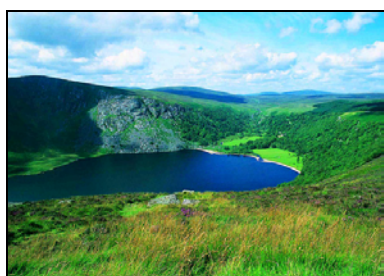


SEA STATEMENT

OF THE

WICKLOW COUNTY DEVELOPMENT PLAN 2010-2016

STRATEGIC ENVIRONMENTAL ASSESSMENT



For: Wicklow County Council

County Hall
Station Road
Wicklow Town
County Wicklow



By: CAAS (Environmental Services)

2nd Floor, The Courtyard
25 Great Strand Street
Dublin 1



SEPTEMBER 2010

Table of Contents

Section 1	Introduction	1
1.1	Terms of Reference	1
1.2	SEA Definition	1
1.3	Legislative Context.....	1
1.4	Content of the SEA Statement	1
1.5	Implications of SEA for the Plan.....	1
Section 2	How Environmental Considerations were integrated into the Plan.....	3
2.1	Consultations	3
2.2	Environmental Sensitivities	3
2.3	Early Identification and Evaluation of Alternatives.....	4
2.4	Mitigation.....	9
Section 3	Environmental Report and Submissions & Observations.....	11
3.1	Introduction	11
3.2	SEA Scoping Submissions	11
3.3	Submissions and Observations	11
3.4	Environmental Report	12
Section 4	Alternatives and the Plan	14
4.1	Introduction	14
4.2	Description of the Alternative Scenarios.....	14
4.3	Evaluation of the Alternative Scenarios	16
4.4	Reasons for choosing the Plan in light of the other reasonable alternatives dealt with.....	23
Section 5	Monitoring Measures.....	25
5.1	Introduction	25
5.2	Indicators and Targets	25
5.3	Sources	25
5.4	Excluded Indicators and Targets	25
5.5	Reporting.....	25
5.6	Responsibility	25
5.7	Thresholds	26

Section 1 Introduction

1.1 Terms of Reference

This is the SEA Statement of the Wicklow County Development Plan 2010-2016 Strategic Environmental Assessment (SEA).

1.2 SEA Definition

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest appropriate stage of decision-making on a par with economic and social considerations.

1.3 Legislative Context

Directive 2001/42/EC of the European Parliament and of the Council, of 27 June 2001, on the assessment of the effects of certain plans and programmes on the environment, referred to hereafter as the SEA Directive, introduced the requirement that SEA be carried out on plans and programmes which are prepared for a number of sectors, including land use planning.

The SEA Directive was transposed into Irish Law through the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (SI No. 435 of 2004), and, the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004). Both sets of regulations became operational on 21 July 2004.

The SEA Directive and the instruments transposing it into Irish Law require that after the adoption of a plan or programme, the plan or programme making authority is required to make a Statement available to the public, the competent environmental authorities and, where relevant, neighbouring countries. This Statement is referred to as an SEA Statement (DEHLG, 2004)¹.

¹ Department of the Environment, Heritage and Local Government (2004) *Implementation of SEA Directive (2001/42/EC): Guidelines for Regional Authorities and Planning Authorities* Dublin: Government of Ireland.

1.4 Content of the SEA Statement

The SEA Statement is required to include information summarising:

- a) how environmental considerations have been integrated into the Plan,
- b) how
 - the environmental report,
 - submissions and observations made to the planning authority on the proposed Plan and Environmental Report, and
 - any transboundary consultations [this is not relevant to this SEA]

have been taken into account during the preparation of the Plan,

- c) the reasons for choosing the Plan, as adopted, in the light of the other reasonable alternatives dealt with, and
- d) the measures decided upon to monitor the significant environmental effects of implementation of the Plan.

1.5 Implications of SEA for the Plan

As a result of the aforementioned legislation, the Wicklow County Development Plan 2010-2016 was required to undergo SEA.

The findings of the SEA were expressed in a Draft Environmental Report which was submitted to the Elected Members alongside the proposed Draft Plan. The purpose of the report was to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of growth in Wicklow.

Changes made to the proposed Draft Plan were evaluated for their environmental consequences and the Draft Environmental Report was updated to become the Environmental Report.

The Environmental Report and the Draft Plan were placed on public display in October 2009.

Addendum I to the Environmental Report (which details responses to the submissions on the Environmental Report which were made during the first period of public display of the Draft Plan and the Environmental Report) was included in the Manager's Report circulated to Elected Members. Addendum I proposed updates to the Environmental Report as a result of submissions, as appropriate.

Proposed Amendments to the Draft Plan were evaluated for their environmental consequences and these were placed on public display alongside the Proposed Amendments in June 2010 the form of Addendum II to the Environmental Report².

On adoption of the Draft Plan, the Addenda were used to update the original Environmental Report into a final Environmental Report which accompanies the adopted Plan.

At each stage of the process the Elected Members took into account the findings of the Environmental Report and/or the Addenda as appropriate.

² It is noted that Addendum II identified that some Proposed Amendments would potentially conflict with the protection of the environment and that these potential conflicts would be mitigated by environmental protection provisions which had already been integrated into the Plan. The Plan was adopted with a number of the aforementioned Proposed Amendments. It is emphasised that any new development under the Plan will be required to comply with all its provisions including those relating to environmental protection.

Section 2 How Environmental Considerations were integrated into the Plan

2.1 Consultations

The Environmental Protection Agency (EPA), the Department of the Environment, Heritage and Local Government (DEHLG) and the Department of Communications, Energy and Natural Resources (DCENR) were all sent SEA scoping notices indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made to Wicklow County Council. A written submission was received on the scope of the SEA from the EPA.

Representatives from the Eastern Regional Fisheries Boards, the National Parks and Wildlife Service, the Department of Communications, Energy and Natural Resources, Wicklow County Council and CAAS attended an SEA Scoping Meeting on 17 June 2009. The information provided at this meeting - including that which relating to Appropriate Assessment (AA) - was taken into account during the formulation of the scope of the SEA.

In addition, the EPA and DEHLG made submissions on the Development Plan and Environmental Report while they were on public display. Further information on the aforementioned submissions is provided under Section 3.2.

2.2 Environmental Sensitivities

2.2.1 Mapping and Early Communication

Environmental considerations were integrated into the Draft Plan before it was placed on public display for the first time.

Environmental sensitivities were mapped in order to identify which areas of the County would be most sensitive to development and would suffer the most adverse effects if growth was to be accommodated in those areas unmitigated.

The sensitivities were communicated to the Plan-making team on a regular basis from the outset of the Plan preparation process. Identifying areas with the most limited carrying capacity within the Plan area helped future growth to be diverted away from these areas.

The sensitivities considered by the SEA included the following:

- Designated ecological sites;
- Land cover;
- Soil Type;
- Water Framework Directive (WFD) Risk Assessments for Rivers, Lakes, Ground, Coastal and Transitional Waters;
- WFD Register of Protected Areas;
- EPA River Water Quality Monitoring;
- GSI Aquifer Vulnerability and Productivity;
- Flooding Data;
- Waste Water Treatment capacity and demand;
- Drinking water supply;
- Drinking water quality;
- Archaeological Heritage;
- Architectural Heritage;
- Landscape Character Areas; and,
- Protected Views and Prospects.

A number of these sensitivities are mapped on Figure 2.1, Figure 2.2 and Figure 2.3.

Overlay mapping

A Geographical Information System (GIS) was used in order to weight the above sensitivities and map them overlapping each other - this allowed the identification of where most sensitivities occur. Figure 2.4 shows the overlay map of sensitivities that was used by the SEA.

Environmental sensitivities are indicated by colours which range from extreme vulnerability (red) to high vulnerability (orange) to moderate vulnerability (yellow) and low vulnerability (green). Where the mapping shows a concentration of environmental sensitivities there is an increased likelihood that development will conflict with these sensitivities and cause environmental deterioration. This is particularly the case where the cumulative

development of small-scale projects, such as rural housing, gradually causes a slow deterioration of a resource, such as water quality.

