

# ENVIRONMENTAL REPORT

---

OF THE

## WICKLOW ENVIRONS AND RATHNEW LOCAL AREA PLAN 2008-2014

### STRATEGIC ENVIRONMENTAL ASSESSMENT



**For: Wicklow County Council**

Áras an Chontae  
Cill Mhantáin



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## Table of Contents

<b>List of Figures .....</b>	<b>i</b>
<b>List of Tables .....</b>	<b>ii</b>
<b>List of Abbreviations.....</b>	<b>iii</b>
<b>Glossary .....</b>	<b>iv</b>
<b>Section 1     SEA Introduction and Background .....</b>	<b>1</b>
1.1     Introduction and Terms of Reference .....	1
1.2     SEA Definition .....	1
1.3     Legislative Context.....	1
1.4     Implications for Wicklow County Council and the Elected Members .....	1
<b>Section 2     SEA Methodology.....</b>	<b>2</b>
2.1     Introduction .....	2
2.2     Screening.....	3
2.3     Scoping .....	3
2.4     Environmental Baseline Data and Other Strategic Actions.....	3
2.5     Alternatives.....	4
2.6     The Environmental Report.....	4
2.7     The SEA Statement.....	4
2.8     Legislative Conformance.....	4
2.9     Difficulties Encountered.....	4
<b>Section 3     Baseline Environment Description .....</b>	<b>6</b>
3.1     Introduction .....	6
3.2     Biodiversity and Flora and Fauna.....	7
3.3     Population and Human Health.....	14
3.4     Soil.....	15
3.5     Water .....	17
3.6     Air and Climatic Factors.....	24
3.7     Material Assets .....	25
3.8     Cultural Heritage .....	26
3.9     Landscape .....	31
3.10     Overlay Mapping of Environmental Sensitivities .....	33
<b>Section 4     Strategic Environmental Objectives.....</b>	<b>38</b>
4.1     Introduction .....	38
4.2     Biodiversity, Flora and Fauna.....	38
4.3     Population and Human Health.....	41
4.4     Soil.....	41
4.5     Water .....	42
4.6     Air and Climatic Factors.....	43
4.7     Material Assets .....	44
4.8     Cultural Heritage .....	46
4.9     Landscape .....	48

<b>Section 5</b>	<b>A Local Area Plan for Wicklow Environs and Rathnew .....</b>	<b>50</b>
5.1	The Local Area Plan .....	50
5.2	Relevant Forward Planning Strategic Actions .....	51
<b>Section 6</b>	<b>Description of Alternative Plan Scenarios.....</b>	<b>52</b>
6.1	Introduction .....	52
6.2	Identification and Description of Alternative Scenarios .....	52
<b>Section 7</b>	<b>Evaluation of Alternative Plan Scenarios .....</b>	<b>57</b>
7.1	Introduction .....	57
7.2	Methodology .....	57
7.3	Evaluation against Baseline.....	59
7.4	Evaluation against Overlay Mapping .....	60
7.5	Evaluation against SEOs .....	64
7.6	The Preferred Alternative .....	64
7.7	The Adopted LAP .....	65
7.8	Changes to Scenario 2 .....	66
<b>Section 8</b>	<b>Evaluation of Policies, Objectives and Standards .....</b>	<b>70</b>
8.1	Methodology .....	70
8.2	Overall Strategy.....	70
8.3	Development Control Objectives .....	71
8.4	Action Areas.....	78
<b>Section 9</b>	<b>Mitigation Measures .....</b>	<b>89</b>
9.1	Introduction .....	89
<b>Section 10</b>	<b>Monitoring .....</b>	<b>92</b>
10.1	Introduction .....	92
10.2	Indicators and Targets .....	92
10.3	Sources .....	92
10.4	Reporting.....	92
10.5	Responsibility .....	92
10.6	Thresholds.....	93
<b>Appendix I</b>	<b>Site Synopses.....</b>	<b>97</b>
<b>Appendix II</b>	<b>Non Technical Summary.....</b>	<b>Separately Bound</b>

## List of Figures

Figure 2.1 Local Area Plan and SEA Stages .....	2
Figure 3.1 General Location Map of Wicklow Town, Environs and Rathnew area .....	6
Figure 3.2 CORINE Land Classification .....	8
Figure 3.3 Designated Ecological Sites and Trees .....	9
Figure 3.4 Soils .....	16
Figure 3.5 WFD Risk Assessment .....	20
Figure 3.6 WFD Register of Protected Areas Entries .....	21
Figure 3.7 GSI Groundwater Vulnerability Ratings .....	22
Figure 3.8 GSI Groundwater Productivity Ratings .....	23
Figure 3.9 Cultural Heritage .....	30
Figure 3.10 Landscape Characterisation and Prospects of Special Amenity .....	32
Figure 3.11 Overlay of Weighted Environmental Sensitivities (all selected factors given equal weight)....	35
Figure 3.12 Overlay of Weighted Environmental Sensitivities (Ecological Designations given greater weight) .....	36
Figure 3.13 Overlay of Weighted Environmental Sensitivities (Landscape Sensitivities given greater weight) .....	37
Figure 6.1 Scenario 1 <i>Minimal Development Envelope</i> .....	54
Figure 6.2 Scenario 2 <i>Moderate Development Envelope</i> .....	55
Figure 6.3 Scenario 3 <i>Maximum Development Envelope</i> .....	56
Figure 7.1 Overlay of Environmental Sensitivities and Development Pressure Areas of Scenario 1.....	61
Figure 7.2 Overlay of Environmental Sensitivities and Development Pressure Areas of Scenario 2.....	62
Figure 7.3 Overlay of Environmental Sensitivities and Development Pressure Areas of Scenario 3.....	63
Figure 7.4 Old Zoning Map - Scenario 2/Draft LAP .....	66
Figure 7.5 Revised Zoning Map - Adopted LAP .....	66
Figure 7.6 The Adopted Plan .....	69

## List of Tables

Table 2.1 Checklist of Information included in this Environmental Report .....	5
Table 3.1 Population Change for the Wicklow Environs and Rathnew area 1986-2006 .....	14
Table 3.2 Recorded Monuments.....	28
Table 3.3 Protected Structures .....	29
Table 3.4 Overall Vulnerability Classes.....	34
Table 7.1 Criteria for appraising the effect of Plan provisions on Strategic Environmental Objectives.....	58
Table 7.2 Strategic Environmental Objectives (SEOs).....	58
Table 7.3 Environmentally Vulnerable Areas most likely to be affected by Scenario 1.....	60
Table 7.4 Environmentally Vulnerable Areas most likely to be affected by Scenario 2.....	60
Table 7.5 Environmentally Vulnerable Areas most likely to be affected by Scenario 3.....	60
Table 7.6 Evaluation of Alternative Scenarios against SEOs .....	64
Table 10.1 Selected Indicators and Targets for Monitoring .....	96

## List of Abbreviations

DEHLG	Department of the Environment, Heritage and Local Government
DCMNR	Department of Communications, Marine and Natural Resources
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
ERBD	Eastern River Basin District
EU	European Union
LAP	Local Area Plan
NHA	Natural Heritage Area
NSS	National Spatial Strategy
RMP	Record of Monuments and Places
RPS	Record of Protected Structures
SEA	Strategic Environmental Assessment
SEO	Strategic Environmental Objective
SI No.	Statutory Instrument Number
WCC	Wicklow County Council
WCDP	Wicklow County Development Plan
WFD	Water Framework Directive

## Glossary

- **Biotic Index Values (Q Values)**

The Biotic Index Values, or Q values, are assigned to rivers in accordance with biological monitoring of surface waters - low Q ratings, as low as Q1, are indicative of low biodiversity and polluted waters, and high Q ratings, as high as Q5, are indicative of high biodiversity and unpolluted waters. Good status as defined by the Water Framework Directive equates to approximately Q4 in the national scheme of biological classification of rivers as set out by the Environmental Protection Agency.

- **Environmental Problems**

Annex I of Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27 June 2001, on the assessment of the effects of certain plans and programmes on the environment (the Strategic Environmental Assessment Directive) requires that information is provided on 'any existing environmental problems which are relevant to the plan or programme', thus, helping to ensure that the proposed strategic action does not make existing environmental problems worse.

Environmental problems arise where there is a conflict between current environmental conditions and ideal targets. If environmental problems are identified at the offset they can help focus attention on important issues and geographical areas where environmental effects of the plan or programme may be likely.

- **Environmental Vectors**

Environmental vectors are environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings.

- **Mitigate**

To make or become less severe or harsh

- **Mitigation Measures**

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

- **Protected Structure**

Protected Structure is the term used in the Planning Act of 2000 to define a structure included by a planning authority in its Record of Protected Structures. Such a structure shall not be altered or demolished in whole or part without obtaining planning permission or confirmation from the planning authority that the part of the structure to be altered is not protected.

- **Recorded Monument**

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

- **Scoping**

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

- **Strategic Actions, Policies, Plans and Programmes**

Strategic actions include: policies, which may be considered as inspiration and guidance for action and which set the framework for plans and programmes; plans, sets of co-ordinated and timed objectives for the implementation of the policy, and; programmes, sets of projects in a particular area.

- **Strategic Environmental Assessment (SEA)**

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

- **Strategic Environmental Objective (SEO)**

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



## Section 1 SEA Introduction and Background

### 1.1 Introduction and Terms of Reference

This is the Environmental Report of the Wicklow Environs and Rathnew Local Area Plan (LAP) Strategic Environmental Assessment (SEA). The purpose of the report is to provide a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of development in the Wicklow Environs and Rathnew area.

The SEA is being carried out in order to comply with the provisions of the SEA Regulations and in order to improve planning and environmental management in Wicklow Environs and Rathnew. This report should be read in conjunction with the Wicklow Environs and Rathnew LAP.

### 1.2 SEA Definition

Environmental assessment is a procedure that ensures that the environmental implications of decisions are taken into account before decisions are made. *Environmental Impact Assessment*, or EIA, is generally used for describing the process of environmental assessment which is limited to individual projects such as waste incinerators, housing developments or roads while *Strategic Environmental Assessment*, or SEA, is the term which has been given to the environmental assessment of plans, and other strategic actions, which help determine what kind of individual projects take place.

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a proposed 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.

What kind of development occurs within the Wicklow Environs and Rathnew area and where it occurs will be significantly determined by the implementation of the LAP. By anticipating the effects and avoiding areas in which development cannot be sustainably accommodated and by directing development towards more compatible

and robust receiving environments real improvements in environmental management and planning can occur - planning applications are more likely to be granted permission, and the scope of any EIAs which may be required as part of any planning applications are likely to be reduced.

### 1.3 Legislative Context

Directive 2001/42/EC of the European Parliament and of the Council of Ministers, 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.

### 1.4 Implications for Wicklow County Council and the Elected Members

As a result of the above legislation, certain plans and programmes which are prepared by Wicklow County Council (WCC) are required to undergo SEA. The findings of SEA are expressed in an Environmental Report which is submitted to the Elected Members alongside the relevant plan or programme. The Elected Members must take account of the Environmental Report before the adoption of the plan or programme.

When the plan or programme is adopted a statement must be made public, summarising, inter alia: how environmental considerations have been integrated into the plan or programme, and; the reasons for choosing the plan or programme as adopted over other alternatives detailed in the environmental report.

## Section 2 SEA Methodology

### 2.1 Introduction

This section details how the SEA for the LAP has been undertaken. The SEA process has been carried out between September 2007 and August 2008.

Figure 2.1 lays out the main stages in the LAP SEA Process.

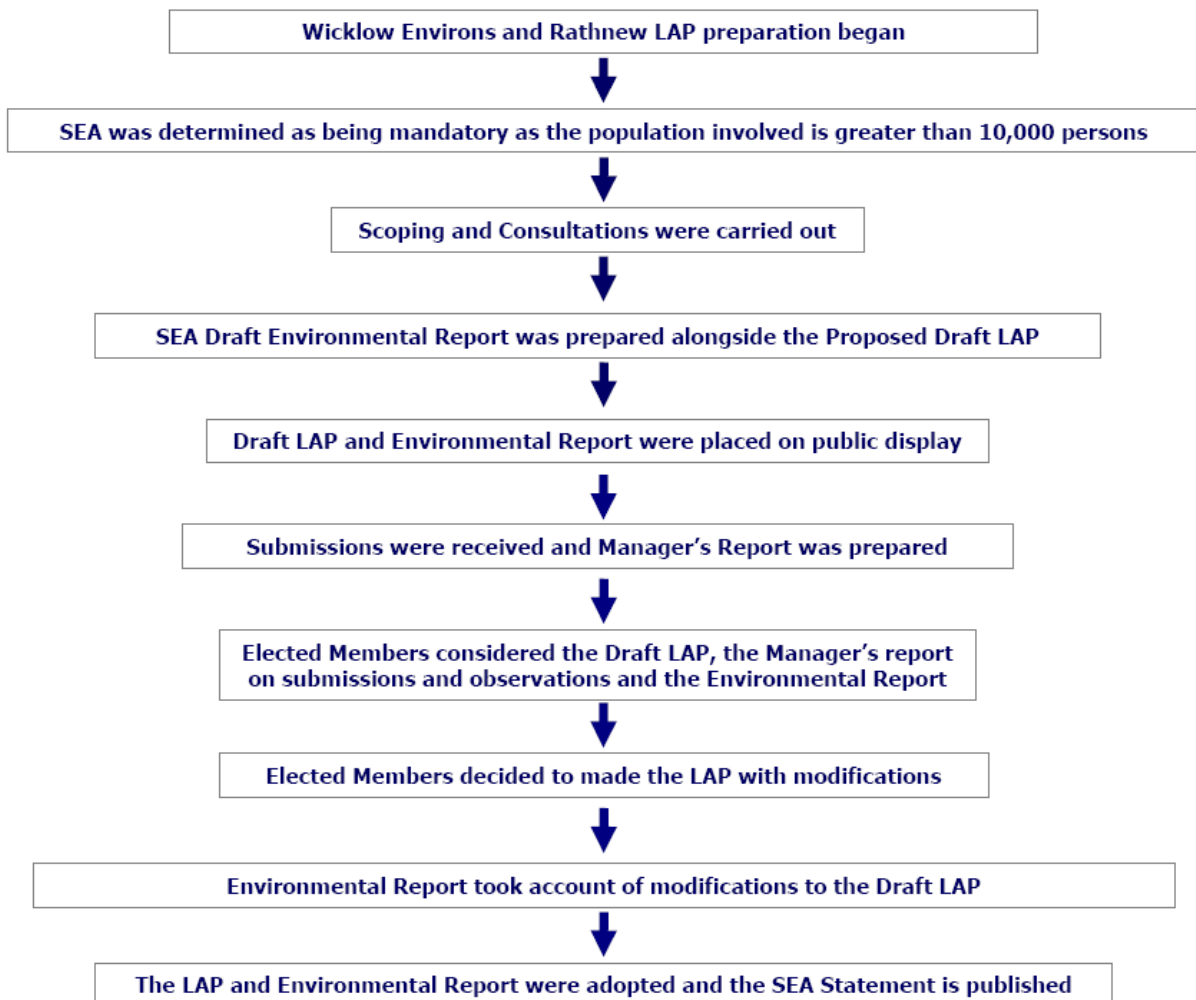


Figure 2.1 Local Area Plan and SEA Stages

## 2.2 Screening

Screening, evaluating whether SEA needs to be carried out, was not relevant as SEA was mandatory for the preparation of the LAP - the population of the Wicklow Environs and Rathnew area exceeds the 10,000 persons threshold set under the SEA Regulations.

## 2.3 Scoping

In consultation with the relevant authorities, the scope of environmental issues to be dealt with by the SEA together with the level of detail to be addressed was broadly decided on after preliminary data collection. Scoping of the SEA was continuous with certain issues being selected for further examination after certain data was obtained. Scoping helped the SEA to become focused upon the important issues, such as those relating to existing and potential environmental issues and environmental problems<sup>1</sup>, not wasting resources on unnecessary data collection.

Scoping facilitated the selection of issues relevant to the environmental components which are specified under the SEA Directive - biodiversity, fauna, flora, population, human health, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, and landscape.

With regard to human health, impacts relevant to the SEA are those which arise as a result of interactions with environmental vectors (i.e. environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings). Impacts upon human beings

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<sup>1</sup> Annex I of the SEA Directive requires that information is provided on 'any existing environmental problems which are relevant to the plan or programme', thus, helping to ensure that the proposed strategic action does not make existing environmental problems worse.

Environmental problems arise where there is a conflict between current environmental conditions and ideal targets. If environmental problems are identified at the offset they can help focus attention on important issues and geographical areas where environmental effects of the plan or programme may be likely.

arising as a result of social and economic conditions are not considered by SEA.

Mandatory consultations were held with: the Environmental Protection Agency (EPA); the Department of the Environment, Heritage and Local Government (DEHLG); the Department of Communications, Marine and Natural Resources (DCMNR). In addition to these consultations a number of departments at WCC were consulted.

The most important strategic environmental issues with regard to the Wicklow Environs and Rathnew area were identified as follows:

- The timely availability of waste water treatment capacity;
- The protection of designated ecological sites, and;
- The protection and improvement of water bodies.

## 2.4 Environmental Baseline Data and Other Strategic Actions

The SEA process is led by the environmental baseline (i.e. the current state of the environment - flora and fauna, soil, water, cultural heritage etc.) to facilitate the identification, evaluation and subsequent monitoring of the effects of the LAP. Data was collected to describe the environmental baseline and its likely evolution without implementation of the LAP.

The SEA Directive (Annex I) requires that information is provided on 'any existing environmental problems which are relevant to the plan or programme'. Information is therefore provided on existing environmental problems which are relevant to the LAP, thus, helping to ensure that the LAP does not make any existing environmental problems worse.

The SEA Directive requires that information on the baseline environment be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected and the likely evolution of the current environment in the absence of the strategic action i.e. the LAP. Any information that does not focus upon this is surplus to requirements; therefore, the SEA of the LAP focuses on the

significant issues, disregarding the less significant ones. In addition, the SEA Directive aims to avoid duplication of the assessment whereby a strategic action forms part of a hierarchy. Furthermore, if certain matters are more appropriately assessed at different levels of the hierarchy in which the LAP is positioned, or, if certain matters have already been assessed by a different level of the hierarchy then additional assessment is not needed.

In order to describe the baseline - the current state of the environment - data was collated from currently available, relevant environmental sources.

## 2.5 Alternatives

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme) are identified, described and evaluated for their likely significant effects on the environment.

Taking into account the objectives and the geographical scope of the LAP, alternatives were formulated in consultation with the Plan-makers and Wicklow County Council.

## 2.6 The Environmental Report

In this Environmental Report, which has been prepared alongside the LAP, the likely environmental effects of the LAP and the alternatives are predicted and their significance evaluated while having regard to the environmental baseline. The Environmental Report provided the decision-makers, who decided to adopt the LAP, with a clear understanding of the likely environmental consequences of decisions regarding the future accommodation of development in the Wicklow Environs and Rathnew area. Mitigation measures to prevent or reduce significant adverse effects posed by the LAP, or to maximise any benefits arising, as well as measures concerning monitoring were proposed.

The Environmental Report was required to be altered as the Elected Members adopted a LAP which includes policies and objectives which were not originally included in the Draft LAP.

## 2.7 The SEA Statement

As required by the SEA Directive and the SEA Regulations a document referred to as an SEA Statement (DEHLG, 2004)<sup>2</sup> has been produced and made available to the public. The SEA Statement includes information on: how environmental considerations have been integrated into the LAP - highlighting the main changes to the Plan which resulted from the SEA process; how the Environmental Report and consultations have been taken into account - summarising the key issues raised in consultations and in the Environmental Report indicating what action, if any, was taken in response and; the reasons for choosing the LAP in the light of the other alternatives, identifying the other alternatives considered, commenting on their potential effects and explaining why the LAP was selected.

As required, information is included on how environmental considerations have been integrated throughout the process as is a description on how the preferred alternative was chosen.

## 2.8 Legislative Conformance

This report complies with the provisions of the SEA Regulations and is written in accordance with Schedule 2B of the Planning and Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004).

Table 2.1 (below) is a reproduction of the checklist of information to be contained in the Environmental Report (DEHLG, 2004)<sup>3</sup> and includes the relevant sections of this report which deal with these requirements.

## 2.9 Difficulties Encountered

The lack of a centralised data source for environmental baseline data posed a difficulty to the SEA process. This difficulty was overcome by

<sup>2</sup> 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.

<sup>3</sup> 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.

the provision of sufficient time resources and through the use of Geographical Information Systems.

<b>Information Required to be included in the Environmental Report</b>	<b>Corresponding Section of this Report</b>
(A) Outline of the contents and main objectives of the plan, and of its relationship with other relevant plans and programmes	Sections 4 and 5
(B) Description of relevant aspects of the current state of the environment and the evolution of that environment without implementation of the plan	Section 3 and Appendix I
(C) Description of the environmental characteristics of areas likely to be significantly affected	Sections 3, 7 and 8
(D) Identification of any existing environmental problems which are relevant to the plan, particularly those relating to European protected sites	Section 3
(E) List environmental protection objectives, established at international, EU or national level, which are relevant to the plan and describe how those objectives and any environmental considerations have been taken into account when preparing the plan	Sections 4, 7 and 8
(F) Describe the likely significant effects on the environment	Section 7 and 8
(G) Describe any measures envisaged to prevent, reduce and as fully as possible offset any significant adverse environmental effects of implementing the plan	Section 9
(H) Give an outline of the reasons for selecting the alternatives considered, and a description of how the assessment was undertaken (including any difficulties)	Sections 2 and 6
(I) A description of proposed monitoring measures	Section 10
(J) A non-technical summary of the above information	Appendix II
(K) Interrelationships between each environmental topic	Addressed as it arises within each Section

**Table 2.1 Checklist of Information included in this Environmental Report**

## Section 3 Baseline Environment Description

### 3.1 Introduction

The environmental baseline of the Wicklow Environs and Rathnew area is described in this section. The baseline and the Strategic Environmental Objectives (see Section 4) are used in order to identify, describe and evaluate the likely significant environmental effects of implementing the LAP.

The environmental baseline encompasses the components of biodiversity, flora and fauna, population, human health, soil, water, air and climatic factors, material assets, cultural

heritage and landscape together with the interrelationship between these components.

Wicklow Environs and Rathnew, which is under the administration of Wicklow County Council, is located in the east of County Wicklow adjacent to Wicklow Town Council's administrative area. The LAP area falls to the east of the N11 National Primary Route and borders the Irish Sea to the north and south of Wicklow Town Council's administrative area. The general Wicklow Environs and Rathnew area to which the LAP relates is indicated by the broken green circle shown on Figure 3.1.

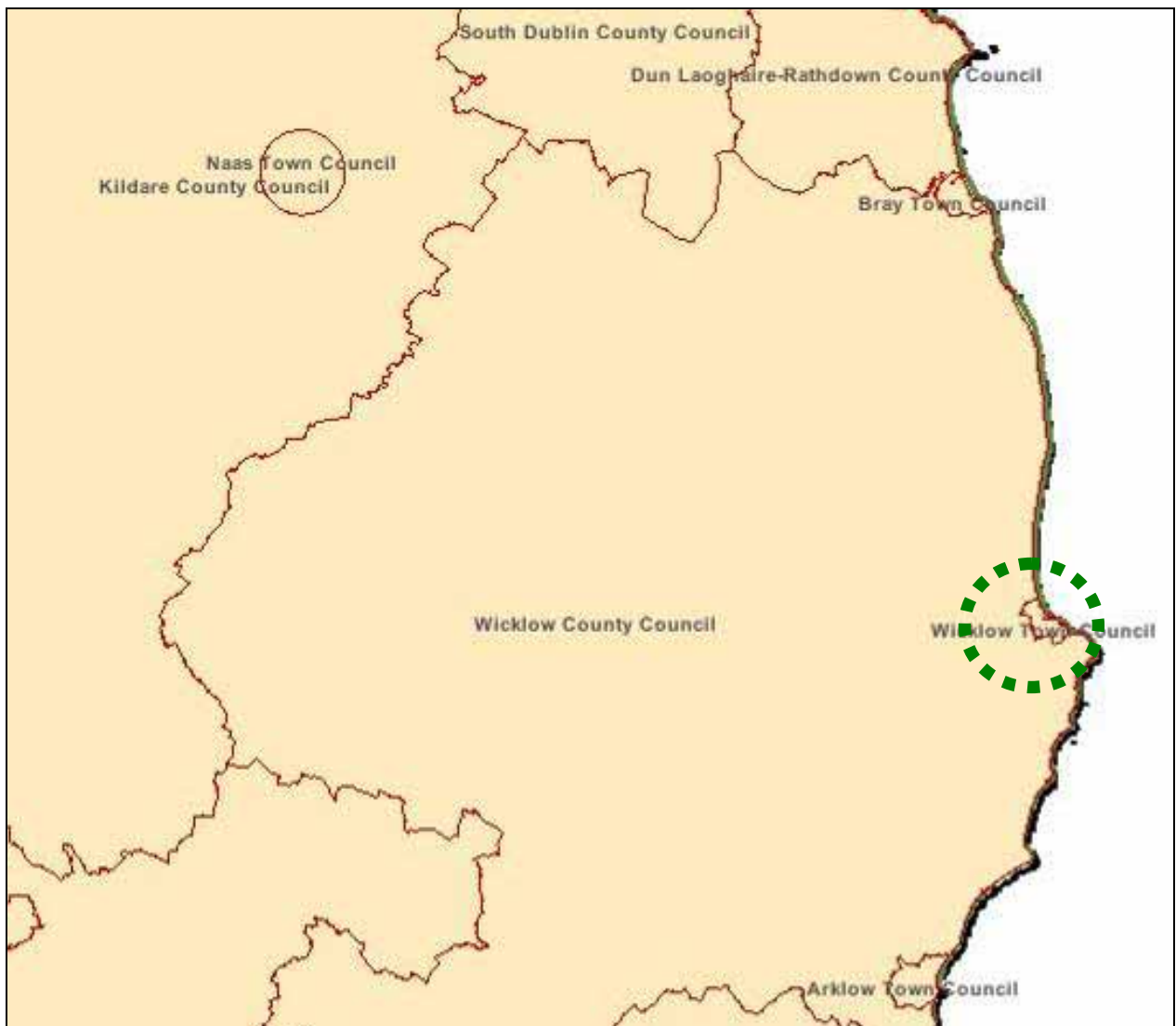


Figure 3.1 General Location Map of Wicklow Town, Environs and Rathnew area

## 3.2 Biodiversity and Flora and Fauna

### 3.2.1 Introduction

Most habitats in the Wicklow and Environs area have been impacted upon to varying degrees by human beings over time. The clearing of vegetation centuries ago resulted in the replacement of an amount of the natural habitats with semi-natural, low biodiversity habitats. However, a number of important natural and semi-natural habitats remain within and adjacent to the study area.

### 3.2.2 General Description

CORINE Land Cover mapping classifies land cover under various headings. CORINE land cover mapping for the study area is shown on Figure 3.2 CORINE Land Classification<sup>4</sup>. The most common land cover headings which are identified across the area include *Pastures*, which are most prevalent in the north of the plan area, and *Non-irrigated agricultural land*, which are located in the south of the plan area. *Discontinuous urban fabric* covers the centre of Rathnew and the Wicklow Town area adjacent to the plan area while land cover headings of *Coastal lagoons*, *Salt Marshes* and *Sea Ports* are attributed to different areas along the coast to the east of the plan area.

Appendix 1 of the Wicklow County Development Plan 2004-2010 comprises a Coastal Zone Management Plan. This contains policies and objectives which seek to protect, conserve and enhance the coastal environment, including specific measures to help conserve the ecological attributes of the coastal parts of the plan area.

### 3.2.3 Ecological Connectivity

Article 10 of the Habitats Directive recognises the importance of ecological networks as corridors and stepping stones for wildlife, including for migration, dispersal and genetic exchange of species of flora and fauna. The Directive requires that ecological connectivity and areas of ecological value outside the Natura 2000 network of designated ecological sites are

maintained and it recognises the need for the management of these areas through land use planning and development policies. Ecological networks are important in connecting areas of local biodiversity with each other and with nearby designated sites so as to prevent islands of habitat from being isolated entities. Ecological networks are composed of linear features, such as treelines, hedgerows, rivers and canals, 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.

There are a number of streams and waterways in the area which are important ecological corridors. The most important of these is the Vartry River which flows across the north of the study area and into Broad Lough before it flows into the sea at Wicklow harbour via the Leirim River. As well as providing connectivity within the study area, the Vartry River provides connectivity both within and between the Wicklow Mountains - where the River rises - the Devil's Glen and the sea at Wicklow. Broad Lough is a key part of the ecological complex of the Murrough NHA, cSAC and SPA which is described in detail in sections 3.2.4.2 and 3.2.4.3 below.

## 3.2.4 Designations

### 3.2.4.1 Introduction

A number of sites within or adjacent to the Wicklow Environs and Rathnew area have one or more ecological designations attached to them. These sites are described below with Site Synopses<sup>5</sup> included as Appendix I and Figure 3.3 Designated Ecological Sites and Trees mapping the designations.

Where the designations pertaining to sites overlap this is pointed out.

