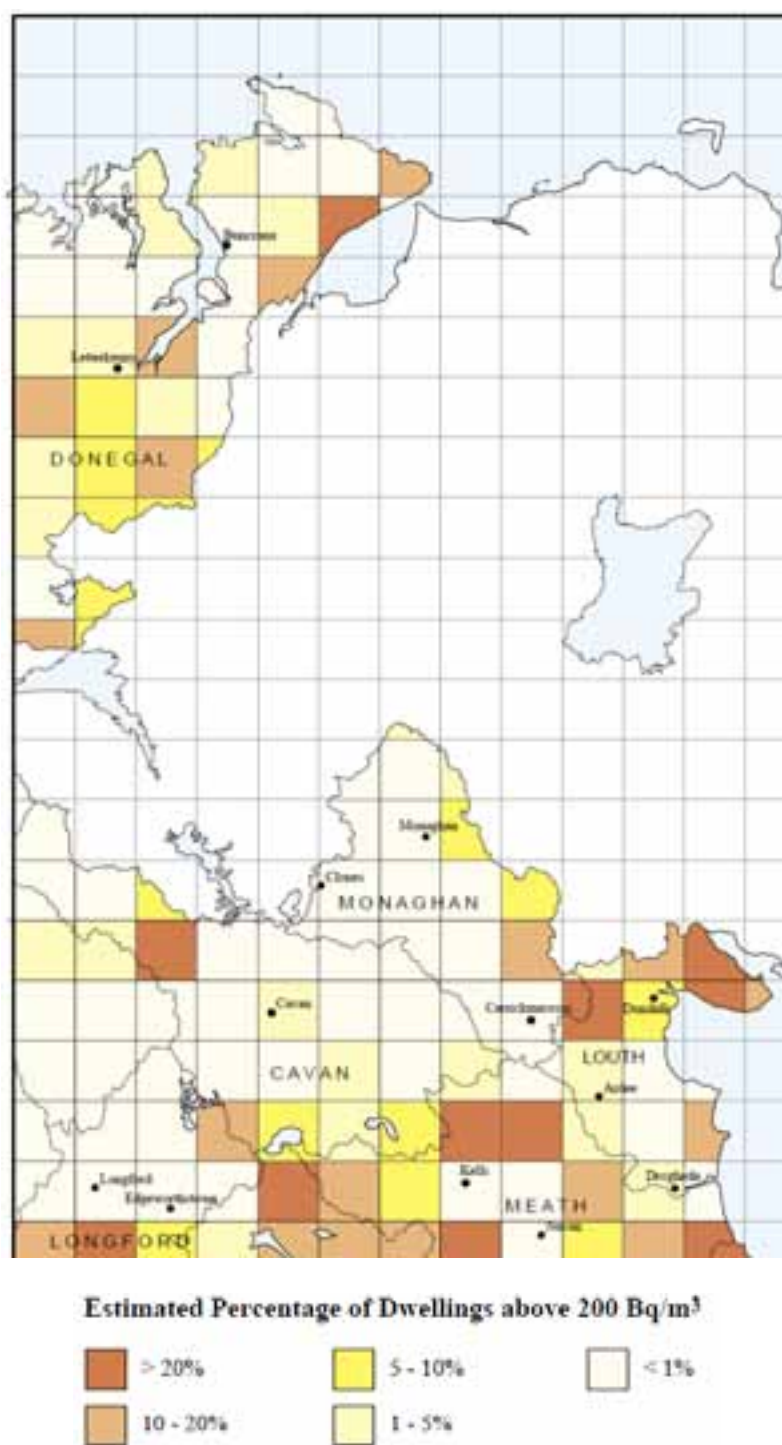
<sup>15</sup> Environmental Protection Agency (2007). Air Quality in Ireland 2006 – Key Indicators of Ambient Air Quality.

<sup>16</sup> <http://www.airqualityni.co.uk/reports.php>.

From an examination of the radon mapping it can be seen that there are a number of areas, spread somewhat sporadically, throughout the region where a significant percentage of houses have elevated radon levels. The extent of areas with elevated radon levels in County Sligo is relatively high.



**Map 16** Extract from RPII Survey 1999 - 'Radon in Irish Buildings'



**Map 17 (a) Extract from RPII Survey 1999 - 'Radon in Irish Buildings'**

Local Authorities, in partnership with other relevant agencies, should promote best practice in the implementation of radon prevention measures.

### **Material Assets**

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, coastal and water resources and coastal defences. Developments and activities can often impact on these assets, which have

been referred to herein. It has been highlighted that there is a high level of residential and commercial vacancy within the region. These properties represent an underutilized resource and if left idle, they can over time deteriorate and detract from the character of urban areas.

The issues in respect to material assets are dealt with herein under their respective headings.

### **Cultural Heritage including Archaeology and Architectural Heritage**

The region is reasonably well supplied with arts and cultural centre's, facilities and events.

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, climactic, 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, make a significant contribution to our built heritage. A lack of awareness of their inherent and associative value can result in the loss of these elements and subsequent erosion of heritage assets. Stone walls for example are an integral part of our rural/demesne landscape, often providing significant historic reference 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. There are a number of significant historic garden/estate landscapes in the region. It is essential that appropriate appraisal and surveying informs the consideration of development proposals for these sensitive sites.

While not every structure is of sufficient importance to warrant the rigours of special protection, the conservation of good examples of the built heritage is vital if a sense of continuity with the past is to be maintained.

The Border Region has a rich and diverse heritage and brings benefits to all that live in the region and those who visit. Along with forming our identity, heritage teaches us lessons from the past and also brings economic benefits to the region by providing scenic landscapes, vernacular architecture and historic monuments for the tourist. Retaining a wide diversity and quality of heritage resources may also be seen as a measure of success and competitiveness.

Caring for our heritage helps fulfill the need for sustainable development by maintaining the quality of our landscapes, the quantity and quality of historic and cultural resources and the heritage of the man-made environment.

It is acknowledged that well selected developments/projects, in appropriate locations, can play a significant role in the enhancement of our understanding of our heritage – artistic, cultural and literary.

Under Section 10 (2) (f) of the Planning and Development Act 2000, as amended, it is a requirement of all county development plans to include objectives for:

*“ the protection of structures, or parts of structures, which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest”.*

Under Section 10 (2)(g) of the Planning and Development Act 2000, as amended, it is a requirement of all county development plans to include objectives for:



*“the preservation of the character of architectural conservation areas”.*

Section 51 (1) of the Planning and Development Act 2000, as amended, states:

*“For the purpose of protecting structures, or parts of structures, which form part of the architectural heritage and which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest, every development plan shall include a record of protected structures, which is, in the opinion of the planning authority, of such interest within its functional area”.*

The archaeological heritage of the region is a unique resource, which has shaped our landscape and our cultural identity. 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 the Environment, Heritage and Local Government National Monuments Section has a specific role in relation to the protection of the archaeological heritage. Each local authority has a legal responsibility to include a Record of Protected Structures in its county development plan. Structures or parts of structures can be added to the Record if they are of special interest under one or more of the following headings: historical, cultural, artistic, archaeological, scientific, social, technical and architectural

The region contains a fine stock of architectural heritage including many large country houses and their associated demesne landscapes, ecclesiastical sites and other sites of industrial and vernacular heritage. Parts of the streetscapes of many of the urban areas within the region contain groups of buildings which make an important contribution to the streetscape. These significant areas of the built environment have been designated Architectural Conservation Areas (ACAs).

The principle legislation that provides the protection to our architectural heritage is the Planning and Development Act, 2000 - 2007. Building activity and natural resource exploration has increased significantly in recent years. This coupled with an increase in afforestation and changing farming methods has placed the built heritage under increasing threat.

### **Landscape and Visual Impacts**

The diversity of landscapes and natural heritage within the region enables views and prospects of areas of natural beauty from many public roads. Accordingly a number of scenic landscapes and routes and sensitive and visually vulnerable areas are designated throughout the region and listed in county development plans for local authorities within the region. The region’s landscapes are of key importance to the region’s tourism industry. Development of infrastructure including energy networks, wind energy and tourism developments all have the potential to impact on the uplands, waterway corridors, demesne and coastal landscapes of the region.

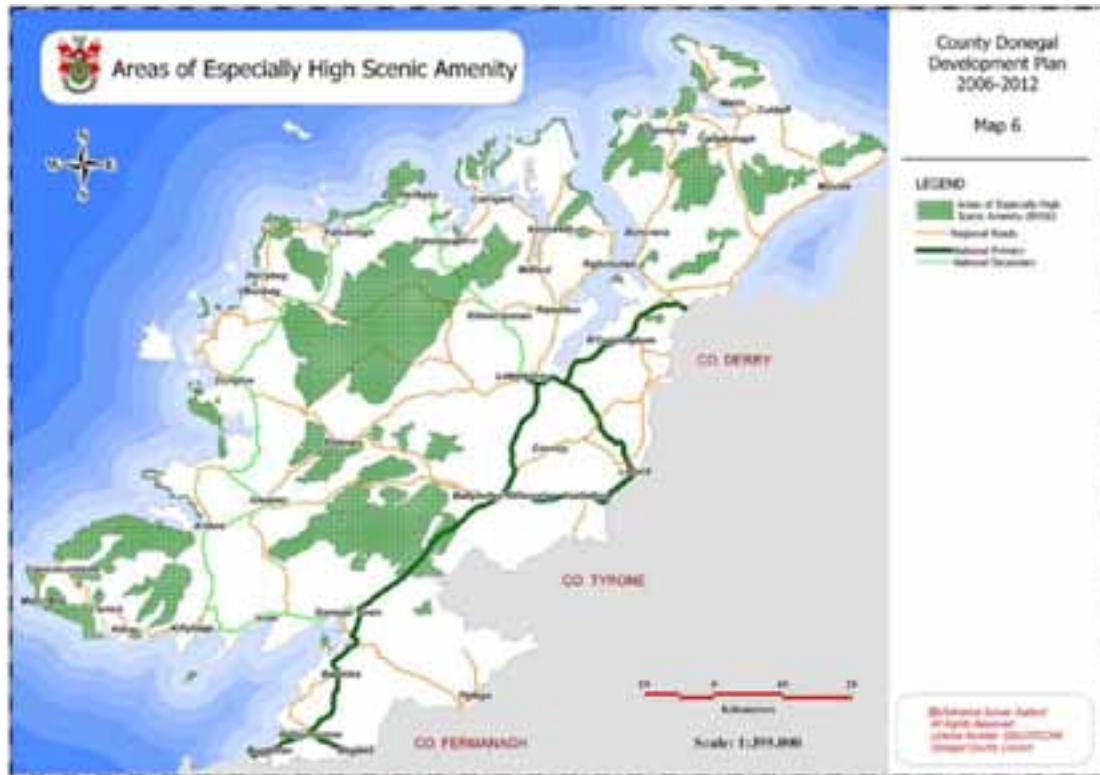
In terms of landscape and visual amenity, local authorities in Ireland conserve and protect scenic value as Areas of High Amenity, Areas of Outstanding Natural Beauty and Protected Views. Each local authority is responsible for the designation of these within their individual jurisdictions, with each development plan providing objectives to protect such views. A summary of the general landscape character and landscape designations of each of the counties within the Border Region is provided below.

**Table 31 General Landscape Character of each County**

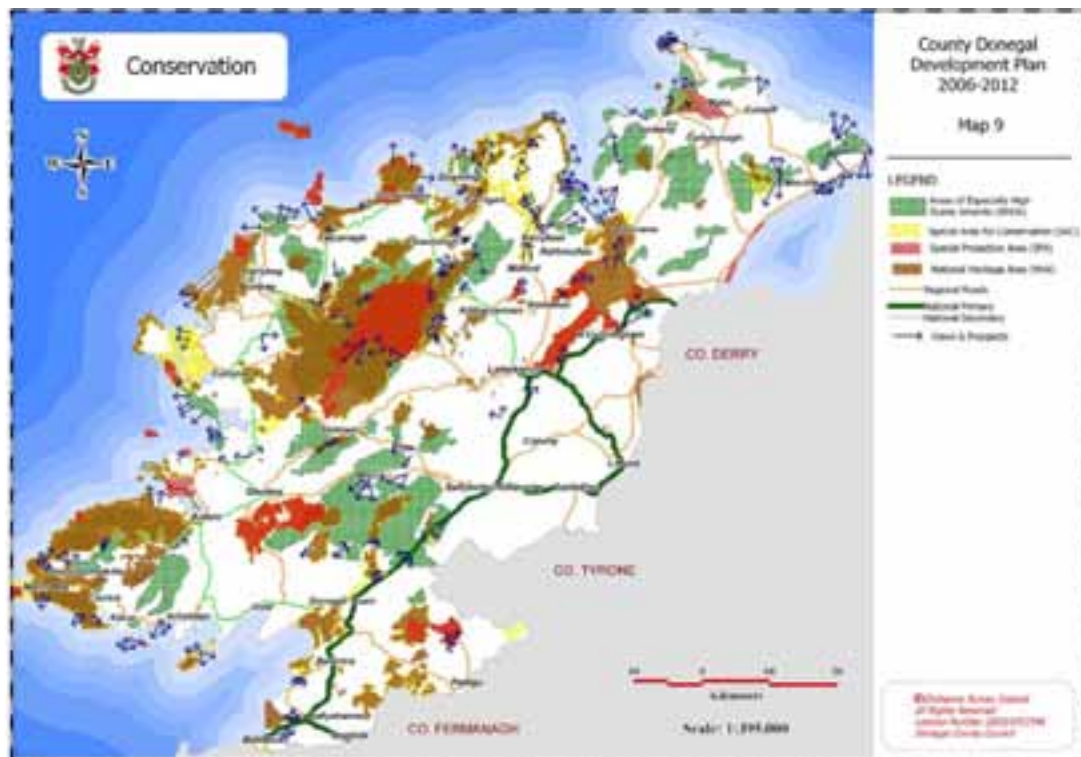
<b>County</b>	<b>General Landscape Character</b>
<b>County Donegal</b>	The landscape of Co. Donegal is dominated by a mountainous granite spine running northeast to southwest comprising the mountain ranges of Derryveagh. To the southwest of these ranges there is a massive peninsula of hard quartzite mountains, known as the Blue Stacks, extending from Ballybofey west to Glencolumbkille on the west coast. The west coast provides a indented coastline, that includes the dramatic sea cliffs of Slieve League, spectacular beaches, tidal sheltered bays, extensive peninsulas and sea loughs (such as Inishowen and Lough Swilly in the North East), in addition to numerous offshore islands, some of which are still inhabited.
<b>County Sligo</b>	Described as a varied natural landscape that includes spectacular limestone mountains, such as Benbulbin and Benwiskin, other interesting upland terrain (e.g. the Ox and Bricklieve Mountains), numerous picturesque lakes (e.g. Loughs Arrow, Easkey, Gara, Glencar, Gill and Talt), enclosed farmland and a diverse coastline, comprising low-lying cliffs, indented shoreline and sandy beaches.
<b>County Leitrim</b>	Described as one of high moor topped mountains, drumlin covered lowlands and glens and coastline. Pastureland is interspersed with hilly outcrops, loughs, rivers, wet pasture and raised peat bogs. County Leitrim is divided by Lough Allen into two distinctive topographical areas. The northern half is characterised by mesa mountains and large lakes, with deep glacial valleys radiating from the centre of the land mass to form a spectacularly scenic landscape. The southern half is typical drumlin country exhibiting the landform and soil type which is the product of retreating glacial masses. Close-packed drumlins and small lakes abound. The River Shannon with its associated lake systems, forms the County's South-West boundary with County Roscommon; Donegal Bay touches the northern extremity of the County in a 4.6Km coastline.
<b>County Cavan</b>	Described as one of drumlin countryside dotted with lakes and small hills. The county has several areas of highly scenic landscape including Lough Oughter, the Shannon-Erne Waterway and a number of forest parks.
<b>County Monaghan</b>	The landscape of Co. Monaghan is described as one of drumlins, interspersed with lakes, trees and woodlands.
<b>County Louth</b>	The county boasts an attractive natural environment. Two areas of the county are designated as being of outstanding natural beauty.

### **Designated Landscapes in County Donegal**

The Donegal County Development Plan 2006-2012 does not provide a list of the areas of Especially High Scenic Amenity or Views and Prospects; therefore the maps accompanying the development plan are reproduced here.