2.3 Early Identification and Evaluation of Alternatives

A range of potential alternative scenarios for the types of planning strategies adopted for the Development Plan were identified at an early stage in the process and evaluated for their likely significant environmental effects (see Section 4).

The environmental sensitivities and overlay mapping shown Figures 2.1 to 2.4 were used in order to predict and evaluate the environmental effects of implementing the scenarios.

Communication of the findings of this evaluation helped the Plan-making team to make an informed choice as to which alternative was to be put before the Elected Members as the proposed Plan.

Communication of this evaluation to the Elected Members through the Environmental Report helped the Elected Members to make an informed choice with regard to the making of the Development Plan.

Mitigation measures which arose from the evaluation and which were integrated into the Plan are detailed under Section 2.4 of this report.

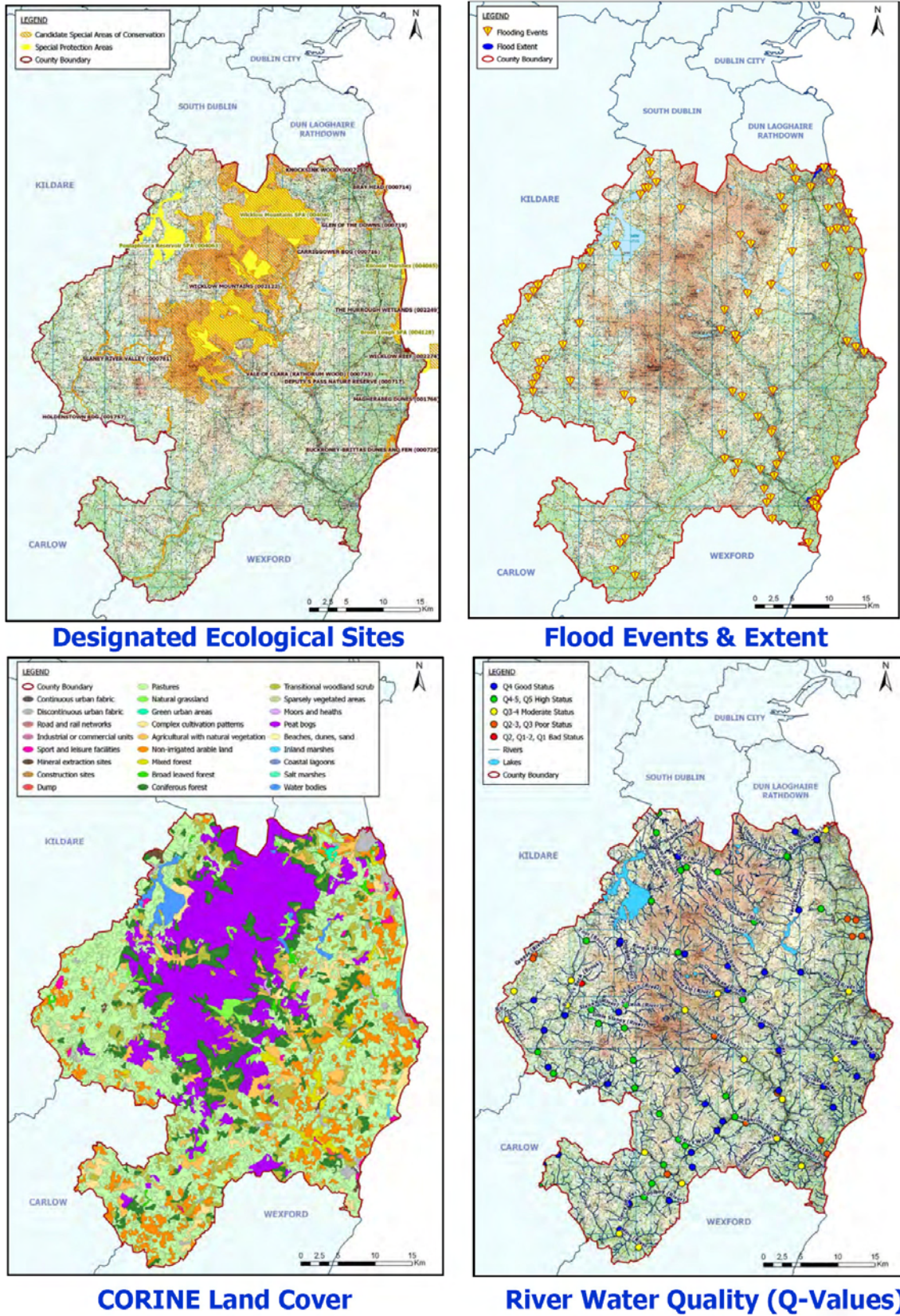


Figure 2.1 Environmental Sensitivities - Plate 1

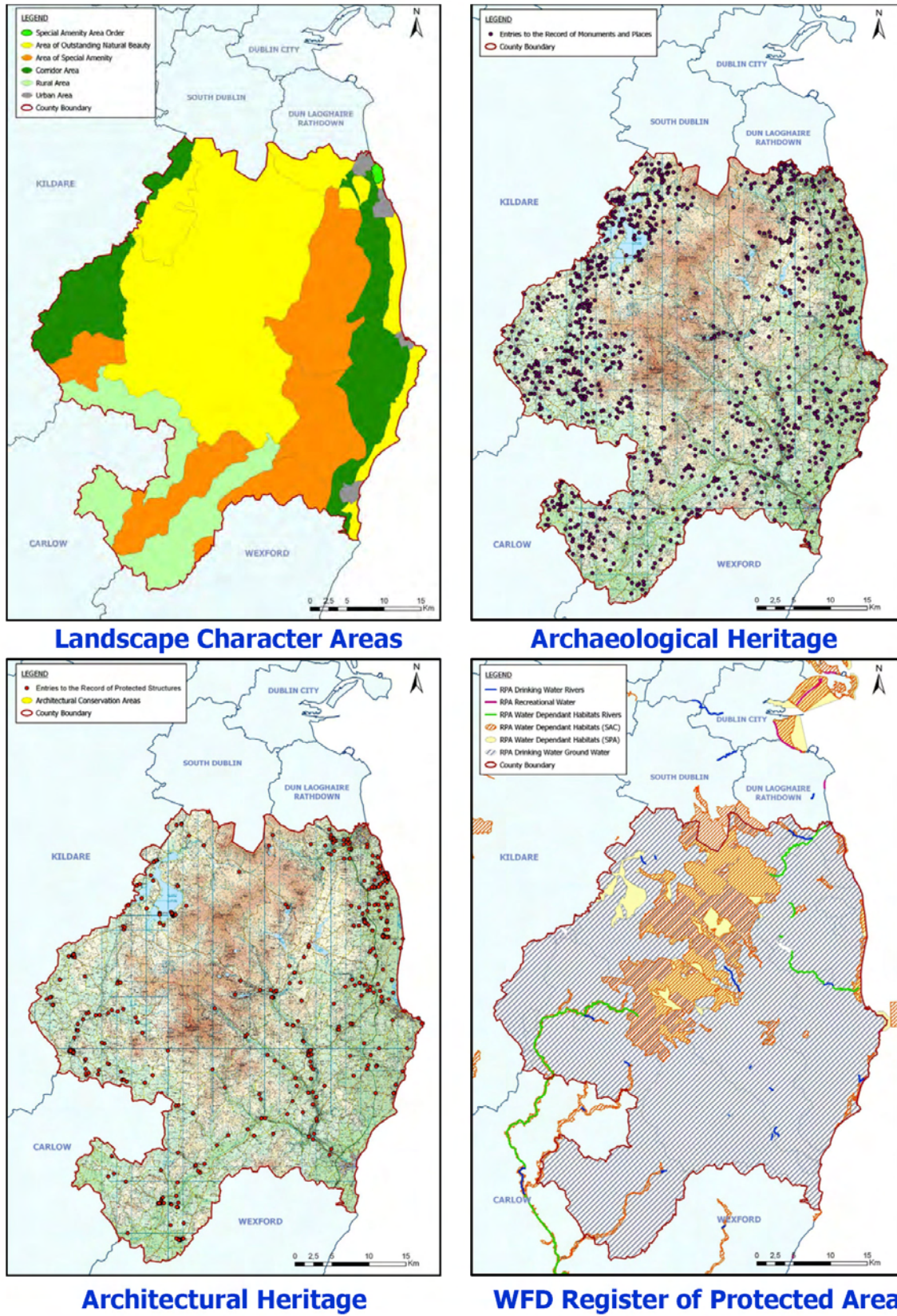


Figure 2.2 Environmental Sensitivities - Plate 2

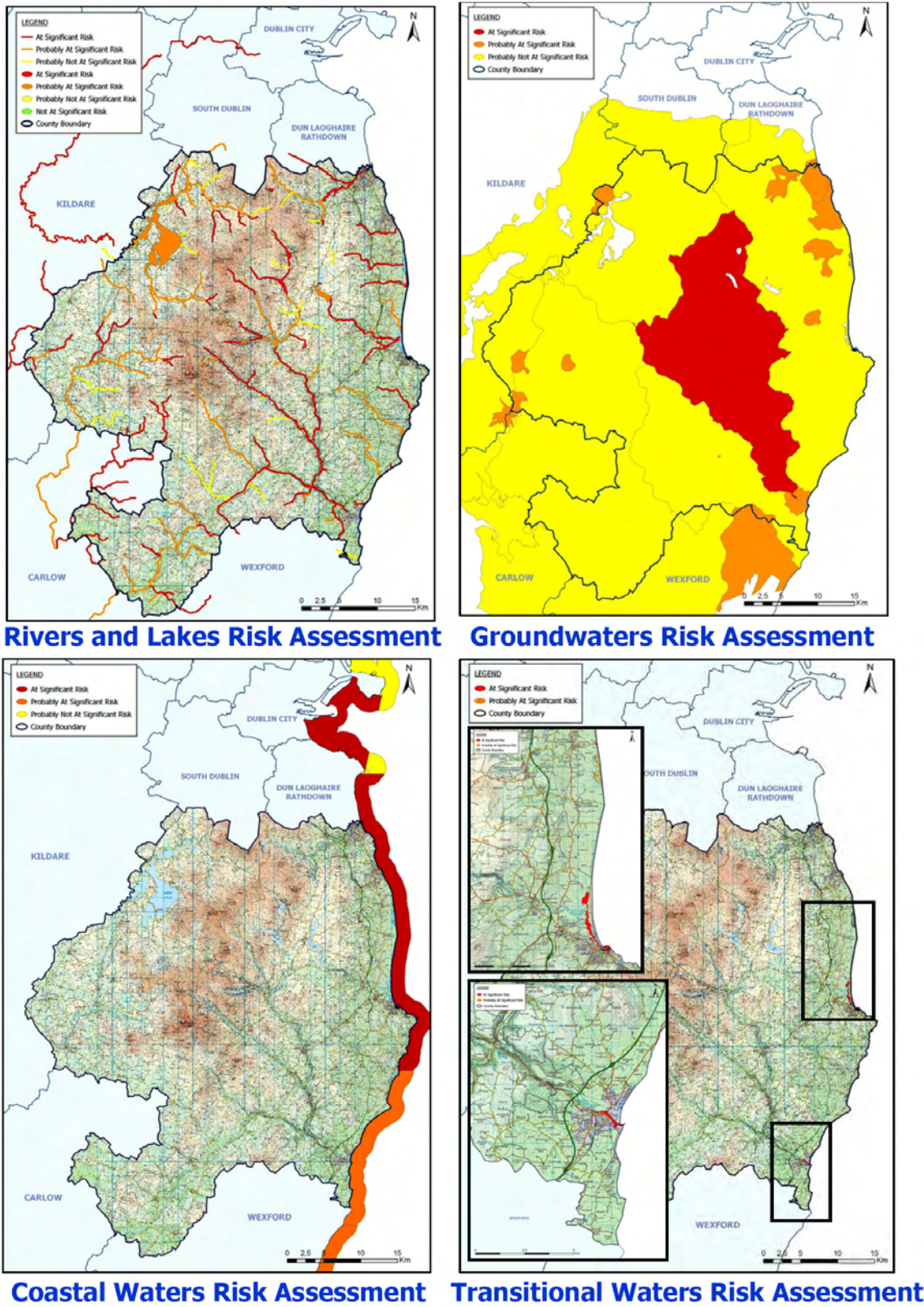


Figure 2.3 Environmental Sensitivities - Plate 3

Maps of sensitivities were weighted and mapped overlapping each other in order to identify where most sensitivities occur.

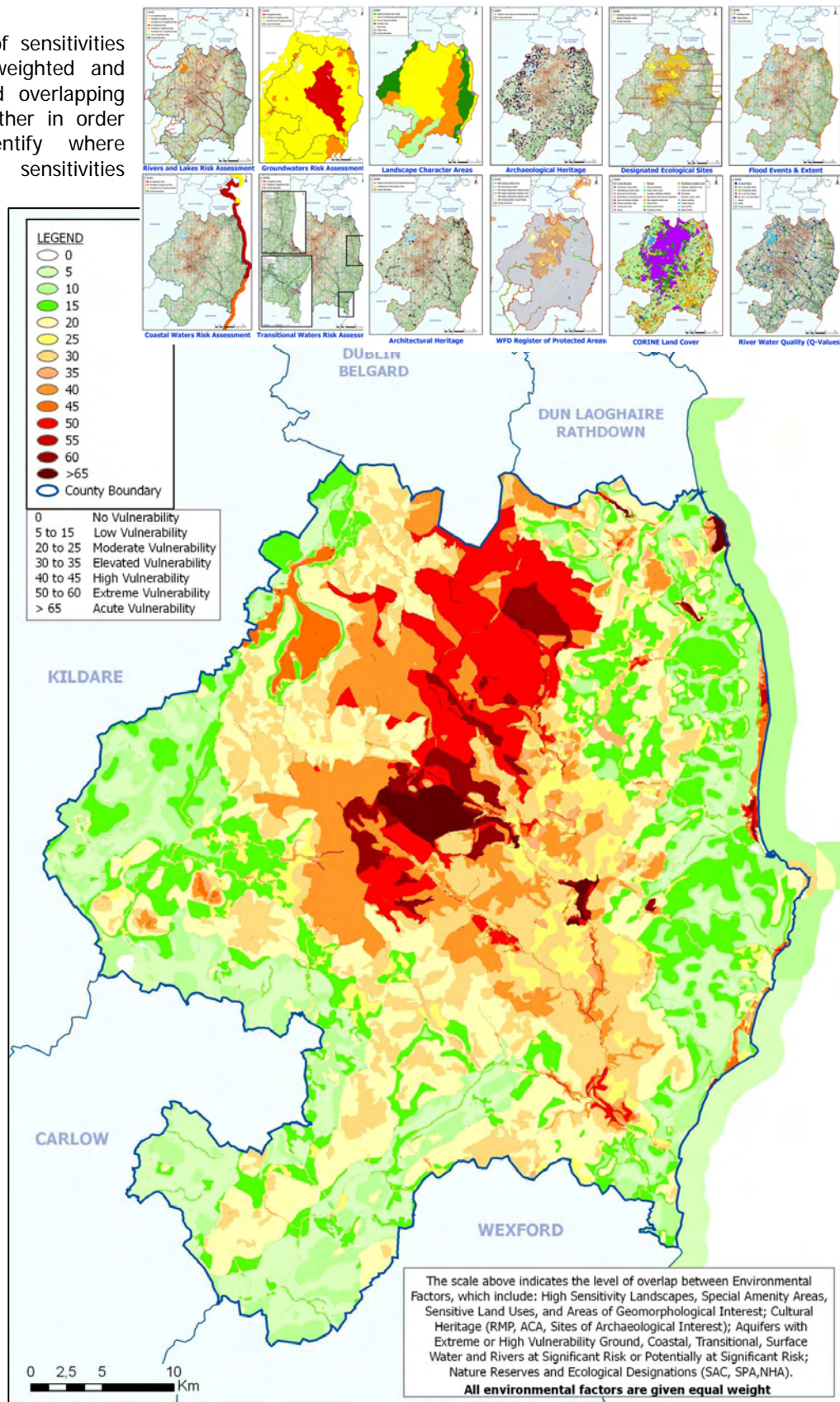


Figure 2.4 Overlay of Environmental Sensitivities

2.4 Mitigation

2.4.1 Introduction

In order to comply with various statutory requirements and in order to comply with the requirements of the statutory consultees, mitigation measures³ were recommended to be integrated into the Plan.