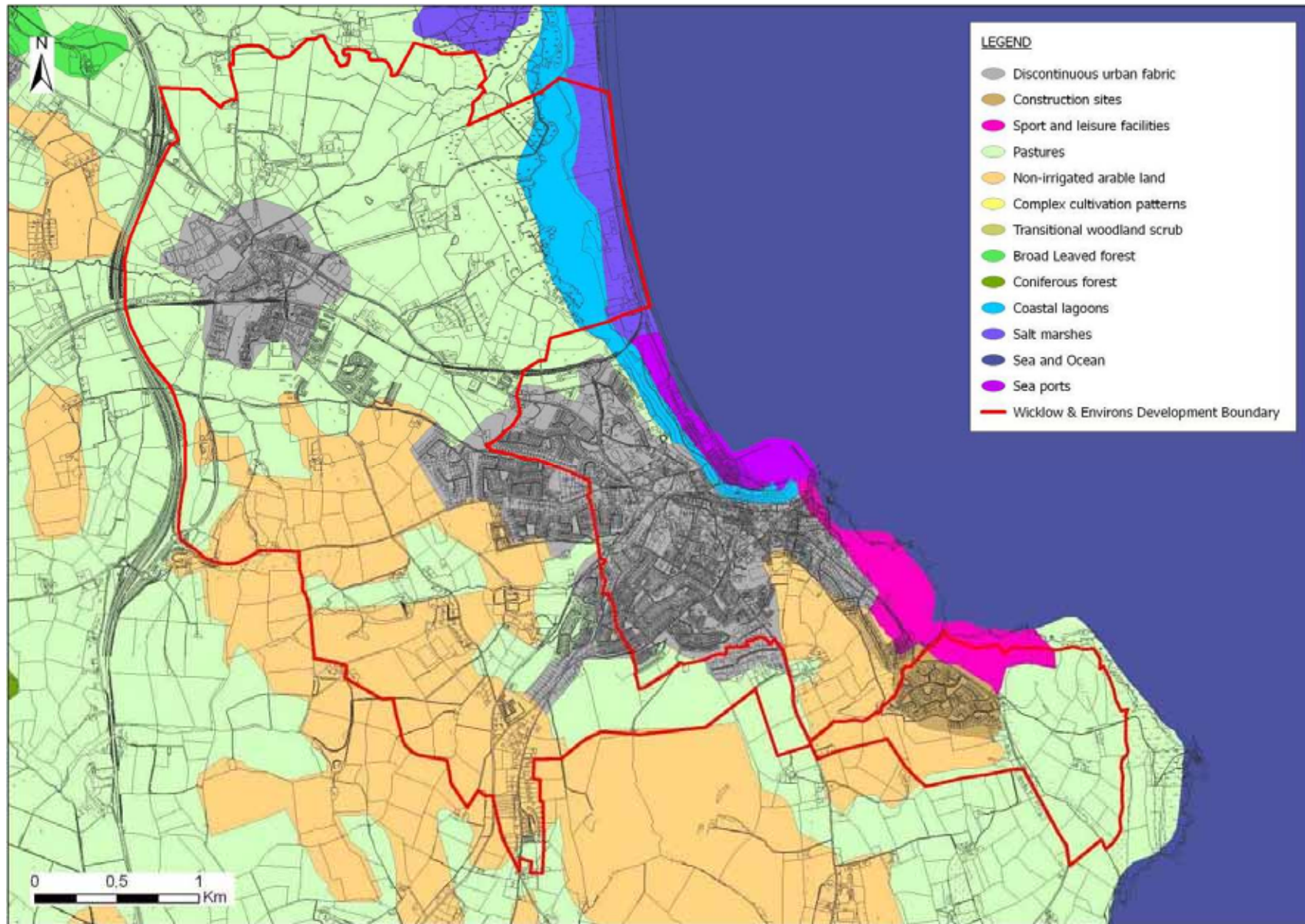
### 3.2.4.2 Candidate Special Areas of Conservation

Candidate Special Areas of Conservation (cSACs) have been selected for protection under the European Council Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC) - referred to as *the Habitats Directive* - by the DEHLG due to their

<sup>4</sup> European Environment Agency Coordination of Information on the Environment (2004) *Ireland's Corine Land Cover 2000 (CLC2000)* Copenhagen: EEA

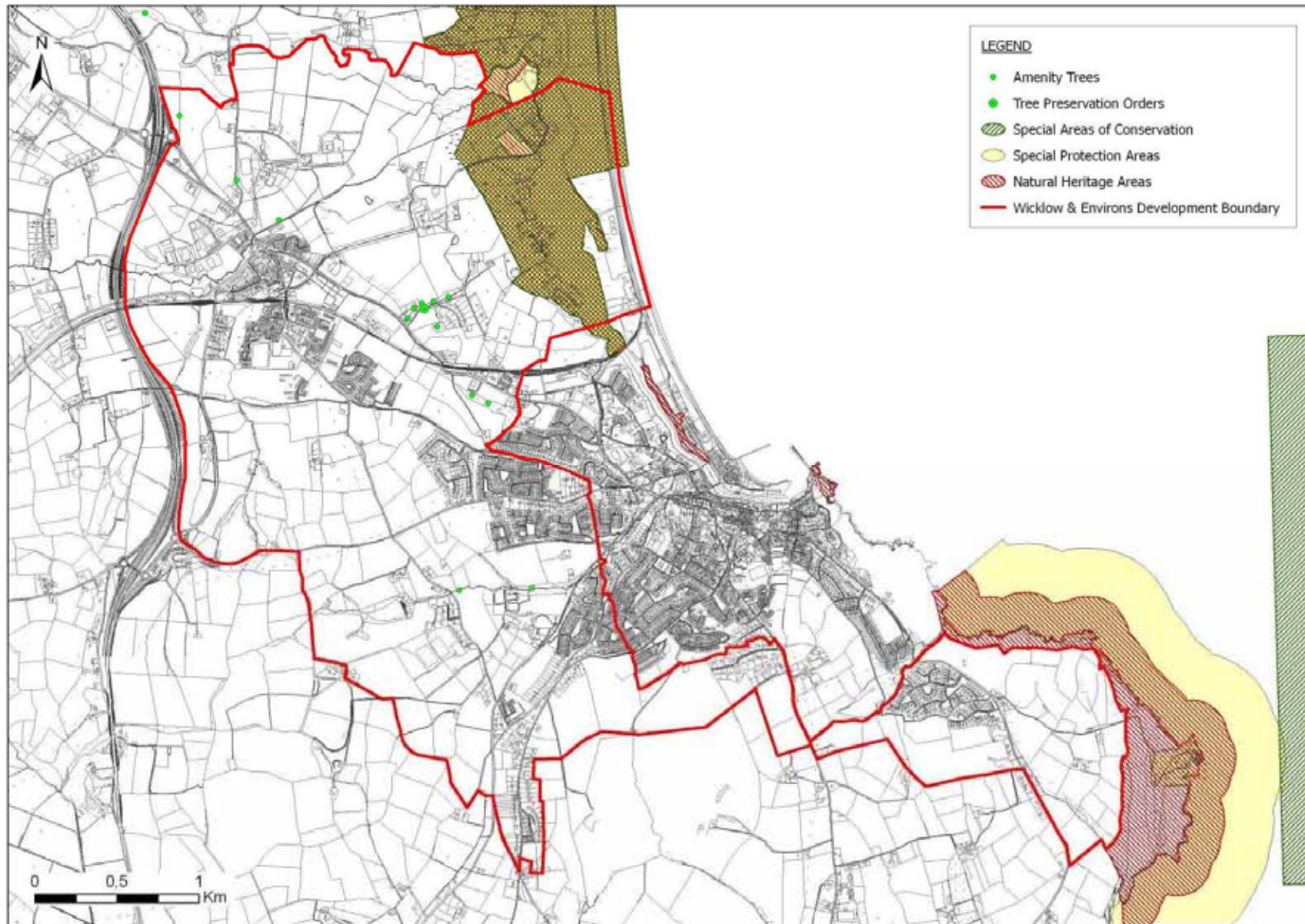
<sup>5</sup> National Parks and Wildlife (various) *Site Synopses for Conservation Sites* Dublin: Government of Ireland





**Figure 3.2 CORINE Land Classification**





conservation value for habitats and species of importance in the European Union. The sites are *candidate* sites because they are currently under consideration by the Commission of the European Union.

There are two cSACs in study area - The Murrough Wetlands cSAC (Site Code 002249) and Wicklow Reef cSAC (Site Code 002274).

On designation, these cSACs, together with the Special Protection Areas, identified below, will form elements of Natura 2000 - a network of protected areas throughout the EU established under the Habitats Directive.

- The Murrough Wetlands cSAC (Site Code 002249)

The area subject to this cSAC designation is similar to the area subject to the Murrough Natural Heritage Area designation (Site Code 000730). Both the areas subject to the cSAC and NHA designations are similar to the area subject to the Murrough Special Protection Area designation (Site Code 004186) except the cSAC and NHA designated areas do not extend as far offshore as the SPA designated area does.

The Murrough is a coastal wetland complex which stretches for 15 km from north of Wicklow Town and extends inland for up to 1 km. A shingle ridge stretches the length of the site and carries the Dublin-Wexford railway.

The site supports a number of habitats listed on Annex I of the Habitats Directive and a number of bird species listed on Annex I of the Birds Directive, as well as a wide range of important migratory birds. There are also many rare plants in the site.

Saltmarsh is present within the site in two distinct areas, one of which is at the southern end of the site closest to the study area where Broad Lough, a brackish, partly tidal lake, has a well developed saltmarsh community.

Other habitats include fen, wet woodland, freshwater and brackish marsh habitats.

The Murrough is an important site for wintering waterfowl and breeding birds with various Annex I bird species present including internationally important populations of Brent Geese and nationally important populations of Wigeon, Teal, Common Scoter and Lapwing.

Recent farming and drainage practices and afforestation have greatly reduced the area and the quality of the wetlands habitats - the area between Kilcoole and Newcastle - around 8 km to the north of Wicklow Environs and Rathnew - is particularly affected. In 1997 there was some levelling of the sand hills below Killougher station which is around 5 km to the north of the Wicklow Environs and Rathnew area. Any pollution, reclamation or further drainage would adversely affect this site.

This site is of importance as it is the largest coastal wetland complex on the east coast of Ireland. Although much affected by drainage, it still contains a wide range of coastal and freshwater habitats including five listed on Annex I of the Habitats Directive, some of which contain threatened plants. Areas on the site contain a rich invertebrate fauna, including several rare species. It is an important site for both wintering and breeding birds and supports a wide variety of species listed on Annex I of the Birds Directive<sup>6</sup>.

- Wicklow Reef cSAC (Site Code 002274)

Wicklow Reef is situated underwater in St. George's Channel to the east of the Wicklow Head area of Wicklow Environs. It is an example of a subtidal reef constructed by the honeycomb worm *Sabellaria alveolata*. *Sabellaria alveolata* subtidal reefs are known to occur in the Mediterranean but this example is an extremely unusual feature and may be the first recorded site of its type for Britain and Ireland.

Reefs are listed under Annex I of the Habitats Directive. There is a good diversity of species associated with the reef, including hydroids, a variety of polychaete worms, the snail *Calliostoma zizyphinum*, the bivalves *Musculus discor* and *Mytilus edulis*, molluscs, bryozoans, barnacles, amphipods and crabs, starfish, brittlestars and sea squirts.

Wicklow Reef is also of particularly high conservation value as it is the only documented example in Ireland of a biogenic reef<sup>7</sup>.

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<sup>6</sup> National Parks and Wildlife Service (2000) *The Murrough Wetlands SAC Site Code 002249* Dublin: Government of Ireland

<sup>7</sup> National Parks and Wildlife Service (2001) *Wicklow Reef SAC Site Code 002274* Dublin: Government of Ireland

### 3.2.4.3 Special Protection Areas

Special Protection Areas (SPAs) have been selected for protection under the 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC) - *referred to as the Birds Directive* - by the DEHLG due to their conservation value for birds of importance in the European Union.

There are two SPAs in the Wicklow Environs and Rathnew area - The Murrough SPA (Site Code 004186) and Wicklow Head SPA (Site Code 004127).

- The Murrough SPA (Site Code 004186)

The area subject to this SPA designation is similar to both the area subject to the Murrough Wetlands Special Area of Conservation designation (Site Code 002249) and the area subject to the Murrough Natural Heritage Area designation (Site Code 000730) except the SPA designation extends further offshore than the SAC and NHA designations.

The Murrough SPA comprises a coastal wetland complex that stretches from Wicklow Town northwards for 13 km to Kilcoole Station, east of Kilcoole village, and extends inland for up to 1 km in places. The site includes an area of marine water extending eastwards to a distance of 200m from the low water mark.

Beside the shingle shore is a stony ridge supporting perennial vegetation. Low sand hills occur at Kilcoole, with Marram and Lyme-grass. In other areas and further inland a rich grassy sward, which is most extensive in the south end of the site, has developed. A community dominated by Silverweed and Strawberry Clover occurs in some of the wetter, grassy areas. In some places, particularly at the south of the site, a Gorse heath has developed on the stony ridge.

At Broad Lough, near the Wicklow and Environs area, a brackish, partly tidal lake, has a well-developed saltmarsh community. A wide range of freshwater and brackish marsh habitats occur within the site. These vary from reed-marsh dominated by reeds and rushes, to those of sedges with other areas supporting a mixture of sedges and Yellow Iris also occurring. The marshes merge into wet grassland in many areas and where grazing pressure is low, a herb-rich sward occurs.

The Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for wetland and waterbirds.

The Murrough SPA is an important site for wintering waterbirds, being internationally important for Brent Goose and nationally important for Red-throated Diver, Greylag Goose, Wigeon, Teal, Black-headed Gull and Herring Gull. The regular occurrence of Red-throated Diver, Little Egret, Whooper Swan, Greenland White-fronted Goose, Golden Plover, Little Tern, Sandwich Tern, Short-eared Owl and Kingfisher is of note as these species are listed on Annex I of the Birds Directive. The site also supports a typical diversity of birds associated with reed swamp, including Reed Warbler, a very localised species in Ireland. The site is also of considerable importance for the wide range of coastal and freshwater habitats that it supports, including several that are listed on Annex I of the Habitats Directive.

The site is a traditional nesting area for Little Tern, and the site now supports one of the largest colonies in the country. During the winter this site is important for a number of waterbirds including the Light-bellied Brent Goose, Red-throated Diver, Greylag Goose, Wigeon, Teal, Black-headed Gull and Herring Gull. Other birds recorded include the Short-eared Owl, the Little Egret, the Reed Warbler, the Kingfisher and the Sandwich Tern.

As mentioned above, recent farming and drainage practices and afforestation have greatly reduced the area and quality of the wetlands habitats - the area between Kilcoole and Newcastle - around 8 km to the north of the Wicklow Environs and Rathnew area - is particularly affected. In 1997 there was some levelling of the sand hills below Killougher station (around 5 km to the north of the Wicklow Environs and Rathnew area). Pollution, reclamation and further drainage would adversely affect this site<sup>8</sup>.

- Wicklow Head SPA (Site Code 004127)

The area subject to this SPA designation is similar to the area subject to the Wicklow Head NHA designation (Site Code 000734, described

<sup>8</sup> National Parks and Wildlife Service (2007) *The Murrough SPA Site Code 004186* Dublin: Government of Ireland

in section 3.2.4.4 below) except it extends further offshore than the NHA designation and not as far inshore.

Wicklow Head is a rocky headland with extensive exposures of mica-schist - a shiny mineral - located along the Wicklow coastline in the east of Wicklow Environs. The site comprises the cliffs where seabirds breed and cliff-top vegetation, as well as some heath vegetation. The marine area to a distance of 500 m from the base of the cliffs, where seabirds forage, bathe and socialise, is included in the site.

Wicklow Head has important seabird colonies and supports a pair of breeding Peregrines, a species listed on Annex I of the Birds Directive. Ravens nest annually on the cliffs, and the heath supports such species as Stonechat, Whitethroat and Linnet.

This site is important as it has a well-documented seabird colony, with two species having populations of national importance. The occurrence of Peregrine Falcon adds to the interest of the site<sup>9</sup>.

#### 3.2.4.4 Natural Heritage Areas

Natural Heritage Areas (NHAs) are designated due to their national conservation value for ecological and/or geological/geomorphological heritage. They cover nationally important semi-natural and natural habitats, landforms or geomorphological features, wildlife plant and animal species or a diversity of these natural attributes.

Two NHAs have been designated for protection in the study area under the Wildlife (Amendment) Act 2000 - Wicklow Head (Site Code 000734) and the Murrough (Site Code 000730)

- Wicklow Head NHA (Site Code 000734)

The area subject to this NHA designation is similar to the area subject to the Wicklow Head SPA designation (Site Code 004127) except it extends further inshore than the SPA designation and not as far offshore.

Wicklow Head is a rocky headland with extensive exposures of mica-schist. It is

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<sup>9</sup> National Parks and Wildlife Service (2002) *Wicklow Head SPA Site Code 004127* Dublin: Government of Ireland

situated about a mile south of Wicklow town. A coastguard station and lighthouse are located on the headland.

The southern side of the headland is indented with inlets. The sheer cliffs provide nesting sites for sea birds, mostly Kittiwakes and smaller numbers of Fulmars, Razorbills and Guillemots. Black Guillemots, Herring Gulls and a few pairs of Shags also nest. Ravens nest annually on the cliffs. The exposed rocks provide a habitat for a considerable range of lichens.

At the top of the cliffs and in rock crevices, thin pockets of soil are colonised by a range of herbs and grasses while behind the headland there is heath and on the slopes north of the lighthouse there is dense bracken

A strip of scrub grows in a depression along the south western part of the site. It follows the line of a stream which flows down towards a shingle beach.

This site is important as a good example of a rocky headland showing nice rock exposures on steep cliffs, which also provide habitat for regionally important concentrations of nesting sea birds. The small area of heath, grassland and wet scrub increase the habitat diversity of this coastal site<sup>10</sup>.

- The Murrough NHA (Site Code 000730)

This site is of importance as it is the largest coastal wetland complex on the east coast of Ireland. Although much affected by drainage, it still contains a wide range of coastal and freshwater habitats, some of which contain threatened plants. Areas on the site contain a rich invertebrate fauna, including several rarities. It is an important site for both wintering and breeding birds and supports a wide variety of EU Birds Directive Annex I bird species<sup>11</sup>.

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<sup>10</sup> National Parks and Wildlife Service (1995) *Wicklow Head NHA Site Code 000734* Dublin: Government of Ireland

<sup>11</sup> National Parks and Wildlife Service (1998) *The Murrough NHA Site Code 000730* Dublin: Government of Ireland

### 3.2.5 WFD Register of Protected Areas

In response to the requirements of the Water Framework Directive a number of water bodies or parts of water bodies which must have extra controls on their quality by virtue of how their waters are used by people and by wildlife have been listed on Registers of Protected Areas (RPAs) (see Section 3.5).

The Vartry River has been listed on the RPA for *Habitats Rivers* while the Wicklow Head SPA and the Murrough SPA have been listed on the RPA for *Species SPA*.

### 3.2.6 Tree Protection

The Wicklow County Development Plan 2004-2010 identifies that there is one existing Tree Protection Order (TPO No. 42) in the Wicklow Environs and Rathnew area for Larch, Scots Pine and Sycamore groups of trees located in Knockrobin (see Figure 3.3).

The CDP also lists nine entries of trees and groups of trees which are considered for preservation as mapped on Figure 3.3 with details as follows:

- Oak and ornamental species forming the avenue of Knockrobin House (Ref. No. 48)
- A copse of European Larch, Scots Pine and Sycamore on Knockrobin Hill (Ref. No. 49)
- A deciduous woodland at Burkeen overlooking the Wicklow to Rathnew road (Ref. No. 50)
- A deciduous woodland forming the valley of the Marlton Stream at Ballynerrin (Ref. No. 51)
- Trees along the southern boundary of Clermont School, with exception of any felling required for road access (Ref. No. 52)
- A line of trees in Clermont School Grounds - western boundary of Clermont School, with exception of any felling required for road access as indicated (junction with existing N11) (Ref. No. 53)
- A line of trees stretching northwest to southeast at lands at Rosanna Lower, except where future road developments require removal (Ref. No. 54)
- A line of trees stretching northwest to southeast at lands at Rosanna Lower, except where future road developments require removal (Ref. No. 55)
- A line of trees stretching northwest to southeast North of the Vartry River near Mill Road, except where future road developments require removal (Ref. No. 56)

### 3.2.7 Flora Protection Order

The Leitrim River has a gravelly bank which supports a community of plants typical of disturbed ground and is protected under the Flora Protection Order 1987.

### 3.2.8 Existing Problems

Over time, ongoing road and building developments within the study area have impacted upon biodiversity and flora and fauna with semi-natural habitats replaced by artificial surfaces as indicated by the discontinuous urban fabric shown on Figure 3.2.

With regard to terrestrial flora and fauna, all greenfield development in the area causes an impact - the replacement of natural and semi natural habitats with artificial surfaces results in loss of flora and fauna and therefore adversely impacts upon this environmental component. The significance of the impact of greenfield development depends on whether individual greenfield developments result in the loss of habitats or species of importance together with the cumulative amount of habitats and species lost and fragmented as a result of all greenfield developments. It is noted that development of brownfield sites and re-development can also have impacts on terrestrial flora and fauna.

The ongoing road and building developments in the study area have impacted upon ecological connectivity within the area and between the area and the wider countryside.

Development in the Wicklow Environs and Rathnew area is generally not significantly impacting upon designated ecological sites however the site synopsis for the Murrough Wetlands site identifies that recent farming and drainage practices and afforestation have greatly reduced the area and quality of the wetlands habitats in the Murrough Wetlands cSAC particularly between Kilcoole and Newcastle (this area is located approximately 8

km to the north of Wicklow Environs and Rathnew). The site synopsis for the Murrough NHA identifies that in 1997 there was some levelling of the sand hills below Killougher station.

Ecological networks have been adversely impacted upon by the development of infrastructure such as roads which result in the habitat fragmentation as well as by the development of housing which results in the removal of hedgerows or housing which occurs along the edges of inland surface waters.

### 3.2.9 Evolution of Biodiversity and Flora and Fauna in the absence of a LAP

In the absence of a Local Area Plan for the Wicklow Environs and Rathnew area development would have no guidance as to where to be directed and planning applications would be assessed on an individual basis with flora and fauna, habitats and ecological connectivity protected under a number of strategic actions relating to biodiversity and flora and fauna protection. The evolution of biodiversity and flora and fauna would be dependent on the rate and extent of any such developments which would take place and these developments would be considered with regard to the County Development Plan 2004-2010.

Any future development along the edges of designated ecological sites would be likely to result in a reduction in habitats and would therefore be likely to reduce ecological connectivity on the edges of these sites.

Development along or adjacent to the banks of rivers could result in a reduction in ecological connectivity within and between these and other habitats.

Pollution of water bodies as a result of any future development along within catchments

would be likely to adversely impact aquatic biodiversity and flora and fauna and the status of the water bodies listed on Registers of Protected Areas for *Habitats Rivers* and *Species SPA*.

Beneficial effects upon biodiversity and flora and fauna (see Sections 8 and 9) which would be likely to arise out of the policies and objectives included in the LAP which are not included in the current WCDP would not be likely without the implementation of the Plan.

## 3.3 Population and Human Health

### 3.3.1 Population

Population figures for the Wicklow Environs and Rathnew area are shown on Table 3.1.

The 2006 Census figures show that the population of the Wicklow Environs area stood at 3,140 persons and the population for the Rathnew area stood at 1,849 persons with the combined populations for the two areas totalling 4,989 persons. The Wicklow Environs and Rathnew area has experienced significant growth over the last two inter censal periods from 1996 to 2006, increasing from 2,311 persons in 1996 to 4,989 in 2006. This represents a doubling of the population over this period.

Population in the Wicklow Environs and Rathnew area grew by 32.51% or 1,224 persons over the most recent inter censal period from 2002 to 2006 and by 62.92% or 1,454 persons over the previous inter-censal period from 1996 to 2002.

The 2006 Census figures show that there are 989 houses in the Wicklow Environs area and 639 households in the Rathnew area.

Year	Population Wicklow Environs	Population Rathnew	Total	Percentage Change (%)
1996	874	1437	2311	-
2002	2324	1441	3765	62.92
2006	3140	1849	4989	32.51

Table 3.1 Population Change for the Wicklow Environs and Rathnew area 1986-2006



### 3.3.2 Human Health

With regard to human health, impacts relevant to the SEA are those which arise as a result of interactions with environmental vectors (i.e. environmental components such as air, water or soil through which contaminants or pollutants, which have the potential to cause harm, can be transported so that they come into contact with human beings).

Human health has the potential to be impacted upon by environmental vectors including water, soil and air. Hazards or nuisances to human health can arise as a result of exposure to these vectors and incompatible landuses. These factors have been considered with regard to the description of: the baseline of each environmental component, and; the identification and evaluation of the likely significant environmental effects of implementing the plan and the alternatives.

### 3.3.3 Existing Problems

There is a lack of waste water treatment capacity to serve granted planning permissions in the Wicklow Environs and Rathnew area. This lack of capacity is constraining the accommodation of population growth; - a significant number of residential developments have been granted planning permission in the Wicklow Environs and Rathnew area subject to restrictions which prevent construction and occupation of units until adequate sewerage, water and roads infrastructure is in place.

### 3.3.4 Evolution of Population and Human Health in the absence of a LAP

Due to the constraints regarding land availability within the administrative boundaries of Wicklow Town Council, land within the Wicklow Environs and Rathnew plan area is required to accommodate the anticipated population increases over the three areas of Wicklow Town, its environs and Rathnew. The occurrence of growth in areas not identified as having environments which are compatible to such land uses can result in significant adverse impacts on the environment. As there is likely to be further increases in Wicklow Environs and Rathnew's population over the coming years, there is a need to direct growth towards the most robust

and away from the most sensitive environments. This can be done by policies and objectives which are included in an LAP and by zoning sufficient amounts of land in order to ensure that growth is directed towards the most compatible environments. In the absence of a LAP such direction of growth would be unlikely to occur and would be likely to result in significant adverse impacts upon a range of environmental components including the landscape, biodiversity, flora and fauna, cultural heritage and water resources.

In the absence of a LAP for the area there would be no framework for the provision of infrastructure to serve existing and future development and this would be likely to delay or hinder the provision of infrastructure which would have the potential to result in impacts on environmental vectors to which humans are exposed e.g. a lack of appropriate waste water treatment infrastructure could adversely impact upon drinking water quality and subsequently upon human health.

In the absence of a LAP, demographic and policy variations that have occurred over the period of the current LAP would be made more difficult to integrate into planning for the area.

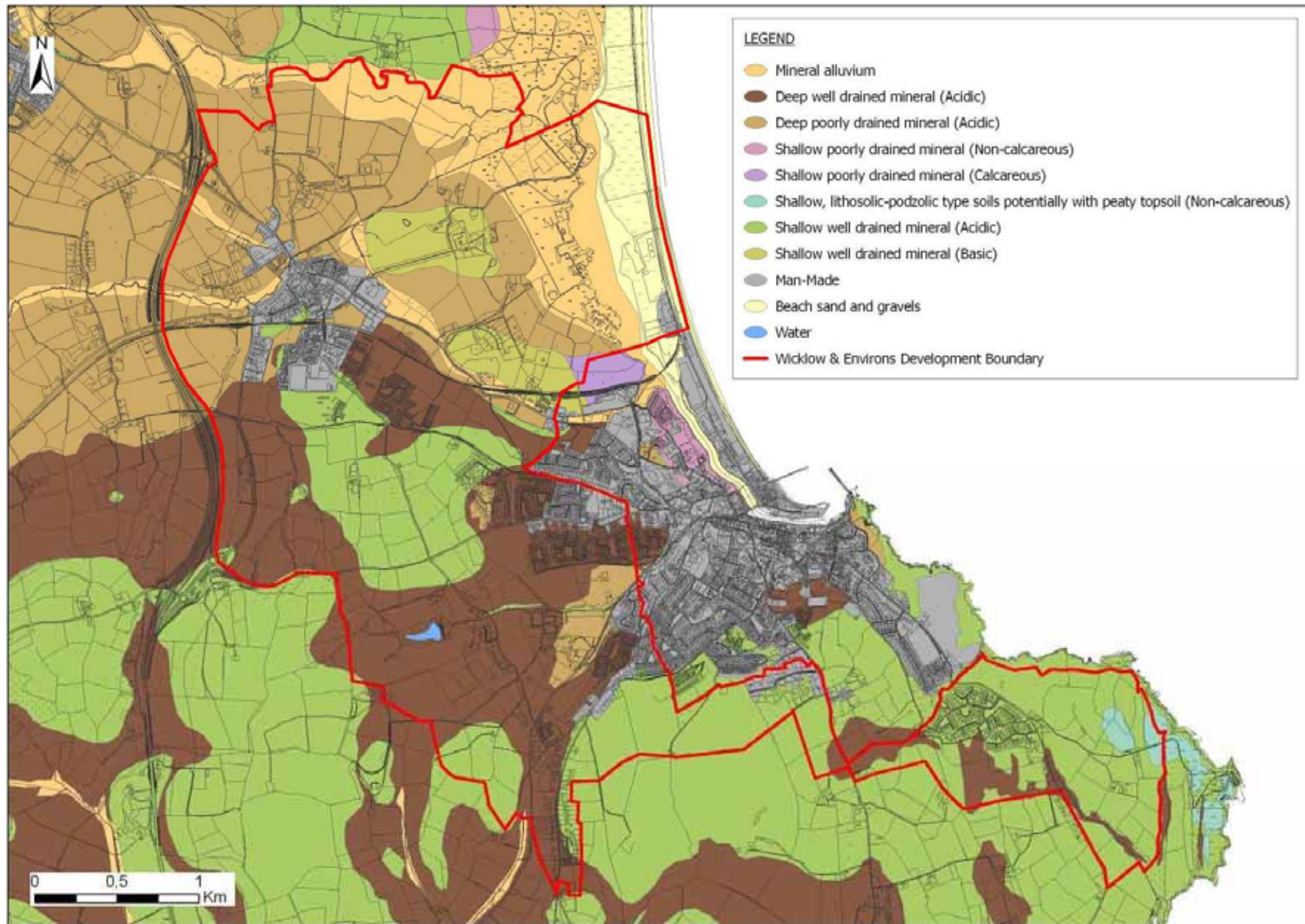
## 3.4 Soil

### 3.4.1 Introduction

Soil performs many vital functions including: food and other biomass production; storage; filtration, and; transformation of many substances including water, carbon, and nitrogen. Soil has a role as a habitat and gene pool, serves as a platform for human activities, landscape and heritage and acts as a provider of raw materials. Such functions of soil are worthy of protection because of their socio-economic as well as environmental importance.