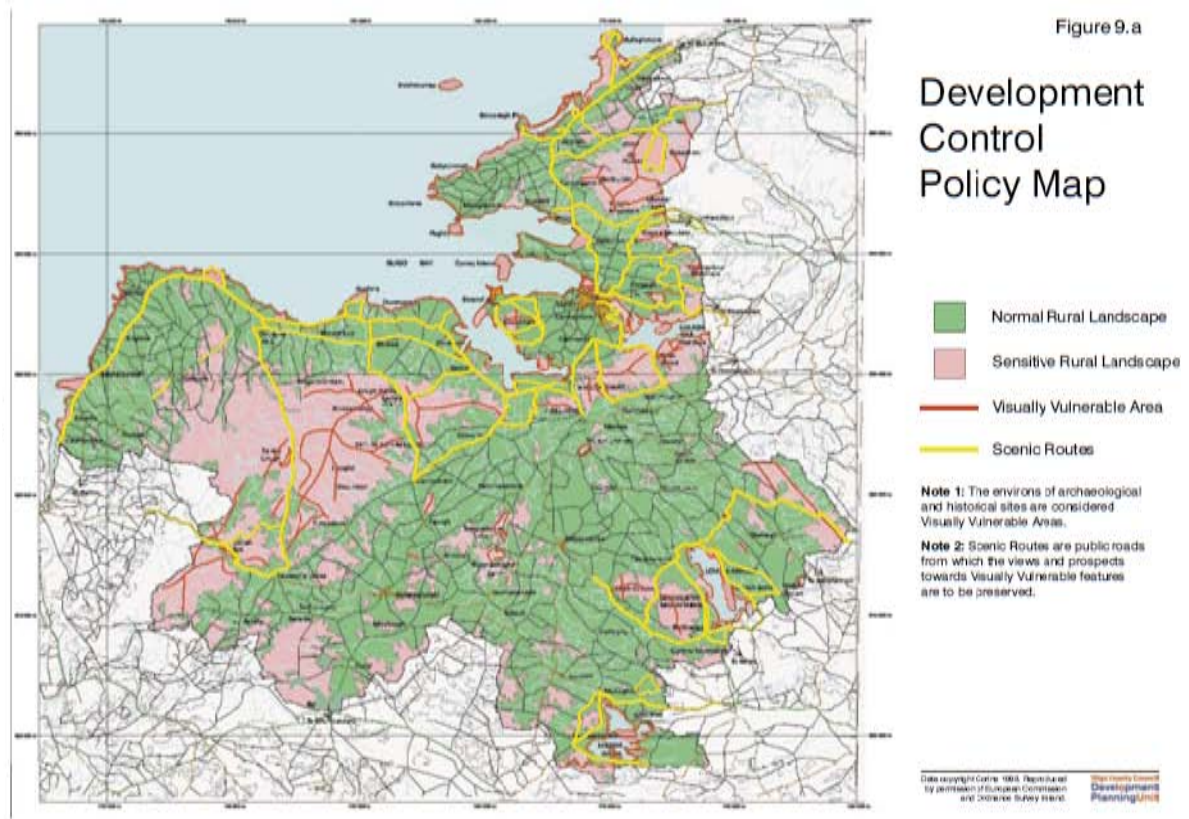
**Map 18** Areas of Especially High Scenic Amenity in County Donegal



**Map 19** Conservation Map - Views & Prospects in County Donegal

### Designated Landscapes in County Sligo

The Sligo County Development Plan 2005-2011 does not provide a list of the Designated Landscapes, therefore the maps accompanying the development plan are reproduced here.



**Map 20 Designated Landscapes in County Sligo**

**Table 32 Scenic Views in County Sligo**

Type of Designation	Location
Scenic Views	<b>Views from National Primary Routes</b> Views of Atlantic Ocean, Ben Bulbin, Kings Mountain and Benwiskin Views of Glencar Lake, Ben Bulbin and Atlantic Ocean Views of Lough Arrow, Bricklieve Mountains and Curlew Mountains
	<b>Views from National Secondary Routes</b> Views of Ballysadare Bay and Knocknarea Views of Atlantic Ocean and Ox Mountains
	<b>Views from Regional Routes</b> Views of Atlantic Ocean, Donegal Bay and Benwiskin Views of Sligo Bay and Harbour, Coney Island, Knocknarea and Coolera Peninsula, Slieve Dargan, Slieve Daeane, Killery Mountain and Ox Mountains Views of Ballygawley Lough, Slieve Dargan and Slieve Daeane Views of Lough Gill and Colgagh Lough Views of Lough Gill, Slieve Dargan, Slieve Daeane and Killery Mountain Views of Knocknarea, Ballysadare Bay, Sligo Bay, Slieve Dargan and Slieve Daeane Views of Sligo Harbour, Sligo Bay and Benbulbin Views of Knocknarea Views of Sligo Bay, Ballysadare Bay and Knocknarea Views of Lough Talt and Ox Mountains

	<p>Views of Kesh Corran and theBricklieve Mountains Views of Lough Gara Views of Killala Bay and Atlantic Ocean</p> <p><b>Views from Local Roads</b> 44 No views listed For details of all listed views see; <a href="http://www.sligococo.ie/media/Media,1936,en.pdf">http://www.sligococo.ie/media/Media,1936,en.pdf</a></p>
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**Table 33 Designated Landscapes in County Leitrim**

<b>Type of Designation</b>	<b>Location</b>
<b>Areas of Outstanding Natural Beauty</b>	<p>The Coast Lough Melvin North Aroo, Glenade, Truskmore, Glencar and environs The Doons, Lough Gill and environs Benbo O'Donnell's Rock and Boleybrack Sheemore</p>
<b>Areas of High Visual Amenity</b>	<p>Coastal Plains Lough Melvin, Glenaniff River and Environs Dough Mountain Thur Mountain Lough McNen Upper and environs Cloonclare Lough Caradice and environs Gulladoo Lake and environs</p>
<b>Outstanding views and Prospects</b>	<p>View towards Donegal Bay from N15 and Local Roads LP02059-1, LP02059-2, LP02059-3, LS06058-0, LS06059-0, LS06001-0 and LS06071-0 View from Local Road LS06049 toward Truskmore and Kings Mountain View towards Lough Melvin and Donegal Bay from Local Road LS06094-1 and LS06094-2 View of Lough Melvin from Aghavoghil View of Loughs Melvin and McNean from Loughross Bar (Local Road LS06197) View towards Glenade Lake and valley from R280 View towards Glenade Lake from Local Roads LT2125-1, LT2151-2, LT02125-1 and LP02125-2 View towards Glencar Lake from Local Road LP04145 View towards Glencar Lake from N16 View towards Benbo Mountain from Local Road LP02136 View towards Lough McNean from Local Roads LT61842-1, LT61842-2, LT61843 and LT61961. View of Fivemilebourne and Carrickanurroo View of Lough Gill from Carrickanurroo View of Lough Gill from R286 View towards Carrigeencor Lake from Local Roads LS08162 and LS08164 View of Benbo, Thur and Dough Mountains from R280 View from O'Donnell's Rock View of Creevelea Abbey from the R286 View towards Bellhavel Lake from Local Road LT42461 View from Gleaghnafeanagh from Local Road LT42533 View towards Lough Allen from the R280 View towards Lough Allen from the R200 View of Slieve an Iarainn from the R280</p>



	View of Slieve an Iarainn and Lough Scur from the R209 View of River Shannon from the N4 Faulties to Aughamore View of Lough Rynn from Local Roads LP01053 and LS05515 View of River Shannon from Local Road LS07426 View of River Shannon from the N4 in the townlands of Munkil and Tully View towards the Leean Mountain Range from the R.278 in the area of Doon Lough
<b>Additional Areas of Interest</b>	Long distance walking route running along the eastern side of L. Allen, northwards toward Manorhamilton.

**Table 34 Designated Landscapes in County Cavan**

<b>Type of Designation</b>	<b>Location</b>
<b>High Landscape Areas</b>	Upland Areas West Cavan Lough Oughter Lakeland Area Erne- Shannon Canal corridor Lough an Lea Mountain
<b>Areas of Special Landscape Interest</b>	Kingscourt/ Dun a Rí
<b>Scenic View &amp; Viewing Points</b>	Gortnahill (N16) Altachullion Area Cornagee Area Dunmakeever Bellavally Gap Belville Tower Drumauna Lough an Lea Annagh Lake Lisnahanagh Drumgarry Inishmore Rann Point Bleanacup Inchin Derrygid Drumcalpin

**Table 35 Designated Landscape in County Monaghan**

<b>Type of Designation</b>	<b>Location</b>
<b>Areas of Primary Amenity Value</b>	Slieve Beagh and Bragan Mountain areas Lough Muckno and Environs
<b>Areas of Secondary Amenity Value</b>	Emy Lough and Environs Blackwater River Valley Mountain Water River Valley Mullyash Mountain Ulster Canal and Environs Rossmore Forest Park and Environs Castleshane Woods and Environs Billy Fox Memorial Park and Environs Annaghmakerrig Lake, Woodlands and Environs Dartry Demesne and Environs Dromore River & lake system including White Lake and Bairds Shore

	Lough Major and Environs Hollywood Lake Lisanisk Lake Lough Naglack Rahans Lake Areas of Secondary Amenity Value
<b>Scenic Drives/Views and Prospects</b>	Scenic views along Emy Lough Scenic views of open countryside from Bragan Mountain View of St Macartens Cathedral Monaghan from Berry Brae View from Castleshane Brae View northwards at Tullybuck Scenic drive and views of open countryside from Mullyash Scenic drive along Lough Muckno Distant views of Lough Muckno and Slieve Gullion Views of Slieve Gullion at Taplagh, Broomfield Scenic views of Lough Egish Scenic drive at Beagh, Shantonagh & Corlat Views of Lough Bawn & Co. Cavan Scenic drive Tattybrack

Table 36 Designated Landscapes in County Louth

Type of Designation	Location
<b>Areas of Outstanding Natural Beauty</b>	Town of Carlingford Cooley Peninsula Clogherhead environs
<b>Areas of High Visual Amenity</b>	Mount Oriel Foughart Hill Monasterboice tower from M1 Carlingford Village and Dundalk Bay Drumallgh view towards Narrow Water Feede Mountain Views from Dungooley crossroad Clogherhead Termonfeckin

### Inter-Relationships between environmental topics

The inter-relationship between environmental topics are largely dealt with herein as they arise. Furthermore an assessment of each of the aims policies and objectives has been undertaken taking into consideration a range of strategic environmental objectives. The following inter-relationships are considered relevant.

**Table 37 Potential Inter-Relationships between SEA Topics**

Biodiversity, Flora, Fauna	√								
Population/ Human Health	√	√							
Soil	√	√	√						
Water	√	√	√	√					
Air	√	√	√	X	√				
Climate	√	√	√	√	√	√			
Material Assets	√	√	√	√	X	√	√		
Cultural Heritage	X	√	X	√	X	X	√	√	
Landscape	√	X	√	√	X	X	√	√	√
	Biodiversity, Flora, Fauna	Population/ Human Health	Soil	Water	Air	Climate	Material Assets	Cultural Heritage	Landscape

√ = Interrelationship Anticipated      X = No interrelationship anticipated.

## 7 Significant Environmental Pressures

### Introduction

The future development of the Border Region has the potential to impact on the environment at a regional, county and local level. New development brings with it a need for supporting infrastructure. Key environmental issues that arise include water supply, treatment of waste water and transportation. Increased population growth in the region is likely to give rise to an increase in car use, particularly where public transport and rail freight 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 and climate change, flood risk, waste management and coastal management. Achieving a good quality of life for the people who live, work or visit the region is considered to be a key objective of the SEA process. Securing economic development and social equity, together with preserving and enhancing the urban and rural character of the region, 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.

Many of the environmental issues referred to herein have an inter-county, cross-regional and cross-border dimension. In addressing these issues it is considered important that there is, where appropriate, a high level of co-operation, integration,



and consistency in the approach, by all authorities and agencies concerned with the management of the environment, particularly at the making of county and local area development plans.

A list of the significant environmental issues that were deemed to have been 'scoped in' during the scoping exercise is given in Table 38 below. Generally, the environmental impacts mentioned under the various topics listed in the table can often act across a number of topic areas e.g. the provision of infrastructure may impact on cultural heritage, biodiversity, water quality, landscapes and material assets. 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 38 Scoping of SEA Topics**

<b>SEA Topics</b>	<b>Scoped in</b>	<b>Indicative list of environmental impacts that need to be considered, either directly or indirectly, in the Environmental Report .</b>
Biodiversity, Fauna and Flora	In	Impacts on protected areas: European Sites (SACs SPAs, Ramsar sites, ASSI/HVA's). Impacts on flora and fauna and habitats including coastal and marine habitats, floodplains, wetlands, watercourses, peatlands and woodlands. Impacts on Freshwater Pearl Mussel protected areas. Impacts on other sensitive habitats, including protected fish species, peatlands. Impacts of invasive species. Interaction with Habitats Directive – Article 6 & 10 requirements.
Population	In	Impacts of change in population profile. Impacts of change in settlement patterns and car use. Road Safety. Efficient use of infrastructural and community services. Increased demand for waste water treatment systems and waste management facilities. Impacts on environmentally sensitive areas.
Human Health	In	Impacts on water quality including drinking water and bathing water. Air and Noise pollution to a lesser extent. Impacts associated with flooding. Generally impacts mentioned elsewhere tend to act either directly or indirectly and to varying extents on human health and wellbeing.
Soil	In	Impacts of land use activities including, urban and rural development, windfarms, waste disposal, afforestation, recreation and agricultural activities.
Water	In	Impacts of development and activities on water quality including drinking water and bathing water. Impacts of urban and rural development including, wastewater and surface water disposal, agricultural activity, water recreational activities and afforestation.
Air	In	Impacts of air pollution associated with transport and industrial emissions.
Climatic factors	In	Impacts of greenhouse gas emissions and flooding. Also impacts of energy generation and consumption. Impacts of energy use and need for conservation.
Material Assets	In	Impacts of development on infrastructure, utilities and amenities including rail, 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.
Landscape	In	Impact on visually sensitive areas including designated landscape and seascapes.
Interrelationship between the above topics	In	Cumulative impacts and interaction of above mentioned items. The impacts and interactions will obviously vary in extent and nature.

### **Biodiversity, Flora and Fauna**

Throughout the island of Ireland there has been a decline in many of the native species through habitat loss, competition, development and agriculture.

Notwithstanding the need to manage a wide range of habitats and species of acknowledged importance, it is considered that the management of Natura 2000 sites (SAC's and SPA's) and Natural Heritage Sites located within the region is of primary importance.

Moreover, 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 an issue of significant environmental concern within the region.

Certain development works on shorelines and floodplains and the associated infilling of wetlands is a potential environmental problem within the region. Invasive non-native plant and animal species are one of the greatest threats to biodiversity affecting the region.

The development of ports and associated works at Drogheda, Greenore, Dundalk, Sligo, Killybegs, Greencastle, and Clogherhead have the potential to have significant environmental impacts, particularly in relation to biodiversity, flora and fauna. The development of airports in Sligo and Donegal have the potential to have significant environmental impacts.

Climate change may impact on the rich biodiversity, flora and fauna of the region in terms of changes in precipitation patterns and temperature variations. There is growing concerns that the region may be affected in different ways by climate change with a pronounced east/west split developing as changes progress.

Other factors that may impact on biodiversity of the region include;

- Loss of environmentally sensitive 'greenfield sites' to development works.
- Changes in hydrology including drainage and flooding
- Peat/Turf extraction
- Overgrazing/undergrazing
- Damage arising from intensive recreating/amenity use
- Damage arising from quarrying activities
- Loss of hedgerows.
- Loss of local biodiversity pockets.

## **Population and Human Health**

Ireland and Northern Ireland's economy has experienced unprecedented economic growth since the early 1990's.

The increase in population has the potential to impact on biodiversity, water quality, landscape, 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.

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. This is an issue that applies across the region. Additional homes mean the spread of urban areas and an increase in rural housing, with the 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

Abstraction and flow regulation is a significant pressure in the region, due to the large number of drinking water supplies from small surface water catchments.

An increase in traffic/pedestrian movement can give rise to an increased risk in terms of road safety.

High levels of radon buildings that are occupied by people pose a risk to human health within certain areas of the region. 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 regional level.

## **Road Safety**

In the European Union (EU) more than 40,000 people die and in excess of 1.7 million are injured in road accidents each year, costing an estimated €160 billion (EU Community Database on Accidents on the Roads in Europe). Road traffic injuries are currently placed at number nine on the World Health Organisation (WHO) top ten health problems. It is estimated that the scale of the problem is such that by 2020 it will become number three.

Road Safety is a key priority in national government policy and this has been reflected in the more recent formation of the Road Safety Authority (RSA).

Ireland's third Road Safety Strategy ( 2007 – 2012) seeks to build on the progress and understanding provided by the first two strategies (1998-2002 and 2004-2006), with the objective of radically - and sustainably – improving safety on Irish roads.