The topics which these mitigation measures cover include:

- Designated Ecological Sites
- Ecological Connectivity
- Human Health
- Brownfield Development
- Status of Surface and Groundwaters
- Flooding
- Water Services (Waste Water and Drinking Water)
- Greenhouse gas emissions and car dependency
- Archaeological Heritage
- Architectural Heritage
- Landscape

Mitigation measures generally benefit multiple environmental components i.e. a measure providing for the protection of surface water resources could beneficially impact upon the protection of biodiversity, flora and fauna, drinking water resources, human health and provision of appropriate waste water treatment infrastructure.

The mitigation measures are identified in Section 9 of the Environmental Report and this identification is reproduced on Table 2.1. The reference codes identified are those which accompany the relevant measures in both the Plan and Section 8 of the Environmental Report.

³ Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing a human action, be it a plan, programme or project. Mitigation measures can be roughly divided into those that: prevent effects; reduce the magnitude or extent, probability and/or severity of effect; repair effects after they have occurred, and; compensate for effects, balancing out negative impacts with other positive ones. Where there are likely to be significant negative effects, consideration should be given in the first instance to preventing these effects or, where this is not possible, to reducing the effects.

Mitigation Topic	Measure	Provisions Integrating Considerations into the Plan
Designated Sites	Ecological	Objectives: BD1, BD2, BD8 and BD7
Ecological Connectivity		Objectives: BD3, BD4, BD5, BD6 and BD9
Human Health		Objectives: AE1, AE2, AE3, NP1, NP2, NP3, NP4 and EMP 14 Also see measures related to water quality, flooding, waste water treatment and drinking water supply and quality.
Brownfield Development		Provisions of Chapter 4 Population, Housing and Settlement, Provisions of Chapter 5 Urban Development and Objectives EMP8, RUR4 and RW4
Status of Surface and Groundwaters		Objectives: RH3, AGR1, AGR4, FTY2, FSH1, WW3, WT1, WT2, WT3, WT4, WT5 and WT6
Flooding		Goals 7 and 10 and Objectives FL1, FL2, FL3, FL4, FL5 and FL6
Water Services (Waste Water and Drinking Water)		Objectives: WS1, WS2, WS3, WS4, WS5, WW1, WW2, WW3, WW5, WW7 and WW8
Greenhouse gas emissions and car dependency		Objectives: PT1, PT2, PT3, PT4, PT5, PT6, PT7, PT8, PT9, CW1, CW2, CW3, CW4, CW5, TE1 and TE2
Archaeological Heritage		Objectives: AR1, AR2, AR3, AR4, AR5 and AR6
Architectural Heritage		Objectives: AH1, RPS1, RPS2, RPS3, RPS4, RPS5, VA1, VA2, VA3, ACA1, ACA2, ACA3, ACA4 and ACA5
Landscape		Objectives: LA1, LA2, LA3 and VP1

Table 2.1 Mitigation Measures

Section 3 Environmental Report and Submissions & Observations

3.1 Introduction

This section details how both the Environmental Report and submissions and observations made to the planning authority on the Environmental Report and SEA process have been taken into account during the preparation of the Plan.

3.2 SEA Scoping Submissions

The Environmental Protection Agency (EPA), the Department of the Environment, Heritage and Local Government (DEHLG) and the Department of Communications, Energy and Natural Resources (DCENR) were all sent SEA scoping notices indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made to Wicklow County Council. A written submission was received on the scope of the SEA from the EPA.

Representatives from the Eastern Regional Fisheries Boards, the National Parks and Wildlife Service, the Department of Communications, Energy and Natural Resources, Wicklow County Council and CAAS attended an SEA Scoping Meeting on 17 June 2009. The information provided at this meeting - including that which relating to Appropriate Assessment (AA) - was taken into account during the formulation of the scope of the SEA.

The EPA's submission identified a number of matters including:

- Water supply;
- Waste water treatment infrastructure and capacity;
- Protection of surface and groundwater resources;
- Inclusion of Water Framework Directive River Basin Management Plan Programme of Measures;
- Protection of designated and non-designated biodiversity;
- Flood risk management;
- Protection and management of bathing areas, beaches and coastal areas;
- Habitat mapping;

- Alien species;
- Climate change;
- Air quality;
- Sustainable energy production and use;
- Sustainable modes of transport;
- Waste management;
- Landscape and townscape;
- Protection of amenity and cultural heritage;
- Main Environmental Challenges (Ireland's Environment 2008, EPA);
- Geographical Information Systems;
- Scoping Meetings; and,
- SEA Statement.

The submission was accompanied by an *SEA Pack* which comprised a combination of Guidance, Checklists and Abstracts from EPA Publications and a Circular Letter issued by the Department of the Environment Heritage and Local Government on Appropriate Assessment of Land Use Plans. Key topics covered included:

- Drinking Water;
- Urban Waste Water Discharges;
- Wetlands Conservation and Protection; and,
- Appropriate Assessment.

The information contained in the EPA submission – in addition to the information which was provided at the SEA Scoping Meeting was – was taken into account during the formulation of the scope of the SEA and while undertaking the SEA.

3.3 Submissions and Observations

The EPA and DEHLG made submissions on the Development Plan and Environmental Report while they were on public display. The information contained in these submissions was taken into account by the SEA as well as the Appropriate Assessment which was undertaken for the Plan.

The EPA submission provided information and advice under the following headings:

- Water;
- Water Quality/Water Framework Directive;
- Drinking Water/Water Supply;
- Waste Water Treatment;
- Groundwater Protection;
- Bathing Water;
- Water Conservation;
- Water Services Act 2007;
- Flood Prevention and Management;
- Integration of infrastructure, zoning and development;
- Biodiversity;
- EU Protected Habitats and Species in Ireland;
- Annex I/ Annex II Habitats Directive;
- Management Plans for Designated Areas;
- Fisheries;
- Buffer Zones;
- Appropriate Assessment;
- Non-Designated Habitats and Species;
- Habitat Mapping;
- Alien species and Noxious Weeds;
- Inland Waters;
- Air, Noise and Climatic Factors;
- Energy Conservation/Renewable Energy;
- Landscape Character Assessment;
- Human Health/Quality of Life;
- Transportation;
- Tourism;
- Infrastructure Planning;
- Urban Waste Water Discharge Licensing;
- Waste Management;
- Environmental Impact Assessment;
- Legislative Obligations;
- Main Environmental Challenges; and,
- Environmental Report.

The EPA's submission resulted in the following updates to the Environmental Report:

- The insertion of information regarding the scoping meeting which was held for the SEA into Section 2.2 of the Environmental Report (*Representatives from the Eastern Regional Fisheries Boards, the National Parks and Wildlife Service, the Department of Communications, Energy and Natural Resources, Wicklow County Council and CAAS attended an SEA Scoping Meeting*

on 17 June 2009. The information provided at this meeting - including that which relating to Appropriate Assessment (AA) - was taken into account during the formulation of the scope of the SEA);

- The insertion of a new Section into the Environmental Report (Section 11 *SEA Summary Table*) which identifies how likely significant effects (if unmitigated) are linked to relevant mitigation measure(s) and indicator(s) which will be used for monitoring; and,
- The amendment of a sentence in Section 10 of the Environmental Report in order to identify that the Council is responsible for the *ongoing review of targets and indicators as necessary.*

The part of the DEHLG's submission relevant to the SEA related to the assessment of the likely significant environmental effects of certain Draft Plan provisions with regard to the protection of Natura 2000 Sites. This part of the submission resulted in the updating of the evaluation contained in Section 8 of the Environmental Report for a number of the provisions identified.

3.4 Environmental Report

The findings of the SEA were expressed in a Draft Environmental Report which was submitted to the Elected Members alongside the proposed Draft Plan. The purpose of the report was to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of growth in Wicklow.

Changes made to the proposed Draft Plan were evaluated for their environmental consequences and the Draft Environmental Report was updated to become the Environmental Report. The Environmental Report and the Draft Plan were placed on public display in October 2009.