Figure 3.4 Soils<sup>12</sup> shows the spatial distribution of soils in the study area. The biodiversity, flora and fauna detailed under Section 3.2 are facilitated by these soils as is an extent of agricultural land use.

<sup>12</sup> Teagasc, Geological Survey of Ireland, Forest Service & EPA (2006) *Soils and Subsoils Class* Dublin: DEHLG



**Figure 3.4 Soils**



### 3.4.2 Soil Types

The majority of soils within and to the south of the study area are well drained mineral soils - shallow well drained mineral acidic soils (coloured green on Figure 3.4 Soils) overlay areas which have rock close to the surface while deep well drained mineral acidic soils (coloured dark brown on Figure 3.4) overlay areas which have subsoils which are further away from the surface.

Within and to the north of the study area inland soils are predominantly deep poorly drained acidic mineral soils (coloured dark tan on Figure 3.4) with mineral alluvium (coloured light tan on Figure 3.4) found in the flood plains of the Vartry River and smaller streams as well as along the banks of Broad Lough and beach sands and gravels (coloured yellow on Figure 3.4) providing for the ridge to the east of Broad Lough along Wicklow's coastline.

Soils underlying the developed areas of Wicklow Environs and Rathnew are man-made or urban soils (coloured light tan on Figure 3.4). Urban soils are soils which have been disturbed, transported or manipulated by man's activities in the urban environment and are often overlain by a non-agricultural, man-made surface layer that has been produced by mixing, filling, or by contamination of land surfaces in urban and suburban areas.

Urban soils have a combination of characteristics that differ from natural soils. These characteristics are due to alterations in both physical and chemical soil properties that cause long term deviation from the natural state.

Natural soil profiles generally tend to gradually change from one horizon to the next; however, urban soils show abrupt changes from one horizon to another depending on the construction history of the soil. Layers may drastically differ in structure, pH, texture, and properties important to plant growth such as aeration, drainage and water holding capacity. A soil's aeration and water drainage capabilities are negatively affected by compaction which occurs as a result of overlying conditions which include traffic and building.

### 3.4.3 Existing Problems

Greenfield development involves the building upon and thereby sealing off of soil thus representing an environmental problem.

There is potential that soil may be polluted and contaminated as a result of pollution from development which is not serviced by appropriate waste water infrastructure and from agricultural sources.

Soil erosion due mainly to surface erosion resulting from construction works and agricultural / forestry operations has major potential to impact on water quality and fishery resources.

In addition to water quality and fishery impacts, these can impact on infrastructure and can have health and safety implications.

### 3.4.4 Evolution of Soil in the absence of the LAP

The currently proposed Soil Directive suggests encouraging the rehabilitation of brownfield sites, thus reducing the depletion of greenfield sites. However, in the absence of a LAP there would be no framework for the direction of growth towards brownfield sites in the Wicklow Environs and Rathnew area, where such direction is appropriate. As a result greenfield development would be likely to occur on an increased basis and would result in the building upon and thereby sealing off of the non-renewable subsoil and soil resources.

## 3.5 Water

### 3.5.1 The Water Framework Directive

#### 3.5.1.1 Introduction

Since 2000, Water Management in the EU has been directed by the Water Framework Directive 2000/60/EC (WFD). The WFD has been transposed into Irish legislation by the European Communities (Water Policy) Regulations 2003 (SI No. 722 of 2003). The WFD requires that all member states implement the necessary measures to prevent deterioration of the status of all waters - surface, ground, estuarine and coastal - and protect, enhance and restore all

waters with the aim of achieving good status by 2015.

For the purpose of implementing the WFD, Ireland has been divided into eight river basin districts or areas of land that are drained by a large river or number of rivers and the adjacent estuarine / coastal areas. The Wicklow Environs and Rathnew area is located in the Eastern River Basin District (ERBD).

Local Authorities located in the ERBD, including Wicklow County Council, are preparing a management plan which will be implemented in order to help protect and improve all waters in the ERBD.

### 3.5.1.2 Risk Assessment

For the purposes of assessment, reporting and management, water in the ERBD has been divided into groundwater, rivers, lakes, estuarine waters and coastal waters which are in turn divided into specific, clearly defined water bodies.

Each water body has been assessed and classified, 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 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) Not at Significant Risk* - the water body is expected to meet good status in 2015.
- *(2b) Probably 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. A Characterisation Report

was published by the ERBD Project Office in 2005<sup>13</sup> including the various risk assessments.

In addition to these assessments which are included in each of the RBD Characterisation Reports, the WFD requires that Registers of Protected Areas (RPAs) are compiled for a number of water bodies or part of water bodies which must have extra controls on their quality by virtue of how their waters are used by people and by wildlife.

It is noted that although the Characterisation Report for each of the RBDs has been published, River Basin Management Plans which will be implemented in order to help protect and improve all waters in the RBDs will not be published until mid to late 2008. These Management Plans will provide specific policies for individual river basins in order to implement the requirements of the WFD.

## 3.5.2 Rivers, Transitional and Coastal Waters

### 3.5.2.1 Introduction

The Vartry River - which flows through Ashford and into the north of Broad Lough to the north of Wicklow Environs and Rathnew - and the Rathnew River - which flows through Rathnew and into the Broad Lough to the south of Vartry River - are the two most dominant river features in the area.

Broad Lough is a brackish, partly tidal lake which flows into the sea at Wicklow Harbour via the Leitrim River.

### 3.5.2.2 Risk Assessment

In terms of achieving the WFD's objectives by 2015 the Vartry River and Rathdrum River are classified as being *(1a) At Significant Risk* of failing to achieve the WFD's objectives by 2015.

The transitional waters of Broad Lough and the Leitrim River are classified as being *(1a) At Significant Risk* of failing to achieve the WFD's objectives by 2015.

The coastal waters adjacent to Wicklow Town and Environs are classified as being *(1a) At*

<sup>13</sup> ERBD Project Office (2005) *Article 5 Characterisation Summary Report* Dublin: ERBD Project Office

*Significant Risk* of failing to achieve the WFD's objectives by 2015.

The risk assessments for the above waters are shown on Figure 3.5.

### 3.5.2.3 Register of Protected Areas

In response to the requirements of the Water Framework Directive a number of water bodies or parts of water bodies which must have extra controls on their quality by virtue of how their waters are used by people and by wildlife have been listed on Registers of Protected Areas (RPAs) (see Section 3.5).

The Wicklow Head SPA and the Murrough SPA have been listed on the RPA for *Species SPA*. The Vartry River has been listed on the RPA for *Habitats Rivers* with a length of the river at Ashford listed on the RPA for *Drinking Water*.

Entries to the Register of Protected Areas for the area are shown on Figure 3.6.

## 3.5.3 Ground Water

### 3.5.3.1 Introduction

Groundwater is stored in the void spaces in underground layers of rock, or aquifers. These aquifers are permeable, allowing both the infiltration of water from the soils above them and the yielding of water to surface and coastal waters. Groundwater is the part of the subsurface water that is in the saturated zone - the zone below the water table, the uppermost level of saturation in an aquifer at which the pressure is atmospheric, in which all pores and fissures are full of water.

### 3.5.3.2 Risk Assessment

The study area is located above the Wicklow East groundwater body which is classified by the ERBD as *(2a) Not at Significant Risk* - the water body is expected to meet good status in 2015.

The ground water risk assessment for the study area is shown on Figure 3.5.

### 3.5.3.3 Register of Protected Areas

It is noted that groundwater beneath the study area is listed on the RPA for Groundwater Drinking Water.

Entries to the Register of Protected Areas for the area are shown on Figure 3.6.

### 3.5.3.4 Productivity and Vulnerability

The Geological Survey of Ireland rates aquifers according to their vulnerability to pollution and their potential productivity.

Aquifer vulnerability refers to the ease with which pollutants of various kinds can enter underground water. Figure 3.7 GSI Groundwater Vulnerability Ratings indicates that the Wicklow town and Environs area to the south of the Rathnew-Wicklow main road is generally rated as *Extreme* due to the shallow depth to bedrock. North of the Rathnew-Wicklow main road, the vulnerability varies from *Low* to *Moderate* due to the increased thickness of soils overlying the bedrock.

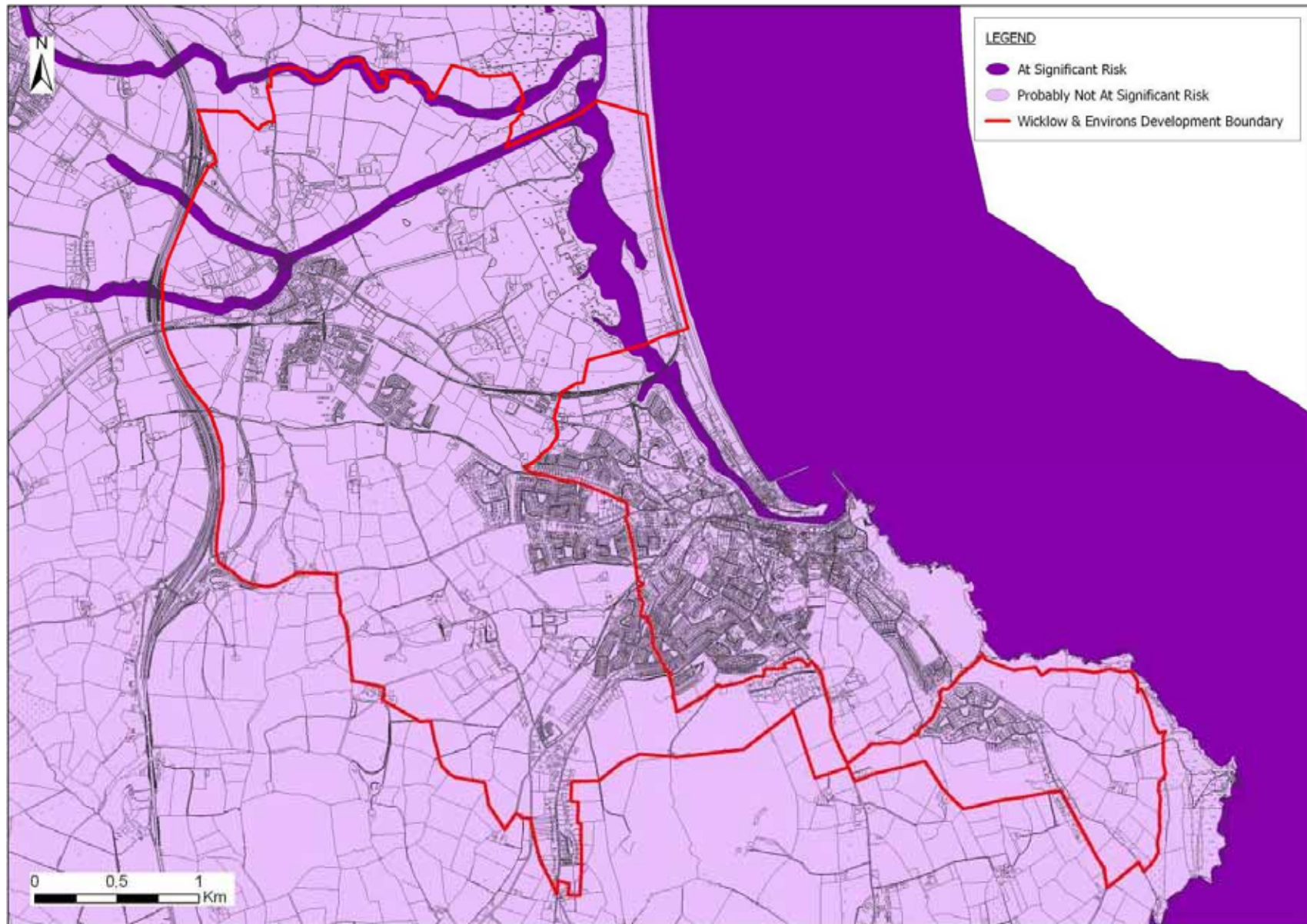
Figure 3.8 GSI Groundwater Productivity Ratings shows that the groundwater beneath the study area to the north of the Rathnew-Wicklow main road is generally identified as being part of an aquifer which is rated as being locally important (LI). This locally important aquifer is a bedrock aquifer which is moderately productive only in local zones - it is capable of yielding enough water to boreholes or springs to supply villages, small towns or factories. South of the Rathnew-Wicklow main road, the groundwater is generally identified as belonging to an aquifer which is rated as poor (PI). This poor aquifer is a bedrock aquifer which is generally unproductive, except for in local zones.

## 3.5.4 Existing Problems

Problems with regard to water quality have the potential for significant adverse impact upon biodiversity and flora and fauna, drinking water supplies and human health.

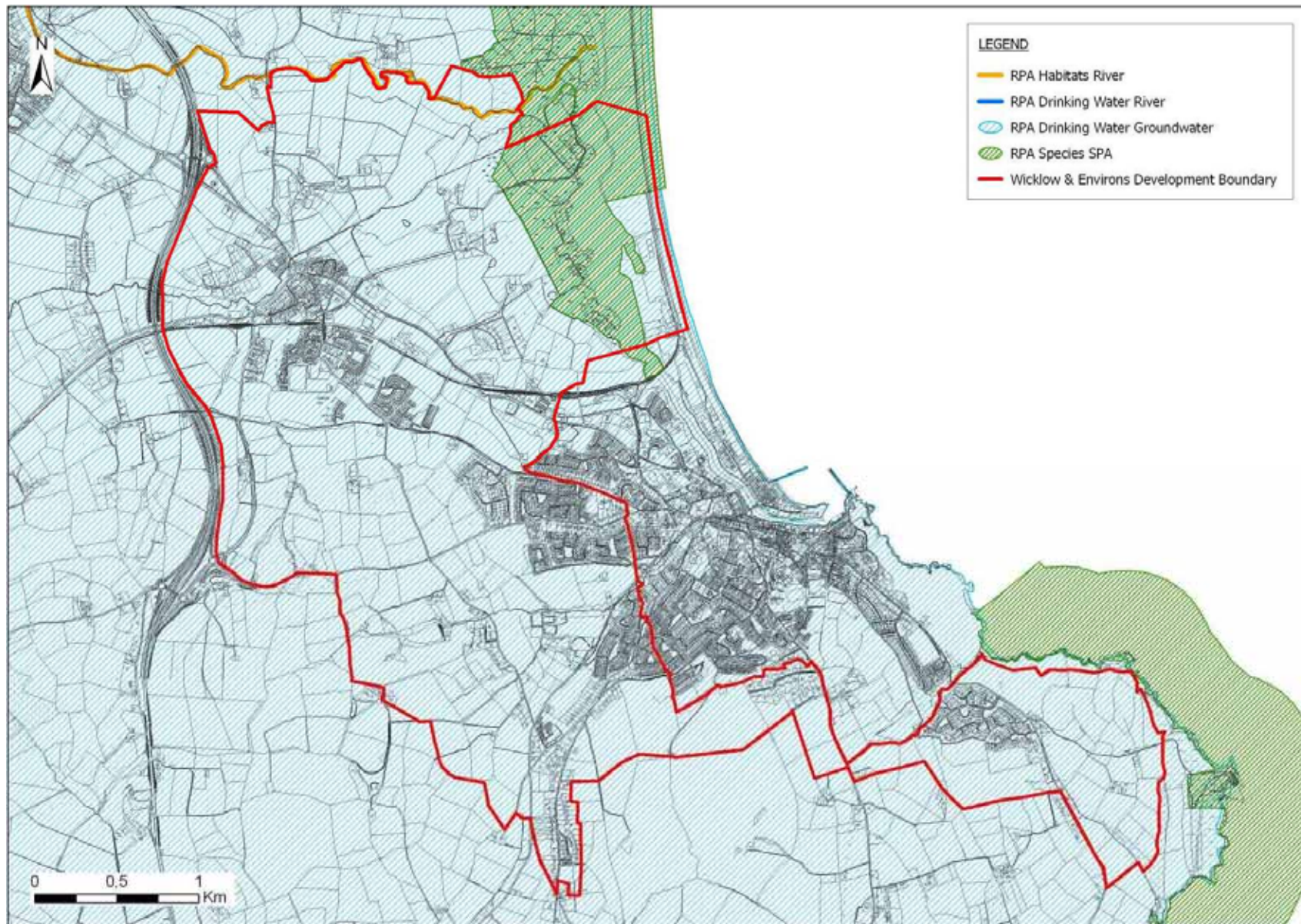
All water bodies - rivers, transitional and coastal - within the study area which have been included in the ERBD's Risk Assessment, with the exception of the groundwater body, have been classified as being *(1a) at significant risk* of failing to achieve the WFD's objectives by 2015.

With regard to the area's groundwater, a significant amount of the waters are classified as being either of extreme or high vulnerability.



**Figure 3.5 WFD Risk Assessment**





**Figure 3.6 WFD Register of Protected Areas Entries**







Figure 3.8 GSI Groundwater Productivity Ratings

In addition to the sensitivities indicated by the risk assessments and the vulnerability ratings, there are a number of entries to the Registers of Protected Areas (RPAs) by virtue of how waters within and surrounding the area are used by people and by wildlife.

The failure to provide appropriate waste water treatment infrastructure and capacity alongside development (see Section 3.7) presents a significant potential problem which could affect Wicklow County Council's ability to meet its commitments under the WFD.

### 3.5.5 Evolution of Water in the absence of the LAP

Based on the risk assessment included in the ERBD Characterisation Report, the two main rivers in the area, the transitional waters of Broad Lough and the Leitrim River and the coastal waters adjacent to Wicklow Town and Environs would be unlikely to the objectives of the WFD.

If development was to occur without appropriate waste water infrastructure then it is likely that these objectives would prove more difficult to be met and adverse impacts with regard to biodiversity and flora and fauna and human health as a result of poor water quality could arise.

## 3.6 Air and Climatic Factors

### 3.6.1 Ambient Air Quality

In order to protect human health, vegetation and ecosystems, EU directives set down air quality standards in Ireland and the other member states for a wide variety of pollutants. These rules include how ambient air quality should be monitored, assessed and managed.

The principles to this approach were set out in 1996 with the Air Quality Framework Directive. This became Irish law through the Environmental Protection Agency Act 1992 (Ambient Air Quality Assessment and Management) Regulations 1999 (SI No. 33 of 1999).

Four daughter directives lay down limits or thresholds for specific pollutants. The first two of these directives cover: sulphur dioxide, nitrogen dioxide and oxides of nitrogen,

particulate matter and lead, and; carbon monoxide and benzene. The other two more daughter directives deal with: ozone, and; polyaromatic hydrocarbons, arsenic, nickel, cadmium and mercury in ambient air.

In order to comply with these directives, the EPA measures the levels of a number of atmospheric pollutants. For the purposes of monitoring in Ireland, four zones are defined in the Air Quality Regulations (2002). The main areas defined in each zone are:

- Zone A: Dublin Conurbation
- Zone B: Cork Conurbation
- Zone C: Other cities and large towns comprising Galway, Limerick, Waterford, Clonmel, Kilkenny, Sligo, Drogheda, Wexford, Athlone, Ennis, Bray, Naas, Carlow, Tralee and Dundalk
- Zone D: Rural Ireland, i.e. the remainder of the State - small towns and rural areas of the country - excluding Zones A, B and C.

The Wicklow Environs and Rathnew area is located in Zone D.

There is currently no ambient air quality monitoring in County Wicklow.

Air quality in the general study area is not considered to be a significant issue.

#### 3.6.1.1 Licensed Facilities

There is one Integrated Pollution Prevention Control (IPPC) licensed facility within the study area - Crown Timber plc (Bollarney Murragh, Wicklow, County Wicklow, Wicklow; License Reg. No. P0608-01). IPPC licenses aim to prevent or reduce emissions to air, water and land, reduce waste and use energy/resources efficiently.

The principal class of activities at the facility is *Wood, Paper, Textiles and Leather*. The treatment or protection of wood involving the use of preservatives with a capacity exceeding 10 tonnes per day.

The IPPC Licensee requires that all operations on-site be carried out in a manner such that air emissions and/or odours do not result in significant impairment of, or significant



interference with amenities or the environment beyond the site boundary.

### 3.6.2 Climatic Factors

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

Based on the latest inventory figures, the EPA estimates that Ireland's emissions in 2005 were 25.4 per cent higher than the baseline estimate that underlies Ireland's allowable emissions for the period 2008-2012, as proposed to the European Commission in 2006<sup>14</sup>.

### 3.6.3 Existing Problems

There are no existing problems which are specific to air quality or climatic factors in the Wicklow Environs and Rathnew area.

### 3.6.4 Evolution of Air and Climatic Factors in the absence of a LAP

In the absence of a LAP there would be no framework for the location of new development and as a consequence development would be likely to occur in a piecemeal fashion, spread out across wider areas than otherwise may be the case. This would result in significant increases in travel related emissions to air.

## 3.7 Material Assets

### 3.7.1 Waste Water

The existing treatment plant serving Wicklow Town and Environs is located in the Wicklow Harbour area. This provides preliminary treatment with effluent being pumped out to sea by means of a long-sea outfall. This is insufficient to serve the future needs in the town and the surrounding area under the Urban Wastewater Treatment Directive 1994. In

addition, existing treatment plants at Ashford and Rathnew are at capacity.

As a result of the lack of capacity of existing treatment plants, a new secondary treatment system with a 37,000PE (population equivalent) is to be provided for the Wicklow catchment area. This new plant is to be located on industrial zoned land at the Murrough. Work on the new plant is due to commence in the next few months, two years after which, it will become operational. The immediate provision of this facility is a vital requirement in the fulfilment of the area's development requirements.

### 3.7.2 Drinking Water

Ashford, Rathnew and Wicklow Town are supplied by treated water from the Vartry Reservoir in Roundwood, in addition to water treated at Cronroe in Ashford. Water from these sources is stored in reservoirs within Wicklow town, at Greenhills (capacity 454,000 l), Mt. Carmel (capacity 630,000 l), Broomhall (capacity 454,000 l) and Seacrest (capacity 454,000 l).

Supply and capacity regarding water supply is very limited and no extra consumption is permissible until supply is increased. Additional water will not be available to service the needs of the plan area until additional sources are available, i.e. (i) wells in Ashford by 2010, (ii) sourcing from Avonmore River in Rathdrum in 5-10 years. In order to provide for greater capacity, upgrades are required to Ashtown and Broomhall reservoirs.

There is a problem with leakage from the mains. In order to limit leakage, the Council have a works programme for leakage reduction which is ongoing during the lifetime of the plan.

### 3.7.3 Transport

The N11 National Primary Road links Wicklow Town, its Environs and Rathnew with Ashford and subsequently Dublin to the north and Enniscorthy and subsequently Wexford to the south. This route facilitates the movement of commuters into the Greater Dublin Area.

Within the Rathnew and the Environs area the R750 Regional Road from Rathnew to Wicklow Town, the R752, from Wicklow Town to Rathdrum and a network of minor local roads facilitate the movement of vehicles.

<sup>14</sup> EPA (2007) Ireland's Greenhouse Gas Emissions Preliminary Statement for 2005 Wexford: Environmental Protection Agency

Public transport to Wicklow town is provided by: a train service through the station located to the northern outskirts of the town, and; a Bus Éireann bus service that runs approximately every two hours, connecting to Dublin and southerly towns such as Arklow and Waterford.

The limited availability of public transport services is reflected in the dominance of car use as the main transportation mode.

### **3.7.4 Flooding**

Flooding of lands within the Environs of Wicklow Town and localised flooding in Wicklow town itself demonstrate a need for the development of the surface water attenuation mechanisms and SUDS (Sustainable Urban Drainage Systems). These would be particularly important as part of any development proposals in areas close to existing water bodies.

### **3.7.5 Existing Problems**

The Wicklow Environs and Rathnew area has experienced relatively large growth in recent years with residential development exceeding infrastructural development.

There is inadequate wastewater treatment capacity for existing and permitted development and no capacity for further development with the existing plant hydraulically and biologically overloaded. This represents a significant existing environmental problem which is likely to be adversely impacting upon Wicklow County Council's ability to meet its commitments under the Water Framework Directive (see Section 3.5). The construction of the new waste water treatment plant will help to solve this problem and enable future population growth.

In order to accommodate recent and future growth, the new waste water treatment plant, increased water supply and additional transport infrastructure etc are needed. Such infrastructural projects or programmes are likely to have significant adverse impacts on the environment if not mitigated. These projects or programmes may require environmental assessments to be carried out on them in order to prevent such impacts.

### **3.7.6 Evolution of Material Assets in the absence of a LAP**

Failure to provide sufficient infrastructure for development would be likely to result in significant adverse impacts. For example, failure to upgrade and provide the new waste water infrastructure would be likely to constrain population growth and adversely impact upon water quality and indirectly significantly adversely impact upon biodiversity and flora and fauna, drinking water supplies and human health.

The objectives of the Wicklow and Environs Integrated Framework Plan for land Use and Transportation 2003 - prepared to provide detailed land use and transportation proposals for the future growth of the Wicklow development centre, having particular regard to land-use patterns that compliment local public transport, walking and cycling - which have been taken into consideration and integrated into the LAP might not have been integrated into planning for the area in the absence of a LAP.

## **3.8 Cultural Heritage**

### **3.8.1 Archaeological Heritage**

#### **3.8.1.1 Introduction**

Archaeology is the study of past societies through the material remains left by those societies and the evidence of their environment. Archaeological heritage consists of such material remains (whether in the form of sites and monuments or artefacts in the sense of moveable objects) and environmental evidence. As archaeological heritage can be used to gain knowledge and understanding of the past it is of great cultural and scientific importance.

Archaeological sites and monuments vary greatly in form and date; examples include earthworks of different types and periods, (e.g. early historic ringforts and prehistoric burial mounds), megalithic tombs from the Prehistoric period, medieval buildings, urban archaeological deposits and underwater features such as wrecks.

Archaeological sites may have no visible surface features; the surface features of an

archaeological site may have decayed completely or been deliberately removed but archaeological deposits and features may survive beneath the surface. Such sites may sometimes be detected as crop-marks visible from the air or have their presence indicated by the occurrence of artefact scatters in ploughed land, but in other cases may remain invisible unless uncovered through ground disturbance.

Archaeology in Ireland is protected under the National Monuments Acts 1930 to 2004.

### 3.8.1.2 Monuments

The term 'monument' includes all man-made structures of whatever form or date except buildings habitually used for ecclesiastical purposes. All monuments in existence before 1700 A.D. are automatically considered to be historic monuments within the meaning of the Acts. Monuments of architectural and historical interest also come within the scope of the Acts. Monuments include: any artificial or partly artificial building, structure or erection or group of such buildings, structures or erections; any cave, stone or other natural product, whether or not forming part of the ground, that has been artificially carved, sculptured or worked upon or which (where it does not form part of the place where it is) appears to have been purposely put or arranged in position; any, or any part of any, prehistoric or ancient tomb, grave or burial deposit, or, ritual, industrial or habitation site; and any place comprising the remains or traces

of any such building, structure or erection, any such cave, stone or natural product or any such tomb, grave, burial deposit or ritual, industrial or habitation site, situated on land or in the territorial waters of the State', but excludes 'any building or part of any building, that is habitually used for ecclesiastical purposes'.

A recorded monument is a monument included in the list and marked on the map which comprises the Record of Monuments and Places set out county by county under Section 12 of the National Monuments (Amendment) Act, 1994 by the Archaeological Survey of Ireland. The definition includes Zones of Archaeological Potential in towns and all other monuments of archaeological interest which have so far been identified.

There are eleven recorded monuments in the study area five of which are dispersed across the Wicklow Environs and Rathnew area and five of which are located on Wicklow/Dunbur Head adjacent to the plan boundary. The monuments include an enclosure field system, two sites of a church and graveyard, a cist, a Souterrain, a holy well, and a rock shelter.

These monuments mapped on Figure 3.9 Cultural Heritage with details provided on Table 3.2.

Monument Number	Site Type	Townland	Description
WI025-008	Enclosure	Newrath	A bivallate enclosure (diam. c. 40m) with inner and outer enclosures evident on aerial photographs, adjacent to traces of a field system (WI025-009).
WI025-009	Field System, site	Newrath	A possible field system, visible on aerial photographs, adjacent to an enclosure (WI025-008).
WI025-01001	Church and graveyard	Commons	The eastern gable end of a church, traditionally associated with St. Ernin, situated at the N end of an oval graveyard (50m x 40m).
WI025-01002	Font	Commons	A granite font located beside the east gable wall of the church.
WI025-011	Church and graveyard	Glebe	The foundation remains of a 10th century church and graveyard, originally with a Romanesque doorway now located in the Protestant parish church in Wicklow Town. Recently excavated for port access road and precisely located
WI025-014	Cist	Ballynerrin (Ne. By.) Wicklow Rural ED	A rectangular cist, a Bronze Age burial, which contained a cremated adult.
WI025-015	Souterrain	Dunbur Head	A possible souterrain, probably natural sea caves, but adjacent to a church (WI025-01701), and possibly used as souterrains while the ecclesiastical site was in use.
WI025-016	Holy Well, site	Dunbur Head	A spring, marked on the early OS map as 'Brides Well', now dried up. It is located just above the high water mark adjacent to a church (WI025-01701).