Local Authorities, working in collaboration with other stakeholders within the Region, have a key role to play in bringing Ireland's road safety record into line with "best practice" countries throughout the World.

## **Soil**

Precipitation changes, predicted as one of the global warming 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 an increased nutrient content, which can damage the balance of nutrient poor, aquatic ecosystems by shifting their species composition, supporting more nutrient-loving species. This can lead to the eutrophication of rivers and lakes. Considering the east/west split in terms of the affects of climate changes mentioned above, the impacts of soil erosion and soil stability is likely to vary accordingly across the region. As discussed previously, extraction activities, when mismanaged, are resulting in pressures on water quality. In particular, peat cutting can be damaging to vegetation, hydrology and landscape.

## **Water**

The main pressures on surface and groundwater quality within the Region are point and diffuse, physical modifications, climate change and other local issues. Point and diffuse sources include wastewater from urban and rural developments such as industrial discharges, soiled surface water, landfills, quarries, contaminated sites, agriculture, wastewater from substandard wastewater units, forestry, discharge of dangerous substances and illegal dumping. Water bodies that depend on a small catchment are particularly vulnerable to pollution and as such the protection of water quality is of significant importance.

Inputs of nutrients, namely phosphorous and nitrogen, at concentrations in excess of natural levels, resulting in over-enrichment and eutrophication present one of the most significant risks to water quality within the region.

The protection of sources of drinking water, the protection of bathing waters and the protection of fishing stocks is of particular concern within the region.

The protection and improvement of water quality crosses a number of environmental topic areas including health and biodiversity and is a major environmental concern.

The River Basin District process referred to earlier has resulted in the carrying out of a comprehensive assessment of water quality (and associated issues) within the region and its catchment area. Accordingly, the integration of the aims and objectives of the River Basin District Management Plans and associated programme of measures into the RPG's is a key consideration in terms of securing good water quality standards and associated habitats within the region.

## **Climate Change and Air Quality**

With regard to climate change, inputs of greenhouse gases which require the use of fossil fuels, add to the carbon dioxide emissions produced within the region.

A dispersed settlement pattern is likely to give rise to a high dependency on the use of the car which in turn gives rise to an increase in greenhouse gases 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.

Of increasing concern is the issue of flooding, the increased severity of which has been linked with climate change. An increase in the incidence and severity of flooding is evident in recent years in areas such as Dundalk, Drogheda and Carrick on Shannon which are particularly vulnerable to flooding.

Currently there are no significant concerns with regard to air quality at the regional level.

## **Material Assets**

Changes to certain material assets located within and adjoining the region may have environmental impacts. Such assets include 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.

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, particularly in Donegal. Some of the physical modifications identified as material assets, such as dams and weirs, may also be resulting in pressures on fisheries used for recreational and commercial purposes.

There is a high level of vacancy within the Region in respect to new residential and commercial development arising from the unprecedented level of building activity during the last number of years. Referring to the 2006 Census data, residential vacancy rates are particularly high in Leitrim (29%) and Donegal (27%). These residential and commercial properties represent a significant underutilised resource. In addition, if they are left idle they can over time deteriorate and in this regard can detract from the character of urban areas.

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

## **Cultural Heritage including Architectural and Archaeological**

Development of infrastructure, in addition to development resulting from economic growth and increasing population, is placing pressure 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 region. 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 region. 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.

## **Landscape**

Existing pressures on landscape are primarily related to impacts on sensitive views resulting from the cumulative impacts arising from inappropriate siting and design of development works. Throughout the region there is inconsistency in the pattern, siting and design of buildings within the countryside, and is particularly evident in Counties Donegal, Cavan and Louth. The cumulative impact of insensitive development on our landscape has a significant impact on the visual amenity and rural character of the region. This is an issue that clearly has a cross-border and inter-county dimension. Anecdotal evidence suggests that more stringent controls on one-off housing within Northern Ireland has lead to increased development pressure in some rural areas of the region, particularly evident in Donegal. Pressures on our 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.

There is a lack of uniformity between counties within, and adjoining the region in terms of the approach to the designation of landscapes and protected views which tends to lead to inconsistency in their management. A more uniform approach to the management of landscapes and protected views would better secure their integrity. Also, a more uniform inter-county and cross-border approach towards the management of development within the countryside would provide for the better management of the landscape.

## **Environmental Pressures in respect to each County**

The following is an outline of particular environmental pressures facing each of the counties within the region. The pressures mentioned are not exclusive to the county under consideration, nor are they an exhaustive list. They are particular pressures associated with the individual county that have been identified during consultations to date.

### **Donegal**

- Many of the islands within the county are covered by Natura 2000 sites, some with international protection (SPA). Accordingly issues arise in terms of

biodiversity, landscape, heritage and water. Of particular concern is the juxtaposition of shellfish growing areas to protected habitats (L. Swilly; L.Foyle; Mulroy Bay).

- Off shore exploration may give rise to potential impacts arising from possible future shore based activities.
- Significant environmental issues may arise should the route of the A5 Dublin-Derry impact on sensitive habitats in the Lough Foyle river system. Likewise significant environmental issues may arise in the development of rail linkages between Letterkenny – Derry and Letterkenny – Sligo.
- It is acknowledged that Glenveagh National Park has a rich heritage in terms of biodiversity, flora and fauna, cultural heritage and landscape.
- Due to increased development pressure and possible impacts on habitats of significant importance, there is a need to develop proactive flood risk management policies that are consistent across the region.
- There are potential impacts to be considered in relation to the development of the North West Gateway Initiative on certain habitats associated with the Swilly and Foyle catchments arising from increases in urban populations, transportation issues etc.
- There is a high level of residential vacancy within the County (27% in 2006) which gives rise to environmental issues in terms of sustainable use of resources', impacts on the urban and rural character and vitality of places.

### **Sligo**

- Continuing development of one-off rural housing relying on wastewater treatment plants which has unknown consequences for the groundwater. Sligo's rural housing policy, especially in 'Rural Areas under Urban Influence', has not achieved a significant reduction in the development of new one-off housing within 10 miles of Sligo.
- Infrastructural schemes such as the expansion of runway at the Regional Airport in Strandhill and the Sligo bypass could potentially impact on habitats of significant importance (SAC/SPA/NHA)
- Significant environmental impacts may arise with regard to developments occurring within the wider catchment areas that flow into the wider Sligo Bay Complex of cSACs and SPAs including Sligo Bay, Drumcliff Bay and Ballisodare Bay. In this regard, habitat loss, reduced volume of water and reduced water quality is an issue.
- Radon in buildings poses a risk to public health in certain areas of the county.

### **Leitrim**

- The high level of residential vacancy (29% in 2006) represents a significant resource which, if left unused, will constitute a wasted material asset and will impact on the character and vitality of the areas where they exist. Issues of dereliction arising from abandoned or neglected developments arise.

- Many rural communities are under threat with declining populations and loss of community services and facilities. The social and cultural capital associated with rural communities living in the countryside needs to be recognised and supported.
- Certain areas within the county are under pressure from one-off housing. These areas are usually located on the periphery of towns and villages, especially along approach roads. Other pressure points would include visually sensitive areas in the vicinity of lakes and along the coastline. Issues arise in relation to pollution control, extension of services, impact on the landscape and rural character.
- Afforestation can have significant impacts on the water quality, the landscape character, biodiversity, archaeology, damage to roads and in some instances, can give rise to social isolation.
- Having regard to poor and sloping ground conditions, wetter summers and changes in farming systems, there is a significant risk to ground water and surface water pollution arising from the spreading of slurry.
- Considering poor ground conditions within the county many wastewater treatment plants are under pressure to adequately treat wastewater. There are also a number of smaller scale urban centres where the pipe network has recently been installed under one contract while the treatment plants have yet to be started under a separate contract. Pressure on public finances places the completion of these schemes under threat.

#### **Cavan**

- Water pollution arising from urban run-off and disposal of wastewater from domestic, industrial and municipal wastewater treatment plants.
- Dispersed settlement pattern and associated environmental pressures
- Cumulative loss of natural habitat
- Segregation/fragmentation of habitats and loss of hedgerows
- Intensive farming
- Disruption of hydrological regime – problems for groundwater, lakes and subsequent drinking water.

#### **Monaghan**

- Proliferation of one off housing in the countryside and urban sprawl, especially in areas of strong urban influence with associated environmental problems.



- Public waste water treatment plants at full capacity in some towns – risk of surface water pollution.
- Intensive agricultural activities – run off from excessive slurry spreading on poor soils and inadequate storage of effluent continues to create problems
- Diesel laundering washings – high fuel cost has resulted in an increase in this activity in the border area.
- Illegal dumping of wastes – landfill charging costs has resulted in an increase in this activity.
- Draining/infilling of wetlands.
- Depletion of water resources – increases in population and water usage has placed a strain on water resources.
- Water quality.
- Cumulative impact of development on habitats – loss of hedgerows, wetlands.
- Environmental scarring resulting from new roads.(e.g. N2)
- Environmental scarring from mineral extraction – numerous rock quarries in Co. Monaghan. There is also the prospect of gold mining.

### **Louth**

- Settlement coalescence, ribbon development and one-off housing poses a significant threat to the sustainable development of the county having regard to its relatively small land mass.
- There are significant areas of floodplain particularly in the environs of both Dundalk and Drogheda. The county as a whole is at risk from several sources of flooding including river and estuarine flooding however, the most significant threat posed by flooding is by way of coastal flooding particularly during storm surges.
- Water supply constraints due to high demand in south Louth and limits to supply from the Boyne.
- Radon in buildings poses a risk to public health in certain areas of the county. The bulk of the Cooley Peninsula together with an area west of Dundalk incorporating the villages of Knockbridge and Tallanstown to the County Monaghan border exceed the reference radon level.

### **Inter-county and Cross Border Issues**

Many of the environmental issues raised in the section above in respect to each of the counties within the region have an inter-county, inter regional 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, waste

disposal, transportation, energy supply and telecommunications. The requirement for co-operation at a catchment level can easily be recognised in the case of the River Basin District Plans. At a local level an environmental management plan for Lough Melvin, which is shared between Leitrim and Fermanagh, has been put in place through a cross border approach. Such measures provide the impetus for further co-operation in terms of addressing cross boundary environmental issues.

### Summary of Main Environmental Pressures

The following two tables present a summary of the main environmental pressures. The first table summarises the pressures within the region and are of a more general nature. The second table presents more specific pressures relating to each county. The items presented in the tables are not exhaustive.

**Table 39 Summary of Main Environmental Pressures within the Region**

<b>Topic</b>	<b>Environmental Issue/ Pressures</b>
<b>Biodiversity, Fauna and Flora</b>	<p>Certain developments and activities associated with agricultural activities, afforestation, 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.</p> <p>The protection of shellfish growing areas, freshwater pearl mussel and salmon have been highlighted as of particular importance.</p> <p>There are a relatively high number of Natura 2000 sites (SAC's and SPA's) and Natural Heritage Sites located within the region. These sites are particularly sensitive to certain development works and activities.</p> <p>Invasive non-native plant and animal species are one of the greatest threats to the biodiversity of the region.</p>
<b>Population and Human Health</b>	<p>Increases in population, their activities and settlement patterns has 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.</p>
<b>Soil</b>	<p>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.</p>
<b>Water</b>	<p>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.</p>

<b>Air and Noise</b>	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.
<b>Climatic factors</b>	Increased greenhouse gas emissions have been linked with climate change resulting in increases in the intensity and frequency of flooding. Of particular concern is the high dependency on the use of the car arising from a dispersed settlement pattern.
<b>Material Assets</b>	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 region. These properties represent an underutilized resource and if left idle, they can over time deteriorate and detract from the character of urban areas.
<b>Cultural heritage, including Architectural and Archaeological</b>	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 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.
<b>Landscape</b>	Developments and activities can impact on visually sensitive areas including designated landscape and seascapes. A lack of uniformity between counties within and adjoining the region towards their approach to the management of the landscape, has been highlighted as a key challenge facing the region.
<b>Interrelationship between the above topics</b>	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 peoples activities and settlement patterns can impact on a wide range of the topics mentioned above.

The following is a summary with respect to each county, of certain items where particular environmental pressures have been identified. Again, the list is not exhaustive and certain pressures are common to all the Border counties and neighbouring areas.

**Table 40 Summary of environmental pressures in each county within the Region**

<b>Donegal</b>
<ul style="list-style-type: none"> <li>• Many offshore islands covered by Natura 2000 sites</li> <li>• Shellfish growing areas posing threats to protected habitats</li> <li>• Off shore resource exploration posing threats to natural habitats</li> <li>• Infrastructural schemes such as the committed road line of the proposed A5/N2 dual carriageway and the potential routes for proposed new rail links</li> <li>• North West Gateway and associated supporting infrastructure such as broadband</li> </ul>

<ul style="list-style-type: none"> <li>ducting</li> <li>One-off housing in the countryside.</li> </ul>
<b>Sligo</b>
<ul style="list-style-type: none"> <li>One-off housing in the countryside</li> <li>Infrastructural schemes such as expansion of Sligo Regional Airport (Strandhill), the Sligo outer bypass and potential realignments or deviations of the N16 road route</li> <li>The Sligo Bay cluster of cSACs and SPAs provides added complexity to the protected habitat equation</li> <li>Radon in buildings in certain areas of the County.</li> </ul>
<b>Leitrim</b>
<ul style="list-style-type: none"> <li>High level of residential vacancy</li> <li>Rural communities in decline within certain areas of the county</li> <li>Certain areas under pressure from one-off housing</li> <li>Water pollution from afforestation, individual wastewater treatment systems and slurry spreading.</li> </ul>
<b>Cavan</b>
<ul style="list-style-type: none"> <li>Water pollution arising from urban run-off and wastewater disposal</li> <li>Dispersed settlement pattern and associated environmental pressures</li> <li>Habitat loss and fragmentation including loss of hedgerows arising from rural settlement patterns</li> <li>Intensive farming</li> <li>Disruption of hydrological regime – associated pressure on water quality</li> </ul>
<b>Monaghan</b>
<ul style="list-style-type: none"> <li>One off housing in the countryside and urban sprawl</li> <li>Limited capacity of municipal wastewater treatment systems</li> <li>Pollution arising from intensive agricultural activities – slurry storage and spreading.</li> <li>Diesel laundering washing</li> <li>Illegal dumping</li> <li>Draining and illegal filling of small scale wetlands</li> <li>Depletion of water resources arising from increase in demand</li> <li>Cumulative impacts from manmade development on habitats notably loss of hedgerows and wetlands.</li> <li>Infrastructural works including new road works and mineral extraction.</li> </ul>
<b>Louth</b>
<ul style="list-style-type: none"> <li>Settlement coalescence, ribbon development and one-off housing</li> <li>Coastal flooding risk</li> <li>Water supply constraints due to high demand in south Louth</li> <li>Radon in buildings in certain parts of the county.</li> </ul>

## **8 Flood Risk Assessment**

### **Introduction**

In recent years, we have become increasingly aware of the importance of factoring the risk to people, property, the overall economy and the environment from flooding into the planning system, and the role that good planning has in avoiding and reducing such risk that could otherwise arise in the future.

There are many areas within the region, including urban centers that are already at risk from periodic flooding. The effects of climate change, such as more severe rainfall events and rising sea levels, will increase these risks and may put other areas at risk that may not have flooded in the past. Adapting to the reality of climate change therefore requires us to be even more vigilant in ensuring that risks of flooding into the future are integrated into the planning process.

Flooding from rivers and coastal waters is a natural phenomenon that cannot be entirely prevented or protected against. Flooding occurs when the capacity of a watercourse to convey water through an area is exceeded or in coastal areas when sea water encroaches on land due to failure of coastal defences, exceptional climatic or other factors. Flooding from the sea and from rivers is probably best known, but prolonged and intense rainfall can also cause sewer flooding, and flooding to arise from overland flow and ponding in hollows.

The man-made environment can exacerbate the consequences of flooding through development in a flood plain which places property and people at risk, or by building in areas where existing drainage infrastructure is deficient or inadequate. Flooding may impact on the economy, social well-being, public health and the environment. The impact on individuals and communities can be significant in terms of personal suffering and financial loss and, even where flooding has natural causes, it can have damaging effects on the environment.

Also of relevance is consideration of the consequences of climate change which is impacting on sea levels, the nature and pattern of rainfall events and weather patterns generally. Whilst the exact impacts of change are not known, it is widely agreed that climate change will result in a higher risk of flooding both inland and at coastal locations through the raising of sea levels and the occurrence of more intense rainfall events. It is important therefore that this issue is addressed within the RPGs as decisions on the direction of future growth within the Border Region may increase flood risk. Also, it is important that the RPGs highlight the need for developing policy and actions, and encourage co-operation across councils and other agencies as the impact of flood and water movement in many places crosses council, national and agency boundaries.