Addendum I to the Environmental Report (which details responses to the submissions on the Environmental Report which were made during the first period of public display of the Draft Plan and the Environmental Report) was included in the Manager's Report circulated to Elected Members. Addendum I proposed updates to the Environmental Report as a result of submissions, as appropriate.

Proposed Amendments to the Draft Plan were evaluated for their environmental consequences and these were placed on public display alongside the Proposed Amendments in June 2010 the form of Addendum II⁴ to the Environmental Report.

On adoption of the Draft Plan, the Addenda were used to update the original Environmental Report into a final Environmental Report which accompanies the adopted Plan.

At each stage of the process the Elected Members took into account the findings of the Environmental Report and/or the Addenda as appropriate.

⁴ It is noted that Addendum II identified that some Proposed Amendments would potentially conflict with the protection of the environment and that these potential conflicts would be mitigated by environmental protection provisions which had already been integrated into the Plan. The Plan was adopted with a number of the aforementioned Proposed Amendments. It is emphasised that any new development under the Plan will be required to comply with all its provisions including those relating to environmental protection.

Section 4 Alternatives and the Plan

4.1 Introduction

This section describes the alternative scenarios for the Development Plan, summarises the evaluation for likely significant environmental effects which is provided in the Environmental Report and identifies the reasons for choosing the Plan, as adopted, in the light of the other reasonable alternatives dealt with.

4.2 Description of the Alternative Scenarios

The environmental consequences of 5 scenarios for the Plan were examined.

4.2.1 Alternative Scenario 1: *Dispersed Scenario*

Rural Dispersed growth with limited Growth in urban centres (Laissez Faire Approach)

The characteristics of this Scenario are as follows:

- Laissez Faire Approach to Planning
- Extensive rural development throughout the County with little or no growth in Urban Areas.
- Social cohesion and fabric of urban areas are diminished
- Limited development on Brownfield sites
- Increased demands on provision of Water/Infrastructure in the rural area
- Conflict with infrastructural provision, new roads/road improvements, EIR Grid and Bord Gas Networks
- Negative Impact on Landscape
- Negative Impact on Environmental Designations (no regard)
- Weak Social Infrastructure
- Travel Demands unsustainable
- Natural resources such as forestry, wind energy and mineral extraction will be interspersed with large areas of rural housing
- Proliferation of individual effluent disposal system and associated pollution risks
- Proliferation of individual wells and associated impacts on the ground water
- Increased pressure on public services to remain economic leading to decline in service provision

4.2.2 Alternative Scenario 2: *Neutral Scenario-Strict application of RPGs/ Protectionist*

Emphasis on growth in both rural and urban areas (Planned approach for growth in both rural and urban areas throughout the County).

The characteristics of this Scenario are as follows:

- Development concentrated into the Regional Planning Guidelines designated towns
- Development in remainder of the County limited to "local need" only
- Reduced options for settlement, leading to social dissatisfaction
- Emphasis in growth in both rural and urban areas, but source of growth of these areas differ from area to area
- Increased Demands on Public services/Infrastructure across all areas
- Impact on landscape with some regard to environmental designations
- Investment in social infrastructure spread leading to uneven provision
- Poor provision of public transport due to lack of concentrated population

4.2.3 Alternative Scenario 3: *Structured Scenario*

Well Developed Urban Structure supporting diverse rural growth

The characteristics of this Scenario are as follows:

- Balanced sustainable Approach to Planning
- Concentration of growth in Urban Centres and appropriate growth in rural areas
- Rural Areas supported by larger urban centres and control of sporadic rural housing
- More sustainable modes of transport
- Increased use of public transport
- Reduced commuting distances to employment opportunities and greater accessibility
- Increased provision of Social Infrastructure
- Protection of landscape and environmental designations
- Reduced impact on water resources
- Infrastructural networks protected

4.2.4 Alternative Scenario 4: *Centred Scenario*

Development concentrated along existing Rail line with limited regard for environmental designation along the coastline, population loading along east coast

The characteristics of this Scenario are as follows:

- Concentration of development along rail line
- Population loading in Bray, Greystones, Kilcoole, Newcastle, Wicklow, Glenealy, Rathdrum, Avoca and Arklow. Densification of these settlements
- Restricted growth in all other parts of the County
- Little regard to Environmental Designations along the East Coast in place of Growth
- Strong regard to Environmental Designations within the rest of the County
- Demand for Increased Social Infrastructure in growth towns
- Population Decline in areas without public transport.
- Investment in other forms of transport diverted
- Investment in remainder of County diverted
- Economic strength and attractiveness of remainder of the County significantly reduced as an indirect effect there would be lack of employment
- Increased Loading on Water Services, Demands on Rivers Systems along settlement concentrations and flooding

4.2.5 Alternative Scenario 5: *Prescriptive Scenario*

Strict application of all environmental designations throughout the County

The characteristics of this Scenario are as follows:

- Strong and Robust Environmental protection
- Development limited to settlements remote from designated areas
- Limited Rural Development
- Increased demands on a small number of existing settlements and infrastructure in those settlements
- Social networks in rural areas or locations near protected sites will be curtailed
- Lack of infrastructure at locations at or near designated sites
- Reduced Recreational and tourism use of the County and associated economic impacts
- The potential to exploit natural resources reduced

4.3 Evaluation of the Alternative Scenarios

4.3.1 Methodology

4.3.1.1 Existing Environment and Overlay Mapping

In order to identify the extent to which environmental sensitivities are likely to be impacted upon by implementation of the 5 scenarios, use was made of environmental baseline data and overlay mapping (see Figures 2.1 to 2.4).

4.3.1.2 Strategic Environmental Objectives (SEOs)

Based on an understanding of the existing and emerging environmental conditions in the County a series of Strategic Environmental Objectives (SEOs) were identified and developed in order to assess the likely environmental effects which would be caused by implementation of each of the 5 alternative scenarios described above.

The alternatives are evaluated using compatibility criteria (see Table 4.1) in order to determine how they are likely to affect the status of these SEOs.

Table 4.2 brings together all the SEOs which have been developed from international, national and regional policies which generally govern environmental protection objectives.

The SEOs and the alternative scenarios are arrayed against each other to identify which interactions - if any - would cause impacts on specific components of the environment. Where the appraisal identifies a likely conflict with the status of an SEO the relevant SEO code is entered into the conflict column - e.g. B1 which stands for SEO likely to be affected - in this instance 'to avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites'.

Likely to Improve status of SEOs	Probable Conflict with status of SEOs- unlikely to be mitigated	Potential Conflict with status of SEOs- likely to be mitigated	Uncertain interaction with status of SEOs	Neutral Interaction with status of SEOs	No Likely interaction with status of SEOs
---	--	---	--	--	--

Table 4.1 Criteria for appraising the effect of Plan provisions on Strategic Environmental Objectives

SEO Code	SEO
B1	To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites
B2	To avoid significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites
B3	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
HH1	To protect human health from hazards or nuisances arising from exposure to incompatible landuses
S1	Maximise the sustainable re-use of brownfield lands, and maximise the use of the existing built environment rather than developing greenfield lands
W1	To maintain and improve, where possible, the quality of surface waters
W2	To prevent pollution and contamination of ground water
W3	To prevent development on lands which pose - or are likely to pose in the future - a significant flood risk
C1	To minimise increases in travel related greenhouse emissions to air
C2	To reduce car dependency within the County by way of, inter alia, encouraging modal change from car to more sustainable forms of public transport and encouraging development which will not be dependent on private transport
M1	To serve new development with appropriate waste water treatment
M2	To serve development within the County with drinking water that is both wholesome and clean
CH1	To protect the archaeological heritage of County Wicklow with regard to entries to the Record of Monuments and Places - including Zones of Archaeological Potential - and the context of the above within the surrounding landscape where relevant
CH2	To preserve and protect the special interest and character of County Wicklow's architectural heritage with regard to entries to the Record of Protected Structures and their context within the surrounding landscape where relevant
L1	To avoid significant adverse impacts on the landscape, especially with regard to Areas of Outstanding Natural Beauty and views and prospects of special amenity

Table 4.2 Strategic Environmental Objectives (SEOs)⁵

⁵ Strategic Environmental Objectives (SEOs) are methodological measures which are developed from international and national policies which generally govern environmental protection objectives and against which the environmental effects of the Plan were tested. The SEOs are used as standards against which the provisions of the Plan were evaluated in order to help identify areas in which significant adverse impacts are likely to occur, if unmitigated against.