**Table 3.2 Recorded Monuments**

## 3.8.2 Architectural Heritage

### 3.8.2.1 Introduction

The term architectural heritage is defined in the Architectural Heritage (National Inventory) and Historic Monuments Act 1999 as meaning all:

- structures and buildings together with their settings and attendant grounds, fixtures and fittings;
- groups of structures and buildings; and
- sites

which are of technical, historical, archaeological, artistic, cultural, scientific, social, or technical interest.

The Record of Protected Structures (RPS) included in the County Wicklow Development Plan is legislated for under Section 51 of the Planning and Development Act 2000 and includes a number of structures within the study

area. All structures, buildings, or erections, which came into existence after 1700 A.D., can be protected through enlistment in the RPS.

Protected Structures - structures enlisted on the RPS - are defined as structures, or parts of structures that are of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view. The term 'structure' encompasses the interior of the structure, the surrounding land or 'curtilage' of the structure, any other structures lying within that curtilage.

There are eleven entries to the RPS which are located within or adjacent to the Wicklow Environs and Rathnew area with no Architectural Conservation Areas (ACAs) designated. As well as there being a number of buildings in the area included on the RPS, there twelve additional structures that are listed in the National Inventory of Architectural Heritage (NIAH).

The NIAH is a state initiative under the administration of the DEHLG which was established on a statutory basis under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. Its purpose is to identify, record, and evaluate the post-1700 architectural heritage of Ireland, uniformly

and consistently as an aid in the protection and conservation of the built heritage. It is intended that the NIAH provides the basis for the inclusion of particular structures in the RPS.

Protected Structures as well as entries to the NIAH are mapped on Figure 3.9 with details provided on Table 3.3.

RPS Number	Structure	Address
25-01	Hotel	Hunters Hotel, Rathnew
25-03	Hand Pump	Marlton Road, Hudson's Garage
25-04	Former National School/Old Band Hall	Rathnew
25-05	Church	Rathnew Catholic Church
25-07	Early Ecclesiastical Remains	Brides Head, Dunbar, Wicklow Head
25-08	Old Semifore	Wicklow Head
25-09	Lighthouse	Wicklow Head, Lighthouse
25-12	Letterbox	Newrath, Rathnew
25-13	Country House/School	Clermont House, Rathnew
25-15	Country House	Tinakelly House, Rathnew
25-16	Country House	Broadlough House

**Table 3.3 Protected Structures**

### 3.8.3 Environmental Problems

No existing problems have been identified with regard to cultural heritage within the study area.

### 3.8.4 Evolution of Cultural Heritage in the absence of a LAP

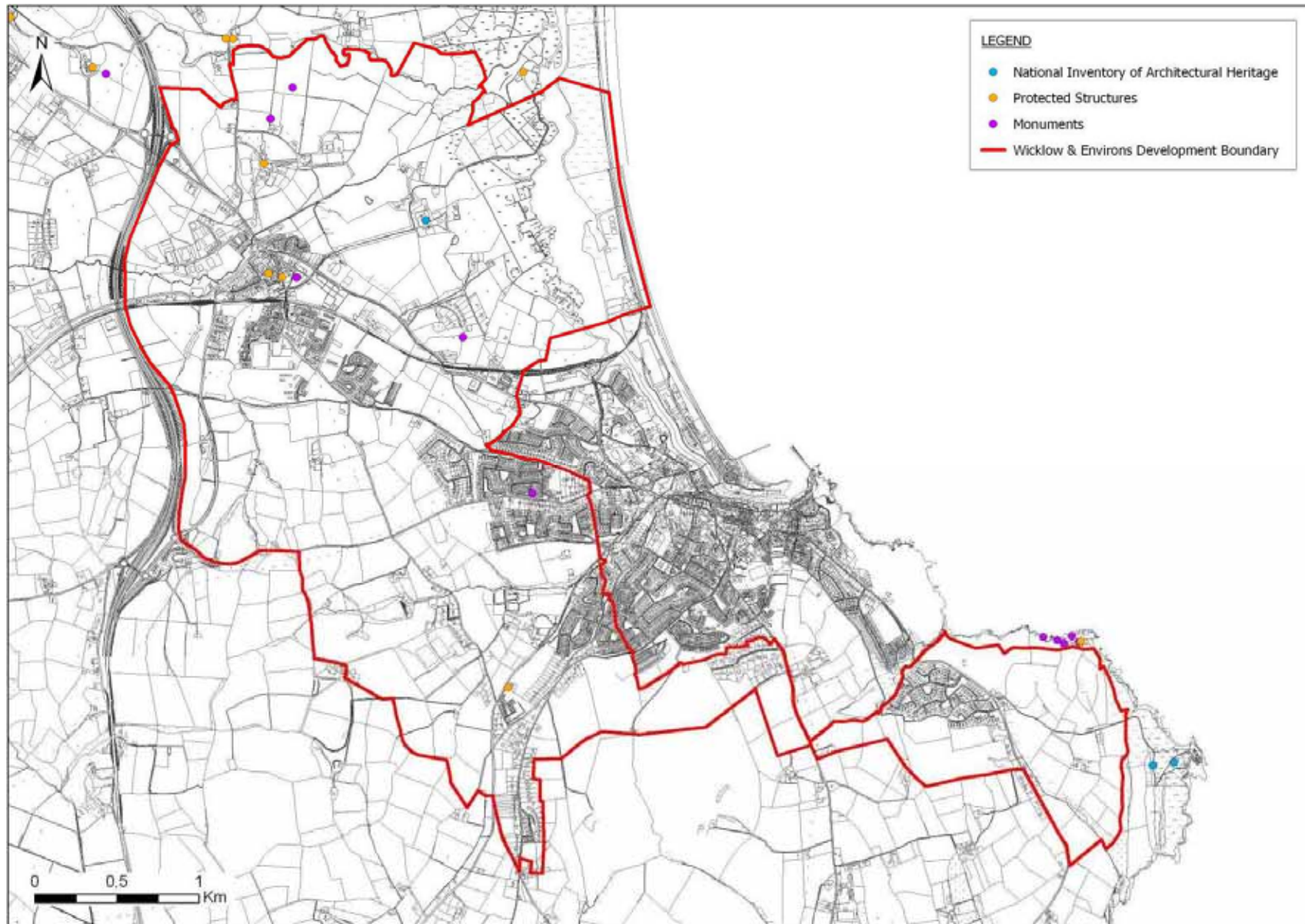
In the absence of an LAP, development would have no guidance as to where to be directed and planning applications would be assessed on an individual basis. Cultural heritage would be likely to be impacted upon by the nature of permitted applications. Although cultural heritage is protected under legislation and under the Wicklow County Development Plan 2004-2010, impacts can still occur as a result of development.

Previously unknown archaeology can be damaged as a result of development which causes ground disturbance.

Development on sites adjoining protected monuments, places or structures can adversely impact upon the context of these cultural heritage items in both townscapes and landscapes if unmitigated against.

Development which involves material alteration or additions to protected structures can detract from the special character of the structure and its setting, and have the potential to result in the loss of features of architectural or historic interest and the historic form and structural integrity of the structure are retained.

Encouraging and facilitating the accommodation of growth on brownfield sites will contribute to mitigating a number of the adverse impacts associated with greenfield development, however, brownfield development has the potential to significantly adversely impact upon cultural heritage - both archaeological and architectural - if unmitigated against.



**Figure 3.9 Cultural Heritage**

## 3.9 Landscape

### 3.9.1 Introduction

Landscapes are areas which are perceived by people and are made up of a number of layers: landform, which results from geological and geomorphological history; landcover, which includes vegetation, water, human settlements; and human values which are a result of historical, cultural, religious and other understandings and interactions with landform and landcover.

The Wicklow Environs and Rathnew area is located in the east of County Wicklow adjacent to Wicklow Town. The coastal situation of parts of the area makes it sensitive to development; the northern portion borders the sea at the Murrough while the southern portion borders the sea at Wicklow Head.

The topography of the land rises away from Broad Lough to the south of the area with a number of hills over 150m above sea level creating a visual boundary to the south which stretches from Wicklow head in the east towards and beyond the N11 in the west. This rising, elevated land is visible for a significant distance to the north of the Wicklow Environs and Rathnew area and therefore is sensitive to development.

### 3.9.2 Landscape Characterisation

#### 3.9.2.1 Introduction

Wicklow County Council's Landscape Characterisation (2004)<sup>15</sup> classifies landscapes in Wicklow according to their sensitivity – their ability to accommodate change or intervention without suffering unacceptable effects to character and values. The most sensitive landscapes are *Areas of Outstanding Natural Beauty* - which are of a very high sensitivity - and *Areas of Special Amenity* - which are of a high sensitivity. Landscapes of lesser sensitivity are *Rural Areas* and *Corridor Areas* which are both of medium sensitivity.

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<sup>15</sup> Wicklow County Council (2004) *Wicklow County Development Plan 2004 – 2010 County Landscape Characterisation* Wicklow: Wicklow County Council

Within the study area there are three landscape areas - the Area of Outstanding Natural Beauty of the Wicklow Coastline, the Eastern Corridor Area and the Urban Area of Wicklow Town which covers the administrative boundary of Wicklow Town Council.

These landscape areas are shown alongside prospects of special amenity on Figure 3.10.

#### 3.9.2.2 Area of Outstanding Natural Beauty of the Wicklow Coastline

The Areas of Outstanding Natural Beauty classification encompasses those landscapes which are most vulnerable and sensitive, and which are considered to be of greatest scenic value. These areas have been identified as areas which tend to be under severe development pressure.

The Wicklow coastline is one of five areas in the County covered by this classification. In the Wicklow Environs and Rathnew area this classification covers a width of approximately 1 km along the entire length of the coastline with the Wicklow Town Urban Area omitted.

The Area of Outstanding Natural Beauty to the north of Wicklow Town is dominated by the open setting of the Broad Lough and the Murrough while to the south of the town it is dominated by Wicklow Head which overlooks Wicklow Town, extending out into the sea.

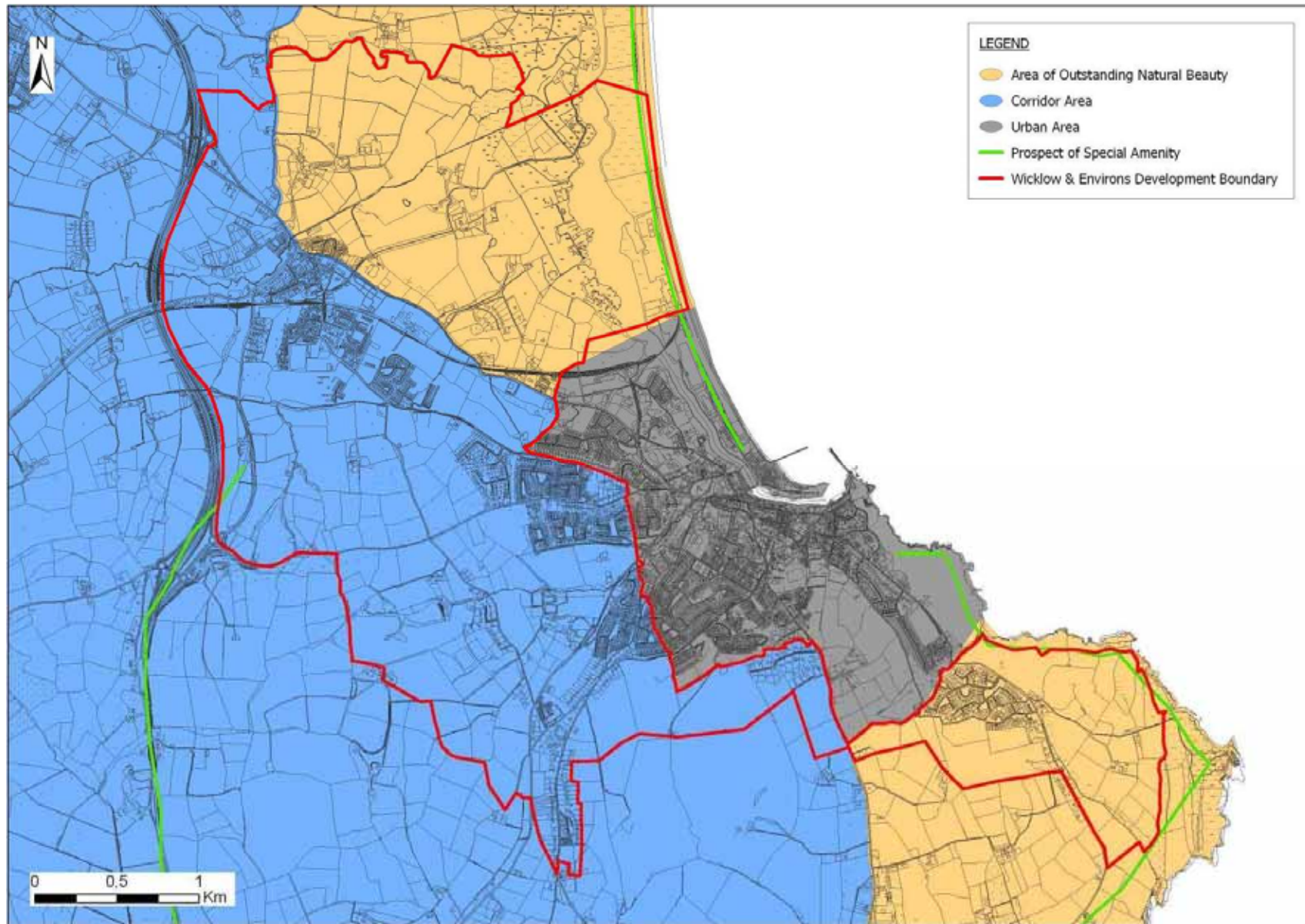
Much of this landscape area is unspoilt and is subject to a number of ecological designations within or adjacent to the study area including those attributed to the Murrough, Broad Lough and Wicklow Head.

Appendix 1 of the Wicklow County Development Plan 2004-2010 comprises a Coastal Zone Management Plan. This contains policies and objectives which seek to protect, conserve and enhance the coastal environment, including specific measures to help protect and improve the landscape and amenity characteristics of the area's coast.

#### 3.9.2.3 Eastern Corridor Area

The Eastern Corridor Area covers all of the landscape to the east of the Area of Outstanding Natural Beauty coastal area and the Wicklow Town Urban area.





**Figure 3.10 Landscape Characterisation and Prospects of Special Amenity**



It relates mainly to the lowland area of influence of the N11 road. This corridor area is under intense pressure from residential and other sporadic development.

The boundaries of the corridor generally follow what is considered to be the area upon which the greatest influence is exerted by the N11 access route. This route, for the most part, runs through the more low-lying and accessible tracts of land, connecting Wicklow Town to Ashford and subsequently Dublin in the north and Arklow and subsequently Enniscorthy and Wexford in the south.

#### **3.9.2.4 Prospects of Special Amenity**

The Wicklow County Development Plan 2004 - 2010 Landscape Characterisation identifies a number of Prospects of Special Amenity in the study area as follow:

- The prospect of the coast along the railway line from Greystones to Wicklow town (Prospect No. 7)
- The prospect of Murrough and sea from the N11 National Primary Road south of Rathnew (Prospect No. 28)
- Prospect of Hawkstown Hill from N11 National Primary Road at Ballinabarney (Prospect No. 29)
- Prospect towards sea from coast road from R750 Regional Road to Arklow (Prospect No. 30)

In addition to the above, the view/panorama from the coast road towards Wicklow Golf Course, Brides Head, Wicklow Head and the Coastline is protected as a View of Special Amenity Value or Special Interest (Number 21) under the Wicklow County Development Plan.

### **3.9.3 Existing Problems**

A problem with regard to the environmental component of landscape is the cumulative visual impact which occurs - especially in the visually prominent, elevated area in the southern portion of the study area - as a result of developments such as one off houses. Such developments, which individually often do not have significant adverse impacts, have the potential to cumulatively and adversely significantly impact upon sensitive landscapes.

### **3.9.4 Evolution of Landscape in the absence of a LAP**

In the absence of a LAP new developments would not be directed to the most appropriate locations and would have to be assessed on an application by application basis.

It is likely that in the absence of a LAP there would be no framework directing housing developments to appropriate locations or requiring certain mitigation measures for developments located in more sensitive landscapes. It is likely that one off housing applications would increase as would the potential that sensitive landscapes and sensitive landscape components - such as the prospects of special amenity value - would be impacted upon.

## **3.10 Overlay Mapping of Environmental Sensitivities**

### **3.10.1 Introduction**

In order to identify where most sensitivities in the study area occur, a number of the environmental sensitivities described above were weighted and mapped overlapping each other.

Environmental sensitivities on the figures which follow are indicated by colours and range from acute vulnerability (dark red) to 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 small housing developments, gradually causes a slow deterioration of a resource, such as water quality.

### **3.10.2 Methodology**

A weighting system applied through Geographical Information System (GIS) software was used in order to calculate the vulnerability of all parts of the study area. Equal value is given to all environmental components

(landscape, water, biodiversity etc.) with the following sensitivity factors given a weighting of 10 points: ecological designations; RPA Habitats Rivers; surface waters at significant risk; RPA Drinking Water Groundwater; entries to the Record of Monuments and Places; entries to the Record of Protected Structures and National Inventory of Architectural Heritage; Protected Trees; Prospects of Special Amenity, and; Areas of Outstanding Natural Beauty.

The scores for each area are added together in order to determine overall vulnerability as is shown on Table 3.4.

Score	Vulnerability Class
10	Low
20	Moderate
30	Vulnerable
40	High
50	Extreme
>60	Acute

**Table 3.4 Overall Vulnerability Classes**

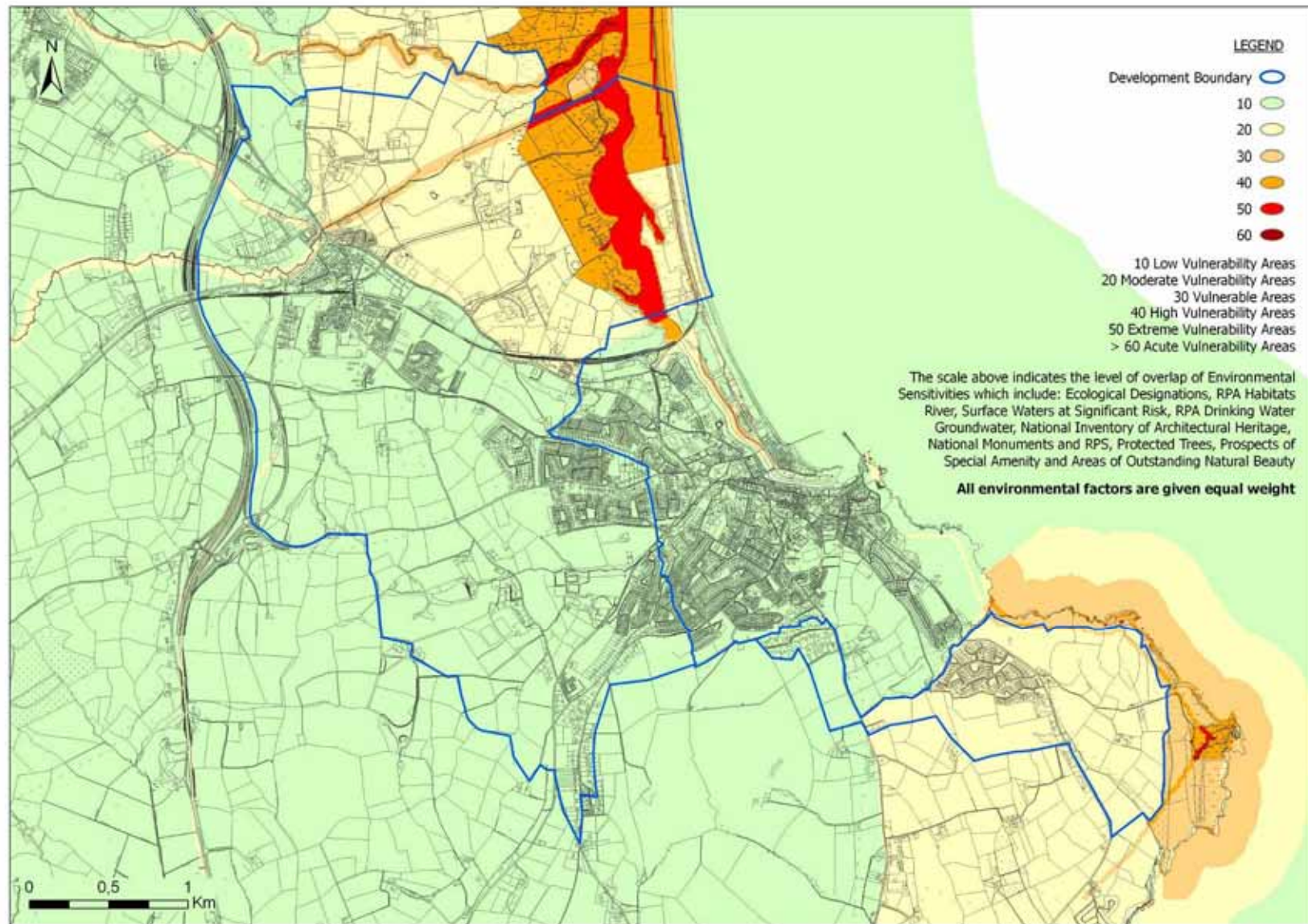
### 3.10.3 Mapping

Figure 3.11 Overlay of Weighted Environmental Sensitivities (all selected factors given equal weight) is an overlay of environmental sensitivities with all selected environmental factors given equal weight.

The weighting system used for Figure 3.12 Overlay of Weighted Environmental Sensitivities (Ecological Designations given greater weight) places more importance on ecological sensitivities (consequently these factors are given double the rating of other factors). Similarly, Figure 3.13 Overlay of Weighted Environmental Sensitivities (Landscape Sensitivities given greater weight) places more importance on landscape sensitivities.

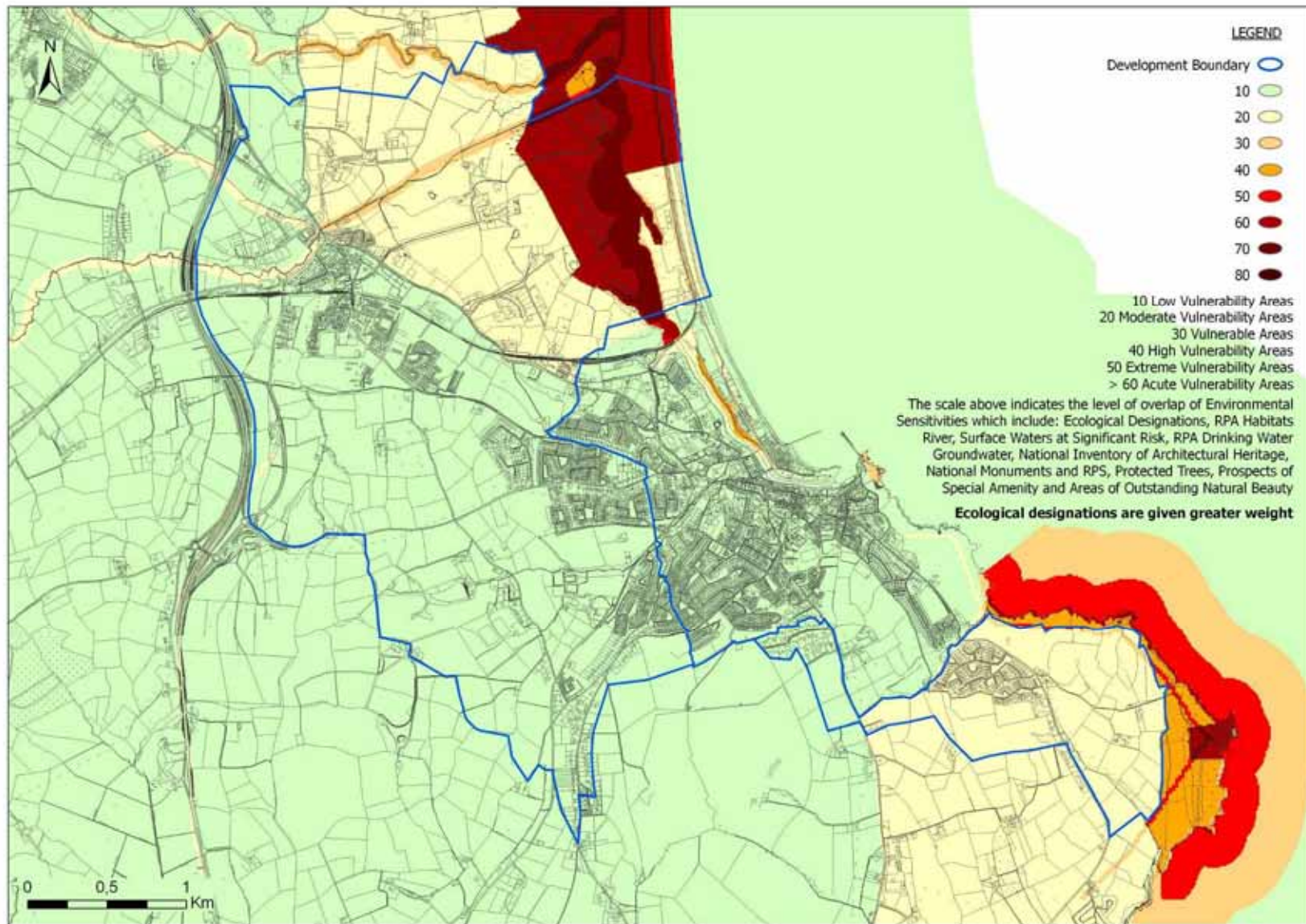
### 3.10.4 Limitations

It is noted that there are elements of subjectivity to the weighting systems used. However, efforts are made to be as objective as possible - for Figure 3.11 each sensitive factor is given an equal weighting while for Figures 3.12 and 3.13 an attempt has been made to take account of place differing importance on the environmental components of biodiversity, flora and fauna and landscape.



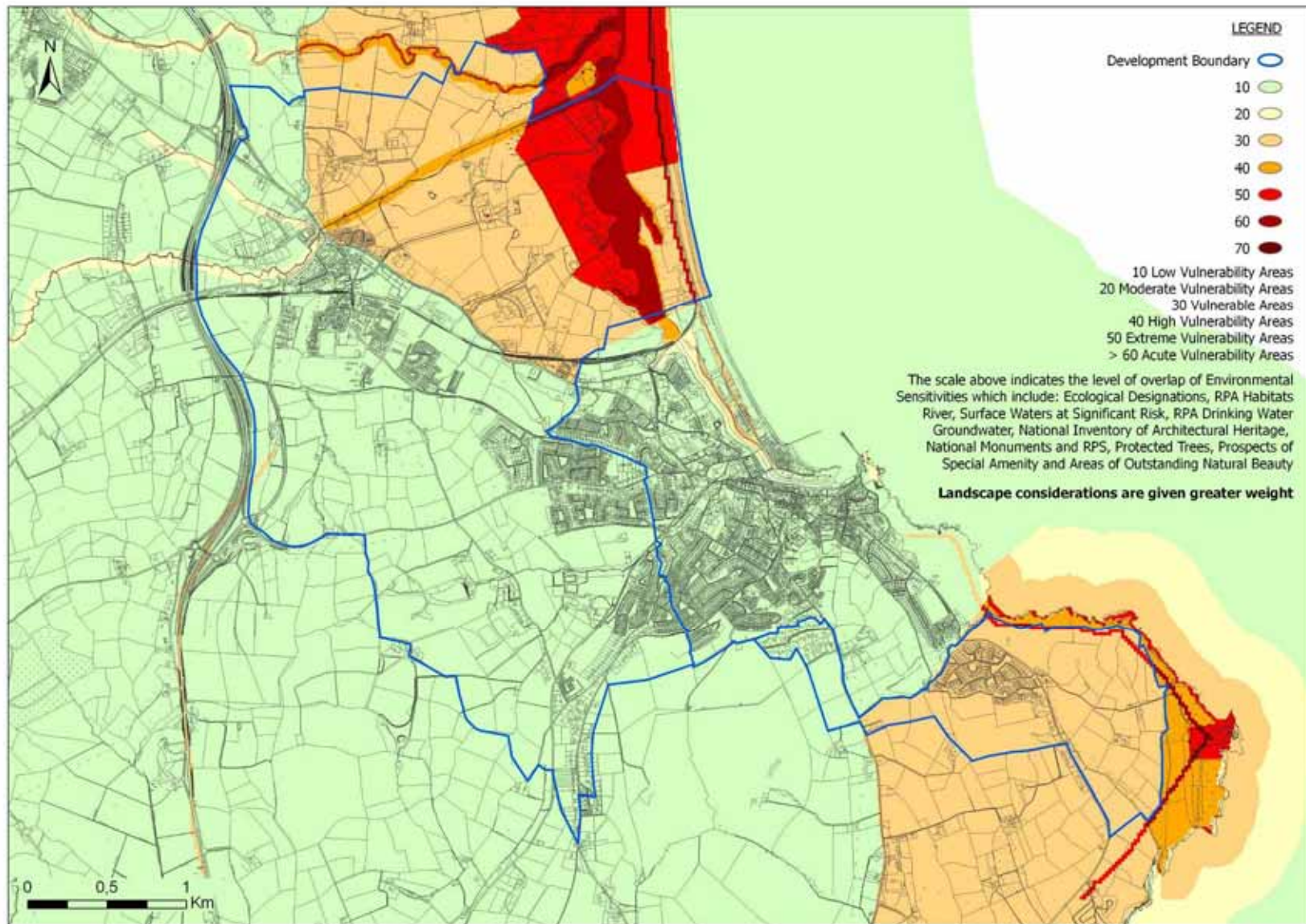
**Figure 3.11 Overlay of Weighted Environmental Sensitivities (all selected factors given equal weight)**





**Figure 3.12 Overlay of Weighted Environmental Sensitivities (Ecological Designations given greater weight)**





**Figure 3.13 Overlay of Weighted Environmental Sensitivities (Landscape Sensitivities given greater weight)**



## Section 4 Strategic Environmental Objectives

### 4.1 Introduction

Strategic Environmental Objectives (SEOs) are methodological measures against which the environmental effects of the LAP can be tested. If complied with in full, SEOs would result in an environmentally neutral impact from implementation of the LAP. The SEOs are set out under a range of topics and are used as objectives against which the LAP can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, if unmitigated.