### **DEHLG Guidelines for Planning Authorities – The Planning System and Flood Risk Management**

The flood risk guidelines require the planning system at national, regional and local levels to:

- Avoid development in areas at risk of flooding, particularly floodplains, unless there are proven wider sustainability grounds that justify appropriate development and where the flood risk can be reduced or managed to an acceptable level without increasing flood risk elsewhere;

- Adopt a sequential approach to flood risk management when assessing the location for new development based on avoidance, reduction and mitigation of flood risk; and
- Incorporate flood risk assessment into the process of making decisions on planning applications and planning appeals.

Having regard to the DEHLG Guidelines, it is important to sets out the key policy recommendations to avoid and manage flood risk within the Border Region. Regional Flood Risk Appraisal therefore includes:

- the identification of appropriate policy responses for priority areas, including areas that transcend administrative boundaries and where there appears to be significant flood risk
- Requirements on foot of the guidelines for co-operation, implementation and co-ordination of more detailed area level strategic flood risk assessment in development plans.

In the overall context of implementing the Floods Directive, flood risk appraisal and management strategies, it is important to differentiate between flooding arising from natural phenomena (Rivers, Coastal and Pluvial) for which the OPW is the lead authority and flooding arising from urban storm water drainage, water supply systems and wastewater infrastructure which are the direct responsibility of local authorities. Cognisance must also be taken of the Water Framework Directive and its implications in relation to the management of flooding.

In terms of existing undeveloped zoned areas that are potentially at risk of flooding, the flood risk guidelines indicate that zoning policies and objectives should be reconsidered for any such lands where flood risk is assessed to be potentially significant and likely to increase in the future. Emphasis is placed on inter-alia; removing high risk/vulnerable uses, revisions to the land use zoning area/objectives for such areas, preparing a detailed local area plan informed by more detailed flood risk assessment addressing development issues prior to development; specification of pre-requisite flood risk measures.

**At the national level:**

The Office of Public Works, as the lead agency for flood risk management in Ireland, will continue its work in developing indicative flood maps and catchment-based Flood Risk Management Plans (FRMPs) in partnership with local authorities, the Environmental Protection Agency and other relevant departments and bodies in accordance with national flood policy and the EU Floods Directive. DEHLG and OPW will work with regional and local authorities in assisting with technical aspects of the implementation of the Guidelines on an ongoing basis, learning from experience within Ireland and internationally.

**At the regional level:**

Regional Authorities will be required to prepare a strategically focused flood risk appraisal at the regional level as an integral input to the preparation of regional planning guidelines (RPG's) which act as a framework for ongoing co-ordination of the development plans of local authorities in their areas. The preparation of this element of the RPG's will be co-ordinated with the preparation of River Basin Management Plans (RBMP's) under the EU Water Framework Directive and future work required to prepare Flood Risk Management Plans under the EU Floods Directive by the OPW.

**At city and county level:**

Planning authorities will introduce flood risk assessment as an integral and leading element of their development planning functions under the Planning Code and at the earliest practicable opportunity in line with the requirements of the Guidelines.

The new flood risk assessment system will be aligned with the existing Strategic Environmental Assessment (SEA) process introducing processes for identifying flood risk and determining what flood risk assessment is required and carrying out such assessments similar to the overall system for screening and scoping under the SEA process.

City and county development plans will establish the flood risk assessment requirements for their functional areas including other planning authorities such as Town Councils and any local area plans (LAP) which may be supplemented by more detailed site-specific flood risk assessment required to comply with the Guidelines.

Planning authorities will assess planning applications for development in accordance with the provisions of the Guidelines following the guidance of their own or any OPW Strategic Flood Risk Assessment and the application of the sequential approach and, if necessary, the Justification Test required by the Guidelines.

Planning authorities will ensure that development is not permitted in areas of flood risk, particularly floodplains, except where there are no suitable alternative sites available in areas at lower risk that are consistent with the objectives of proper planning and sustainable development. Where such development has to take place, in the case of urban regeneration for example, the type of development has to be carefully considered and the risks should be mitigated and managed through location, layout and design of the development to reduce flood risk to an acceptable level. Planning authorities will ensure that only developments consistent with the overall policy and

technical approaches of the Guidelines will be approved and permission will be refused where flood issues have not been, or cannot be, addressed successfully and where the presence of unacceptable residual flood risks to the development, its occupants or users and adjoining property remains. Under the Planning and Development Act 2000, planning permission refused for the reason that the proposed development is in an area which is at risk of flooding excludes compensation.

In the case of applications for planning permission and development consents to planning authorities and An Bord Pleanála, applicants and their agents are required to:

- Carefully examine their development proposals to ensure consistency with the requirements of the Guidelines including carefully researching whether there have been instances of flooding or there is the potential for flooding, on specific sites and declaring any known flood history in the planning application form as required under the Planning and Development Regulations 2006.
- Engage with planning authorities at an early stage, utilising the arrangements for pre-planning application consultation with regard to any flood risk assessment issues that may arise. Carry out a site-specific flood risk assessment, as appropriate, and comply with the terms and conditions of any grant of planning permission with regard to the minimisation of flood risk.

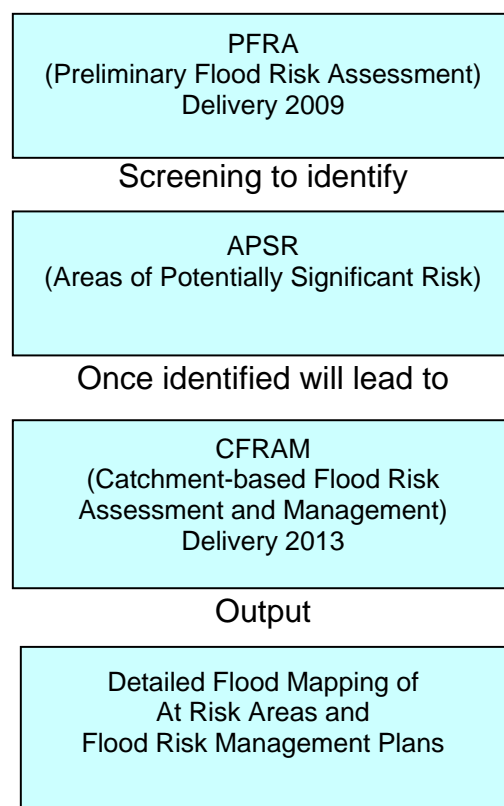
## Existing Flood Risk Assessment

The OPW are currently involved in preparing a Preliminary Flood Risk Assessments (PFRA's) with the relevant local authorities, the Environmental Protection Agency (EPA) and other key agencies. This will identify 'Areas with Potential Significant flood Risk' (APSR's) based on historic and predictive data and consultation with stakeholders. Catchment-based Flood Risk Assessment and Management Plans (CFRAMs) will be developed for these areas. These CFRAM studies will establish a prioritised set of flood risk management measures for their relevant areas, including the use of physical and management responses.

Nationally, the PFRA will be completed in 2009 and will identify areas of potential flood risk. As this is a screening exercise it is probable that not all flood risk areas will be identified. Detailed flood mapping will then be prepared for areas deemed to be at risk by 2013. The focus of these studies is on risk management and not flood prevention.

Diagram 8.1 outlines the hierarchy of flood risk assessments that will be required to meet the requirements of the Floods Directive.

**Figure 7 Hierarchy of Flood Risk Assessment Plans**



## Existing Data Available

There is currently limited data available on local catchment areas in local authorities, the OPW or other agencies. Much of the existing data is accessible on [www.floodmaps.ie](http://www.floodmaps.ie)



The primary sources of current flooding and flood risk data are as follows:

- Existing individual area/catchment flood studies
- Historical recording of spatial information from [www.floodmaps.ie](http://www.floodmaps.ie) prepared by the OPW (this map gives a clear illustration of the number and distribution of previous flood events across the Region.<sup>17</sup>)
- Flood benefit mapping where arterial drainage works have taken place (layer on flood maps) which is a surrogate indicator of flood risk
- Mapping of extents of historical flooding, including O.S historical mapping
- Soils maps of the region from the Geological Survey of Ireland;
- Topographical mapping including Lidar mapping. (Local contour data.)
- Coastal flooding studies pertaining to defences, including information pertaining to Irish Coastal Protection Strategy Studies (Draft Stage) and
- Urban drainage studies undertaken by local authorities.

**Map 21 Indicative Mapping available on from the OPW website.**



**Map 21** indicates the type of information available from the OPW website in respect to flooding. In this instance the map shows (cross hatched in red) the extent of benefiting lands<sup>18</sup>. This type of information can assist Planning Authorities in flood risk assessment at a county or local level.

### **Background to Flooding in the Border Region**

The Border Region incorporates six local authority areas of Donegal, Sligo, Leitrim, Cavan, Monaghan and Louth which covers an area of 12, 156 sq km and includes a multitude of topographies, soil and rock types and water bodies. The area is spread across a number of River Basin Districts - North Western, Western, Neagh Bann,

<sup>17</sup> It should be borne in mind that works have taken place in some flood locations to alleviate risk of repeat flood events and data quality is variable.

<sup>18</sup> A dataset prepared by the Office of Public Works identifying land that might benefit from the implementation of Arterial (Major) Drainage Schemes (under the Arterial Drainage Act 1945) and indicating areas of land subject to flooding or poor drainage.

Shannon and Eastern. The area has a significant coastline and is bound to the east by the Irish Sea and to the west and north by the Atlantic Ocean. It contains a significant number of lakes.

As a topographically diverse area traversed by a number of rivers and with a large coastline the area contains a substantial number of risk areas for flooding.

As previously outlined, mapping of historical flood events in the Border Region is available on [www.floodmaps.ie](http://www.floodmaps.ie) along with associated reports and gives a general indication of where flood vulnerable locations exist. Further information on the extent of benefiting lands, land commission drainage areas and areas which historically flooded is also shown. Coastal flood risk mapping is at draft stage and indicates areas of potential risk <sup>19</sup> based on climate change predictions. This data is indicative by nature.

Many of our towns, including four of the larger towns in the area, are located on the coast/coastal estuaries and thus may be vulnerable to rising tide levels. The impact of increased tide levels on existing coastal defence structures, adjacent low lying areas and existing surface water drainage infrastructure through tide locking of both stream and piped systems needs to be considered. The potential impact and risk associated with joint probability events such as co-incident high river flows, exceptional tide and adverse weather events is also relevant.

All of our major towns are located adjacent to rivers. As such, increased extreme flow levels may impact on adjacent lands, particularly where flows are constricted by bridges or other features. Furthermore, surface water drainage in many areas discharge to smaller streams. These streams are particularly responsive to local high intensity rainfall events. Flood risk in these streams will be disproportionately exacerbated by increased runoff from urban development. As such they have potential to significantly increase local flood risk.

Topography of centres will also impact on flood potential with rainfall and associated runoff flowing through and accumulating in low lying areas. Thus there is a risk associated with overland flow, particularly if natural flow channels are constrained or blocked by development, and ponding in low areas. Capacity constraints in existing piped drainage systems, particularly on combined systems may also cause localised flooding with additional health related risks.

## **Regional Flood Risk Appraisal**

Within the context of planning for future growth, areas known to be at risk from flooding, both now and in the future, should be overlaid on locations identified for development or already developed. The assignment of risk to these areas is thus based on limited historic data available and needs to take account of existing flood defences or their adequacy, flood return periods and climate change impacts.

In this Regional Flood Risk Appraisal, the focus of flood risk assessment will be based on the key settlements identified in the core settlement strategy. Other settlements within the region are known to be at risk from various types of flooding but they, along with the key urban settlements, will be subject of a more detailed Strategic Flood Risk Assessment which will be carried out during future reviews and in the preparation of county development plans within the region. Table 41 outlines a summary of the various types of flooding that may affect our key urban settlements.

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<sup>19</sup> Potential flood areas do not take cognisance of existing flood defenses in place.

**Table 41 Key Towns potentially affected by Flooding**

Type of Flood Risk	Location	Risk Area	Recommendations for Development & Local Area Plans
<b>Coastal Fluvial</b>	<b>Letterkenny</b>	Lands adjacent to River Swilly - within the defined town centre.  Lands adjacent to urban streams that may be susceptible to flooding.	Permit only appropriate development subject to mandatory flood risk assessment.  Carry out catchment based hydrological assessments, flood path analysis and incorporate catchment based SUDS provisions in the development plan.  OPW undertaking CFRAM for River Swilly
<b>Coastal Fluvial</b>	<b>Sligo</b>	Low lying lands adjacent to Harbour  Localised Flooding /Urban streams	Permit only appropriate development subject to mandatory flood risk assessments.  Implementation of measures in Sligo Main Drainage Studies/SUDS provisions in local area plans.
<b>Coastal Fluvial</b>	<b>Dundalk</b>	Area to East of town protected by ramparts and lands adjacent to Castletown River.  Lands adjacent to urban streams	Incorporation of recommendations in CFRAM study as variation into Dundalk and Environs Development Plan and local area plans.  Implement appropriate improvement works and condition appropriate catchment based SUDS provisions for new developments.  OPW undertaking CFRAM for Dundalk area.
<b>Coastal Fluvial</b>	<b>Drogheda</b>	Areas adjacent to River Boyne  Lands adjacent to urban streams	Incorporate appropriate policies to flood proof redevelopment of brownfield sites along quays and preserve appropriate flow channels through setting back of development and creation of open space amenity along river bank.  Implement appropriate improvement works and condition appropriate catchment based SUDS provisions for new developments.
<b>Fluvial</b>	<b>Carrick on Shannon</b>	Riverside areas	Permit only appropriate development subject to mandatory flood risk assessment in identified flood risk areas.  Review indicative flood levels based on climate change.
<b>Fluvial</b>	<b>Monaghan</b>	Adjacent to	Implement improvement of the Shambles

		Old Cross Square and Shopping Centre  Coolshannagh, Killyconnigan, Mullaghdoon.	Channel. Condition appropriate SUDS on new developments discharging to watercourse.  Permit only appropriate development subject to mandatory flood risk assessment in flood susceptible areas as highlighted on flood benefiting lands mapping.
<b>Fluvial</b>	<b>Cavan</b>	Adjacent to Cavan River	Maintain existing natural flood attenuation features. Incorporate SUDS on new developments discharging to watercourse. Preserve wetlands which attenuate river levels.

### Development within Flood Risk Areas

Specific areas in the key settlements identified within the core settlement strategy are vulnerable to two key sources of flooding - fluvial and coastal. It is therefore apparent that effective management of flood risk coupled with wider environmental, sustainability and economic considerations mean that it is possible to facilitate the continued growth and expansion of these urban centres based on the consolidation of the urban core. In line with the sequential and justification criteria set out in the Department's Draft Guidelines on the Planning System and Flood Risk Management, it is considered that these locations should be encouraged to consolidate and grow in order to bring about a more compact and sustainable urban development form in parallel with a clear flood risk management policy framework.

Such an approach, whilst appropriate for brownfield sites and areas directly abutting to the urban core, may be less so in peripheral areas where alternative more appropriate land use options should be considered (i.e. recreation, protected industrial etc.). In the context of defended areas, it is essential that consideration should be given to the impact of climate change, in that the impact of defence failure, overtopping and possible rapid inundation must be considered in determining what land use and development may be facilitated. In particular, hospitals, emergency services, schools, sheltered housing or other developments which are directly sensitive to or whose operation may be compromised by inundation should not be permitted in such areas.

Other smaller towns in the region have been identified as vulnerable to flooding, based on the current information available. Within these settlements, implementation of the draft flood risk planning guidelines is essential and the sequential test on flood risk establishes the mechanism to reconcile proposed land use and development and highlight the flood risk issues. The outcome of such flood risk assessments must then feed directly into the local development planning process by providing flood risk maps with appropriate policy and objectives.

In addition to the above, all other flood plains within the region should be protected from non-essential developments and any permitted development should not materially affect flood risk.

A key consideration in implementing the sequential test is the issue of social resilience in that properties in flood risk areas may become devalued and thus may end up being utilised to house more vulnerable members of society. These in turn are more vulnerable to flooding in that they are economically disadvantaged and may

find it harder to recover from consequences of flooding thus widening existing inequalities.

### **Flood Risk Assessment across Administrative Boundaries**

An integrated approach to catchment management is required to manage flood risk. This will entail the co-operation of many authorities, in that many of our rivers not only cross county boundaries but are also affected by national boundaries. Furthermore, in the case of the Rivers Shannon and Erne, flow management is largely controlled by the ESB, whilst the OPW and Rivers Agency also have a significant role to play.