4.3.2 Evaluation of Alternative Scenarios

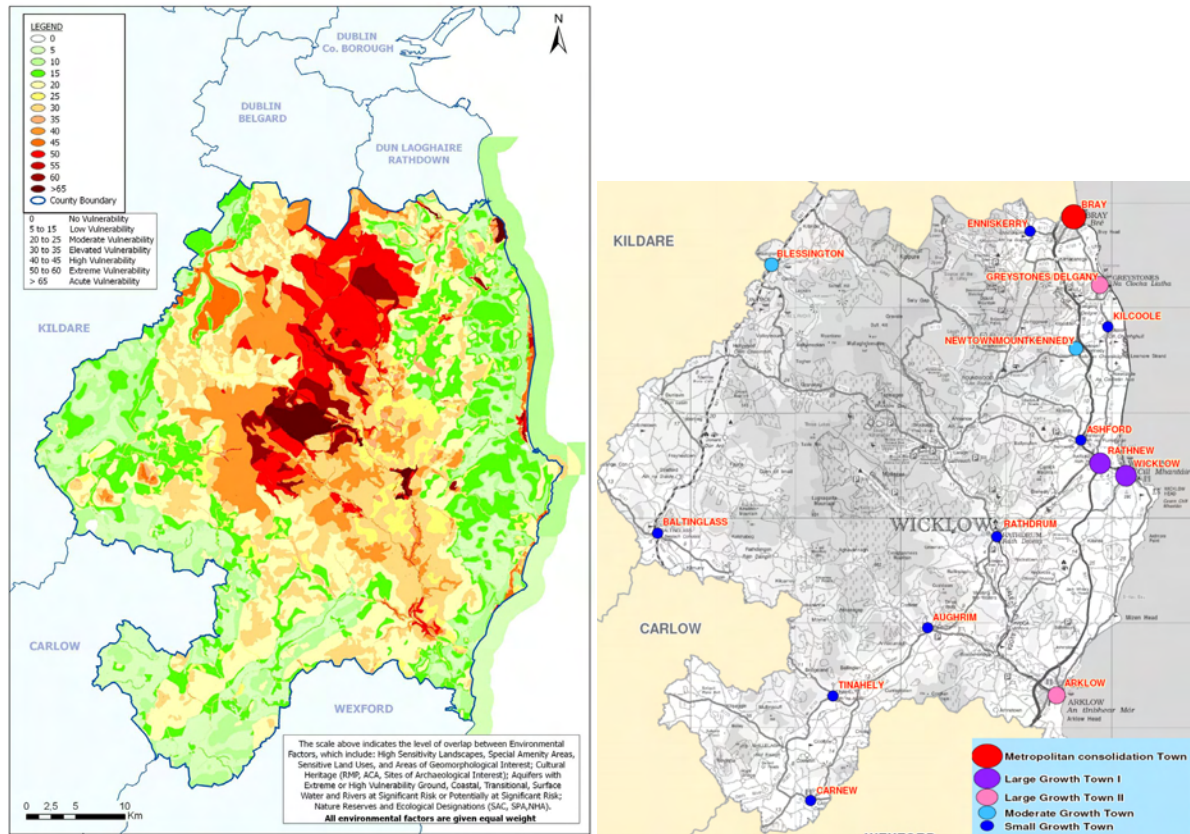


Figure 4.1 Environmental Sensitivity mapping compared to locations of Main Settlement Centres

4.3.2.1 Introduction

This section summarises where each development scenario is likely to give rise to concentrations of settlement. Such settlement will also give rise to associated economic activity that is likely to give rise to additional environmental pressures.

In general, the most environmentally robust parts of the County are in the East, South and West. Most of the main settlement areas are in the East which is generally robust, except for the coastline. Apart from any occurring along rivers or on the coast most settlement is unlikely to cause adverse effects. The South and West are less developed but each have sizeable robust areas.

The central and Northern upland areas are however highly sensitive and while they are generally sparsely populated, some parts are subject to considerable pressure for settlement and development, including wind energy and forestry projects.

Notwithstanding the generally robust nature of the existing environment, most of the main settlement centres have their discharge points located on rivers that are classified as being at 'significant risk' of not meeting Water Framework Directive Standards by 2015.

Having described where development might occur under Section 4.2, the following sections provide a more detailed analysis of the likely effects of each scenario.

4.3.2.2 Alternative Scenario 1: *Dispersed Scenario*

Likely Environmental Effects include -

- *Flora & Fauna*

High potential for conflicts between developments and ecologically designated sites and other key habitats – particularly those dependant on water quality as a sustaining resource. The most pronounced conflicts are likely to occur in upland areas, along coastline and along river corridors.

- *Water*

Dispersed rural settlement will continue to significantly threaten groundwater and surface water quality.

- *Landscape*

Widespread rural housing, especially that sited for amenity reasons, will give rise to continued change of rural character from being classified as 'agricultural' to 'settled' – with strong associated perception of loss of amenity to areas that are valued for scenery and tourism.

- *Air [Mobility]*

Highly dispersed settlement patterns will lead to very high levels of private vehicle movements with associated effects on air, including noise, air emissions and climate change effects.

4.3.2.3 Alternative Scenario 2: **Neutral Scenario-Strict application of RPGs/ Protectionist**

Likely Environmental Effects include -

- *Flora & Fauna*

Some habitat fragmentation and disturbance – mostly in the vicinity of main settlement centres with little potential to affect designated sites.

- *Water*

Future threats to water quality of rivers serving principal towns.

- *Landscape*

Little effect except in the vicinity of main settlement centres with limited potential to affect designated landscapes.

- *Air [Mobility]*

Concentrated settlement patterns will lead to lower levels of private vehicle movements with associated minimisation of effects on air, including noise, air emissions and climate change effects.

4.3.2.4 Alternative Scenario 3: **Structured Scenario Alternative**

Likely Environmental Effects include -

- *Flora & Fauna*

Potential adverse effects on water quality, together with some potential for habitat fragmentation and disturbance.

- *Water*

Future threats to water quality of rivers serving principal towns. Potential exacerbation of water quality status of other waters.

- *Landscape*

Little effect except in the vicinity of main settlement centres with some limited potential to affect designated landscapes

- *Air [Mobility]*

Concentrated settlement patterns will generally lead to lower levels of private vehicle movements with associated minimisation of effects on air, including noise, air emissions and climate change effects.

4.3.2.5 Alternative Scenario 4: Centred Scenario Alternative

Likely Environmental Effects include -

- *Flora & Fauna*

High potential for conflicts between developments and ecologically designated sites and other key habitats – particularly those dependant on water quality as a sustaining resource and coastal habitats that are vulnerable to disturbance.

- *Water*

Future threats to water quality of rivers serving main settlement centres and to quality of bathing waters.

- *Landscape*

High potential for adverse effects on Coastal Areas of Outstanding Natural Beauty and on protected prospects and views close to coastline.

- *Air [Mobility]*

Concentrated settlement patterns will tend to lead to lower levels of private vehicle movements with associated minimisation of effects on air, including noise, air emissions and climate change effects. Higher utilisation of rail transport likely.

4.3.2.6 Alternative Scenario 5: *Prescriptive Scenario*

Likely Environmental Effects include -

- *Flora & Fauna*

Low potential for effects on designated sites.

- *Water*

Potential for deterioration of water quality.

- *Landscape*

Strong control of potential adverse landscape impacts.

- *Air [Mobility]*

Settlement patterns will continue to lead to high levels of private vehicle movements with associated effects on air, including noise, air emissions and climate change effects.

4.3.2.7 Qualitative Summary of Relative Likely Environmental Effects

The table below provides a qualitative summary of the relative environmental effects of implementing each of the alternative scenarios for the Development Plan.