SEOs are distinct from the objectives of the LAP - although they will often overlap - and are developed from international, national and local authority policies which generally govern environmental protection objectives. Such policy includes that of various European Directives which have been transposed into Irish law, relevant other Irish environmental legislation and the policies of the Wicklow County Council Development Plan 2005 to 2011, all of which are intended to be implemented at the local level in the Wicklow Environs / Rathnew area and integrated into the LAP for the area.

The SEA Directive requires that the evaluation be focused upon the relevant aspects of the environmental characteristics of areas likely to be significantly affected. In compliance with this requirement, SEOs have been developed for the relevant environmental components of this SEA. Most attention has been given to environmental components which are likely to be impacted as a result of implementation of a LAP.

A number of SEOs are linked to indicators which can facilitate the monitoring of the LAP, if adopted and implemented, as well as to targets which the LAP can help work towards. The primary source used in formulating the SEOs was Table 4B of the SEA Guidelines (DEHLG, 2004)<sup>16</sup>. This list has been amended to give effect to objectives that are considered relevant to this LAP. The use of SEOs, although not a statutory requirement, does fulfil obligations set out in Schedule 2B of the Planning and

Development (Strategic Environmental Assessment) Regulations 2004 (SI No. 436 of 2004).

### 4.2 Biodiversity, Flora and Fauna

#### 4.2.1 International, European and National Strategic Actions

##### 4.2.1.1 UN Convention on Biodiversity 1992

The United Nations Convention on Biological Diversity 1992 requires the promotion of the conservation and sustainable use of biodiversity.

##### 4.2.1.2 Habitats Directive 1992

The Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora) aims to ensure the conservation of certain natural habitats and species which are at favourable conservation status. Article 10 of the Habitats Directive recognises the importance of ecological networks as corridors and stepping stones for wildlife, including for migration, dispersal and genetic exchange of species of flora and fauna. The Directive requires that ecological connectivity and areas of ecological value outside the 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.

##### 4.2.1.3 National Biodiversity Plan 2002

The preparation and implementation of Ireland's National Biodiversity Plan (DAHGI, 2002)<sup>17</sup> complies with an obligation under the Convention. The overall goal of the Plan is to secure the conservation, including where possible the enhancement and sustainable use of biological diversity in Ireland and to contribute to conservation and sustainable use

<sup>16</sup> 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.

<sup>17</sup> Department of Arts, Heritage, Gaeltacht and the Islands (2002) *National Biodiversity Plan* Dublin: Government of Ireland

of biodiversity globally. Objectives following on from this goal are to:

- Conserve habitat diversity, including all sites of special biodiversity importance;
- Conserve species diversity;
- Conserve genetic diversity, both wild and domesticated, and;
- Contribute to the conservation and sustainable use of biodiversity and to advancing other obligations of the CBD in the EU, regionally and internationally.

#### 4.2.1.4 Wildlife (Amendment) Act 2000

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

#### 4.2.2 Wicklow County Development Plan 2004-2010

Relevant policies of the Wicklow County Development Plan 2004-2010 relating to biodiversity, flora and fauna include:

**Policy D10:** The Council will encourage the protection of all mature trees and hedgerows which occur on development sites and roads, and as part of the application process may require the submission of tree and hedgerow surveys to accompany applications for development. A detailed tree survey shall include the following. All trees with a diameter of 75mm and above (measured at a height of 1.4m above ground level) should be included in the survey. Hedgerows should be surveyed by reference to species, branch canopy, spread, shape, height and condition. Remedial works should also be indicated where appropriate and trees should be identified on site with suitable tags. Provision should be made in the site layout for incorporating specimen trees that are in good condition.

**Policy D11:** Development will not generally be permitted where there is likely damage or destruction either to trees protected by a Tree Preservation Order or those which have particular a local amenity or nature conservation value. Development that requires the felling of mature trees of amenity value, conservation value or special interest, even though

they may not be listed in the Development Plan, will be discouraged.

**Policy HL3:** The Council will have regard to the designated areas for wildlife that are located in the county including any additional or alterations that occur to these designations throughout the lifetime of this plan. The Council will facilitate the protection of these areas from any development that would adversely affect their conservation value.

**Policy HL4:** The Council will ensure that any development proposal in the vicinity of, or affecting in any way a designated area, provides sufficient information to show how its proposals will impact upon the designated area, and will include proposals for appropriate amelioration. In all such cases, the Council shall consult with the National Parks and Wildlife Section of the Department of the Environment, Heritage and Local Government (DOEHLG).

**Policy HL11:** The Council shall seek to identify, protect and conserve, in co-operation with the relevant statutory authorities and other groups, vulnerable, rare, and threatened species of wild fauna and flora and their habitats. Regard will be given to species listed in National and European legislation, and processes, international conventions, agreements and processes. Furthermore regard will be given to other available information such as the Important Bird Areas (IBAs) Inventory available from Birdwatch Ireland.

**Policy HL12:** The Council shall seek to identify, protect and conserve, in co-operation with the relevant statutory authorities and other groups a representative sample of the county's wildlife habitats of local or regional importance, not otherwise protected by legislation.

**Policy HL13:** The Council will seek to protect and enhance wherever possible wildlife habitats such as coast, cliff, dunes, rivers, streams, lakes, bog, fen, marsh, scrub and woodland, field boundaries (hedgerows, ditches and stone walls) which occur outside of designated areas. Taken as a whole, such features form an important network of habitats and corridors which allow wildlife to exist and flourish.

**Policy HL15:** The Council will ensure that the impact of new developments on bio-diversity is minimised, and will seek to include measures for the enhancement of bio-diversity in all proposals for large developments.

**Policy HL17:** The Council will promote the protection of trees, in particular native and broadleaf species, which are of conservation, and/or amenity value. Development that requires the felling of mature trees of special interest, even though they may not be listed in the Development Plan, will be discouraged.

**Policy HL19:** The Council will encourage the protection of hedgerows and stone walls which are important features of traditional farming practices,

which provide a unique corridor habitat for wildlife and which contribute to the visual amenities of the countryside. In particular the Council will expect all new developments to comply with the requirements for the protection of hedgerows and field boundaries and the inclusion of same within the overall development in Chapter 5 Design and Development.

**Policy HL20:** The Council will safeguard the legacy of demesne planting in the county. While it is recognised that some of these deciduous woodlands are managed on a commercial basis, it is nevertheless desirable to resist the clear felling or felling to a scale which subjects the remaining trees to windthrow or prevents their regeneration.

**Land Reclamation objective:** The Council will ensure that no reclamation of estuary land or coastal marshland occurs which would damage coastal habitats.

**Policy F3:** The Council shall encourage forestry in a manner that is sustainable and in harmony with the surrounding landscape, ensuring that no pollution or injury is caused to natural waters, wildlife habitats or conservation areas.

### 4.2.3 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been developed with regard to the environmental baseline and the objectives of the above strategic actions.

<b>SEO B1:</b>	To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites
<b>Indicator B1:</b>	Percentage of relevant habitats and designated ecological sites lost as a result of implementation of the LAP
<b>Target B1:</b>	No losses of relevant habitats, species or their sustaining resources in designated ecological sites as a result of implementation of the LAP

<b>SEO B2:</b>	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
<b>Indicator B2:</b>	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 LAP
<b>Target B2:</b>	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 LAP

<b>SEO B3:</b>	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
<b>Indicator B3:</b>	Percentage loss of connectivity between areas of local biodiversity as a result of implementation of the LAP – as evidenced from a resurvey of CORINE mapping
<b>Target B3:</b>	No ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity to be lost without remediation as a result of implementation of the LAP

Note: the impact of implementing the LAP on aquatic biodiversity and flora and fauna is influenced by impacts upon the quality of surface, estuarine and coastal waters which relate to SEO's W1 and 2.

### 4.3 Population and Human Health

The impact of implementing the LAP on human health is determined by the impacts which the LAP has upon environmental vectors including water, soil and air.

<b>SEO HH1:</b>	To protect human health from hazards or nuisances arising from exposure to incompatible landuses
<b>Indicator HH1:</b>	Occurrence (any) of a spatially concentrated deterioration in human health
<b>Target HH1:</b>	No spatial concentrations of health problems arising from environmental factors

## 4.4 Soil

### 4.4.1 Proposal for a Soil Framework Directive

To date, there is no legislation which is specific to the protection of soil resources. However, there is currently an EU Thematic Strategy on the protection of soil which includes a proposal for a Soil Framework Directive which proposes common principles for protecting soils across the EU.

Article 5 of the proposed Directive states that, for the purposes of preserving the various functions of soil; sealing, the development of artificial surfaces on top of soil resources, should be limited. The proposed Directive suggests that this may be achieved through rehabilitating brownfield sites, thus reducing the depletion of greenfield sites. The proposed Directive also states soil should be used in a sustainable manner which preserves its capacity to deliver ecological, economic and social services, while maintaining its functions so that future generations can meet their needs.

### 4.4.2 Wicklow County Development Plan 2004-2010

Relevant policies of the Wicklow County Development Plan 2004-2010 relating to soils (and geology) include:

**Policy HL9 Proposals involving significant ground excavations:** The Council will consult with the Geological Survey of Ireland as it deems necessary, when dealing with any proposals for major developments which will entail 'significant' ground excavation, such as quarrying, road cuttings, tunnels, major drainage works, and foundations for industrial or large buildings and complexes.

**Policy EM 12:** The Council will support the suitable development and expansion of resource based rural activities including timber processing and the processing of aggregates and stone, that is not damaging to the local environment, amenities and heritage.

**Policy EM 14:** The Council will facilitate and encourage the exploration and exploitation of minerals in the County in a manner, which is consistent with environmental protection and sustainable development.

**Policy EM 15:** The Council will facilitate the operations of the extractive aggregates industry where they conform to the principle of sustainability and do not significantly affect residential, environmental or tourism amenities.

**Policy EM 16:** The Council will encourage the use, development and diversification of the County's indigenous natural rock industry, particularly where it can be shown to benefit processing, craft or other related industries.

**Objective re. Sand and Gravel Removal:** It is a control objective of the Council to ensure that there is no removal of sand dunes, beach sands or gravels through application of the provisions of the Foreshore (Amendment) Act, 1992, in close co-operation with the Department of the Marine.

### 4.4.3 SEOs, Indicators and Targets

The following SEO, Indicator and Target have been developed with regard to the environmental baseline and the proposed Soil Directive.

<b>SEO S1:</b>	Maximise the sustainable re-use of brownfield lands, and maximise the use of the existing built environment rather than developing greenfield lands <sup>18</sup>
<b>Indicator S1:</b>	Area of brownfield land developed over the plan period
<b>Target S1:</b>	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 LAP) at the end of the LAP lifespan

Note: the impact of implementing the LAP on soil quality is influenced by impacts upon the quality of surface and ground waters which relate to SEOs W1 and 2.

## 4.5 Water

### 4.5.1 The WFD 2000

#### 4.5.1.1 Overview

As described in the environmental baseline description, the Eastern River Basin District's (ERBD) Characterisation Report includes a risk assessment which classifies surface waters in the Plan area as being either "at risk" in the context of the Directive's objectives. Water bodies placed in the "at risk" category will need improvement to achieve the required status. Groundwaters are classified as being "strongly expected to achieve good status" with reference to the Directive's objectives.

#### 4.5.1.2 Surface Waters

Good status as defined by the Water Framework Directive equates to approximately Q4 in the national scheme of biological classification of rivers as set out by the EPA.

#### 4.5.1.3 Quality Standards and Threshold Values for Ground Water

Detailed provisions to achieve the aims of the WFD for ground water have been presented in a Groundwater Daughter Directive (Directive

2006/118/EC on the protection of groundwater against pollution and deterioration).

This Directive sets up environmental objectives of good groundwater quantitative and chemical status, as well as ensuring a continuity to the 1980 Groundwater Directive (Directive 80/68/EEC on the protection of groundwater against pollution caused by dangerous substances) which is due to be repealed under the WFD by the end of 2013.

Article 3 of the 2006 Directive required that the assessment of the chemical status of groundwater use both quality standards identified in Annex I of the Directive and threshold values to be set by individual member states.

Groundwater quality standards are environmental quality standards expressed as the concentration of a particular pollutant, group of pollutants or indicator of pollution in groundwater, which should not be exceeded in order to protect human health and the environment. Annex I of the Directive sets standards for two pollutants: Nitrates - 50mg/l - and; Active substances in pesticides<sup>19</sup>, including their relevant metabolites, degradation and reaction products - 0,1 µg/l and 0,5 µg/l (total<sup>20</sup>).

Irish groundwater threshold values<sup>21</sup> are currently in the process of being set by the EPA.

<sup>19</sup> 'Pesticides' means plant protection products and biocidal products as defined in Article 2 of Directive 91/414/EEC and in Article 2 of Directive 98/8/EC, respectively.

<sup>20</sup> 'Total' means the sum of all individual pesticides detected and quantified in the monitoring procedure, including their relevant metabolites, degradation and reaction products.

<sup>21</sup> Threshold values are to be established by Member States for all pollutants and indicators of pollution which characterise groundwater bodies classified as being at risk of failing to achieve good groundwater chemical status under the WFD. Threshold values are required to be established in a way that, should the monitoring results at a representative monitoring point exceed the thresholds, this will indicate a risk that one or more of the conditions for good groundwater chemical status - with regard to the ability of groundwater to support human uses and with regard to waters used for the abstraction of drinking water - are not being met.

<sup>18</sup> SEO S1 was identified as conflicting with SEOs CH1 and CH2



#### 4.5.2 Wicklow County Development Plan 2004-2010

Relevant policies of the Wicklow County Development Plan 2004-2010 relating to water include:

**Policy W5:** The Council will implement the provisions of the River Basin Management Plans (Eastern River and South Eastern River Basin Management Plans) in order to protect the environment, public health and the recreational potential of these water bodies.

**Policy W6:** The Council will have regard to the Wicklow Groundwater Protection Scheme 2003.

**Policy W7:** Within the variety of watercourses that the Council considers may be susceptible to flooding, developers may be required to provide hydraulic and flood impact information in support of their planning application. In such cases, developers must show the measures they will take to minimise flood risk, including attenuation in situ and downstream of their development to the satisfaction of the Council.

**Policy WS1:** The Council will provide satisfactory wastewater treatment and ancillary works to all towns and villages in the county to serve existing and future populations in accordance with the Wicklow Settlement Strategy and Hierarchy, in accordance with the Water Framework Directive 2000, the Water Services Investment Programme and those identified in Schedule 9.3.

**Policy WS2:** It is the policy of Wicklow County Council to promote in a sustainable manner development and expansion of County Wicklow in accordance with the recommendations of the Greater Dublin Strategic Drainage Study which includes the following documents:

1. Climate change policy
2. Basement policy
3. Inflow and infiltration minimisation to sewer networks
4. New development policy
5. Environmental management policy

**Policy HL 14:** The Council will discourage proposals for development that are in, or would interfere with the natural flood plain.

**Policy F3:** The Council shall encourage forestry in a manner that is sustainable and in harmony with the surrounding landscape, ensuring that no pollution or injury is caused to natural waters, wildlife habitats or conservation areas.

#### 4.5.3 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been developed with regard to the Wicklow Environs & Rathnew environmental baseline and the objectives of the above strategic actions.

<b>SEO W1:</b>	To maintain and improve, where possible, the quality of rivers
<b>Indicator W1:</b>	Biotic Quality Rating (Q Value)
<b>Target W1i:</b>	To maintain a biotic quality rating of Q4, in line with the requirement to achieve good water status under the Water Framework Directive, by 2015
<b>Target W1ii:</b>	To improve biotic quality ratings, where possible, to Q5

<b>SEO W2:</b>	To prevent pollution and contamination of ground water
<b>Indicator W2:</b>	Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC
<b>Target W2:</b>	Compliance with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC

### 4.6 Air and Climatic Factors

#### 4.6.1 Kyoto Protocol

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

#### 4.6.2 Wicklow County Development Plan 2004-2010

Relevant policies of the Wicklow County Development Plan 2004-2010 relating to air quality include:

**Policy WS11:** The Council will enforce the provisions of the 1987 Air Pollution Act, in order to control industrial and other emissions in order to protect ambient air quality in County Wicklow.

**Policy WS 12:** The Council shall have regard to the EPA Act, 1992 and the EPA Noise Regulations, 1994, in aiming to minimise noise pollution in the county.

**Policy EN1 :** The Council will support national and international initiatives for limiting emissions of greenhouse gases and encouraging the development of renewable energy sources.

**Policy EN2 :** The Council will continue to support the development of renewable energy in suitable locations in an environmentally sustainable manner while complying with the County Development Plan policy and principles of proper planning and sustainable development.

**Policy EN3 :** The Council will encourage the development of wind energy in suitable locations in an environmentally sustainable manner.

**Policy EN4 :** The Council will prepare an Indicative Wind Energy Strategy within 12 months of the adoption of the County Development Plan 2004-2010.

**Policy EN5:** The Council will encourage the development of small-scale hydroelectric generation in an environmentally sustainable manner.

**Policy EN6:** The Council will support the further extension of the gas grid into County Wicklow to serve residential communities, commerce and industry.

**Policy EN7:** The Council will support the necessary generation of electrical power in County Wicklow.

<b>SEO A1:</b>	To minimise increases in travel related greenhouse emissions to air
<b>Indicator A1i<sup>22</sup>:</b>	Percentage of population within the plan area travelling to work or school by public transport or non-mechanical means
<b>Target A1i:</b>	An increase in the percentage of the population travelling to work or school by public transport or non-mechanical means
<b>Indicator A1ii<sup>23</sup>:</b>	Average distance travelled to work or school by the population of the Wicklow Environs and Rathnew area
<b>Target A1ii:</b>	A decrease in the average distance travelled to work or school by the population of the Wicklow Environs and Rathnew area

### 4.7 Material Assets

#### 4.7.1 Waste Water

The treatment of wastewater is governed by the Urban Waste Water Treatment Directive (91/271/EEC) (amended by Directive 98/15/EEC) transposed into Irish law by the Urban Waste Water Treatment Regulations 2001 (SI 254 of 2001). The Directive aims to protect the environment from the adverse effects of the wastewater discharges by ensuring that wastewater is appropriately treated before it is discharged to the environment. The Regulations stipulate that sewage treatment facilities are in place in all towns by 2005.

Appropriate treatment is essential in order to meet the requirements of the Water Framework Directive.

#### 4.7.2 Natural Resources

Impacts upon natural resources are integrated into SEOs B1, B2, B3, S1, W1, W2 and L1.

<sup>22</sup> As measured by the Central Statistics Office

<sup>23</sup> As measured by the Central Statistics Office

### 4.7.3 Roads

The N11 National Primary Road links Wicklow Town, its Environs and Rathnew with Ashford and subsequently Dublin to the north and Enniscorthy and subsequently Wexford to the south. This route facilitates the movement of commuters into the Greater Dublin Area.

Within the Rathnew and the Environs area the R750 Regional Road from Rathnew to Wicklow Town, the R752, from Wicklow Town to Rathdrum and a network of minor local roads facilitate the movement of vehicles.

The environmental effects of new road projects in the Wicklow Environs and Rathnew area will be examined by any Environmental Impact Assessment subject which may be required and by the planning process.

### 4.7.4 Wicklow County Development Plan 2004- 2010

Relevant policies of the Wicklow County Development Plan 2004-2010 relating to material assets include:

**Policy EM 12:** The Council will support the suitable development and expansion of resource based rural activities including timber processing and the processing of aggregates and stone, that is not damaging to the local environment, amenities and heritage.

**Policy EM 14:** The Council will facilitate and encourage the exploration and exploitation of minerals in the County in a manner, which is consistent with environmental protection and sustainable development.

**Policy EM 15:** The Council will facilitate the operations of the extractive aggregates industry where they conform to the principle of sustainability and do not significantly affect residential, environmental or tourism amenities.

**Policy EM 16:** The Council will encourage the use, development and diversification of the County's indigenous natural rock industry, particularly where it can be shown to benefit processing, craft or other related industries.

**Policy T1:** The Council will, in line with Government and National Roads Authority (NRA) policies, and in accordance with the "Roads Needs Study", published by the NRA and the National Development Plan, seek to bring national primary and secondary roads up to the appropriate standards.

**Policy T2:** The Council will continue the improvement of regional roads and to develop the local roads to the appropriate standards consistent with present and expected traffic flow, including predicted increased traffic flows to likely development and in accordance with Government policy and the Roads Programme adopted by the Council. New and existing road space will be allocated to provide for bus, cycle and pedestrians.

**Policy T3:** The Council shall have regard to provisions of relevant legislation relating to the protection of built and natural heritage when carrying out roads improvement works. The council shall consult with the National Parks and Wildlife Service (in accordance 'notifiable actions' provisions of the E.U. Habitats Directive) in advance of any upgrading works to the Sally Gap road (as identified on map 17b), as this road is located in a Special Area of Conservation (SAC), and shall consult on any proposals that would have an impact upon other designated wildlife areas.

**Policy T9:** The Council will support the further development of public transport services and improved public transport links with Dublin City for residents of County Wicklow.

**Policy T10:** The Council will support the further improvement of public transport services within the County and in particular facilitating the provision and promotion of privately run transportation systems in rural areas such as the Wicklow Rural Transport Initiative.

**Policy T11:** The Council will ensure that Car Parking Standards are generally adhered to in accordance with Table 5.3 illustrated in Chapter 5, while ensuring that the objectives and principles of the DTO's Strategy are not compromised.

**Policy T12:** The Council will encourage the development of cycling and walking as sustainable modes of transport.

**Policy T13:** Where planning applications are being granted for new major developments, it is the policy of the Council to ensure that an adequate cycle network is provided.

**Policy T14:** The Council will ensure that all large developments are subject to a Traffic Impact Assessment. The Council may also require the provision of Road Safety Audits in the case of substantial road works.

**Objective re. Sand and Gravel Removal:** It is a control objective of the Council to ensure that there is no removal of sand dunes, beach sands or gravels through application of the provisions of the Foreshore (Amendment) Act, 1992, in close co-operation with the Department of the Marine.

**Development Close to Soft Coastlines:** The Council will protect both public and private investments by prohibiting any new building or development

(including caravans and temporary dwellings) within 50 metres of 'soft shorelines' as defined.

**Development Close to Sea Level:** The Council will ensure that no new habitable structures shall be permitted below 3 metres (O.D. Malin) in the interest of public safety and the protection of property and residential amenity.

#### 4.7.5 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been developed with regard to the environmental baseline and the objectives of the above strategic actions.

<b>SEO M1:</b>	To serve new development with appropriate waste water treatment
<b>Indicator M1:</b>	Number of new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the LAP
<b>Target M1:</b>	No new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the LAP

### 4.8 Cultural Heritage

#### 4.8.1 Archaeological Heritage

##### 4.8.1.1 National Protection

The Record of Monuments and Places (RMP) for County Wicklow lists and protects monuments and places under Section 12 of the National Monuments (Amending National Monument Acts from 1930 to 1994) Act, 1994.

Any potential impacts on Recorded Monuments would require the consent of the Minister for the Environment, Heritage and Local Government under Section 14 of the National Monuments Act 1930 as amended by Section 5 of the National Monuments Act 2004.

#### 4.8.2 Wicklow County Development Plan 2004-2010

Relevant policies of the Wicklow County Development Plan 2004-2010 relating to archaeological heritage include:

##### Archaeological assessment requirements

**Policy HL26:** The Council will ensure that proposed developments that may due to their size, location, or nature have implications for the archaeological heritage, are subject to an archaeological assessment. Such an assessment will ensure that the development can be designed in such a way as to avoid or minimise any potential effects on the archaeological heritage. In all such cases the Council shall consult with the National Monuments Section of the Department of the Environment, Heritage and Local Government (DOEHLG). Proposals for development which are likely to have an impact upon archaeological heritage, for example those in riverine, intertidal and sub-tidal environments shall be subject to archaeological assessment.

**Policy HL27:** When dealing with proposals for development that would impact upon archaeological sites and/or features, the Council will promote a presumption in favour of the 'preservation in situ' of archaeological remains and settings, in accordance with government policy. Where permission for such proposals is granted, the Council will require the developer to have the site works supervised by a competent archaeologist. In all such cases the Council will consult with the National Monuments Section of the Department of the Environment, Heritage and Local Government (DOEHLG).

**Policy HL30:** The Council will ensure that provision is made through the development control process, for the protection of previously unknown archaeological sites and features where they are discovered during development works. In all such cases the Council will consult with the National Monuments Section of the Department of the Environment, Heritage and Local Government (DOEHLG).

#### 4.8.3 Architectural Heritage

##### 4.8.3.1 National Heritage

Protected Structures are legislated for under Section 51 of the Planning and Development Act 2000. Protected Structures must not be altered or demolished in whole or part without obtaining planning permission or confirmation from the planning authority that the part of the structure to be altered is not protected.

#### 4.8.4 Wicklow County Development Plan 2004-2010

Relevant policies of the Wicklow County Development Plan 2004-2010 relating to architectural heritage include:

**Policy D6:** The Council will promote good urban design, of buildings, paving, lighting and street furniture.

**Policy D8:** The Council will encourage good shopfront design in the development of new and refurbishment of existing shopfronts in accordance with specified principles.

**Policy HL36:** The Council will encourage the protection, appreciation and appropriate revitalisation of the architectural heritage of the county.

**Policy HL39:** The Council will ensure that alteration to, or extension of, protected structures will only be permitted if the proposal is in keeping with the character of the structure.

**Policy HL40:** The Council will require sufficient information to be submitted in order to facilitate a full consideration of the potential impacts of proposals for the change of use of Protected Structures.

**Policy HL41:** The Council shall only consider the change of use of Protected Structures, if it can be shown that the structure, character, appearance and setting will not be adversely affected.

**Policy HL42:** The Council will strongly resist the demolition of any Protected Structure, unless satisfied that exceptional circumstances exist. In cases where demolition or partial demolition of such a structure is permitted, or where permission is given for the removal of feature(s), the proper recording of the building will be required before any changes are made. In all such cases, the opinion of the DOEHLG and other relevant bodies will be sought.

**SEO CH1:** To protect the archaeological heritage of Wicklow Environs and Rathnew 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.

**Indicator 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.

**Target 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.

#### 4.8.5 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been developed with regard to the environmental baseline, the above designations and the SEA architectural heritage study.



<b>SEO CH2:</b>	To preserve and protect the special interest and character of Wicklow Environs and Rathnew's architectural heritage with regard to entries to the Record of Protected Structures and their context within the surrounding landscape where relevant.
<b>Indicator CH2:</b>	Number of unauthorised developments occurring which result in physical loss or loss entries to the Record of Protected Structures and/or their context within the surrounding landscape where relevant.
<b>Target CH2:</b>	No unauthorised developments occurring which result in physical loss or loss entries to the Record of Protected Structures and/or their context within the surrounding landscape where relevant.

## 4.9 Landscape

### 4.9.1 European Landscape Convention 2002

Ireland signed and ratified the European Landscape Convention in 2002 with the Convention coming into force in Ireland in 2004. The aims of the Convention include: to conserve and maintain the significant or characteristic features of a landscape, justified by its heritage value derived from its natural configuration and/or from human activity; to harmonise changes in the landscape which are brought about by social, economic and environmental processes, and to enhance landscapes.

### 4.9.2 Wicklow County Development Plan 2004-2010

Relevant policies of the Wicklow County Development Plan 2004-2010 relating to landscape include:

**Policy SS15:** Permissions for developments within high Vulnerability Landscape Areas of Outstanding Natural Beauty shall be subject to a Visual Impact Assessment.

#### **Policy A1 Control, Siting and Design of Advertising:**

The Council will exercise strict control on advertising signs and related materials in order to avoid visual clutter, to protect and preserve the amenity and/or special interest of the area, to ensure traffic safety and where applicable, to preserve the integrity of buildings, particularly those listed for preservation.

**Policy A2 Roadside Advertising Structures:** Signs will be only licensed where premises are located away from main traffic routes in rural areas and where they meet specified criteria.

The Council will generally refuse licence applications for the location of advance advertising structures along approach roads into towns and villages and along National Primary and Secondary Routes save for tourist attractions of national or regional importance.

**Policy A3 Fingerpost Signs:** The Council will only consider the licensing of fingerpost signs for businesses in isolated urban or rural locations. Such signs, where licensed shall comply with specified criteria.

**Policy A4 Tourist Signage:** The Council will encourage the more effective location of tourist signage in a manner that will help the user identify tourist attractions of national or regional importance, yet does not lead to visual clutter, disamenity or traffic hazard.