It is recommended that a collaborative approach to the shared management of river catchments should be fostered under the aegis of River Basin Districts so as to facilitate implementation of flood management initiatives.

### **Recommendations on Best Practice for Local Authorities**

- 1) The RPGs recognise the need to protect across the Border Region, the natural flood plains and riparian corridors of all rivers that have not already been built on, and seek that this is explicitly stated and spatially designated in all future county development plans and local area plans. Redevelopment of areas within flood plains should also incorporate appropriate flood protection and mitigation measures.

In the absence of flood risk data, councils should identify these areas using other data from the OPW, existing studies, historical information available, and, where necessary, through additional studies or investigations.

Land required for current and future flood management should be safeguarded from development.

The process of identifying lands for future development in towns and villages should follow a sequential approach and will be in the lowest risk sites appropriate for the development, and should include adequate provision for adaptation to, or protection against, the impacts of climate change.

- 2) The coastline of the Border Region, like all coasts, is experiencing both erosion, deposition and some flooding as a result of normal sea action. It will also experience in the future increased storm activity and sea level rises. Parts of the coast are low lying and vulnerable to flooding in the long-term from sea level rise, and it is essential that current and future plans and development do not create significant problems in the future. Where coastal areas are bounded by Natura 2000 sites, cognisance should be taken of the need to mitigate the effects of coastal squeeze on same.
- 3) Continued investment needs to be made in research on long term options for the protection of coastal towns from long-term sea level rise and increased storm activity.
- 4) If flood risk is not to increase over time, it is important that local development plans and frameworks identify lowest risk sites for future development. In order to do so, local planning authorities will need to identify the spatial variation of flood risk within their areas. These areas should be identified through carrying out Strategic Flood Risk Assessments. Strategic Flood Risk Assessments will

enable planning authorities to apply the sequential test to the preparation of strategies, plans and programmes and provide a plan-led approach to the future development of the region.

In a flooding event, whether widespread or extremely localised, damage to key infrastructure (e.g. power stations or significant sub-stations, communication hubs, wastewater treatment plants, hospitals, schools, major roads etc.) has major implications, both to those in the area, and across the region. The cost of such disruption is significant to business and can also place people in high risk situations. For this reason, it is advised that key infrastructure suppliers should assess current elements and stress test future projects against flood risk, where this has not been previously undertaken.

## **9 Likely Evolution of the Environment in the Absence of the Implementation of the RPG's.**

The Regional Planning Guidelines act as a vehicle for the consideration of a wide range of economic, social and environmental issues at a strategic level. The process provides an opportunity for participation of a wide range of parties with an interest and expertise in the strategic development of the region. The consideration of the environmental issues is generally inextricably linked to the economic, social and cultural considerations. Accordingly, environmental considerations play a central role in shaping the guidelines and this is manifested through the relationship between the Guidelines and the Strategic Environmental Assessment and Habitats Directive Assessment. The policies and objectives that emerge in this process will provide the framework for future county development plans and local areas plans within the region.

In the absence of the RPGs, the following outcomes are the most likely to arise in this region:

1. There would not be a long term strategic planning framework for the proper planning and sustainable development of the region.
2. It is likely that the region would further develop in an unbalanced way thereby not realising its potential and improving the quality of life for its residents.
3. There would be no strategic identification of the key infrastructural requirements such as the identification of key transport and energy corridors, water supplies and waste water treatment facilities and development of telecommunications. In the absence of the identification of these key infrastructural requirements there would be a knock on effect on the economic, social and cultural development of the region and a slower recovery from the current economic crisis.
4. There would not be a core settlement strategy setting out a planning framework for the future development of the region. There would be no focus on the key strategic areas for future population growth. This in turn would lead to an exacerbation of the dispersed population of the region which weakens the existing urban structure and discourages the economies of scale required to justify the provision services. It also makes the region less attractive to invest in.
5. The socio-economic development of the region will occur on an ad-hoc basis.
6. Less protection will be afforded to the natural receiving environment within the region.
7. The ecological, cultural, architectural and archaeological heritage will not be sufficiently protected at a strategic level.
8. Key environmental issues such as the protection of water quality may not be sufficiently considered at county and local levels due to the absence of a parent document dealing strategically with the issue.
9. There is likely to be an increase in the travel to work patterns experienced in the region because in a 'laissez faire' situation development will be provided where the market dictates.

Having regard to the foregoing, it is reasonable to conclude that the RPGs will lead to the proper planning and sustainable development of the region which would not occur to the same extent in their absence.

## 10 Monitoring, Environmental Objectives, Indicators and Targets

Under Section 26 (1) of the Planning and Development Act 2000 – 2009 a Regional Authority shall, not later than 6 years after the making of such guidelines and not less than once in every period of 6 years thereafter, review such guidelines and when so reviewing, it may revoke the guidelines or make new regional planning guidelines. In this regard the environmental indicators and targets presented below may be used to monitor the predicted environmental impacts of implementing the plan.

Monitoring will be based around the objectives, indicators and targets outlined below. Monitoring at an early stage will help identify unforeseen adverse effects and in undertaking the appropriate remedial action. Monitoring measures over the period of the Guidelines can be geared towards addressing any gaps (where practicable) which are identified in the Environmental Report. It will also enable an assessment of whether the Guidelines is achieving its environmental objectives and targets and will help identify issues that be need to be revisited.

The list of environmental objectives is indicated in Table 42. The list includes biodiversity, flora and fauna, population, human health, soil/geology, water, air/climatic factors, material assets and cultural heritage/landscape. The interrelationship between these factors can be seen from the results of the assessment. Column 1 'Environmental Objectives' are key Strategic Environmental Objectives (SEO's) against which the aims, policies and objectives can be assessed.

**Table 42 Environmental Objectives, Indicators and Targets**

<b>Biodiversity, Flora and Fauna</b>		
<b>Environmental Objectives</b>	<b>Indicators</b>	<b>Targets</b>
Bio: Protect, conserve and enhance habitats, species and areas of national and international importance, and promote the sustainable management of habitat networks.	<p>Conservation status of habitats and species as assessed under Article 17 of the Habitats Directive.</p> <p>Reproduction in Freshwater Pearl Mussel populations</p>	<p>Maintenance of favourable conservation status<sup>20</sup> for all habitats and species protected under national and international legislation.</p> <p>Compliance with Catchment Plans for Freshwater Pearl Mussel.</p> <p>Compliance with Water Framework Directive River Basin Management Plans.</p>



Population and Human Health		
Environmental Objectives	Indicators	Targets
Pop: Facilitate a good quality of life for the region's population through ensuring high quality living and working environments.	<p>Provision of employment, services and amenities within the region.</p> <p>Quality of shellfish growing areas in the region.</p> <p>Number of Blue Flag Beaches in the region.</p>	<p>Increase in employment opportunities, services and public amenity within the region.</p> <p>No Shellfish Areas to be graded as Class C.</p> <p>Restore Blue Flag Status to beaches that have lost Blue Flag in 2009.</p>
Water Resources		
Environmental Objectives	Indicators	Targets
Wtr 1: Manage the risk of coastal, estuarine and fluvial flooding with particular reference to urban areas.	Properties and lands at risk of flooding.	<p>Improved Flood Risk management in areas prone to flooding in the region.</p> <p>Reduction in incidents of flood damage to properties.</p>
<p>Wtr 2. Protect the quality of surface and ground waters as sources of drinking water and as valuable assets for amenity, and recreation and ecosystem purposes.</p> <p>Wtr 3. Achieve, maintain and improve required water quality standards and avoid discharges of pollutants or contamination to waters.</p>	<p>Water quality monitoring results by the EPA for:</p> <ul style="list-style-type: none"> <li>• Surface Water Ecological and Chemical Status</li> <li>• Trophic Status of Estuarine and Coastal Waters</li> <li>• Bathing Water Quality</li> <li>• Groundwater Quality</li> <li>• Drinking Water Quality</li> </ul> <p>Number of Public Water Supplies on EPA Remedial Action List.</p> <p>EPA data under <i>Urban Waste Water Discharges in Ireland population Equivalents Greater than 500 persons - Reports for the Years 2008 and 2009 and 2010-211</i>.</p> <p>Agglomerations over 500 in the region without Secondary Treatment.</p> <p>Number of Discharge Licences granted by EPA.</p>	<p>Protect and Restore areas identified in the River Basin District Management Plan required to achieve "good" status i.e. 4+ for water quality by 2015 in line with the Water Framework Directive objectives.</p> <p>Improvement or at least no deterioration 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 inadequate treatment and capacity for waste water.</p>

Air and Climate		
Environmental Objectives	Indicators	Targets
AC1: Support Implementation of National Climate Strategy 2007-2012.	<p>National Level of Carbon Emissions.</p> <p>Delivery of County Climate Change Strategies.</p> <p>Preparation of a Regional Climate Change Action Plan.</p>	<p>20% reduction of greenhouse gas emissions from 1990 levels by 2020.</p> <p>Full delivery of Climate Change Strategies in all Counties in the region</p> <p>Preparation of a Regional Climate Change Action Plan.</p>
AC 2: Promote and encourage a modal shift from the fossil fuel dependant vehicles to more sustainable modes of travel.	<p>Average daily motor vehicle flows.</p> <p>Proportion of travel by mode</p> <p>Monetary investment in bus and rail travel, walking and cycling.</p>	<p>To reduce road traffic in line with <i>Smarter Travel A Sustainable Transport Future</i>.</p> <p>Increased investment in cycle paths and foot paths.</p>
Cultural Heritage		
Environmental Objectives	Indicators	Targets
CH: Protect and conserve the integrity and setting of features of built and archaeological heritage.	<p>Number of structures in RPS in relation to Ministerial Recommendations arising from NIAH County Inventories.</p> <p>Number and range of ACAs designated in the region (townscape/demesne landscapes).</p> <p>Number of Monuments in 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 region 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
LH: Protect and conserve the quality, character and distinctiveness of landscape and avoid adverse impacts.	<p>Area of landscape designated as scenic landscapes, sensitive and visually vulnerable.</p> <p>Preparation of Landscape Character Assessments by local authorities in the region.</p>	<p>Increase in area in Region subject to landscape conservation</p> <p>Preparation of a Regional Landscape Character Assessment.</p> <p>Appropriate Heritage Appraisal and Landscape Capacity Assessment to inform any future development of uplands, waterway corridors, demesne and coastal landscapes.</p>
Soils and Geology		
Environmental Objectives	Indicators	Targets
SL: Protect and maintain the quality of soils as a fundamental natural resource and protect and conserve geological heritage sites.	<p>EPA/Teagasc National Soils Mapping project.</p> <p>Incidents of peat /land slides.</p> <p>Number/ Area of geological heritage sites mapped by Geological Survey of Ireland.</p>	<p>Conservation of soil quality re organic matter.</p> <p>Retain/increase number of geological heritage sites in the region.</p>
Material Assets		
Environmental Objectives	Indicators	Targets
MA: Maintain and improve the availability and quality of all 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.	

## 11 Assessment of Aims, Policies and Objectives

This section assesses the potential effects of implementing the Guidelines on the environment. This is achieved through the examination of each aim, policy and objective proposed by the Guidelines under headings that indicate whether the implementation of the Guidelines is likely to improve, conflict or have a neutral effect on the environment (see table below).

Based on an understanding of the existing and emerging environmental conditions in the region, a series of Strategic Environmental Objectives have been developed to assess the potential effects of implementing the Guidelines on the environment. The SEO's are used as standards against which the development aims, policies and objectives of the Guidelines can be evaluated in order to help identify areas where significant adverse impacts are likely to occur, if unmitigated against.

In the assessment below the SEO's are applied to the relevant aims, policies and objectives of the Guidelines and a matrix is used to give an indication of the potential environmental effects of implementing the Guidelines.

**Table 43 Criteria for appraising the effect of Guideline provisions on Strategic Environmental Objectives**

Probable <b>Conflict</b> with status of SEOs – unlikely to be mitigated - to *an acceptable level	Potential <b>Conflict</b> with status of SEOs – likely to be mitigated - to *an acceptable level	<b>Uncertain</b> interaction with status of SEOs	<b>Neutral</b> interaction with status of SEOs	<b>No Likely</b> interaction with status of SEOs	Likely to <b>Improve</b> status of 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 44 Strategic Environmental Objectives (SEOs)**

Environmental Component	SEO Code	Strategic Environmental Objective
<b>Biodiversity, Flora and Fauna</b>	<b>Bio:</b>	Protect, conserve and enhance habitats, species and areas of national and international importance, and promote the sustainable management of habitat networks.
<b>Population and Human Health</b>	<b>Pop:</b>	Facilitate a good quality of life for the Region's population through ensuring high quality living and working environments
<b>Water</b>	<b>Wtr1:</b>	Manage the risk of coastal, estuarine and fluvial flooding with particular reference to urban areas.
<b>Water</b>	<b>Wtr2:</b>	Protect the quality of surface and ground waters as sources of drinking water and as valuable assets for amenity, and recreation and ecosystem purposes
<b>Water</b>	<b>Wtr3:</b>	Achieve, maintain and improve required water quality standards and avoid discharges of pollutants or contamination to waters.
<b>Air Quality &amp; Climate Change</b>	<b>AC1:</b>	Support Implementation of National Climate Strategy 2007-2012
<b>Air Quality &amp; Climatic Factors</b>	<b>AC2:</b>	Promote and encourage a modal shift from the fossil fuel dependant vehicles to more sustainable modes of travel

<b>Cultural Heritage</b>	<b>CH:</b>	Protect and conserve the integrity and setting of features of built and archaeological heritage.
<b>Landscape</b>	<b>LD:</b>	Protect and conserve the quality, character and distinctiveness of landscape and avoid adverse impacts.
<b>Soil</b>	<b>SL</b>	Protect and maintain the quality of soils as a fundamental natural resource and protect and conserve geological heritage sites.
<b>Material Assets</b>	<b>MA:</b>	Maintain and improve the availability and quality of all community related infrastructure, services and facilities and ensure the prudent management of environmental resources.

## Conclusion

The assessment of aims policies and objectives outlined in Table 45 indicates;

- That the implementation of the RPG's will, in general terms, have an overall positive impact on the environmental status of the Region.
- Whereas a significant number of aims, policies and objectives will have an overall positive impact, many of these will be accompanied by potential for environmental conflict; however such conflicts are likely to be mitigated to an acceptable level\*;
- The impact of some aims policies and objectives may be uncertain, neutral or may have no likely environmental impact;
- That the implementation of the RPG's will not give rise to probable environmental conflicts that are unlikely to be mitigated to an \*acceptable level.