Scenario 5, would give rise to the least environmental effects. Scenario 3, the selected scenario, and scenario 2 both have increased potential to cause adverse effects. Scenarios 1 and 4 have the highest potential to cause adverse effects

Scenario	Main Potential Environmental Effects			
	Flora & Fauna	Water	Landscape	Air [Mobility]
Alternative Scenario 1: <i>Dispersed Scenario</i>	Significant, widespread	Significant, widespread	Significant, widespread	Significant, widespread
Alternative Scenario 2: <i>Neutral Scenario-Strict application of RPGs/Protectionist</i>	Some localised significant	Significant	Slight localised	Minimal
Alternative Scenario 3: <i>Structured Scenario</i>	Some localised significant	Significant	Slight localised	Minimal
Alternative Scenario 4: <i>Centred Scenario</i>	Significant	Significant	Significant	Slight
Alternative Scenario 5 - <i>Prescriptive Scenario</i>	Minimal	Significant	Minimal	Significant

Table 4.3 Qualitative Summary of the Relative Environmental Effects of each of the Alternative Development Plan Scenarios

4.3.2.8 Evaluation against SEOs

The table below provides an evaluation of each of the alternative scenarios for the Development Plan against the Strategic Environmental Objectives (SEOs). Scenario 3, the selected scenario, creates significantly less effects – including none on designated habitats.

	Likely to Improve status of SEOs	Probable Conflict with status of SEOs - unlikely to be mitigated	Potential Conflict with status of SEOs - would be mitigated	Uncertain interaction with status of SEOs	Neutral Interaction with status of SEOs	No Likely interaction with status of SEOs
Alternative Scenario 1: <i>Dispersed Scenario</i>		HH1 S1 W1 W2 W3 C1 C2 M1 M2 CH1 CH2 L1	B1 B2 B3			
Alternative Scenario 2: <i>Neutral Scenario- Strict application of RPGs/ Protectionist</i>	HH1 S1 W2 L1		B1 B2 B3 W1 W3 M1 M2 CH1 CH2		C1 C2	
Alternative Scenario 3: <i>Structured Scenario</i>	HH1 S1 W2 C1 C2 M2 L1		B1 B2 B3 W1 W3 M1 CH1 CH2			
Alternative Scenario 4: <i>Centred Scenario</i>	S1 W2 W3 C1 C2 CH1 CH2	HH1 L1	B1 B2 B3 W1 M1 M2			
<i>Alternative Scenario 5: Prescriptive Scenario</i>	HH1 S1 W1 W2 CH1 CH2 L1		B1 B2 B3 W3 M1 M2		C1 C2	

Table 4.4 Evaluation of Alternative Scenarios against SEOs

4.4 Reasons for choosing the Plan in light of the other reasonable alternatives dealt with

The Alternatives that were examined were produced and evaluated at an earlier - more embryonic - stage to facilitate the evaluation and selection of a plan - having regard, *inter alia* to environmental consequences.

The Alternative Scenario that emerged from the Plan preparation process and was adopted was Scenario 3 - this Scenario achieves a good balance between potential environmental impact and conformance with relevant National and Regional planning objectives.

The assessment showed that the **Dispersed** and **Centred** Scenarios (1 and 4 respectively) have the potential to give rise to the most adverse environmental effects and these scenarios should be regarded as the least environmentally compatible versions. The **Neutral Scenario-Strict application of RPGs/ Protectionist** and **Structured** Scenarios (2 and 3 respectively) have more potential to cause adverse environmental effects but achieve better balance with development needs and conformance with planning objectives. The Prescriptive Scenario (5) would be likely to cause the least adverse environmental effects but has poor conformance with planning objectives.

With the integration of appropriate mitigation measures (including those identified in Section 2.4 of this report) potential adverse environmental effects which could arise as a result of implementing this scenario would be likely to be avoided, reduced or offset.

Scenario 3 was chosen to be developed for the Development Plan by the plan-making team and put on public display and adopted by the Elected Members having regard to both:

1. The environmental effects which were identified by the Strategic Environmental Assessment; and,
2. Planning - including social and economic - effects.

The Settlement Hierarchy Map for the top main towns within the County (Levels 1 to 5) from the Development Plan (Scenario 3) is shown on Figure 4.2.

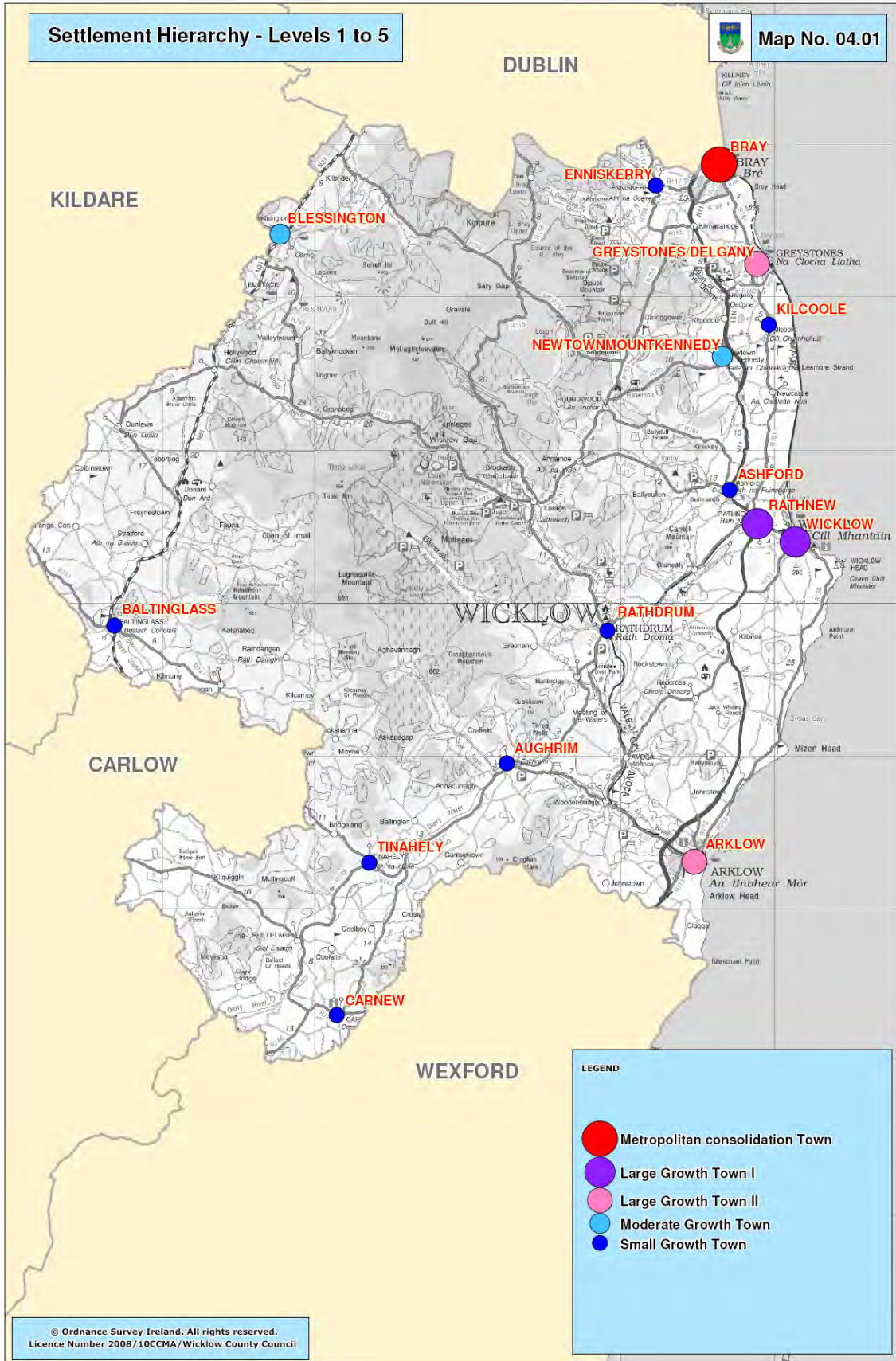


Figure 4.2 Settlement Hierarchy Map (Levels 1 to 5) from the Plan

Section 5 Monitoring Measures

5.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This section and Section 10 of the Environmental Report contain proposals for monitoring the likely significant effects of implementing the County Development Plan.