**Policy A5 Advertising in Towns and Villages:** The Council will not permit the erection of advertising hoardings and advertising structures within the built up area of towns and villages and in particular in residential areas and on buildings or structures listed for preservation. The Council will prevent the location of such structures where they compete with traffic signs, sight lines or distract attention at a junction so as to create a traffic hazard.

The Council will only consider permitting the location of advertising hoardings within towns in exceptional circumstances where they improve the neighbourhood by screening unsightly features. Permission for such hoardings will be granted only for limited periods.

#### **Policy A6 Building Facade Advertising Control**

**Guidelines:** Specified guidelines shall apply to building facade advertising especially in towns and villages.

**Policy A7 Advertising in Rural Areas:** The Council will discourage the erection of advertising hoardings and advance advertising in rural areas and in particular where they are adjacent to or affect buildings, structures, areas, views or prospects that are listed for preservation.

**Policy HL1:** The Council will ensure that the development of Wicklow takes full account of the Designated Landscape categories and the protection of their amenities and assets.

**Policy HL6:** It is the policy of the Council to preserve views and prospects as identified in schedule 10.6 / 10.7 to protect the natural beauty of the County.

**Policy HL22:** The Council will protect and preserve access routes to amenity areas generally.

**Policy HL23:** The Council will encourage the provision of access routes to amenity areas with consultation with National Parks and Wildlife service and in co-operation and agreement with landowners and will protect such areas from inappropriate development infringing upon accepted access routes.

**Policy T&R 11:** The Council will promote, in co-operation with the various relevant organisations, the more extensive use of the coastal strip for such activities as touring, sight-seeing, walking, pony trekking, etc. as a tourism resource and as a recreational resource for the residents of County Wicklow and other visitors.

**Policy F3:** The Council shall encourage forestry in a manner that is sustainable and in harmony with the surrounding landscape, ensuring that no pollution or injury is caused to natural waters, wildlife habitats or conservation areas.

**Policy F4:** Forestry will be appropriate in terms of nature and scale to the surrounding area.

**SEO L1:** To avoid significant adverse impacts on the landscape, especially with regard to Wicklow Environs and Rathnew's sensitive landscape features and designated scenic views.

**Indicator L1:** Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to Wicklow Environs and Rathnew's sensitive landscape features and designated scenic views - resulting from development which is granted permission under the LAP

**Target L1:** No developments permitted which result in avoidable impacts on the landscape - especially with regard to Wicklow Environs and Rathnew's sensitive landscape features and designated scenic views - resulting from development which is granted permission under the LAP

### 4.9.3 SEOs, Indicators and Targets

The following SEOs, Indicators and Targets have been developed with regard to the environmental baseline, the above strategic actions and the SEA landscape study.

## Section 5 A Local Area Plan for Wicklow Environs and Rathnew

### 5.1 The Local Area Plan

#### 5.1.1 Introduction

Under Section 18 of the Planning and Development Act 2000 a planning authority may make a local area plan (LAP) in respect of local areas - those areas designated as a town, having a population in excess of 2,000 and situated within the functional area of a planning authority which is a county council.

The Wicklow Environs and Rathnew Local Area Plan (LAP), with which this report should be read in conjunction, has been prepared in response to the development pressures facing Wicklow Environs and Rathnew and the need to provide a positive framework for the future development of the area that is consistent with the policies and objectives contained in the Wicklow County Development Plan 2004 - 2010 and other higher forward planning strategic actions.

The LAP is intended to provide for the proper planning and sustainable development for Wicklow Environs and Rathnew for a duration of six years, from adoption in 2008 until 2014, unless amended. It consists of a written statement and maps which give a graphic representation of the proposals of the Plan, indicating land use and other development standards together with various local objectives.

The LAP is divided into eight sections:

- Section 1 states the purpose of the LAP;
- Section 2 provides a policy context for the LAP;
- Section 3 describes the overall strategy of the Plan;
- Section 4 sets out development control objectives that will be applied to development proposals in the area, in addition to those set out in the County Development Plan, in order to regulate the impact of development on the

environment in pursuance of the declared policies;

- Section 5 details specific provisions for a total of ten Action Areas within the Plan area and includes a subsection on phasing of development;
- Section 6 sets out the land use zoning objectives;
- Section 7 describes the proposed implementation of the LAP; and,
- Section 8 provides an overview of the SEA.

#### 5.1.2 The Vision

The Strategic Vision of the Plan is to: ensure that the environs of Wicklow Town and Rathnew develop so as to integrate fully with the existing built area of Wicklow Town, so that the area functions as one entity, while preserving the character of each of the existing areas, and; to ensure that the area shall perform a function that is consistent with its regional role as a 'Primary Development Centre' within the GDA, and develop to enhance Wicklow's status as the County Town, and the key service centre for east County Wicklow.

The Strategic Policy Objectives of the Plan are that it shall be the policy of the County Council to:

- Allow for the development of Wicklow Environs and Rathnew in an orderly manner;
- Provide for the expansion of Wicklow Environs and Rathnew on lands close to the town centre zonings, which may be developed with least infrastructural expenditure, which generate the shortest journeys and which provide good access to the range of social, educational and economic facilities available in the town;

- Provide for the protection from development of areas of high visual amenity, special interest and scientific interest; and,
- Use its powers, including powers of compulsory acquisition, to facilitate the achievement of the objectives, including zoning objectives, of this Plan.

### **5.1.3 Alternatives**

Sections 6 and 7 of this report identify, describe and evaluate different alternatives of how to achieve the vision which is set out for the LAP, taking into account the relevant land use strategic actions (see Section 5.2 below), the SEOs identified in Section 4 as well as the geographical scope of the LAP. The evaluation

of alternatives results in the identification of a preferred alternative which was submitted to the Elected Members of Wicklow County Council along with this Environmental Report for consideration.

## **5.2 Relevant Forward Planning Strategic Actions**

Section 5 of Part A of the LAP describes the conformity of the LAP with the provisions of the National Spatial Strategy (2002-2020), the Regional Planning Guidelines (2004-2016) and with the Wicklow County Development Plan 2004-2010.

## Section 6 Description of Alternative Plan Scenarios

### 6.1 Introduction

One of the critical roles of SEA is to facilitate an evaluation of the likely environmental consequences of a range of alternative strategies for accommodating the future development of the Wicklow Environs and Rathnew area within the constraints imposed by intrinsic environmental conditions. In this instance the consideration of conceptual alternatives arose during the early stages of plan inception at a workshop with the development plan team. The principal findings are presented in this section.

The SEA Directive requires that reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme, are identified, described and evaluated for their likely significant effects on the environment. Alternatives were formulated through consultation with the plan-making team at WCC.

Section 7 of this report identifies, describes and evaluates the different alternatives of how to achieve the overall strategy - taking into account the relevant land use strategic actions and the SEOs identified previously, as well as the geographical scope of the LAP. The evaluation of alternatives resulted in the identification of a preferred alternative which was submitted to the Elected Members of the Council along with an earlier draft of this report. The Elected Members adopted a Plan which closely corresponds to the preferred alternative but which included a number of changes. These changes are detailed under Section 7 of this updated and final environmental report.

### 6.2 Identification and Description of Alternative Scenarios

#### 6.2.1 Introduction

A range of three potential scenarios for the types of planning strategies that could be adopted are described in this section. They represent increasingly intensive and extensive development. A Number of features are core to

all scenarios, namely the location, extent and use of Action Areas 2, 3, 5, 6, 7, 8 and 9 as well as the areas immediately zoning of existing developed areas.

#### 6.2.2 Scenario 1 *Minimal Development Envelope*

Characteristics of this Scenario (see Figure 6.1) include extensive transitional zones between developed areas and open countryside formed by areas zoned for various categories of open space and amenities. In particular it provides a very significant and proactive protection for the rising lands to the south of the town that are visually conspicuous as well to the equally conspicuous western shore of Broad Lough. Development west of the town is largely contained - both visually and physically - between the Motorway and the rising ground around Tinahilly house.

#### 6.2.3 Scenario 2 *Moderate Development Envelope*

Characteristics of this Scenario (see Figure 6.2) are similar to Scenario 1 with the following exceptions that have environmental consequences: the employment area impinges further northward along the natural habitats of the Murrough<sup>24</sup>; there is no protection afforded to the rising ground to the south of the town; there is less open space around the perimeter of the town; housing begins to encroach closer to the southern boundaries of the Broad Lough<sup>25</sup>, and; development along the northern boundary has no zoned transition between development land and unzoned agricultural lands.

This scenario would include the following Local Objectives:

- Local Objective 1: Planning applications on this site must be accompanied by an eco-hydrological assessment. This must comply with Section 18 of the European Communities (Natural Habitats) Regulations 1997 and identify and evaluate the direct and indirect effects

<sup>24</sup> The Murrough SPA 004186; The Murrough NHA 000730; The Murrough Wetlands cSAC 002249

<sup>25</sup> Ibid.



which the development would be likely to have upon the designated site, ecological connectivity and drainage. Such planning applications must also be accompanied by evidence of consultation between the applicant and the National Parks and Wildlife Service about the assessment.

- Local Objective 3: to provide for the development of greenway linkages with the objective of facilitating non-motorised transport modes.

#### **6.2.4 Scenario 3 *Maximum Development Envelope***

This Scenario (see Figure 6.3) represents a further intensification of the developments and associated impacts noted in Scenario 3. This Scenario envisages no transition between any zoned land and the unzoned rural areas. It proposes visually conspicuous development on rising lands in many locations – most notably south of the town, along the shore of Broad Lough, and on rising ground to the south-west of the town. It will significantly and adversely affect habitats and ecological process on wetland to the north of the town as well as along the western shore of Broad Lough and along the Murrough itself. It extends development beyond the boundary of the motorway and will lead to unsustainable patterns of local and personal mobility. The proposed area of high density Residential development will be inherently visually conspicuous on account of the existing topography.

This scenario would include the following Local Objectives:

- Local Objective 2: to provide for a major out of town shopping centre
- Local Objective 3: to provide for medium density housing with views of the Murrough

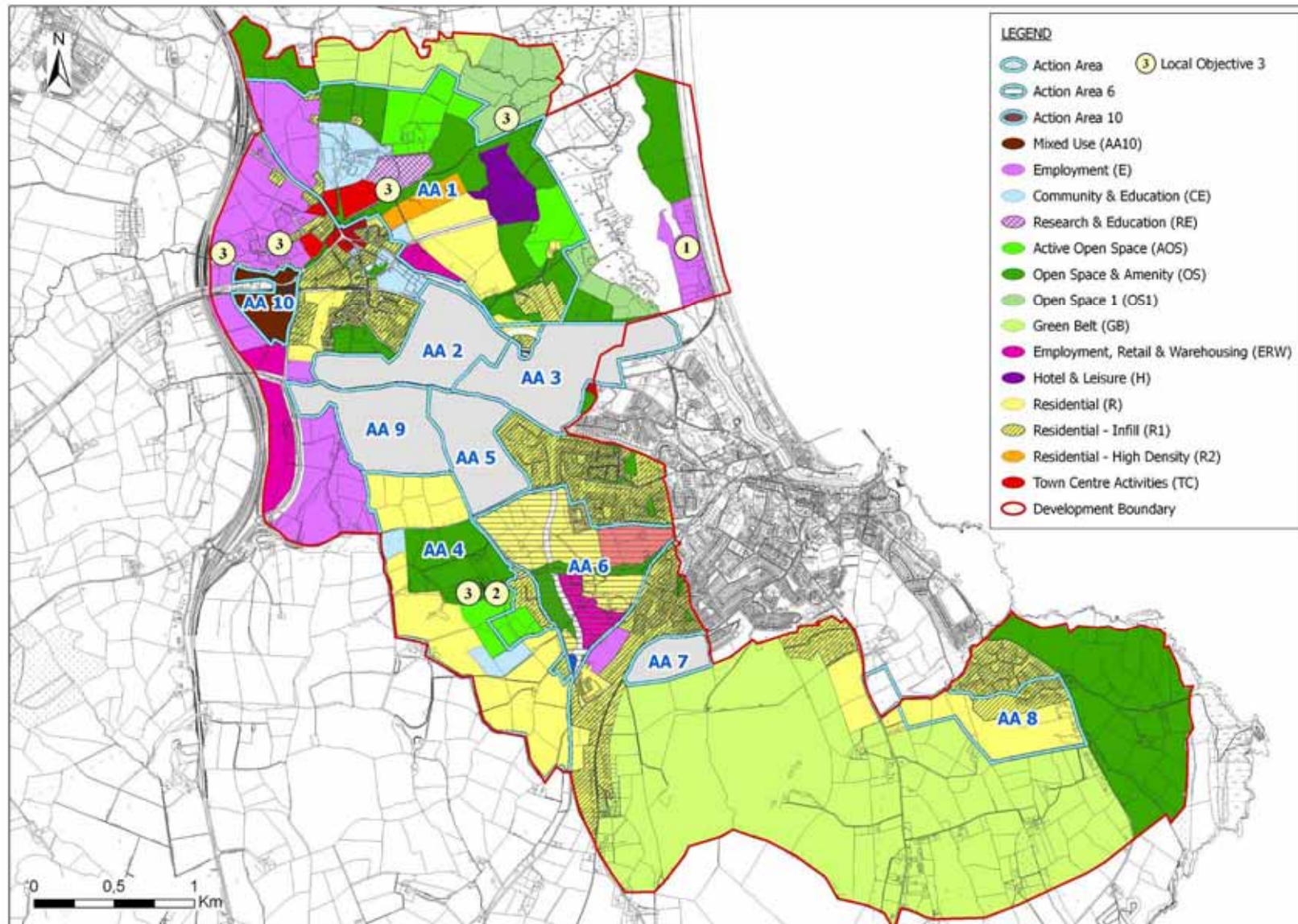


Figure 6.1 Scenario 1 *Minimal Development Envelope*

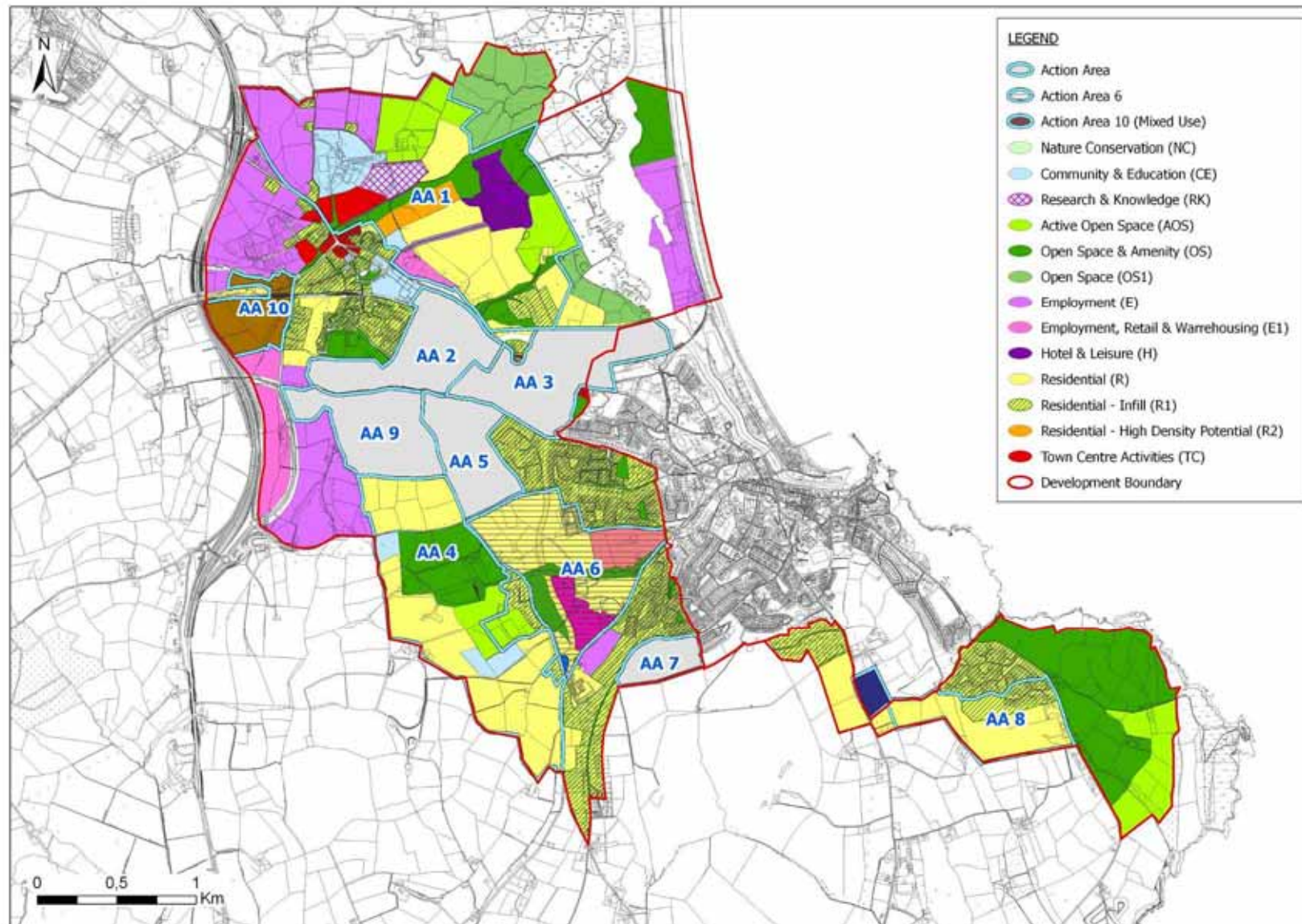
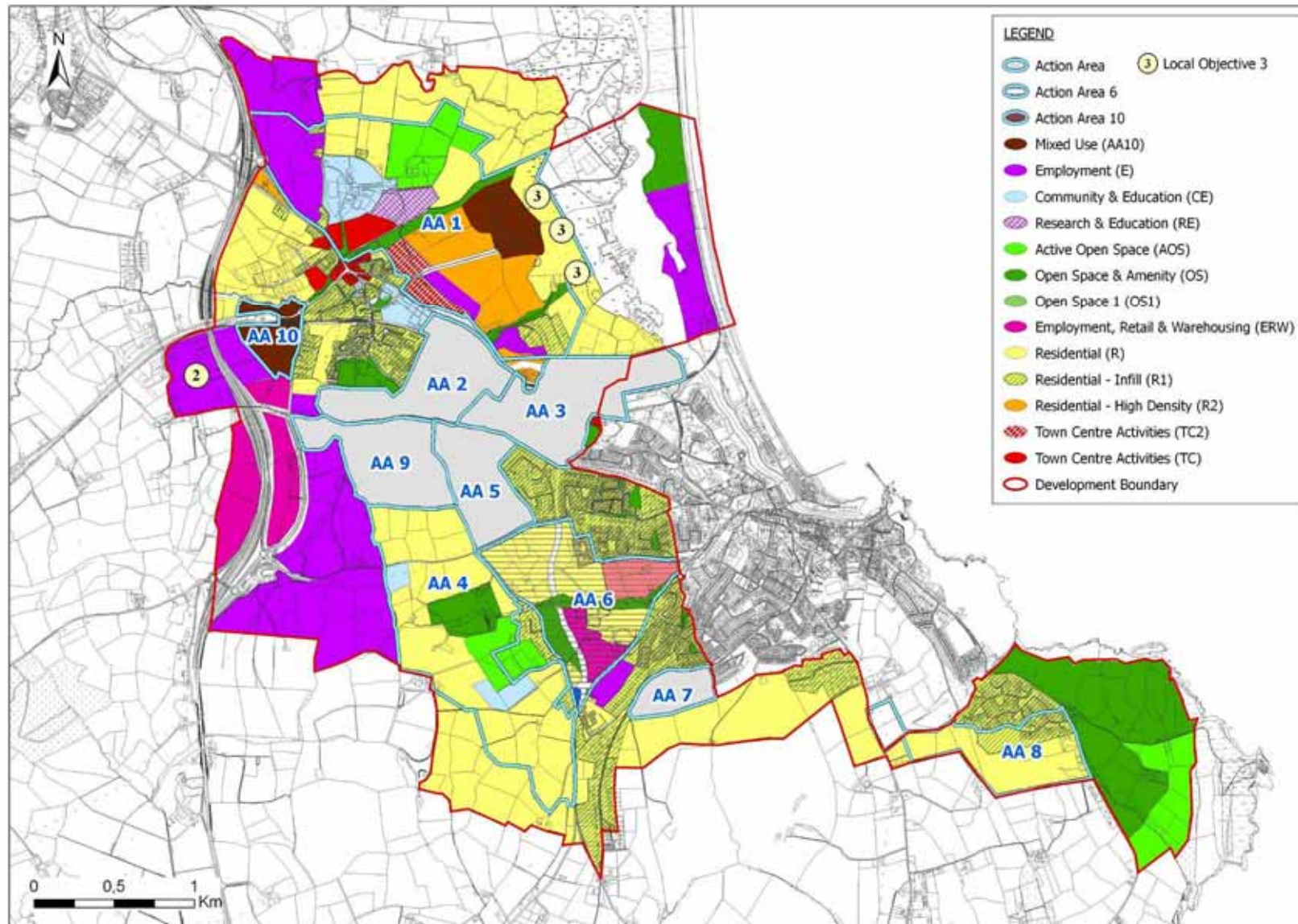


Figure 6.2 Scenario 2 *Moderate Development Envelope*





**Figure 6.3 Scenario 3 *Maximum Development Envelope***

## Section 7 Evaluation of Alternative Plan Scenarios

### 7.1 Introduction

The objective of this section is to determine the relative merits of a range of alternative scenarios under a range of types of plan regimes. This determination seeks to understand whether each alternative is likely to improve, conflict or have a neutral interaction with the provisions of the Plan as well as the certainty of that interaction. A series of Strategic Environmental Objectives were developed based on an understanding of the existing and emerging environmental conditions. These were then used to assess the likely effect of these different strategic alternatives for the Plan. The SEOs and the Scenarios are then arrayed against each other to identify which interactions – if any – would be likely to cause significant impacts on specific components of the environment.

### 7.2 Methodology

#### 7.2.1 Existing Environment

Use has been made of the description of the environmental baseline, including the maps which spatially represent components of the environmental baseline (Sections 3.2 to 3.9) in order to identify how each alternative scenario would impact upon the environment.

#### 7.2.2 Overlay Mapping

In order to identify the extent to which environmental sensitivities are likely to be impacted upon by implementation of the Plan and alternatives, overlay mapping (which weighs environmental sensitivities and maps them overlapping each other as shown under Section 3.10) is also used. Figure 3.11 Overlay of Weighted Environmental Sensitivities (all selected factors given equal weight) is used for this purpose.

#### 7.2.3 Strategic Environmental Objectives (SEOs)

Based on an understanding of the existing and emerging environmental conditions in the Wicklow Environs and Rathnew area a series of SEOs were developed in order to assess the likely environmental effects which would be caused by implementation of each of the four alternative scenarios described and mapped in Section 6. The alternatives are evaluated using compatibility criteria (see Table 7.1) in order to determine how they are likely to affect the status of these SEOs.

Table 7.2 brings together all the SEOs which have been developed from international, national and county 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, species or their sustaining resources in designated ecological sites'.

<b>Likely to Improve</b> status of SEOs	<b>Probable Conflict</b> with status of SEOs- unlikely to be mitigated	<b>Potential Conflict</b> with status of SEOs- likely to be mitigated	<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>Mitigation Measure Code(s)</b> (see Section 9) - to be filled in on all tables
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**Table 7.1 Criteria for appraising the effect of Plan provisions on Strategic Environmental Objectives**

SEO Code	SEO
<b>B1</b>	To avoid loss of relevant habitats, geological features, species or their sustaining resources in designated ecological sites
<b>B2</b>	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
<b>B3</b>	To sustain, enhance or - where relevant - prevent the loss of ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity
<b>HH1</b>	To protect human health from hazards or nuisances arising from exposure to incompatible landuses
<b>S1</b>	Maximise the sustainable re-use of brownfield lands, and maximise the use of the existing built environment rather than developing greenfield lands <sup>26</sup>
<b>W1</b>	To maintain and improve, where possible, the quality of rivers
<b>W2</b>	To prevent pollution and contamination of ground water
<b>A1</b>	To minimise increases in travel related greenhouse emissions to air
<b>M1</b>	To serve new development with appropriate waste water treatment
<b>CH1</b>	To protect the archaeological heritage of Wicklow Environs and Rathnew 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.
<b>CH2</b>	To preserve and protect the special interest and character of Wicklow Environs and Rathnew's architectural heritage with regard to entries to the Record of Protected Structures and their context within the surrounding landscape where relevant.
<b>L1</b>	To avoid significant adverse impacts on the landscape, especially with regard to Wicklow Environs and Rathnew's sensitive landscape features and designated scenic views.

**Table 7.2 Strategic Environmental Objectives (SEOs)<sup>27</sup>**

<sup>26</sup> SEO S1 was identified as conflicting with SEOs CH1 and CH2

<sup>27</sup> Strategic Environmental Objectives (SEOs) are methodological measures which are developed from international, national and county policies which generally govern environmental protection objectives and against which the environmental effects of the Plan can be tested. The SEOs are used as standards against which the development strategies, policies and objectives of the Plan, including the zoning provisions and, can be evaluated in order to help identify areas in which significant adverse impacts are likely to occur, if unmitigated against.



## **7.3 Evaluation against Baseline**

### **7.3.1 Scenario 1 *Minimal Development Envelope***

With the exception of the inadequacy of the wastewater treatment facilities – this Scenario has the least environmental effect. It has very good protection - using zoned buffer lands - of important ecological and visual amenities. The resultant settlement pattern is tightly concentrated which will promote sustainable patterns of mobility and the layout and boundaries conform well to topography.

### **7.3.2 Scenario 2 Moderate Development Envelope**

This scenario lacks the extensive buffer protection of Scenario 1. Otherwise it provides a fairly compact layout that currently respects, but does not actively protect, environmental sensitivities. Failure to provide waste water treatment infrastructure and capacity in line with population growth would be likely to result in significant adverse impacts upon surface, estuarine and coastal waters at significant risk of meeting objectives under the Water Framework development, upon biodiversity and flora and fauna and upon human health.

### **7.3.3 Scenario 3 Maximum Development Envelope**

This Scenario will give rise to significant and adverse environmental affects on the ecology, scenery and services of the area on account of encroachment onto rising ground around the town, excessive proximity of unsuitable landuses to the Broad Lough, dense development on elevated topography, development beyond the motorway and the absence of any transitional uses.

As is the case with Scenario 1 and Scenario 2, failure to provide waste water treatment infrastructure and capacity in line with population growth would be likely to result in significant adverse impacts upon surface, estuarine and coastal waters at significant risk of meeting objectives under the Water Framework development, upon biodiversity and flora and fauna and upon human health.

### **7.3.4 Summary of Analysis**

On the basis of this analysis Scenario 1 minimal Footprint - emerges as the most environmentally sustainable alternative. However, having regard to Planning considerations, While Scenario 2 emerges as the alternative that balances environmental protection with economic and social development. Scenario 3 will cause significant and long-term adverse effects on the ecology, scenery and services of the area.

## 7.4 Evaluation against Overlay Mapping

Tables 7.3 to 7.5 quantify the vulnerability areas which are likely to be impacted upon by the areas of each Scenario which are most likely to come under development pressure i.e. those areas zoned: Action Area; Mixed Use; Employment; Community and Education; Research and Education; Employment, Retail and Warehousing; Hotel and Leisure; Residential; Residential - Infill; Residential - High Density, and; Town Centre Activities. These areas are mapped (see Figures 7.1 to 7.4) and calculated using GIS software.

The measurements indicate that:

- Scenario 3 would be likely to result in more adverse environmental impacts than each of the other two Scenarios.
- If mitigated, Scenarios 1 and 2 would be likely to result in a lesser frequency and magnitude of impacts than Scenario 3.
- Scenario 3 is the scenario with the greatest amount of high vulnerability areas covered by development pressure areas and the only scenario for which extreme vulnerability areas are covered by development pressure areas.