It may therefore be concluded, that the implementation of the RPG's will have an overall positive impact on the environmental status of the Region and will not, either on its own or taken in combination with other relevant plans or programmes, give rise to any significant adverse environmental impacts that cannot 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 45      Assessment of Aims, Policies and Objectives**

<b>Aims, Policies and Objectives</b>	<b>Probable Conflict</b> with status of SEOs – unlikely to be mitigated - to an acceptable level	<b>Potential Conflict</b> with status of SEOs – likely to be mitigated - to an acceptable level	<b>Uncertain</b> interaction with status of SEOs	<b>Neutral</b> interaction with status of SEOs	<b>No Likely</b> interaction with status of SEOs	<b>Likely to Improve</b> status of SEOs
<b>Vision</b>						
By 2022, the Border Region will be a competitive area recognised as, and prospering from, its unique interface between two economies, where economic success will benefit all, through the implementation of the balanced development model, which will provide an outstanding natural environment, innovative people, which in themselves, will be our most valuable asset.				Bio Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 CH LD SL MA		
<b>Strategic Goals</b>						
SG 1. To foster the development of the Region's most important asset, its people by providing an improved quality of life for all people and communities living, working and visiting the Region.						Bio Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 CH LD SL MA
SG 2. To ensure the development of the key urban settlements and to facilitate integrated sustainable development between urban and rural areas.		Bio Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 CH LD SL				Pop MA
SG 3. To improve intra and inter regional connectivity and mobility throughout the region through the development of strategic radial corridors and strategic links.		Bio AC 1 AC 2 CH LD SL	Wtr 1		Wtr 2 Wtr 3	Pop MA
SG 4. To promote economic growth, competitiveness and development potential of the region and to facilitate emerging sectors in the Region that will provide sustainable jobs for the future.		Bio Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 LD CH SL MA				
SG 5. To protect and enhance the quality of the natural environment and built heritage of the region.						Bio Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 LD CH SL MA

SG 6. To co-ordinate a regional approach to the key environmental challenges facing the region.						Bio Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 LD CH SL MA
SG 7. To co-ordinate and integrate key issues in National and Regional Spatial Planning Strategies and in particular, the National Spatial Strategy and the National Development Plan, and associated inter-regional development initiatives that support and promote strategic links.		Bio Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 LD CH SL MA				
SG 8. To co-ordinate and integrate key issues in cross border spatial planning strategies, and in particular, the Regional Development Strategy for Northern Ireland and associated inter-regional development initiatives that support and promote strategic links between the two economies.		Bio Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 LD CH SL MA				
SG.9 To exploit the regions unique location at the interface between two economies by putting in place the drivers for economic growth through the development of the Eastern Corridor, Atlantic Arc and the Central Border Area		Bio Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 LD CH SL MA				
<b>Comment 1: These are strategic goals of the RPG's that are translated into detailed policies and objectives within the respective sections of the Guidelines. These will in turn be translated into appropriate subsidiary plans and projects that will be the subject of further mitigation measures down to project level.</b>						
<b>Chapter 3: Settlement Strategy</b>						
Settlement Hierarchy (outlined in Table 3.1)		Bio PopWtr 1 Wtr 2 Wtr 3 AC 1 AC 2 LD CH SL MA				
<b>Strategic Development Options</b>						
Balanced Development Model		Bio Wtr 1 Wtr 2 Wtr 3 LD CH SL				Pop AC1, AC2 MA
<b>Core Settlement Strategy Aims</b>						
<ul style="list-style-type: none"> <li>Strengthen the critical mass of the regions key urban settlements by prioritising regional population growth and housing requirements;</li> <li>Outline a policy framework for the development of the remaining share of population in the region; and</li> <li>Sustain and revitalise rural areas within the above development framework</li> </ul>		Bio Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 LD CH SL MA				

Settlement Strategy Model						
<ul style="list-style-type: none"> <li>Development of critical mass in the 7 key urban centres which will be the focal points for growth;</li> <li>The linking of the key urban centres through the development of Strategic Radial Corridors and Strategic Links;</li> <li>Promote and facilitate the emerging north/south corridors on the western (Atlantic Arc) and eastern (Eastern Corridor) seaboard which will be linked through the Strategic Radial Corridors and Strategic Links;</li> <li>Development of the Northern Cross within the Region and into Northern Ireland;</li> <li>Improved and enhanced connectivity through the Central Border Region</li> </ul> <p>In addition to addressing the matters regarding population targets and housing land requirements in the previous sections, planning authorities should also address the following matters in assessing and deciding on land use zoning objectives in their development plans.</p>		Bio Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 LD CH SL MA				
<b>Comment: By focusing development in a balanced and sustainable manner there will be an overall improvement in the status of SEO's, however the environmental pressures associated with these objectives are likely to give rise to potential conflicts which will be mitigated through the implementation of the Guidelines and subsidiary plans and projects.</b>						
Settlement Strategy Framework						
<p>CSO1. Land-use zoning for residential purposes by planning authorities has to take account of the following factors:</p> <ul style="list-style-type: none"> <li>The sequential development of land;</li> <li>The development of land to make efficient use of existing and proposed infrastructure such as roads and water services;</li> <li>The making available of sufficient land for development to ensure that the market for development land performs effectively; and</li> <li>Avoiding an oversupply of land in that it becomes difficult to accurately identify and co-ordinate investment priorities in the provision of physical and social infrastructure such as water services, transport, schools and amenities, essential to achieving sustainable communities.</li> </ul>		Bio				Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 LD CH MA SL
Settlement Strategy Policy						
CSP 1. Land should be zoned on the basis of the population targets that are set for the settlement in question.		Bio				Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 LD CH SL MA
CSP 2. A degree of headroom should be built in to calculation of housing land requirements arising from the assessment of population		Bio				Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 LD



targets.						CH SL MA
CSP 3. The excess in zoned land over the amount needed should have regard to the extent of approved development, vacancies and the need to ensure a properly functioning market for housing land. The excess should normally lie between an additional 50% and 100% of the land requirement based solely on population targets.		Bio				Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 CH LD SL MA
CSP 4. Land that is zoned should either be serviced or about to be serviced with essential infrastructure such as water services, local transport, schools and amenities.		Bio Wtr 1 Wtr 2 Wtr 3 CH LD SL		AC 1 AC 2		Pop MA
CSP 5. Zoned land should be assigned to different phases of development with a proviso that, generally a later phase should not commence until a given percentage of an earlier phase has been granted permission and another given percentage has been developed or is currently being development.		Bio Wtr 1 Wtr 2 Wtr 3 CH LD SL		AC 1 AC 2		Pop MA
CSP 6. Zoned lands that are identified for first phase development should follow the sequential approach as follows:  In order to maximise the utility of existing and future infrastructure provision and promote the achievement of sustainability, a logical sequential approach should be taken to the zoning of land for development: (i) Zoning should extend outwards from the centre of an urban area, with undeveloped lands closest to the core and public transport routes being given preference (i.e. 'leapfrogging' to more remote areas should be avoided); (ii) A strong emphasis should be placed on encouraging infill opportunities and better use of under-utilised lands; and (iii) Areas to be zoned should be contiguous to existing zoned development lands.  Only in exceptional circumstances should the above principles be contravened. Any exceptions must be clearly justified by local circumstances and such justification must be set out in the written statement of the development plan.		Bio Wtr 1 Wtr 2 Wtr 3 CH LD SL		AC 1 AC 2		Pop MA
CSP 7. Development plans shall be consistent with the approach to		Bio Wtr 1 Wtr 2				Pop MA

population distribution outlined in this core settlement strategy. In addition, the amount of land zoned for development within each settlement should reflect the population assigned and should be in accordance with the phasing approach outlined above.		Wtr 3 AC 1 AC 2 CH LD SL				
<b>Rural Housing Policy</b>						
CSP 8. Local Authorities Rural Housing Planning Policy should be evidence based and accommodate rural generated housing; consistent with this settlement framework and the DEHLG Sustainable Rural Housing Guidelines, 2005.		Bio Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 CH LD SL MA	Pop			
CSP 9. Rural housing and ancillary development shall be subject to the requirements of the Habitats Directive.						Bio Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 CH LD SL MA
<b>Chapter 4: Regional Economic Strategy</b>						
ESP 1. Build on existing collaborative cross-regional (and cross-border where relevant) approaches to Gateway and Hub development and continue to prioritise investment in key settlements of the region.				Bio Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 CH LD SL MA		Pop
ESP 2. Promote and support elected representatives and council officials to actively participate in short workshops and seminars (and where relevant, training programmes) on regional and local development, the role of planning in facilitating growth, translating EU Directives into local policy, and the urban-rural inter-relationship to name but four areas.				Bio Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 CH LD SL MA		Pop
ESP 3. Develop small sectorally focused teams within the region to further explore specific opportunities in identified relevant sectors. Existing initiatives should be considered by the sector teams to explore potential synergies and opportunities for knowledge sharing (for example the NW Business & Technology Zone and the Dundalk-Newry Twin City International Traded Services Zone). Emphasis should be placed on the development of indigenous industry and, in this regard, agencies such as Enterprise Ireland and Invest NI should be involved in any such teams.				Bio Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 CH LD SL MA		Pop
ESP 4. Develop a strategy to facilitate and promote the nurturing of micro-enterprise clustering throughout the region. This should be carried out in association with the third level education institutes within the region.		Bio Wtr 1 Wtr 2 Wtr 3 AC 2 CH LD SL		Pop AC 1 MA		

ESP 5. Develop the potential of Eco-Tourism in the region so that the relatively unspoilt landscape remains intact and is developed in an environmentally sustainable manner.						Bio Pop Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2 CH LD SL MA
ESP 6. Promote and support the development of flagship projects. These projects are significant regional tourist resources and have potential as economic drivers within the local economy. Such projects might include the Marble Arch Caves Global Geopark, the Shannon/Erne Waterway, the Cooley/Mourne and Gullion Geological sites and the re-opening of the Ulster Canal.		Bio Wtr 1 Wtr 2 Wtr 3 AC 2 CH LD SL		AC 1		Pop MA
ESP 7. Develop a Renewable Energy Strategy based on both large and small scale projects, with specific targets and support for farmers in the development of small-scale community-based and cooperatively owned projects in order to maximise the potential for rural diversification which make best use of the various forms of renewable energy such as wind, solar, bio-mass, biofuel.		Bio Wtr 1 Wtr 2 Wtr 3 CH LD SL		AC 2		Pop AC 1 MA
ESP 8. Develop all transport infrastructure and water and waste water services in line with those priorities identified in Chapter 5 so that key urban centres develop critical mass and improved connectivity that facilitates them in becoming the key engines for growth in the region.		Bio Wtr 1 AC 2 CH LD SL		AC 1		Pop Wtr 2 Wtr 3 MA
ESP 9. Upgrade electricity transmission network in accordance with priorities identified in Chapter 5 to secure energy supply to existing users; provide sufficient supply to additional users and facilitate connection of renewable energy sources to the grid.		Bio CH LD SL MA		Wtr 1 Wtr 2 Wtr 3 AC 2		Pop AC 1
ESP 10. Planning authorities shall facilitate the provision, improvement and development of telecommunication networks, to ensure the competitiveness and economic development of the region.		Bio Wtr 1 CH LD SL		Wtr 2 Wtr 3		Pop AC 1 AC 2 MA
ESP 11. Promote co-operation between the Higher Education Institute and local industry in the development of courses relevant to regional enterprise.				Bio Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2		Pop CH MA
ESP 12. Develop the template of North West Cross Border Workforce Development Forum for replication in other areas of the region for the purposes of the identification of local skills needs and workforce development solutions.				Bio Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2		Pop CH MA

ESP 13. Identify and implement innovative skills retention measures.				Bio Wtr 1 Wtr 2 Wtr 3 AC 1 AC 2		Pop CH MA
ESP 14. Direct new retail floor space into Gateways and Hubs and those centres selected for additional population growth. Future provision of significant retail developments within the Border region should be consistent with the policies and recommendations of the DEHLG Retail Planning Guidelines for Planning Authorities		Bio Wtr 1 AC 2 CH		Wtr 2 Wtr 3 AC 1 LD SL		Pop MA
<b>Chapter 5: Infrastructure</b>						
INFP 1. In assessing all plans and projects, Local Authorities must comply with Article 6 of Habitats Directive and have regard to the relevant conservation objectives, qualifying interest and threats to the site integrity of a Natura 2000 site				AC2		Bio MA Pop Wtr1Wtr2 Wtr3 AC1 CH LD SL
INFP2. Facilitate the development, at the appropriate classification, of those sections of the Strategic Radial Corridors and Strategic Links identified above as being of priority importance for the Region;		Bio Pop Wtr1 Wtr2 Wtr3 AC1 AC2 CH LD SL MA				
INFP 3. Facilitate and support the improvements identified to address particular infrastructural bottlenecks/ weaknesses within the Gateways.		Bio Pop Wtr1 Wtr2 Wtr3 SL AC1 AC2 CH LD MA				
INFP 4. Protect the carrying capacity of strategic links through the restriction of new accesses and intensification of existing accesses.					Bio Pop Wtr1 Wtr2 Wtr3 AC1 AC2 CH LD SL MA	
INFP 5. Support the expansion of rural transport services under the rural transport programme.					Bio Pop Wtr1 Wtr2 Wtr3 SL CH LD	AC1 AC2 MA
INFP 6. Promote the use of ILUTS for key settlements within the Region with particular emphasis on refocusing transport		Bio LD SL			Wtr1 Wtr2 Wtr3 CH	Pop AC1 AC2 MA

strategies to favour public transport modes.						
INFP 7.	Promote the integration of road, rail, bus and other sustainable modes at key locations within the Region with the development of Park and Ride facilities being a primary objective.		Bio LD SL			Wtr1 Wtr2 CH Wtr3  Pop AC1 AC2 MA
INFP 8.	Explore with other relevant public, private and community organisations, a range of innovative rural transport proposals including, rural park and ride schemes, rural carpooling and car-sharing schemes, and rural bus schemes.					Bio Wtr1 Wtr2 Wtr3 SL CH LD SL MA  Pop AC1 AC2
INFP 9.	Support the provision of a rail link between the Letterkenny/Derry linked Gateway and examine the potential of a rail link from Letterkenny to Sligo.		Bio, LD SL CH			Wrt1 Wrt2 Wrt3  Pop AC1 AC2 MA
INFP 10.	Promote the re-opening of the Western Rail Corridor from Athenry to Sligo.		Bio LD SL CH			Wrt1 Wrt2 Wrt3  Pop AC1 AC2 MA
INFP 11.	Identify disused transport corridors worthy of protection for future sustainable uses.		Bio LD SL CH			Wrt1 Wrt2 Wrt3  Pop AC1 AC2 MA
INFP 12.	New development should not compromise the expansion of rail and waterway corridors within the region		Bio LD SL CH Wrt1 Wrt2 Wrt3			  Pop AC1 AC2 MA
INFP 13.	Promote and support cycling and walking within the Region, particularly within urban centres		Bio SL MA			Wtr1 Wtr2 Wtr3  Pop AC1 AC2 CH LD
INFP 14.	Support the provision of adequate port facilities for commercial, fishing and amenity purposes within the region subject to compliance with Habitats Directive.		Bio Wtr1 Wtr2 Wtr3 AC1 AC2 CH LD SL			  Pop MA
INFP 15.	Support the development of the Drogheda Port Access Route.		Bio Wtr1 Wtr2 Wtr3 AC1 LD SL			AC2 CH  Pop MA
INFP 16.	Promote and support the ongoing operation and development of all regional airports.		Bio Wtr1 Wtr2 Wtr3 SL AC1 AC2 CH LD SL			  Pop MA

INFP 17.	Support the improvement of existing access routes to the regional airports	Bio SL AC2		AC1	Wtr1 Wtr2 Wtr3 CH LD	Pop MA
<b>Water Services Policy</b>						
INFP 18.	Local Authorities in the Border Region will provide Water Services in the most environmentally friendly, efficient, safe, and economical way possible, in accordance with Circular PD 7/09 and any subsequent DEHLG and EPA Guidelines and relevant EU Directives.	Bio Wtr1 Wtr2 Wtr3 CH LD SL			AC1 AC2	MA Pop
INFP 19.	The provision of water and sewerage facilities within settlements and rural areas of the region, must be considered and consistent with the settlement framework for population growth laid out in Chapter 3 of these guidelines as well as the investment priorities outlined in table 5.1.	Bio Wtr1 Wtr2 Wtr3 CH LD SL			AC1 AC2	Pop MA
INFP 20.	Proposals for new or increased water abstraction from surface and groundwater sources shall be appropriately assessed for its potential impact upon Natura 2000 sites in situ and ex situ.	Wtr2 Wtr3 LD SL			AC1 AC2 CH	Bio Pop Wtr1 MA
INFP 21.	Proposals for new or increased waste water discharge to surface or ground water shall be appropriately assessed for its potential impact upon Natura 2000 sites in-situ and ex-situ.	Wtr2 Wtr3 LD SL			AC1 AC2 CH	Bio Pop Wtr1 MA
INFP 22.	For all other settlements (in addition to the seven key settlements) and all rural and commercial development, Local authorities must comply with the provisions of the Habitats Directive.				CH AC1 AC2	Bio Pop Wtr1 Wtr2 Wtr3 LD SL MA
<b>Water Services Objectives</b>						
INFO 1.	Local Authorities must aim to reduce UFW to 25% within the life time of the Guidelines.				AC2 CH LD SL	Bio Wtr1 Pop Wtr2 Wtr3 AC1 MA
INFO 2.	Water conservation must be a priority through rehabilitation and reinforcement of existing water networks.					
INFO 3.	Surface water should be separated from waste water. Local authorities should promote SUDS, where possible.					
INFO 4.	Local authorities should promote rain water harvesting and					

INFO 5.	other water conservation measures. All drinking water supply sources should be protected and managed appropriately through the development plan process.					
INFO 6.	All waters receiving discharges should be protected and managed in accordance with the River Basin Management Plans and Programme of Measures.					
<b>Energy Infrastructure Policy</b>						
INFP 23.	Development plans should facilitate the provision of energy networks in principle, provided that it can be demonstrated that – <ul style="list-style-type: none"> <li>the development is required in order to facilitate the provision or retention of significant economic or social infrastructure</li> <li>the route proposed has been identified with due consideration for social, cultural and environmental impacts to include Habitats Directive Assessment where required</li> <li>the design is such that it will achieve least environmental impact consistent with not incurring excessive cost</li> <li>where impacts are inevitable mitigation features have been included</li> <li>where it can be shown the proposed development is consistent with international best practice with regard to materials and technologies, that will ensure a safe, secure, reliable, economic and efficient and high quality network</li> </ul>		Bio Wtr1 Wtr2 Wtr3 AC1 CH LD SL	Pop		AC2 MA
<b>Renewable Energy Policy</b>						
INFP 24.	Promote and support an optimal mix of renewable energy generation within the region.		Pop Bio Wtr1 Wtr2 Wtr3 CH LD SL			AC1 AC2 MA
INFP 25.	The BRA will prepare an Energy Strategy during the life of these Guidelines. Local authorities shall comply with the proposed integrated regional energy strategy on energy conservation and renewable energy generation.		Bio Pop Wtr1 Wtr2 Wtr3 CH LD SL			AC1 AC2 MA
INFP 26.	Local authorities should support and promote a move away from fossil-fuel energy production through investment in renewable energy and the creation of more 'green collar jobs'.		Bio Pop Wtr1 Wtr2 Wtr3 CH LD SL			AC1 AC2 MA