Monitoring enables, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action. In addition to this, monitoring can also play an important role in assessing whether the Plan is achieving its environmental objectives and targets - measures which the Plan can help work towards - whether these need to be reexamined and whether the proposed mitigation measures are being implemented.

5.2 Indicators and Targets

Monitoring is based around the indicators which were chosen earlier in the process. These indicators allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives used in the evaluation. Focus will be given to indicators which are relevant to the likely significant environmental effects of implementing the County Development Plan and existing monitoring arrangements will be used in order to monitor the selected indicators. Each indicator to be monitored will be accompanied by the relevant target(s) which were identified with regard to the relevant legislation.

Table 5.1 shows the indicators and targets which have been selected with regard to the monitoring of the Plan.

5.3 Sources

Measurements for indicators should come from existing monitoring sources in combination with the Development Management Process at the Council. Existing monitoring sources include those maintained by the Council and the relevant authorities e.g. the Environmental

Protection Agency, the National Parks and Wildlife Service and the Central Statistics Office.

Where significant adverse effects - including positive, negative, cumulative and indirect - are likely to occur upon, for example, entries to the RMP, entries to the RPS or ecological networks as a result of the undertaking of individual projects or multiple individual projects such instances should be identified and recorded and should feed into the monitoring evaluation.

5.4 Excluded Indicators and Targets

As noted on Table 5.1, monitoring data on Indicator W2 (Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC) may not be available for the preliminary monitoring evaluation as the groundwater threshold values to which this indicator relates have not yet been identified by the EPA.

5.5 Reporting

A preliminary monitoring evaluation report on the effects of implementing the County Development Plan will be prepared to coincide with the Manager's report to the elected members on the progress achieved in securing Development Plan objectives within two years of the making of the Plan (this Manager's report is required under section 15 of the 2000 Planning Act).

5.6 Responsibility

The Council is responsible for collating existing relevant monitored data, the preparation of a monitoring report, the publication of this report, if necessary, the carrying out of corrective action and ongoing review of targets and indicators as necessary.

It is recommended that a Steering Committee be established to oversee the monitoring process.

5.7 Thresholds

Thresholds at which corrective action will be considered are as follows:

- boil notices on drinking water;
- fish kills;
- the failing of Mandatory Standards under Directive 76/160/EEC or the failure to achieve a classification of Sufficient under Directive 2006/7/EC by bathing waters.
- court cases taken by the DEHLG regarding impacts upon archaeological heritage including entries to the Record of Monuments and Places; and,
- complaints received from statutory consultees regarding avoidable environmental impacts resulting from development which is granted permission under the County Development Plan.

Environmental Component	Selected Indicator(s)	Selected Target(s)	Source
Biodiversity, Flora and Fauna	<p>B1: Percentage of relevant habitats and designated ecological sites lost as a result of implementation of the CDP</p> <p>B2: Number of significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the CDP</p> <p>B3: Percentage loss of connectivity without remediation as a result of implementation of the CDP – as evidenced from a resurvey of CORINE mapping</p>	<p>B1: No losses of relevant habitats, species or their sustaining resources in designated ecological sites as a result of implementation of the CDP</p> <p>B2: No significant adverse impacts, including direct, cumulative and indirect impacts, to relevant habitats, geological features, species or their sustaining resources in designated ecological sites by development within or adjacent to these sites as a result of implementation of the CDP</p> <p>B3: No ecological networks or parts thereof to be lost without remediation as a result of implementation of the CDP</p>	<p>CORINE Mapping, DEHLG Records & Development Management Process in the Council</p> <p>Development Management Process in the Council & Consultation with the National Parks and Wildlife Service</p> <p>CORINE mapping and possibly new habitat mapping for the County</p>
Population and Human Health	HH1: Occurrence (any) of a spatially concentrated deterioration in human health	HH1: No spatial concentrations of health problems arising from environmental factors as a result of implementing the CDP	The Council, EPA, Health and Safety Authority and Health Service Executive
Soil	S1: Area of brownfield land developed over the plan period	S1: Reduced availability of brownfield land (subject to availability on the open market, the demand for such land and the ability for such lands to be sustainably re-used within the provisions of the CDP) at the end of the CDP lifespan	Development Management Process the Council

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
Water	W1i: Biotic Quality Rating (Q Value) for Rivers	W1i: To achieve, in line with the requirement to achieve good water status under the Water Framework Directive by 2015, a biotic quality rating of Q4 and, where possible, to Q5	EPA
	W1ii: Trophic Status of Lakes	W1ii: To achieve, in line with the requirement to achieve good water status under the Water Framework Directive by 2015, a trophic status of mesotrophic and, where possible, oligotrophic	EPA
	W1iii: Trophic Status of Transitional Waters (ATSEBI)	W1iii: To maintain or to improve trophic status, where relevant, to unpolluted in line with the requirement to achieve good water status under the Water Framework Directive, by 2015	EPA
	W1iv: Mandatory and Guide values as set by Directive 76/160/EEC, Or; Poor, Sufficient, Good and Excellent classifications as set by Directive 2006/7/EC	W1iv: To achieve - as a minimum - Mandatory values, and where possible to achieve Guide values as set by Directive 76/160/EEC, Or; To achieve - as a minimum - the Sufficient classification as set by Directive 2006/7/EC, and where possible to achieve the Good or Excellent classifications	EPA and/or Council data
	W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	W2: Compliance with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC	As noted under Section 5.4, monitoring data may not be available for this indicator when the monitoring evaluation is being prepared.
	W3: Number of developments granted permission on lands which are subject - or are likely to be subject in the future - to a significant flood risk	W3: Minimise developments granted permission on lands which are subject - or are likely to be subject in the future - to a significant flood risk	Development Management Process in the Council

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
Air and Climatic Factors	<p>C1i: Percentage of population within the County travelling to work or school by public transport or non-mechanical means</p> <p>C1ii: Average distance travelled to work or school by the population of the County</p>	<p>C1i: An increase in the percentage of the population travelling to work or school by public transport or non-mechanical means</p> <p>C1ii: A decrease in the average distance travelled to work or school by the population of the County</p>	Central Statistics Office
Material Assets	<p>M1: Number of new developments granted permission which can be adequately served with waste water treatment over the lifetime of the CDP</p> <p>M2: Number of non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health</p>	<p>M1: All new developments granted permission to be connected to and adequately served by waste water treatment over the lifetime of the CDP</p> <p>M2: No non-compliances with the 48 parameters identified in the European Communities (Drinking Water) Regulations (No. 2) 2007 which present a potential danger to human health as a result of implementing the Plan</p>	<p>Development Management Process in the Council</p> <p>The Council and EPA</p>

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
Cultural Heritage	<p>CH1: Number of unauthorised developments occurring which result in full or partial loss to entries to the Record of Monuments and Places - including Zones of Archaeological Potential - and the context of the above within the surrounding landscape where relevant</p> <p>CH2i: Number of unauthorised developments occurring which result in physical loss of entries to the Record of Protected Structures and/or their context within the surrounding landscape where relevant</p> <p>CH2ii: Number of additions to the Record of Protected Structures and the number of additional ACAs</p>	<p>CH1: No unauthorised developments occurring which result in full or partial loss to entries to the Record of Monuments and Places - including Zones of Archaeological Potential - and the context of the above within the surrounding landscape where relevant</p> <p>CH2i: No unauthorised developments occurring which result in physical loss of entries to the Record of Protected Structures and/or their context within the surrounding landscape where relevant</p> <p>CH2ii: Make Additions to the Record of Protected Structures and make additional ACAs, where appropriate</p>	<p>Development Management Process in the Council; Complaints from statutory consultees</p> <p>Development Management Process in the Council; Complaints from statutory consultees</p> <p>The Council</p>
Landscape	L1: Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to Areas of Outstanding Natural Beauty and views and prospects of special amenity - resulting from development which is granted permission under the CDP	L1: No developments permitted which result in avoidable impacts on the landscape - especially with regard to Areas of Outstanding Natural Beauty and views and prospects of special amenity - resulting from development which is granted permission under the CDP	Development Management Process in the Council; Complaints from statutory consultees

Table 5.1 Selected Indicators, Targets and Monitoring Sources