Vulnerability Area	Area (km <sup>2</sup> )	% of Development Pressure Areas covering each Vulnerability Area
Low	10.70	76.2
Moderate	3.26	23.2
Vulnerable	0.08	0.6
High	0.01	0
Extreme	0	0
Acute	0	0
Total	14.05	100

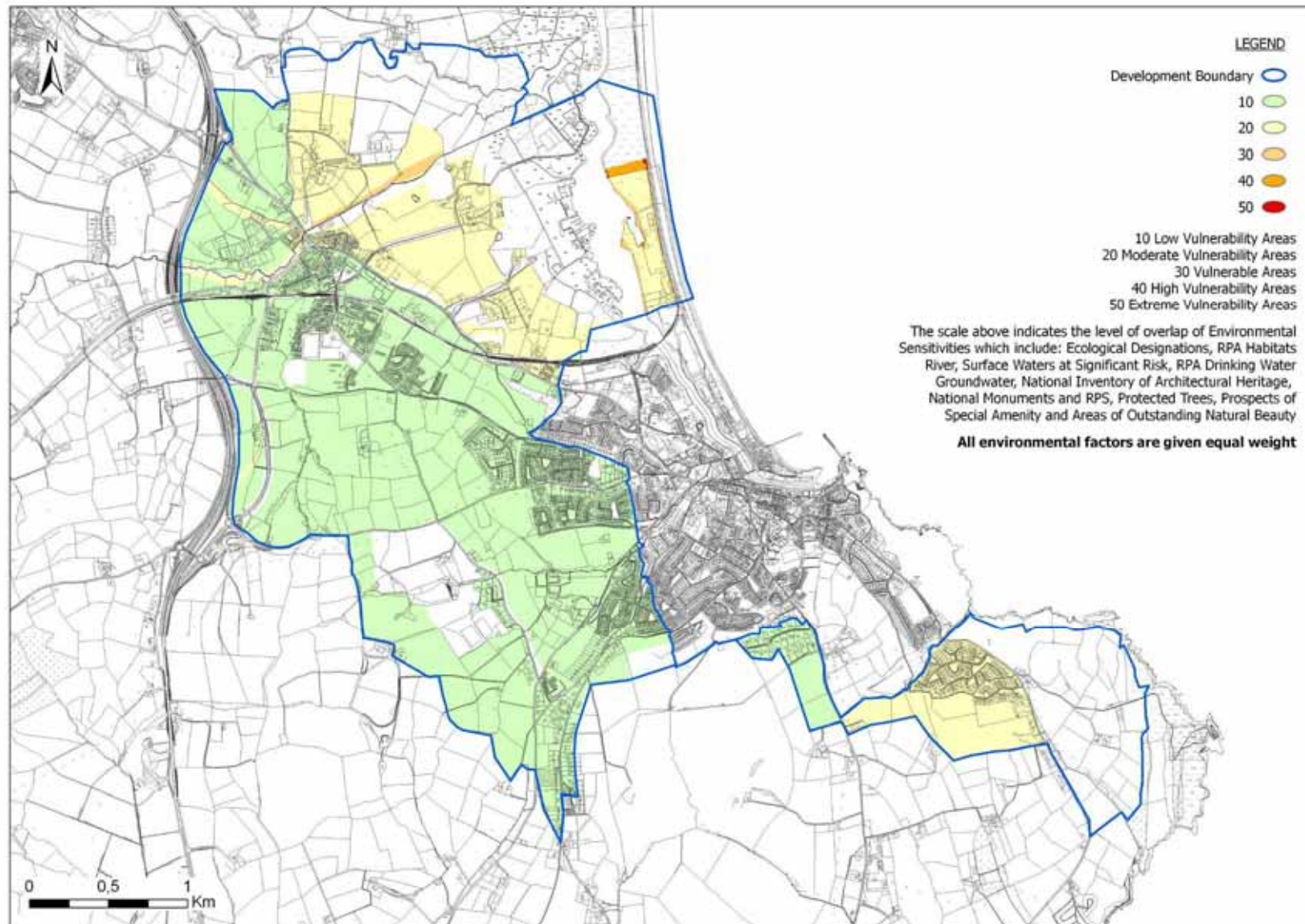
**Table 7.3 Environmentally Vulnerable Areas most likely to be affected by Scenario 1**

Vulnerability Area	Area (km <sup>2</sup> )	% of Development Pressure Areas covering each Vulnerability Area
Low	10.71	71.9
Moderate	4.00	26.8
Vulnerable	0.14	0.9
High	0.04	0.3
Extreme	0.01	0.1
Acute	0	0
Total	14.90	100

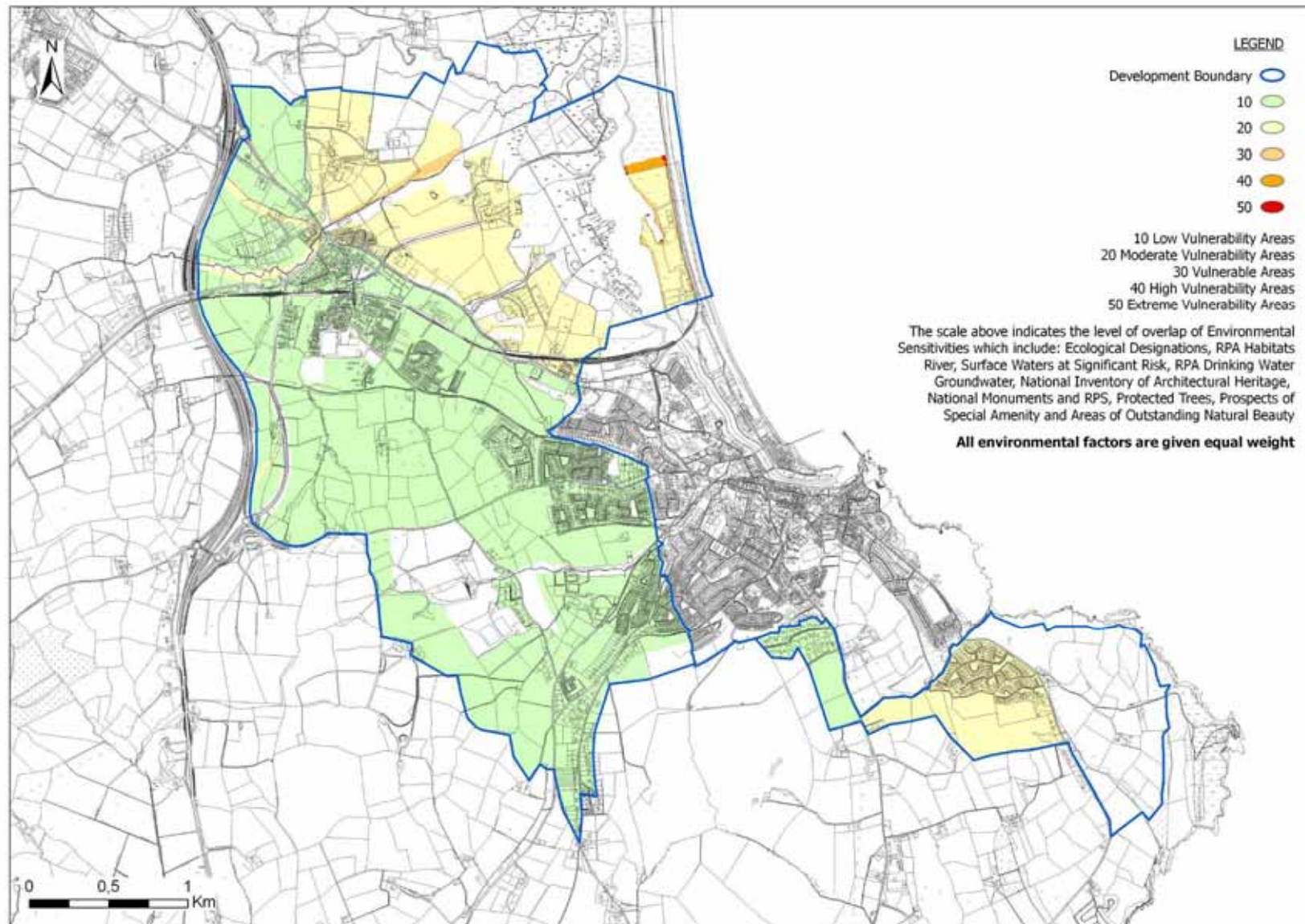
**Table 7.4 Environmentally Vulnerable Areas most likely to be affected by Scenario 2**

Vulnerability Area	Area (km <sup>2</sup> )	% of Development Pressure Areas covering each Vulnerability Area
Low	14.26	70.2
Moderate	5.58	27.5
Vulnerable	0.38	1.9
High	0.07	0.3
Extreme	0.01	0.1
Acute	0	0
Total	20.30	100

**Table 7.5 Environmentally Vulnerable Areas most likely to be affected by Scenario 3**

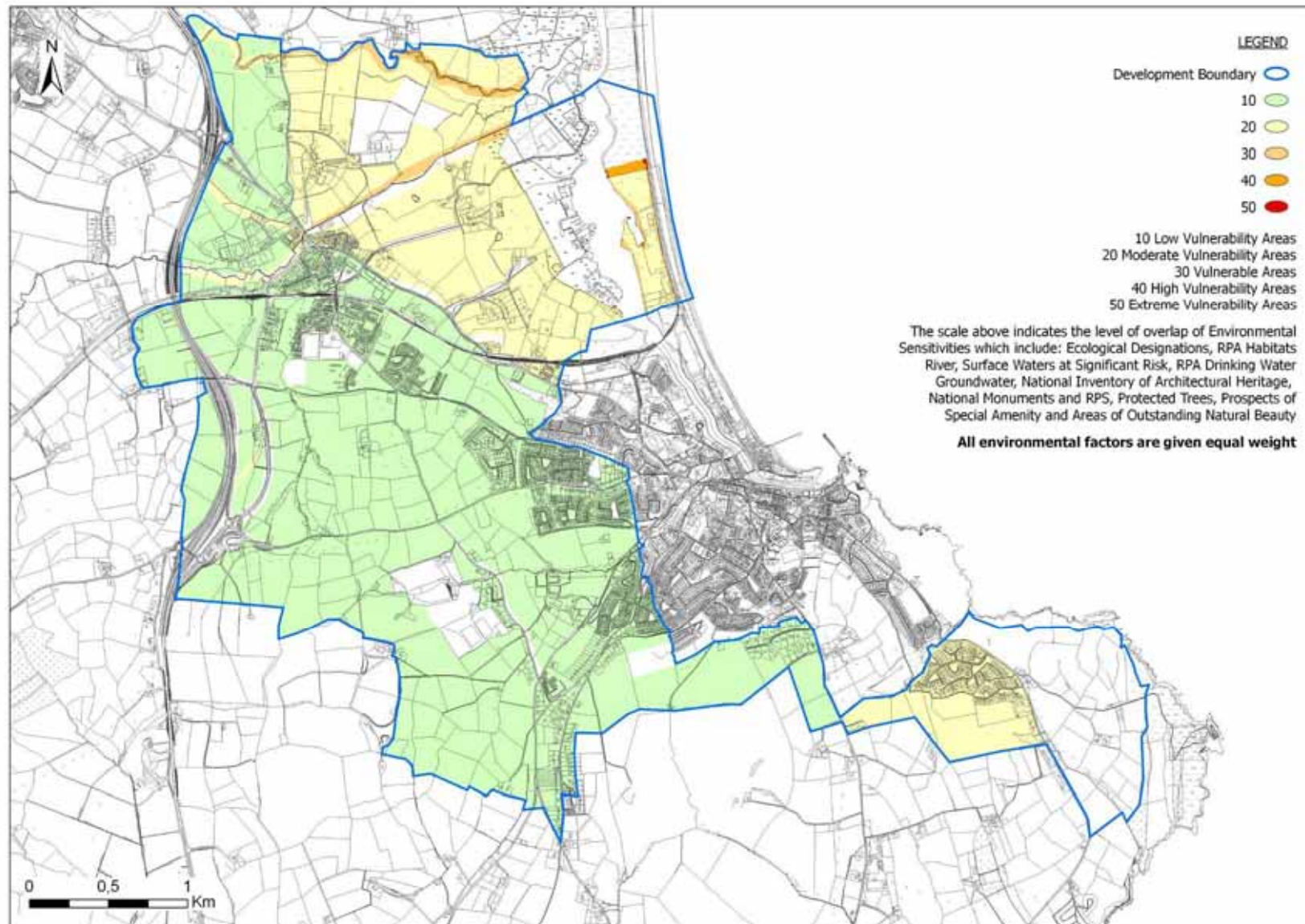


**Figure 7.1 Overlay of Environmental Sensitivities and Development Pressure Areas of Scenario 1**



**Figure 7.2 Overlay of Environmental Sensitivities and Development Pressure Areas of Scenario 2**





**Figure 7.3 Overlay of Environmental Sensitivities and Development Pressure Areas of Scenario 3**

## 7.5 Evaluation against SEOs

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation</u> <u>Measure</u> <u>Code(s)</u> (see Section 9)
Alternative Scenario 1	B1 B2 B3 A1 L1 S1		M1 HH1 W1 W2 CH1 CH2				MM2 MM3 MM4 MM5 MM6 MM7
Alternative Scenario 2	S1		M1 HH1 W1 W2 CH1 B1 B2 B3 CH2 L1 A1				MM1 MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9
Alternative Scenario 3		B1 B2 L1 S1 A1	M1 HH1 W1 W2 B3 CH1 CH2				MM1 MM2 MM3 MM4 MM5 MM6 MM7 MM8

**Table 7.6 Evaluation of Alternative Scenarios against SEOs**

Table 7.6 summarises the evaluation of Alternative Scenarios 1, 2, and 3 against the Strategic Environmental Objectives (SEOs).

## 7.6 The Preferred Alternative

### 7.6.1 Summary of Analysis

On the basis of the above analysis Scenario 1 would be likely to improve the status of a number of the SEOs and emerges as the most environmentally sustainable option.

If unmitigated, Scenarios 2 and 3 would be likely to result in a number of adverse environmental impacts.

Having regard to Planning considerations, Scenario 2 provides a better balance between environmental protection and economic and social development and therefore provides for the most overall sustainable option.

Under Scenario 2, potential conflicts with environmental objectives can largely be offset by appropriate mitigation measures, as indicated. Significant adverse impacts on designated ecological sites (The Murrough SPA 004186; The Murrough NHA 000730; The Murrough Wetlands cSAC 002249) will be avoided by compliance with, inter alia, mitigation measure MM9.

The Draft LAP that emerged from the Plan preparation process corresponded to Scenario 2.



## **7.7 The Adopted LAP**

### **7.7.1 Introduction**

The Draft LAP that emerged from the Plan preparation process - which corresponded to Scenario 2 - was placed on public display for a period of time during which submissions and observations were invited.

A report was prepared by the County Manager proposing changes to the Draft Plan which arose from certain submissions and observations made during this period. This report was considered by the Elected Members alongside the Draft Plan and Environmental Report.

The Elected Members accepted most of the changes contained in the Manager's Report and proposed a number of modifications to these changes.

The modifications were placed on public display for a second period of time during which submissions and observations were invited. A second report was prepared by the County Manager proposing changes to the modifications which arose from certain submissions and observations. This report was considered by the Elected Members alongside the modifications and an addendum to the Environmental Report.

The Elected Members accepted most of the changes to the modifications contained in the Manager's Report and made a number of final amendments to the modifications before adopting the LAP.

The LAP which was adopted (see Figure 7.6) corresponds closely to Scenario 2 however a number of changes have been made to the Scenario 2 land use zoning map.

Significant changes occur in the north of the Plan area and are detailed below.

## 7.8 Changes to Scenario 2

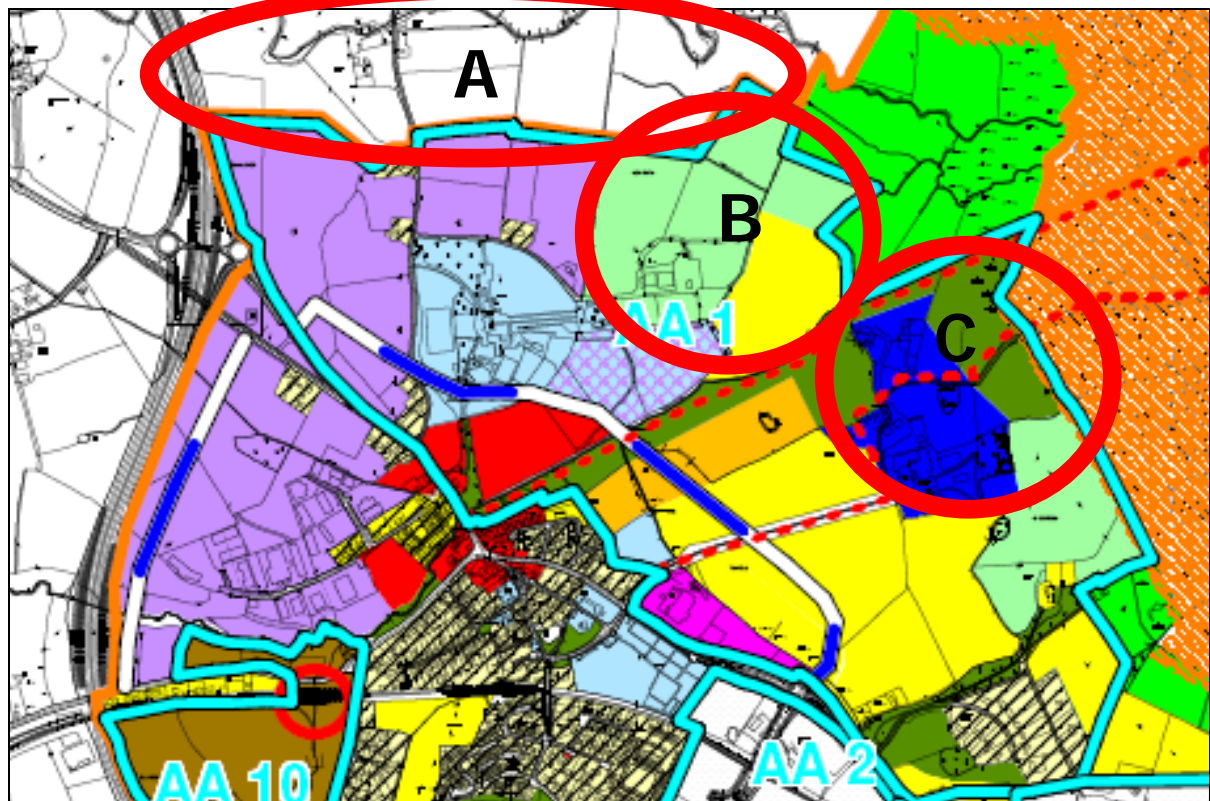


Figure 7.4 Old Zoning Map - Scenario 2/Draft LAP

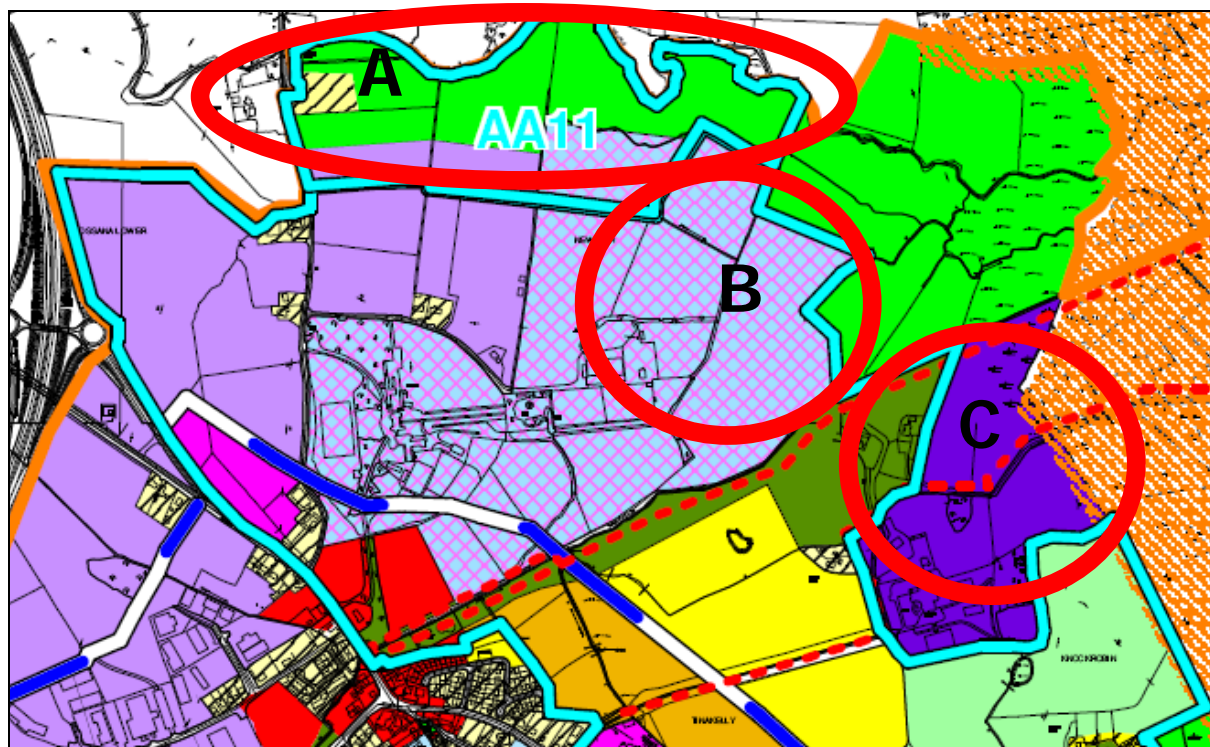


Figure 7.5 Revised Zoning Map - Adopted LAP

### 7.8.1 Action Area 11

The expansion of the development boundary northwards into Action Area 11 (see A on maps above).

The objectives of Action Area 11 are to:

- Provide for Employment uses on lands measuring 3.55 ha, which shall be in keeping and connected to the employment lands within Action Area 1. The use of these employment lands will require the development of high quality environments that will not adversely affect the natural environment of the area and accordingly height and site development standard restrictions will be employed accordingly. These developments should employ a plot ratio in accordance with the County Development Plan; small building units will be encouraged with high quality landscaping. The development of these lands shall include an overall site master plan that incorporates details such as phasing, planting, landscaping, the use proposed and the visual impact of the development. The amenities of adjoining properties shall be protected.
- Reserve 3.41 ha for the future expansion of the College Campus zoning.
- Reserve 16.96 ha of land as solely Open Space.
- A Flood Impact Assessment shall be prepared relating to the development of this Action Area.

This change would be likely to have a potential conflict with status of SEOs S1 and B3 - due to the addition of greenfield area into the Plan area - and SEO HH1 - due to flooding potential. However, such conflict would be likely to be mitigated by complying with mitigation measures integrated into the LAP, including all those recommended in this report, as well as by the measures relating to Open Space and a Flood Impact Assessment which are included as part of the objectives of Action Area 11.

### 7.8.2 Research and Knowledge Zoning

The replacement of Active Open Space and Residential Zoning with Research and Knowledge Zoning in Action Area 1 (see B on maps above).

This change would be likely to have a potential conflict with status of in particular SEOs S1, B3 and L1 - due to the addition of greenfield area into the Plan area which would be likely to be mitigated by complying with mitigation measures integrated into the LAP, including all those recommended by this report. Further evaluation of the objectives of Action Area 1 is contained in Section 8 below.

### 7.8.3 Hotel and Leisure Zoning

The replacement of Active Open Space and Amenity and Active Open Space Zoning with Hotel and Leisure Zoning (see C on maps above).

This change would have a potential conflict with status of SEOs B1, B2, B3 and L1 however such conflict would be mitigated by complying with mitigation measures integrated into the LAP, including all those recommended by this report.

If any development was to be allowed at this site then it would have to comply with all mitigation measures.

It is noted that the ecological and hydrological assessment which is included as part of the change will conform to Mitigation Measure 1 identified in this report and integrated into the LAP. Mitigation Measure 1 reads:

*Planning applications where part or all of the subject site lies within a zone that extends from the boundary of any designated ecological site to the next field boundary or to a distance of 50 metres, whichever is closer, must be accompanied by an eco-hydrological assessment. This must comply with Section 18 of the European Communities (Natural Habitats) Regulations 1997 and identify and evaluate the direct and indirect effects which the development would be likely to have upon the designated site, ecological connectivity and*

*drainage. Such planning applications must also be accompanied by evidence of consultation between the applicant and the National Parks and Wildlife Service about the assessment.*

*The need for eco-hydrological assessments for planning applications outside this zone shall be decided upon on a site by site basis depending on local ecological and drainage conditions and other factors as appropriate. In such cases the applicant should consult with Wicklow County Council's Planning Department about the need for such an assessment.*

It is noted that such an assessment would be required to take into account, inter alia, lands used for roosting by birds for which the adjacent SPA has been designated.

In addition, it is noted that Mitigation Measure 9, viz.:

*No projects giving rise to significant adverse direct, indirect or secondary impacts on Natura 2000 sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans or projects)<sup>28</sup>.*

is also required to be complied with.

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<sup>28</sup> Except as provided for in Section 6(4) of the Habitats Directive, viz. There must be:  
(a) no alternative solution available,  
(b) imperative reasons of overriding public interest for the plan to proceed; and  
(c) adequate compensatory measures in place.



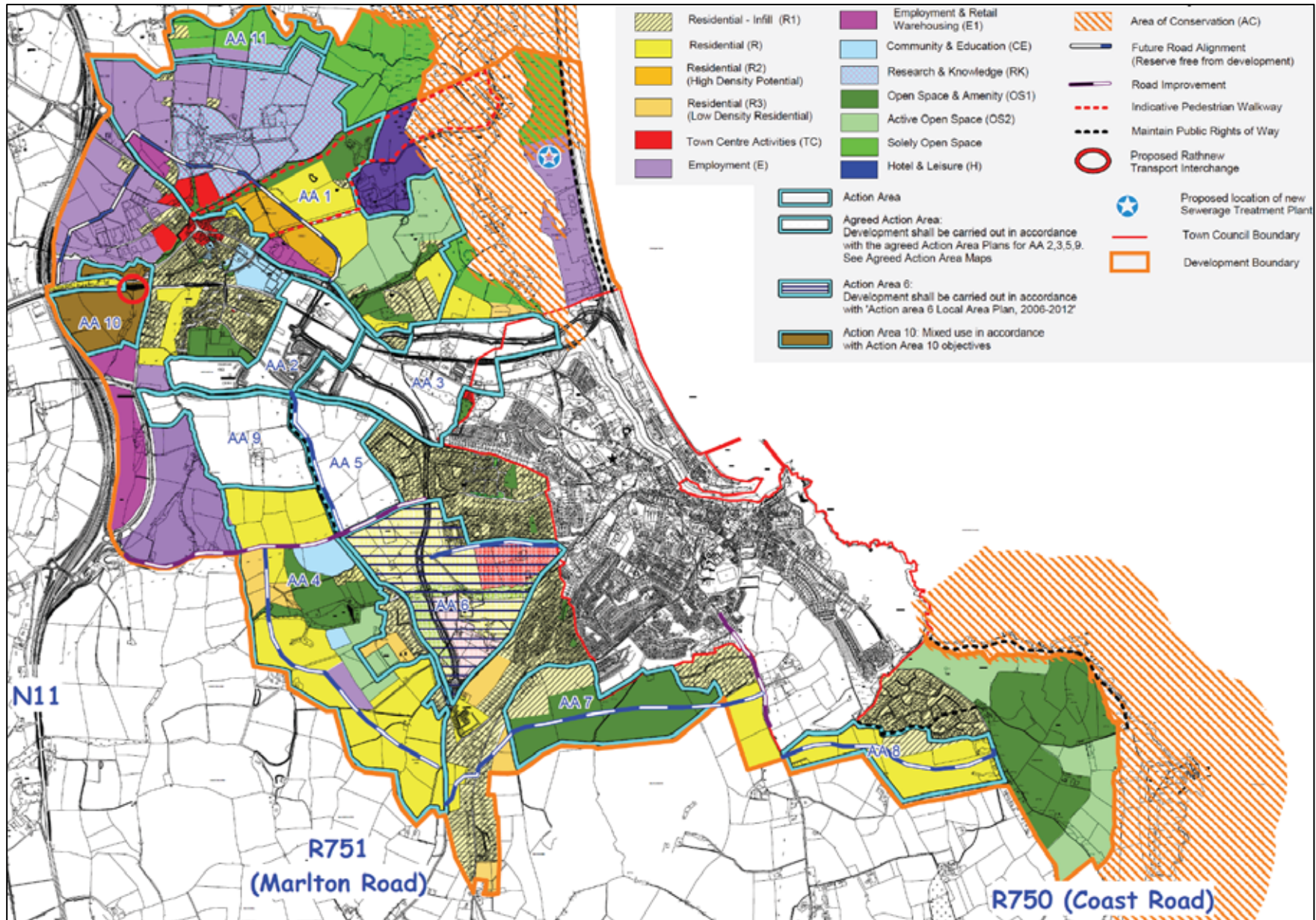


Figure 7.6 The Adopted Plan

CAAS for Wicklow County Council

## Section 8 Evaluation of Policies, Objectives and Standards

### 8.1 Methodology

This section evaluates the Plan's strategy and objectives. Strategic Environmental Objectives (SEOs) are used in order to evaluate each of the Plan measures as outlined under Section 7. Use has been made of the environmental baseline maps provided in Section 3 for this purpose.

With regard to policies and objectives evaluated as having an uncertain interaction with the status of SEOs, the interaction, and environmental impacts, if any, which the implementation of these Plan measures would have would be determined by: the nature and extent of development arising from these Plan measures, and; site specific environmental factors. These impacts may be assessed as part of an EIA of a particular project and/or by the development management process.

Avoidance of conflict is dependent upon the development management process only granting permission for individual projects arising from these measures which do not conflict with the status of SEOs. Providing other Plan measures, including the measures recommended by this report, and measures arising out of lower tier assessments are complied with, conflicts with SEOs would be likely to be avoided.