Renewable Energy Objectives						
INFO 7.	Provide landscape sensitivity analysis, in support of the regional strategy on renewable energy generation, to further refine locations suitable for development.		Bio Pop Wtr1 Wtr2 Wtr3 CH LD SL			AC1 AC2 MA
INFO 8.	Develop a balanced portfolio of renewable technologies.					
INFO 9.	Establish measures, targets and timeframes to reduce energy consumption and increase energy efficiency in line with national targets.					
INFO 10.	Support and facilitate greater penetration of renewable technologies at residential, commercial and power generation levels, providing such initiatives are compliant with planning and environment criteria and international directives.					
INFO 11.	Local Authorities will ensure that strategic goals for reducing energy demand and energy related emissions will contribute in a major way to achieving regional and national climate change targets.					
Telecommunications Policy						
INFP 27.	Development Plans and Local Area Plans should facilitate open access to high speed and high capacity broadband digital networks that will enable the development of a smart economy within the region.		Bio Pop CH LD		Wtr1 Wtr2 Wtr3 SL	AC1 AC2 MA
Telecommunications Objectives						
INFO 12.	Support and promote the repair and upgrading of the existing telephone network including the provision of improved broadband enabled individual line services to all subscribers;		Bio Pop CH LD		Wtr1 Wtr2 Wtr3 SL	AC1 AC2 MA
INFO 13.	Support and promote the provision of open access vendor neutral ducting in all new developments.					
INFO 14.	Support and promote the network enabling of all new build residential properties and the provision of open access co-located communication service connection and access facilities.					
INFO 15.	Support the provision and inclusion of publically owned open access ducting in all public infrastructural projects.					
INFO 16.	Support and promote the carrying out of integrated regionally planned telecommunication access provision to identify the existing deficiencies and inadequacies to address the servicing of future needs.					
INFO 17.	Support and promote the extension of the availability of access to the MANS to small business and residential users through the provision improved access and lower connection					



INFO 18.	and use costs. Support and facilitate the development of the National Broadband Scheme						
<b>Waste Management Policy</b>							
INFP 28.	Facilitate the provision of waste management facilities identified as necessary by regional waste management plans through the planning system subject to the requirements of the Habitats Directive.		Bio Pop Wtr1 Wtr2 Wtr3 CH LD SL			AC2	AC1 MA
INFP 29.	Local Authorities within the region should explore and develop waste management practices on an inter regional and on a cross border basis.		Bio Pop Wtr1 Wtr2 Wtr3 CH LD SL			AC2	AC1 MA
<b>Chapter 6: Environment and Amenities</b>							
<b>Climate Change Policy</b>							
ENVP 1.	Support the implementation of the National Climate Strategy 2007-2012.		Bio Pop Wtr1 Wtr2 Wtr3 CH LD SL				AC1 AC2 MA
ENVP 2.	Manage population growth through the proper planning and sustainable development of the region.		Bio Wtr2 Wtr3 SL LD CH				Pop Wtr1 AC1 AC2 MA
ENVP 3.	Reduce demands on non – renewable resources and promote the use of sustainable resources.		Wtr1 Wtr2 Wtr3 SL CH LD				AC1 Bio MA Pop AC2
<b>Climate Change Objective</b>							
ENVO 1.	Expand the use of geological and soil mapping to inform planning decisions relating to settlement, flooding, food production value and carbon sequestration, to identify prime agricultural lands (for food production), degraded/contaminated lands (which may have implications for water quality, health, fauna), and those which are essential for habitat protection, or have geological significance.						Bio Pop Wtr1 Wtr2 Wtr3 SL AC1 AC2 CH LD SL MA
<b>Natural Heritage Policy</b>							
ENVP 4.	All development plans and projects within the Border Region which would be likely (either individually or in combination with other plans or projects) to give rise to significant adverse direct, indirect or secondary impacts on the integrity on any Natura 2000 sites having regard to their conservation				AC2		Bio Pop Wtr1 Wtr2 Wtr3 SL AC1 CH LD SL MA

<p>objectives, shall not be permitted on the basis of these guidelines unless imperative reasons of overriding public interest can be established and there are no feasible alternative solutions.</p> <p>ENVP 5. All development plans and projects within the Border Region shall conserve and protect the ecological integrity of designated sites of international and national importance, and sites proposed for designation, in particular, European sites (including Natura 2000 sites), and Ramsar sites, NHAs and statutory reserves.</p> <p>ENVP 6. Local authorities shall implement the National Biodiversity Plan, through the adoption and implementation of local biodiversity action plans as part of integrated local heritage plans, as the conservation of biodiversity is an essential component of sustainable development.</p>						
<b>Natural Heritage Objectives</b>						
<p>ENVO 2. Continued development and renewal of Local Authority Heritage Plans in each Council area working with all key stakeholders to identify and deliver a range of actions and programmes to support heritage in the Council area.</p> <p>ENVO 3. Development and delivery of Bio-Diversity Action Plans in each Council area.</p> <p>ENVO 4. Expansion of the programme to protect important individual or groups of trees through greater use of tree preservation orders through the undertaking of an inventory of the Council area where funding allows.</p> <p>ENVO 5. Through development plans identify and protect ecological networks linking protected and designated important sites within each council area in accordance with Article 10 of the Habitats Directive.</p>				AC2		Bio Pop Wtr1 Wtr2 Wtr3 SL AC1 CH LD SL MA
<b>Landscape Policy</b>						
<p>ENVP 7. Protect and manage the landscape of the region</p>					AC2	Bio Pop Wtr1 Wtr2 Wtr3 AC1 CH LD SL MA
<p>ENVP 8. Local Authorities shall collaborate with adjoining Planning Authorities so that all development plan policies are consistent in the protection and management of the landscape</p>					AC2	Bio Pop Wtr1 Wtr2 Wtr3 SL AC1 CH LD MA

Landscape Objectives						
ENVO 6.	Adopt policies and measures in County Development Plans to protect, manage and plan landscapes through the provision of Landscape Classification and Character Assessments in accordance with adopted European (and contemporary National) Landscape Guidance Documents such as 'Guidelines for the Implementation of the European Landscape Convention, February 2008'				AC2	Bio Pop Wtr1 Wtr2 Wtr3 AC1 AC2 CH LD SL MA
ENVO 7.	Inclusion of policies in Development Plans to protect important views and prospects and special amenity areas to facilitate passive enjoyment of the heritage of the landscape.					
Water Policy						
ENVP 9.	To ensure alignment between the core objectives of the Water Framework Directive, (including River Basin Management Plans and POMS and Freshwater Pearl Mussel Sub-Basin Management Plans pertaining to the Border Region) and other related plans such as County Development Plans and related Local Area Plans; Habitat and Species Protection Plans under the Habitats Directive, Water Services Investment Programme, Nitrates Action Programme; and Flood Management Plans.				AC2	Bio Pop Wtr1 Wtr2 Wtr3 SL AC1 CH LD MA
ENVP 10.	Local Authorities shall prioritise, and aim to comply with the recommendations set out in the EPA Report 2009, Urban Waste Water Discharges in Ireland for Population Equivalents Greater than 500 Persons.		Bio Wtr1 Wtr2 Wtr3 CH LD SL		AC1 AC2	Pop MA
ENVP 11.	Local Authorities shall prioritise, and aim to comply with, the recommendations set out in the EPA Report 2009, The Provision and Quality of Drinking Water in Ireland.		Bio Wtr1 Wtr2 Wtr3 CH LD SL		AC1 AC2	MA Pop
Water Objectives						
ENVO 8.	Local authorities must incorporate the issues from the River Basin Management Plans and all action measures set out in Shellfish Water Protection Measures within their jurisdiction into the plan making process so that the implications of development on water quality is a key driver in identification of suitable locations for new development.				AC2	Bio Pop Wtr1 Wtr2 Wtr3 SL AC1 CH LD MA
ENVO 9.	Development Management objectives and guidance places strong emphasis on the need for Sustainable Drainage Systems and water management to reduce both flood risk,					

ENVO 10.	overflows and the washing of pollutants from surface areas into receiving waters.						
ENVO 11.	Areas of good and poor ecological status in the River Basin Management Plans should be identified in all Development Plans and specific policies developed to protect their status, including restrictions on types of development which impact on water quality.						
ENVO 12.	Include ground water protection measures in Development and Local Area Plans in accordance with consultation with the DEHLG, EPA, GSI and any other relevant licensing bodies.						
ENVO 12.	Plans and projects that have the potential to negatively impact on Natura 2000 sites will be subject to a Habitats Directive Assessment (HDA) in accordance with Article 6 of the Habitats Directive and in accordance with best practice and guidance.						
<b>Built Heritage Policy</b>							
ENVP 12.	To ensure that all aspects of the built heritage including archaeological, industrial, and architectural heritage, are suitably protected, enhanced, sensitively reused/ integrated into new development works and incorporated in development plans, records of protected structures, heritage plans and site specific projects & developments.						Bio Pop Wtr1 Wtr2 Wtr3 SL AC1 AC2 CH LD MA
<b>Built Heritage Objectives</b>							
ENVO 13.	Protect all national and recorded monuments identified on the national record and also all other archaeological sites that emerge through investigative or construction works through the development plan and management process and in cooperation with the Department of Environment, Heritage and Local Government;						Bio Pop Wtr1 Wtr2 Wtr3 AC1 AC2 CH LD SL MA
ENVO 14.	Adopt development plan policies and objectives to manage, protect, enhance, and/or sensitively integrate, where appropriate, all areas of built heritage, as defined within the relevant national heritage legislation;						
ENVO 15.	Carry out thematic built heritage audits, in order to inform policy and decision making in the planning process and where appropriate, inclusion in the Record of Protected Structures;						
ENVO 16.	Continue to protect through development plan policy and development management decisions, Architectural Conservation Areas, protected structures and vernacular buildings;						
ENVO 17.	Promote, where appropriate, settlement identity through traditional plot sizes, street patterns, street furniture and building scales in the development of towns, villages and						

clusters; ENVO 18.	Continue to provide Local Authority grant assistance in relation to specific conservation projects, where practical;						
ENVO 19.	Where appropriate, promote sensitive retrofitting of the established building stock;						
ENVO 20.	Improve the appearance and character of areas with particular townscape character by actively protecting their distinctive identities;						
ENVO 21.	Seek protection, enhancement and sensitive integration/re-use, as may be appropriate of heritage transport corridors, including rail, road and water corridors, to ensure their long term future and their role in relation to access provision, tourism development, biodiversity space and development buffers;						
ENVO 22.	Undertake research to identify key historic landscapes within Council areas which merit protection and support through policies and objectives in Development Plans.						
<b>Amenities and Recreation Policy</b>							
ENVP 13.	To protect and enhance the natural environment and to recognise the economic, social, environmental and physical value and benefits of green spaces in County, Town and Local Area Plans.					Wtr2 Wtr3	Bio Pop Wtr1 AC1 AC2 CH LD SL MA
<b>Amenities and Recreation Objectives</b>							
ENVO 23.	Support the co-ordination of development and design guidelines and development control standards within the Region (Cross-border co-operation will also be required on this issue).					Wtr2 Wtr3	Bio Pop Wtr1 AC1 AC2 CH LD SL MA
ENVO 24.	Ensure that the future provision of residential developments, or mixed use schemes with a residential element, should be consistent with the DEHLG Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas.						
ENVO 25.	Support the retrofit of recreation, amenities and facilities in our towns, villages and rural areas.						
ENVO 26.	Encourage the promotion of natural wildlife spaces/corridors within existing urban areas.						
EVNO27	Support and promote an inter-regional and collaborative approach to the development of access to the countryside						
ENVO28	Development Plans and Local Area Plans should support and protect the rights of landowners and rights of way throughout the region						
<b>Coastal Policy</b>							
ENVP 14.	Promote and support the development of Integrated Coastal		Bio CH LD		AC1	AC2	Pop Wtr1 Wtr2

Zone Management with all coastal local authorities in the Border region so that future Development Plans may be guided in relation to the management of coastal areas.		SL MA				Wtr3
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Coastal Objectives						
ENVO 29. Incorporate coastal zone management into relevant County, Town and Local Area Plans.		Bio CH LD SL MA		AC1	AC2	Pop Wtr1 Wtr2 Wtr3
ENVO 30. Development plans should respect and accommodate the changing physical nature of the coastline including the risks of erosion and land instability, changes to the intertidal zone, and the risk from flooding.						
ENVO 31. Ensure the conservation and enhancement of the landscape and seascape, biodiversity, historic and archaeological features and restrict the development of the undeveloped sections of the coastal zone.						
Cross Border Management of the Environment						
ENVP 15. Planning Authorities shall consult and seek to collaborate with the Northern Ireland Environmental Agency and the Loughs Agency so that development plans adopt a joint approach towards the management of the environment and the provision of infrastructure, community services and facilities.		Bio CH LD SL MA				AC1 AC2 Pop Wtr2 Wtr3 Wtr1
Chapter 7: Social Infrastructure & Community Development						
SIP 1. All areas of Social Infrastructure and Community Development shall be incorporated and integrated into all Development Plans and Development Management of planning authorities throughout the region.		Bio CH LD			Wtr1 Wtr2 Wtr3 AC1 SL	Pop MA AC2
SIP 2. Development plans shall facilitate the provision of social infrastructure and community development through the zoning of sufficient and appropriate lands in accordance with DEHLG Guidelines.		Bio CH LD			Wtr1 Wtr2 Wtr3 AC1 SL	Pop AC2 MA

Social Infrastructure and Community Development Objectives						
SIO 1.	Identify deficiencies in social infrastructure and plan for the future development of all services in an equitable and fair way through County Development Plans and related strategies of the local authority;		Bio CH LD			Wtr1 Wtr2 Wtr3 AC1 SL
SIO 2.	Where appropriate, consider the future provision of social infrastructure on a cross border basis;					Pop AC2 MA
SIO 3.	Within appropriate settlements, provide adequate zoned lands to accommodate the future provision and development of social infrastructure;					
SIO 4.	Identify appropriate sites within settlements for the provision of future social infrastructure;					
SIO 5.	Ensure that all community services are adequately accommodated within new residential schemes and are consistent with DEHLG Guidelines;					
SIO 6.	Ensure that the necessary infrastructure is available, or is currently being planned for to accommodate local services within the community;					
SIO 7.	Support and accommodate the development of existing services in line with the proper planning and sustainable development of the area;					
SIO 8.	Access to all and social inclusion must be at the core of all local authority planning and decision making;					
SIO 9.	Facilitate the development of ICT services through the local authority planning system, subject to the proper planning and sustainable development of the area;					
SIO 10.	Promote the social, physical and economic development of Gaeltacht areas					
Chapter 8: Regional Flood Risk Appraisal						
Flood Risk Policy						
FRP 1.	Development Plans and Local Area Plans should be consistent with The Planning System and Flood risk Management Guidelines – Guidelines for Planning Authorities and adopt a strategic, integrated, sustainable and proactive approach, to catchment management to reduce flood risk within the Region, managing the risk from: <ul style="list-style-type: none"> <li>tidal effects around estuaries and along the coast including the implications of the latest predictions for</li> </ul>		Bio Wtr2 Wtr3 CH LD SL MA			AC1 AC2
						Pop Wtr1

<ul style="list-style-type: none"> <li>sea level rise;</li> <li>fluvial flooding along river corridors and other significant watercourses resulting from catchments within and beyond the Region and other sources of flooding; and</li> <li>pluvial flooding resulting from surface water runoff and capacity constraints in surface water drainage systems.</li> </ul>						
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FRP 2.	Where new or upgraded flood/coastal defences are shown to be essential to protect existing development, all such proposals shall be subject to the Floods and Habitats Directive and all other statutory requirements.		Bio Wtr2 Wtr3 CH LD SL MA			AC1 AC2	Pop Wtr1
FRP 3.	New development should be avoided in areas at risk of flooding. However, it is recognised and acknowledged that the key urban settlements are at risk from coastal and fluvial flooding, but their continued growth and expansion can be facilitated through the careful expansion of the urban core and the implementation of appropriate land uses in areas at risk.		Wtr1 Wtr2 Wtr3 MA			Bio AC1 AC2 CH LD SL	Pop
FRP 4.	County Development Plans and Local Area Plans shall include a Strategic Flood Risk Assessment. Existing and proposed zoning of lands for development in areas at risk of flooding (flood plains <sup>21</sup> ) should follow the sequential approach and justification test set out in the Departmental Guidance on Flood Risk Management.		Bio Wtr1 Wtr2 Wtr3 MA			AC1 AC2 CH LD SL	Pop
FRP 5.	SUDS based drainage plans should be prepared in conjunction with Local Area Plans to optimise flood/runoff management potential of the areas.		Bio CH SL MA			AC1 AC2 LD	Pop Wtr1 Wtr2 Wtr3
FRP 6.	Through flood plain protection and SUDs, Local Authorities should incorporate improvements in biodiversity and amenity for existing and future developments.		CH LD SL MA			AC1 AC2	Bio Pop Wtr1 Wtr2 Wtr3

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Flood plain is defined as follows

Rivers – the extent of a flood event with a 1% annual probability of exceeding the peak floodwater level.

The Coast – the extent of a flood event with a 0.5% annual probability of exceeding the peak floodwater level



FRP 7.	Direct strategically significant development to low risk areas.		Bio CH LD SL MA			Wtr2 Wtr3 AC1 AC2	Pop Wtr1
FRP 8.	An evidence based approach should be adopted to the application of sequential approach and justification test in the zoning of flood susceptible lands for development. This should be transparent and use objective criteria appropriate to proposed zoning.		Bio CH LD SL MA			Wtr2 Wtr3 AC1 AC2	Pop Wtr1
FRP 9.	Founded on the precautionary approach to dealing with flood risk, measures such as flood compensation storage works or new hard-engineered flood defences alone will not be acceptable as justification for development in a flood plain.		Bio CH LD SL MA	Wtr2 Wtr3		AC1 AC2	Pop Wtr1
FRP 10.	Recognising the concept of coastal evolution and fluvial flooding as part of our dynamic physical environment, an adaptive approach to working with these natural processes shall be adopted.		Bio Pop CH LD SL MA			AC1 AC2	Wtr1 Wtr2 Wtr3

**Recommendations arising from assessment (in addition to amendments already included following the Habitats Workshops in Nov/Dec 09):**

- The import of the statements in respect to the framework within which the Guidelines operate, and the requirement that development envisaged in the Guidelines is predicated on the provision of adequate infrastructure, community services and facilities and also resources becoming available, as set out in the Preamble herein, should be suitably incorporated into the Guidelines.**
- A statement should be inserted in the Guidelines indicating that they should be read in conjunction with the Environmental Report and Habitats Assessment Report.**
- Further guidance in respect to flood risk should be provided in the Guidelines outline the level of detail required within a hierarchy of subsidiary plans.**
- Policy Addition: Local Authorities shall priorities, and aim to comply with, the recommendations set out in the EPA Report 2009, Urban Waste Water Discharges in Ireland for Population Equivalents Greater than 500 Persons – A Report for the Years 2006 and 2007.**
- Policy Addition: Local Authorities shall priorities, and aim to comply with, the recommendations set out in the EPA Report 2009, The Provision and Quality of Drinking Water in Ireland – A Report for the Years 2007 and 2008.**
- Policy Addition: Planning Authorities shall consult and seek to collaborate with adjoining Planning Authorities in order to ensure that Development Plan designations, policies and guidelines with respect to the management of the landscape are consistent.**
- Policy Addition: Planning Authorities shall seek to integrate land-use and transportation planning so as to minimise the carbon footprint of urban areas.**
- Policy Addition: Planning Authorities shall consult and seek to collaborate with the Northern Ireland Environmental Agency in order to ensure that Development Plans adopt a joint approach towards the management of the environment and the provision of infrastructure, community services and facilities.**

**Table 46 Assessment of Alternatives**

<b>Aims, Policies and Objectives</b>	Probable <b>Conflict</b> with status of SEOs – unlikely to be mitigated to an acceptable level	Potential <b>Conflict</b> with status of SEOs – likely to be mitigated to an acceptable level.	<b>Uncertain</b> interaction with status of SEOs	<b>Neutral</b> interaction with status of SEOs	<b>No Likely</b> interaction with status of SEOs	Likely to <b>Improve</b> status of SEOs.
<b>Predominantly Gateway Led Development</b>	<p>Pop, AC2, MA, (by concentrating growth and investment in the Gateways other areas would suffer in terms of their development. Overall travel times for areas outside the Gateways would increase and access to a wide range of services and facilities would be made difficult for many)</p> <p>Bio, Wtr2, Wtr3 (whereas concentrating development in the Gateways would relieve environmental pressure on the balance of the region, the assimilation capacity of these centres would come under considerable pressure. In this regard it would be unlikely that the impacts of such pressure could to be mitigated to an acceptable level within the lifetime of the Guidelines).</p>	<p>LD, SL (concentrating development in three centres would relieve pressure on the landscape, soil and geological heritage of the balance of the Region)</p> <p>AC1, (by increasing vehicular usage (emissions) arising from unsustainable travel patterns associated with a wide catchment area.</p> <p>Wtr 1 (by comparison to the balanced development model the impact of flooding at Gateways would become more critical as there would be greater pressure from development at these centres).</p>	CH (generally less pressure from development on items of heritage value however some items outside the Gateways may suffer from lack of investment)			
<b>Balanced Development Model</b>		<p>Bio, Wrt2, Wtr 3, LD, SL, (by concentrating development on a number of strategically important and environmentally robust centres there would relieve pressure on the balance of the region area.</p> <p>Wtr1 (subject to the implementation of a robust flood risk management regime for strategically important centres where there is a risk of flooding).</p>	CH (generally less pressure from development on items of heritage value however some items outside the strategically important centres may suffer from lack of investment)			Pop, AC1, AC2, MA (a good geographical spread of strategically important centres would provide better access to services and facilities and would promote and facilitate prudent management of resources and more sustainable patterns and modes of travel).
<b>Market Lead Development Model</b>	Bio, Pop, Wrt1, Wrt2, Wrt3, AC1, AC2, CH, LD, SL and MA (a more dispersed, ad-hoc pattern of development and a lack of strategic planning in terms of the targeting of investment and use of resources would not achieve balanced regional development. Development would not be directed towards environmentally robust areas.					

## **12 Mitigation Measures**

Schedule 2B of the Planning and Development (SEA) Regulations 2004 requires that consideration be given to; “the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan”. Mitigation involves ameliorating significant negative effects and enhancing positive ones. The EPA Guidelines on SEA (2003) state that mitigation; “may involve preventing impacts altogether, reducing their magnitude as much as possible and/or probability of occurrence, or putting in place measures to remedy effects after they have occurred, or to compensate for them by providing environmental benefits elsewhere”. It is important to note that Strategic Environmental Assessment is an integral part of the making of the Guidelines and that this is an iterative process. Consequently the Environmental Report will continue to influence the making of the Guidelines.

The Guidelines incorporate a wide range of aims, objectives and policies that are founded on the principle of sustainable development. In particular the Guidelines have been formulated with the explicit intention of protecting the environment and avoiding potentially adverse environmental impacts. A number of meetings/workshops have taken place during the formulation of the Guidelines involving the groups such as; the Technical Working Group, the SEA team, the Habitats team, Department of Environment Heritage and Local Government, Environmental Protection Agency, National Parks and Wildlife Service, North South Share River Basin District Office, Northern Ireland Environmental Agency and Infrastructural Providers. At these meetings/workshops environmental considerations were central to the making of the Guidelines.

Remaining potentially adverse conflicts or impacts may be characterised as ‘residual impacts’. These are potential impacts that remain after all mitigation measures have been considered under the RPG process. The majority of these are potential impacts, which are likely to be capable of further mitigation through careful, detailed implementation of best practices in terms of development management process and the implementation of County Development Plans, Local Area Plans, Framework Plans, other Plans and Guidelines.

As outlined in the preamble to this report, the management and care of the environment falls within the responsibility of a very wide range of departments and agencies and is governed by a raft of legislative requirements and guidelines. In this regard the Guidelines have been formulated so as to integrate with a wide range of plans and programmes and secure a strategic approach towards the sustainable development of the Region.

It is important to note in terms of environmental assessment, that certain individual plans and projects that provide the framework for development, including County Development Plans, Local Area Plans will be subject to SEA and Habitats Assessment Reports as the need arises. In addition, proposals for developments will be subject to detailed assessment in terms of normal planning requirements including where deemed necessary; Environmental and other Technical Reports, Environmental Impact Assessments and Habitats Assessments.

The measures referred to above will act to prevent, reduce and as fully as possible offset any significant effects of implementing the Guidelines.

### 13 Incorporating Environmental Issues into Draft Regional Planning Guidelines

The following table is an outline of how the environmental issues raised in the SEA process were incorporated into the Draft RPG's as policies, objectives or otherwise. The list is not exhaustive and does not include reference to the statements within the Draft RPG's. The third column includes some proposals for additional policies, objectives or references to be included in the Draft RPG's. The latter represents the final phase of ensuring that the environmental issues raised during the SEA process are incorporated into the Draft RPG's.

Environmental Issue	Policy, Objective, or reference in RPG's	Additional Policy Objective or Reference Required (final check)
<b>Biodiversity, Flora &amp; Fauna</b>		
Impact of development works e.g. forestry, agricultural activities and wide range of infrastructural works	SG5, SG6 ESP 5 INFP 1, INFP 14, INFP 18 – INFP 22, INFO 6, INFP 23, INFP 28, ENVP 1 – ENVP 3, ENVP 4 – ENVP 6, ENVO 2 – ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVP 14, ENVO 29 – 31, ENVP 15,	
Protection of watercourses especially sensitive water bodies	ESP 8 INFP 18 – INFP 22, INFO 6, INFP 23, ENVP 4 – ENVP 6, ENVO 2 – ENVO 5, ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVP 15,	
Conservation of Fish Stock	Most water related policies and objectives apply to varying degrees	
Control of Invasive Species	ENVP 6, ENVO 2 – ENVO 5,	
Protection of Natura 2000 sites including certain sites within Northern Ireland	CSP 9, INFP 1, INFP 14, INFP 18, INFP 20 - INFP 22, INFO 6, INFP 23, INFP 28, ENVP 4 – ENVP 6, ENVO 2 – ENVO 5, ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVP 15,	
Alignment with "Green City Guidelines 2008"	ENVP 6, ENVO 2 – ENVO 5	
Protection of Annex 11 species such as Freshwater Pearl Mussel and Salmon	Biodiversity related policies and objectives apply to varying degrees	Make specific reference to protection of protecton of Pearl Mussel.
Ramsar Sites and Statutory Nature Reserves	ENVO 2 – ENVO 5,	
Ecological Networks	ENVO 2 – ENVO 5, ENVP	

	15,	
Shellfish Waters	Biodiversity related policies and objectives apply to varying degrees	Make specific reference to protection of Shellfish Waters
<b>Population and Human Health</b>		
Quality of Life	Vision Statement and most policies and objectives apply to varying degrees.	
Population Trends and Regional Population Targets and Settlement Patterns	SG2, SG 7, Ch 3 (Table 3.1), Ch 3 Balanced Development Model, Settlement Strategy (Aims, Model, Framework,) and Policies CSP 1 – CSP 9	
Health and its relationship with environmental issues	Many policies and objectives apply to varying degrees - with particular reference to, drinking water quality, provision of; community related infrastructure, services and facilities.	
Radon in buildings		* add statement to RPGs Refer to SEA.
Road Safety		Add reference to RPG's e.g. L A working in collaboration with other stakeholders have a key role to play in bringing Irelands road safety record in line with 'best practice' countries throughout the World. Refer to SEA
Provision of infrastructure and community facilities	INFP 2 - INFP 22, INFP 23, INFP 24, INFP 25, INFP 27, INFO 12 – INFO 18, INFP 28, INFP 29, ENVP 13, ENVO 23 – 28, ENVP 15, SIP 1, SIP 2, SIO 1 – SIO 10,	
Flooding	FRP1 – FRP10.	
<b>Water</b>		
Impact of development works on water quality eg forestry, agricultural activities and wide range of infrastructural works	SG6, INFP 18 – INFP 22, INFO 6, INFP 23, INFP 28, ENVP 4 – ENVP 6, ENVO 2 – ENVO 5, ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVP 15,	
Alignment with aims policies and objectives of	SG6, INFP 18, INFO 6 ENVO 5, ENVP 9 – ENVP	

River Basin District Plans	11, ENVO 8 – ENVO 12, ENVP 15,	
Wastewater and Drinking Water and Bathing Water requirements – with particular refer to recent EPA Reports on Wastewater Treatment and Quality of Drinking Water	SG6 ESP 8 INFP 3, INFP 1 –INFP 6, INFP 18 – INFP 22 INFO 1 – INFO 6, INFP 23, ENVP 4 – ENVP 6, ENVO 2 – ENVO 5, ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVP 15,	
<b>Air and Climate Change</b>		
Climate Change & Air Quality	SG 6, ENVP 1 – ENVP 3, ENVO 1, ENVP 15,	
Impact of Climate Change on Cultural and Natural Heritage, Coastal Flooding	ENVP 1 – ENVP 3, ENVO 1	
Limiting greenhouse gas emissions and reducing dependency on fossil fuels	ESP 7 INFP 6 INFP 7 - INFP 13, INFP 24 – NNFP 26, INFO 7 – INFO 11, ENVP 1 – ENVP 3, ENVO 1, ENVP 15,	
<b>Cultural Heritage</b>		
Impact of development works eg forestry, agricultural activities and wide range of infrastructural works	SG5, SG 6, INFP 23, ENVP 12, ENVO 13 – 22, ENVP 14, ENVO 29 – 31, ENVP 15,	
Identification and protection of Geological Sites.	SG5, ENVP 5, ENVO 1, ENVO 2.	Add statement outlining the need for L A to collaborate with each other and with the GSI in identifying and protecting geological sites of importance – refer to submission from GSI in SEA
Protection of items of Architectural and Archeological Interest	SG5, INFP 23, ENVO 8 – ENVO 12, ENVP 14, ENVO 29 – 31, ENVP 15,	
Consideration of Marble Arch Caves Global Geopark	ESP 6	
<b>Landscape</b>		
Impact of development works eg forestry, agricultural activities and wide range of infrastructural works	SG5 SG 6 ESP 5, INFP 23, INFO 7, ENVP 7, ENVP 8, ENVO 6 – ENVO 7, ENVO 22, ENVP 14, ENVO 29 – 31, ENVP 15,	
Identification. classification and protection of	SG6 ENVP 7, ENVP 8 ENVO 6 – ENVO 7, ENVO	

landscape	22, ENVP 14, ENVO 29 – 31, ENVP 15,	
Lack of uniformity between Local Authorities towards management of landscape	SG6, ENVP 7, ENVP 8 ENVO 6 – ENVO 7, ENVP 14, ENVO 29 – 31, ENVP 15,	
<b>Other Issues</b>		
Urban Character, layout and Design	ENVP 12, ENVO 13 - ENVO 22	
One-off housing in the countryside	Many policies and objectives apply to varying degrees, CSP 8 in particular	
Cross border co-operation and collaboration in respect to spatial planning	SG6, SG8, INFP 29, ENVP 15, ENVO 23, SIO 2,	
Cumulative impact of off-shore wind farms		
Development of Recreation and Tourism Facilities	ESP 5, ESP 6	
Intercounty and Transboundary Environmental Pressures	SG6 SG8 ESP 6 INFP 1, ENVP 4 – ENVP 6, ENVO 2 – ENVO 5, ENVO 5, ENVP 9 – ENVP 11, ENVO 8 – ENVO 12, ENVO 8 – ENVO 12, ENVO 23, ENVP 15,	
Coastal Management	SG6, ENVP 14, ENVO 29 – 31,	
Waste Management	SG6, INFP 28, INFP 29.	
Alternatives under Art 5 of the SEA Directive	CH 3 Settlement Strategy with particular reference to, Settlement Hierarchy and the Balanced Development Model)	
Level of Commercial and Residential Vacancy	CSP 3, Other measures including Economic Strategy, provision of key Infrastructural and Community related services and facilities.	
Sustaining Rural Communities	CSP 8, INFP 5 INFP 8, INFP 18, INFP 19, INFP 23, INFP SIP 1, SIP 2, SIO 1 – SIO 10, 27, INFO 12 – INFO 18,	