### 8.2 Overall Strategy

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation</u> <u>Measure</u> <u>Code(s)</u> (see Section 9)
<b>Strategic Vision</b>							
Ensure that the environs of Wicklow Town and Rathnew develop so as to integrate fully with the existing built area of Wicklow Town, so that the area functions as one entity, while preserving the character of each of the existing areas. The area shall perform a function that is consistent with its regional role as a 'Primary Development Centre' within the Greater Dublin Area, and develop to enhance its status as the County Town, and the key service centre for east Co. Wicklow.	CH2		B1 B2 B3 HH1 S1 W1 W2 A1 M1 CH1 L1				MM1 MM2 MM3 MM4 MM5 MM6 MM8 MM9
<b>Strategic Policy Objectives</b>							
Allow for the development of Wicklow Environs and Rathnew in an orderly manner.			B1 B2 B3 HH1 S1 W1 W2 A1 M1 CH1 CH2 L1				MM1 MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9
Provide for the expansion of Wicklow Environs and Rathnew on lands close to the town centre zonings, which may be developed with least infrastructural expenditure, which generate the shortest journeys and which provide good access to the range of social, educational and economic facilities available in the town.	A1 S1		B1 B2 B3 HH1 W1 W2 M1 CH1 CH2 L1				MM1 MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9



Provide for the protection from development of areas of high visual amenity, special interest and scientific interest.	B1 B2 L1						
Use its powers, including powers of compulsory acquisition, to facilitate the achievement of the objectives, including zoning objectives, of this Plan.				✓			

## 8.3 Development Control Objectives

### 8.3.1 General Objectives

	Likely to <u>Improve</u> status of SEOs	Probable <b>Conflict</b> with status of SEOs- unlikely to be mitigated	Potential <b>Conflict</b> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<b>Neutral</b> Interaction with status of SEOs	<b>No Likely</b> interaction with status of SEOs	<u>Mitigation Measure Code(s)</u> (see Section 9)
GEN1 It is the objective of the Council that high standards of building and urban design should be employed in all new developments and that all public open spaces should enjoy high standards of landscaping for both active and passive recreation areas.	CH2 L1						
GEN2 Wicklow County Council is committed as a priority to encouraging more sustainable development through energy end use efficiency, and increasing the use of renewable energy, in all new building projects in the designated area within the Wicklow Environs/Rathnew Local Area Plan as set out in the building Regulations Part L  It is also a policy of the council to promote sustainable building designs and materials that optimise the energy efficiency of buildings. During the design process, regard should be had to the implications for sustainability and energy efficiency of all aspects of building design. Appropriate design decisions in relation to layout, levels of insulation, amount and orientation of glazing, utilisation of solar energy, heating system and fuel type, construction materials and measures to limit the use of potable water can contribute greatly to ensuring sustainability. The council encourages the minimisation of water production during the construction process and the recycling of construction waste.						✓	

### 8.3.2 Residential Development

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation</u> <u>Measure</u> <u>Code(s)</u> (see Section 9)
RES1 It is the objective of the Council to phase development so that new development will evolve from the fringes of existing developed areas where infrastructure and community facilities exist. Except as specifically provided for, this Local Area Plan applies the standards of the County Development Plan in respect of residential developments.	M1 A1		B1 B2 B3 HH1 S1 W1 W2 M1 CH1 CH2 L1				MM1 MM2 MM3 MM5 MM6 MM7 MM8 MM9
RES2 In accordance with best planning practice, certain areas are considered suitable for higher density development. It is an objective of this plan to promote higher residential densities in the following locations:  <ul style="list-style-type: none"> <li>Land zoned R2, TC, AA10</li> <li>Appropriate infill and brownfield sites</li> </ul> <p>At these sites, the densities set out in the Residential Density Guidelines shall be adhered to. The quantum of development that will be considered on such lands will be guided by development control standards pertaining to such matters as plot ratio, site coverage, open space, parking, height, size, layout and design considerations etc. High-density residential developments will be required to be of exceptional quality design, with good consideration of layout and orientation. No development will be permitted that compromises the amenity of existing properties in the vicinity of proposals. No development will be permitted that compromises the value and form of existing streetscapes that are considered worthy of protection. No development will be permitted that compromises the character and setting of heritage assets that are considered worthy of protection.</p> <p>The Council will have regard to the 'Residential Density Guidelines, DoEHLG, 1999' and 'Sustainable Urban Housing: Design Standards for New Apartments – Guidelines for Planning Authorities, 2007' in the assessment of planning applications.</p>	S1 CH2		B1 B2 B3 HH1 W1 W2 M1 CH1 L1				MM2 MM3 MM4 MM5 MM6 MM8 MM9
RES3 In areas that are in predominantly residential use, priority will be given to the provision of additional housing so long as this does not have an adverse effect on the character and amenity of the area. Non-residential uses will be allowed where they are on a limited scale, compatible with the residential environment and it can be demonstrated that they are of benefit to the local community and normally could not be more satisfactorily located outside a residential area.	CH2		B1 B2 B3 HH1 S1 W1 W2 A1 M1 CH1 L1				MM2 MM3 MM4 MM5 MM6 MM8 MM9
RES4 It is the objective of the Council to acquire lands within the plan area where necessary to provide for housing and community facilities.			B1 B2 B3 HH1 S1 W1 W2 A1 M1 CH1 CH2 L1				MM1 MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9

<p>RES5</p> <p>Applications for permission to develop large residential sites, which are located outside Action Areas, shall include a phasing plan to ensure that residential development takes place in a sustainable and integrated manner. Particular regard shall be paid to the existing and planned social and physical infrastructure, e.g. parks, schools, community facilities, roads and sewerage infrastructure, and employment generating projects/developments.</p>			<p>B1 B2 B3 HH1 S1 W1 W2 A1 M1 CH1 CH2 L1</p>				<p>MM1 MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9</p>
<p>RES6</p> <p>Notwithstanding the zoning of land for residential purposes and the phasing set out in Section 5.11, the Development Management process shall monitor and implement the 2010 and 2016 population targets and shall phase and restrict, where necessary, the granting of residential planning permissions to ensure these targets are not exceeded.</p>				✓			
<p>RES7</p> <p>It is an objective of the Council to provide for Low Density Residential Development or serviced sites in the following locations with a maximum cap on each location.</p> <ul style="list-style-type: none"> <li>• Zoning of 2ha for low density housing along the Ballyguile Road providing for a maximum of 15 no. units/serviced sites.</li> <li>• Zoning of 1.74ha for low density housing at Bollarney North providing for a maximum of 14 no. units.</li> <li>• Zoning of 3.64ha for low density housing providing for a maximum of 44 residential units.</li> <li>• Zoning of 2.42ha for low density housing providing for a maximum of 30 residential units</li> <li>• Zoning of 2.778ha for low density housing providing for a maximum of 50 residential units</li> </ul>			<p>B1 B2 B3 HH1 S1 W1 W2 A1 M1 CH1 CH2 L1</p>				<p>MM1 MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9</p>
<p>RES8</p> <p>That the detailed planning for the new residential developments must make provision for a high degree of permeability, specifically cycling, and pedestrian permeability both between and within those areas connecting to the existing town centre and community areas. Permeability must be of the highest design standards and address crime prevention concerns of the local community.</p>	A1						

### 8.3.3 Rathnew Town Centre and Retail

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation</u> <u>Measure</u> <u>Code(s)</u> (see Section 9)
<p>RET1</p> <p>The retail policy of this Plan is to allow for the development of Wicklow Environs and Rathnew in a complementary manner to the development of Wicklow Town. This Plan recognises that the heart of Wicklow is the existing historic commercial area. In considering retail applications, the Council will have regard to the provisions of Chapter 7 of the CDP and the Retail Planning Guidelines, 2005. All retail schemes in the region of and over 800m<sup>2</sup> (net) should provide a Retail Impact Statement in the interests of encouraging the careful planning and identification of retail needs.</p>				✓			
<p>RET2</p> <p>The Council will seek to encourage the development of retail spaces within the TC zoned area to cater for retail demands. The consolidation and expansion of existing facilities will be encouraged to meet additional retail requirements. Within the TC zone, retail and commercial uses shall be the principle use at ground floor level. A ground floor change of use from retail or commercial to residential will not generally be permitted. The amenity of existing residential properties within the TC zone shall not be compromised.</p>	S1 A1		CH2				MM7

RET3 The Council will seek to enhance the streetscape of Rathnew village and to ensure that all infill development reflects established building styles and formats. All commercial and residential development within Rathnew village should reflect established building lines and promote the development of high quality frontages and should enhance the identity of the village as the heart of its community.	CH2						
RET4 Local shops may be permitted in residentially zoned areas but should service only immediate local needs with any individual shop unit not exceeding 150sqm of net floorspace.						✓	

### 8.3.4 Employment

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation</u> <u>Measure</u> <u>Code(s)</u> (see Section 9)
EMP1 It is the objective of the Council to specifically promote the development of employment opportunities on E and E1 zoned land, and to consider the development of appropriate employment opportunities in other suitable locations, in accordance with the provisions set out in Chapter 6 of the County Development Plan.			B1 B2 B3 HH1 S1 W1 W2 A1 M1 CH1 CH2 L1				MM1 MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9
EMP2 It is the objective of the Council to promote the continued operation of the Port as a viable economic element in Wicklow's fabric.	S1		B1 B2 W1				MM1 MM4 MM5
EMP3 Development of lands for Employment/Enterprise activities will be encouraged at selected locations as per the zoning provisions of this plan. These uses will require the development of high quality environments that will not adversely affect the natural environment of the area and accordingly height and site development standard restrictions will be employed accordingly. Any application for permission for such developments shall include an overall site masterplan that incorporates details such as phasing, planting, landscaping, the use proposed and the visual impact of the development.	L1						
EMP4 All employment zoned lands shall be developed with a range to unit types, including smaller starter type units, units suitable for local service industries, storage and distribution and well as any other uses in demand locally, following consultation with the CEB and Economic Development Section of the Council. All uses will be considered having regard to contribution to the local economy and to normal good planning standards						✓	
EMP5 Having regard to the situation of the E zoned land at the Murrough that is - in a scenic setting between the sea and the candidate Murrough Wetlands SAC; - is a likely location for future port expansion/relocation; - directly to the north of the Murrough Action Area Plan designated in the Wicklow Town Development Plan; any proposed development in this area must take cognisance of these attributes, and specifically the design any proposed development on the perimeter of the overall site must be of a scale, quality, and character that will not detract from the natural amenity of this area.			B1 B2				MM1 MM9

### 8.3.5 Coastal Zone Management

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation Measure Code(s)</u> (see Section 9)
CZ1 It is the objective of the Council to control development in the coastal zone in accordance with the objectives set out in the Coastal Zone Management Plan, as set out in Appendix 1, and referred to in 'Section 6.1.18: Coastal Zone Management Objectives', of Chapter 10 of the County Development Plan.	B1 B2 B3 L1 M1 HH1 W1 W2						

### 8.3.6 Open Space and Community

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation Measure Code(s)</u> (see Section 9)
OS1 It is the objective of the Council to retain all existing open spaces. The Council will not permit development that will result in the loss of playing fields, children’s play space, amenity open space or land zoned for open space and recreation purposes.  It is the objective of the Council to ensure that residential development will not be permitted on open green spaces, which are or have been identified as open space as part of a planning application.	B1 B2 B3 W1 HH1		S1				
OS2 It is the objective of the Council to require land that is zoned for Active Open Space to be developed as open space. These lands should be safely accessible and available to the general public, and of a suitable size and nature, for sport, active recreation or children’s play. Active Open Space shall generally be provided in accordance with the following:  • Two thirds of the required area shall be in the form of formal active playing areas for outdoor sports, e.g. pitches, courts, bowling/ golf putting greens, athletics track etc. • One third of the required area shall be for children’s play space. Of this area, at least one quarter shall be for equipped play space. • Multi-Use Games Areas (MUGA) are acceptable in any location within the Active Open Space zone. • All open space shall be well lit and, where possible, overlooked by adjoining development, in order to minimise anti-social behaviour. • Facilities shall be suitably fenced.				✓			

OS3 The Community & Enterprise Department of Wicklow County Council will meet on an annual basis with sporting clubs, community groups and other similar bodies who are active in the area covered by this plan. The purpose of this meeting is to enable Wicklow County Council to consult with the bodies on the plans for the expenditure of levies raised for Class 3 projects under the Development Levy Contribution Scheme and any Special Levy Scheme that may be in existence. The Community and Enterprise Department will report on the outcome of this meeting at the following Area Meeting of East Wicklow Councillors.						✓	
OS4 Wicklow County Council will request the Department of Environment, Heritage & Local Government to fund a study into the establishment of a tourist trail from the Glen Strand to Wicklow Head. This study is to establish the need for any safety enhancements for this trail, review any potential erosion threats along the route and to quantify the cost of providing this route. This request is to be made within 6 months of the completion of this plan. The response to this request is to be made known at the following meeting of Wicklow County Council and circulated to all members.						✓	
OS5 That the community and enterprise section along with Wicklow Town Council carry out a review of all the proposed community facilities with the environs and town council lands. To report on their size location and use and to establish the best solutions for the future that will enable them to be sustainable and self sufficient in the long term						✓	

### 8.3.7 Roads and Transportation

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation</u> <u>Measure</u> <u>Code(s)</u> (see Section 9)
ROA1  It is an objective of the Council to achieve the objectives set out in the Roads and Transportation Objectives Matrix. All development shall comply with these objectives (see LAP text).  The matrix contains the main road objectives required to improve the road network by the provision of new roads and improved sections of existing roads such that existing and future traffic levels can be accommodated. The Council shall continue to improve the existing road network as necessary and may identify and carry out road works in addition to those contained in the matrix.			B3 HH1 S1 W1 W2 A1 CH1 CH2 L1	A1			MM2 MM3 MM5 MM6 MM7 MM8
ROA2  The Council will not permit new developments that are not connected to the footpath system.	HH1						
ROA3  It is an objective of the Council to facilitate the construction of a scenic loop pedestrian walkway at Brideshead as indicated in the land use-zoning map.				✓			



ROA4  A key element of the development strategy for the Plan is the delivery of interconnecting pedestrian /cycle routes. The Plan provides for a network of cycle ways and pedestrian linkages throughout the LAP lands to the Town Centre, existing residential areas and community facilities. The precise routings will be identified at a later stage. These routes shall be provided as part of the proposed development of the Action Area Lands at the developers' expense. Cycle parking shall be provided at the local service areas, at schools and at community facilities	A1						
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### 8.3.8 Sanitary Services

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation Measure Code(s)</u> (see Section 9)
SS1 It is an objective of the Council to ensure that no new significant developments are permitted until the Council is satisfied that there is appropriate water and waste water infrastructure in place to accommodate the proposed development. The required water and wastewater infrastructure shall be in place prior to the commencement of the new development.	M1						
SS2 Lands above the 63m contour cannot be developed until Ashtown Reservoir and its associated mains have been constructed.						✓	
SS3 All proposed developments on land located below 3 metres OD, or in the vicinity of areas known to flood will not normally be permitted. Flood protection measures might be accepted where the Council is satisfied that they will not adversely affect the amenities of adjoining areas. It will be the responsibility of the applicant to provide conclusive evidence that flood protection measures will be successful and will not adversely affect the amenities of adjoining lands. The Council will require planning applications on flood prone lands to submit a Flood Risk Assessment.	HH1						
SS4 The Council will require that all surface water in excess of that flowing from the site under previous land use conditions will be required to be attenuated on site unless conclusive evidence can be produced that existing watercourses or surface water sewers can accommodate such increased flows, as well as increased flows from all possible developments within the relevant catchment area. All development shall comply with Sustainable Urban Drainage Systems (SUDS).	W1 HH1 B1 B2						
SS5 The mitigation measures listed MM2, MM4 and MM5 in section 9 of the Environmental report and set out in section 8 below shall be fully complied with in the preparation of proposals for the development of lands within the Wicklow Environs and Rathnew Area.	B1 B2 B3 HH1 W1 W2 M1						

### 8.3.9 Natural, Architectural and Archaeological Heritage

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation Measure Code(s)</u> (see Section 9)
HER1 It is an objective of the Council to protect the natural, architectural and archaeological heritage of the town, in accordance with the provisions of the County Development Plan and the provisions of this Plan.	B1 B2 B3 HH1 W1 W2 M1 CH1 CH2 L1		S1				
HER 2 The mitigation measures listed MM1, MM3, MM6, MM7, MM8 and MM9 in section 9 of the Environmental report and set out in section 8 below shall be fully complied with in the preparation of proposals for the development of lands of natural, architectural and archaeological importance.	B1 B2 B3 HH1 W1 W2 M1 CH1 CH2 L1		S1				

## 8.4 Action Areas

### 8.4.1 Action Area 1 Objectives to be complied with by any Plan

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation Measure Code(s)</u> (see Section 9)
Development of residential units of high standards of design and layout. An Urban Framework Plan shall be prepared by urban design specialists, for development in the area of the new Rathnew Town Centre zone and the 'R2: High Density Residential Zone'. The plan shall include specific objectives regarding the form that new development should take, including objectives on land uses and density, access, the massing and height of buildings, the location of landmarks, streetscape, public realm and public spaces.	CH2 L1		B1 B2 B3 HH1 S1 W1 W2 M1 CH1	A1			MM1 MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9
Provision of a new inner relief road for Rathnew to facilitate access to new developments from the existing road network, to prevent congestion at the Rathnew mini roundabout due to the development of AA1 and to achieve good traffic circulation in the area.			B3 HH1 S1 W1 W2 A1 CH1 CH2 L1	A1			MM2 MM3 MM5 MM6 MM7 MM8
The reservation of lands around Clermont for the future provision of student accommodation, on lands zoned CC	A1		S1 B3 HH1 W1 W2 M1 CH1 CH2				MM2 MM3 MM4 MM5 MM6 MM7
The reservation of lands to the north east of Clermont for the possible future expansion of the College, on lands zoned CC	A1		S1 B3 HH1 W1 W2 M1 CH1 CH2				MM2 MM3 MM4 MM5 MM6 MM7

Development of a third level education facility at Clermont with the development of an adjoining research and knowledge based commercial area, on lands zoned CC	S1		B3 HH1 W1 W2 M1 CH1 CH2				MM2 MM3 MM4 MM5 MM6 MM7
Development of lands for Employment as indicated on the map, including the provision of retail warehousing, on the area of land measuring 3ha between the R772 (old N11) and the new Rathnew relief road (to be accessed from the new relief road). The use of these employment lands will require the development of high quality environments that will not adversely affect the natural environment of the area and accordingly height and site development standard restrictions will be employed accordingly. These developments should employ a plot ratio in accordance with the County Development Plan; small building units will be encouraged with high quality landscaping. The development of these lands shall include overall site master plan that incorporates details such as phasing, planting, landscaping, the use proposed and the visual impact of the development. The amenities of adjoining properties shall be protected.	L1		S1 B3 HH1 W1 W2 M1 CH1 CH2				MM2 MM3 MM4 MM5 MM6 MM7 MM8
Areas of open space shall be provided as part of the development of the College, with the lands zoned for Active Open Space to the east/south of Tinakilly providing sports facilities for both college sports and the wider community.	B3						
A comprehensive landscaping plan shall be submitted relating to the lands immediately adjoining the existing avenue to Tinakilly House from the proposed relief road to the hotel and leisure zoning. This landscaping plan shall include mounding and dense planting.	L1						
A Heritage Appraisal / Impact Assessment shall be undertaken to assess the impact of development proposals on heritage features. The 'curtilage' of the protected structures shall be defined.	B1 B2 B3 HH1 W1 W2 M1 CH1 CH2 L1		S1				
A formal landscaped public amenity walkway along both sides of the river shall be provided, as indicated on the map. That portion of the proposed walkway that is in the vicinity of the 'AC: Area of Conservation' zone, shall be subject to consultation and agreement with the 'National Parks and Wildlife Service'. The plan shall include suitable proposals to ensure that walkway areas are maintained as safe, usable areas, free from anti-social behaviour.	B3 HH1 L1						
A Flood Impact Assessment shall be prepared relating to the development of this Action Area.	HH1						
Lands shall be reserved to allow for the development of sanitary services to service the development of the area.	M1 HH1 B1 B2 W1 W2						
Uses shall be assessed in terms of their contribution towards the achievement of the 'Zoning Objective'.  Having regard to the expansive area of AA1, the large number of landowners involved, and in order to enable development to proceed, the Council will allow 2 separate Action Area Plans to be put in place for the area within AA1, subject to the following: <ul style="list-style-type: none"> <li>Plan A shall be for lands north of Rathnew stream; Plan B shall be for lands south of Rathnew stream. The plans shall comply with the overriding objectives for the entire AA1, as set out above.</li> <li>Prior to agreeing any Action Area Plan, agreement shall be reached on the design, alignment and delivery of the new access route that traverses the Action Area. Only 40% of residential development will be permitted in advance of the full completion of this link road.</li> <li>Prior to agreeing any Action Area Plan, the Urban Framework Plan for the new Rathnew Town Centre zone and the 'R2: High Density Residential Zone', shall be prepared and agreed.</li> </ul>				✓			

### 8.4.2 Approved Action Area 2 Plan (2003)

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation</u> <u>Measure</u> <u>Code(s)</u> (see Section 9)
<p>This Action Area is located in the Tinakilly, Merrymeeting and Broomhall area of Wicklow Environs and Rathnew.</p> <p>Development shall be in accordance with Action Area Plan 2, dated 4<sup>th</sup> March 2003.</p> <p>In summary, the approved Action Area Plan 2 allows for the following:</p> <ul style="list-style-type: none"> <li>• The Development of Action Area 2 to comprise of c.20ha of Residential land, c.2ha of community and educational land, c.12ha for employment purposes, c.2ha for Hotel &amp; Leisure facilities and c.2ha of dedicated open space. Development will result in c. 400-500 dwellings of various sizes, a school, a small neighbourhood centre, playing pitches</li> <li>• Provision of a standalone retail unit of up to 900Sqm including a petrol filling station. The scale of these retail units shall be determined by a Retail Impact Assessment.</li> <li>• Development within AA2 is to be undertaken in 3 phases.</li> <li>• The construction of new roads, and road realignments, improvements and reservations.</li> <li>• The development of sanitary services.</li> </ul>			B1 B2 B3 HH1 S1 W1 W2 M1 CH1 CH2 L1	A1			MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9

### 8.4.3 Approved Action Area 3 Plan (2003)

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation Measure Code(s)</u> (see Section 9)
<p>This Action Area is located in the Burkeen and Bollarney North area of Wicklow Environs and Rathnew, and incorporates lands in the Wicklow Town Council administrative area.</p> <p>Development shall be in accordance with the approved Action Area Plan 3, dated 24<sup>th</sup> October 2003. In summary, the approved Action Area Plan 3 allows for the following:</p> <ul style="list-style-type: none"> <li>• The development of c.54ha, which is made up of approximately 25ha of residential land, 4.85ha of community and educational land, 2.7ha of land for Enterprise Development, 4.4ha of Industrial land and 1.9ha for the preservation of an existing tree plantation. Within Wicklow Town Council's area, provision is made for the development of a park and ride facility with commercial development at Wicklow Train Station.</li> <li>• Development within AA3 is to be undertaken in 2 phases.</li> <li>• The construction of new roads, and road realignments, improvements and reservations.</li> <li>• The development of sanitary services.</li> </ul>			B1 B2 B3 HH1 S1 W1 W2 M1 CH1 CH2 L1	A1			MM1 MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9

### 8.4.4 Action Area 4 Objectives to be complied with by any Plan

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation Measure Code(s)</u> (see Section 9)
Development of residential units of high standards of design and layout.			B1 B2 B3 HH1 S1 W1 W2 M1 CH1 CH2 L1	A1			MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9
A link road from the R751 to the Rockey Road shall be provided to facilitate access to new developments from the existing road network in order to prevent congestion from traffic generated by AA4 developments. No more than 20% of residential development will be constructed in advance of the completion of the proposed link road between R751-Rockey Road.			B3 HH1 S1 W1 W2 A1 CH1 CH2 L1	A1			MM2 MM3 MM5 MM6 MM7 MM8
Provision of access from the new link road to the active open space and community & education lands.			B3 HH1 S1 W1 W2 A1 CH1 CH2 L1	A1			MM2 MM3 MM5 MM6 MM7 MM8



Provision of a formal landscaped open space area, on lands zoned 'OS: Open Space and Amenity', that will be used for the purpose of a public park/ amenity area. These lands are suitable for passive recreation and amenity, including walks and landscaped areas. Land zoned 'AOS: Active Open Space', shall be developed in accordance with Objective OS2. All types of open space shall be well lit and, where possible, overlooked by adjoining development, in order to minimise anti-social behaviour.	L1 HH1						
Reservation of lands to meet community and educational requirements. 1.21ha shall be provided to accommodate a 16-classroom primary school and 5.136ha shall be provided to accommodate a 1200 pupil post primary school. Should the development of a post primary school on the lands measuring 5.163ha not take place or require the full amount of lands designated for school use other community uses shall be permitted on these lands in accordance with the zoning objectives of the Wicklow Environs & Rathnew Local Area Plan 2008-2014				✓			
Approximately 3ha shall be provided for employment use. These lands shall be used to develop incubator units for small/start up businesses and their future expansion into larger scale units.			B1 B2 B3 HH1 S1 W1 W2 M1 CH1 CH2 L1	A1			MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9
The development of sanitary services.			M1				MM4 MM5

#### 8.4.5 Approved Action Area 5 Plan (2005)

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation</u> <u>Measure</u> <u>Code(s)</u> (see Section 9)
<p>This Action Area is located in the Broomhall area of Wicklow Environs and Rathnew.</p> <p>Development shall be in accordance with the approved Action Area Plan 5, dated 6<sup>th</sup> July 2005.</p> <p>In summary, the approved Action Area Plan 5 allows for the following:</p> <ul style="list-style-type: none"> <li>• The development of c.27ha, all of which is zoned for residential development.</li> <li>• A neighbourhood centre with maximum floor area of 500m<sup>2</sup> is to be provided along the boundary of AA5 with AA9.</li> <li>• Open space is required to be provided in tandem with the development.</li> <li>• Development within AA5 is to be undertaken in 3 phases.</li> <li>• Road alignments and improvements.</li> <li>• The development of sanitary services.</li> </ul>			B1 B2 B3 HH1 S1 W1 W2 M1 CH1 CH2 L1	A1			MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9

### 8.4.6 Action Area 6 Local Area Plan 2006-2012

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation Measure Code(s)</u> (see Section 9)
Development shall be in accordance with 'Action Area 6 Local Area Plan 2006-2012'	B3		S1 L1 CH1 W1 W2 M1	A1			MM4 MM5 MM6 MM8

### 8.4.7 Approved Action Area 7 Plan (2004)

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation Measure Code(s)</u> (see Section 9)
<p>This Action Area is located in the Ballyguile area of Wicklow Environs and Rathnew.</p> <p>Development shall be in accordance with the approved Action Area Plan 7, dated 23<sup>rd</sup> February 2004.</p> <p>In summary, the approved Action Area Plan 7 allows for the following:</p> <ul style="list-style-type: none"> <li>• The development of c.43ha, which is made up of 35.7ha of land for open space and 7.4ha of land for residential development.</li> <li>• Residential units shall be designed to a high quality and shall have regard in their massing, height and finishes to the scenic elevated location.</li> <li>• A landscaped open space area, on lands zoned for open space, shall be provided in the form of a public park / amenity area</li> <li>• Development of AA7 can proceed in a single phase, subject to agreement regarding roads and access issues, including the definition of a feasible option for the development of a link road from Ballyguile to Dunbar</li> <li>• No development may occur above the 125m OD contour except where it has been established in the western side of the Action Area</li> <li>• The development of sanitary services.</li> </ul>			B1 B2 B3 HH1 S1 W1 W2 M1 CH1 L1	A1			MM2 MM3 MM4 MM5 MM6 MM8 MM9

### 8.4.8 Action Area 8 Objectives to be complied with by any Plan

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation</u> <u>Measure</u> <u>Code(s)</u> (see Section 9)
Development of residential units of high standards of design and layout.			B1 B2 B3 HH1 S1 W1 W2 M1 CH1 L1	A1			MM2 MM3 MM4 MM5 MM6 MM8 MM9
A link road from the R750 to the Greenhills Road shall be provided to facilitate access to new developments from the existing road network and achieve good traffic circulation in the area.			B3 HH1 S1 W1 W2 A1 CH1 L1	A1			MM2 MM3 MM5 MM6 MM8
Provision of community and neighbourhood retail facilities to meet the needs of residential development located within 500m.	A1						
Reservation of lands to allow for the development of sanitary service and other services facilities, including water storage facilities, to service the development of the area.	M1 HH1 B1 B2 W1 W2						

### 8.4.9 Approved Action Area 9 Plan (2007)

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation</u> <u>Measure</u> <u>Code(s)</u> (see Section 9)
<p>This Action Area is located in the Broomhall area of Wicklow Environs and Rathnew.</p> <p>Development shall be in accordance with the approved Action Area Plan 9, dated 24<sup>th</sup> September 2007.</p> <p>In summary, the approved Action Area Plan 9 allows for the following:</p> <ul style="list-style-type: none"> <li>• The development of c.42ha, which is made up of 4ha of land for enterprise development and the remainder for residential development.</li> <li>• A neighbourhood centre, with maximum floor area of 500m<sup>2</sup>, to be provided at the boundary of AA9 with AA5.</li> <li>• Open space is to be provided in tandem with each phase of development.</li> <li>• Development within AA9 is to be undertaken in 2 phases.</li> <li>• Road alignments and improvements.</li> <li>• The development of sanitary services.</li> </ul>			B1 B2 B3 HH1 S1 W1 W2 M1 CH1 L1	A1			MM2 MM3 MM4 MM5 MM6 MM8 MM9

### 8.4.10 Action Area 10 Objectives to be complied with by any Plan

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation</u> <u>Measure</u> <u>Code(s)</u> (see Section 9)
This land shall be developed for mixed use and high density residential, employment and community uses. The residential component shall comprise a maximum of 40% of the total floor area within the Action Area.	A1		B1 B2 B3 HH1 S1 W1 W2 M1 CH1 CH2 L1				MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9
An Urban Framework Plan shall be prepared as part of the Action Area Plan, by urban design specialists. The plan shall include specific objectives regarding the form that new development should take, including land uses and density, access, the massing and height of buildings, the location of landmarks, streetscape, public realm and public spaces.	CH2						
This area shall have a maximum plot ratio of 2.5 and a maximum site coverage of 70%. The relevant development control standards set out in the County Development Plan, regarding public and private open space, parking, height standards, protection of residential amenity etc. shall guide the quantum of development that shall be allowed on the land.				√			
The plan shall conform with the objectives set out in the 'Wicklow and Environs Integrated Framework Plan for Land Use and Transportation, 2003'. This plan set out an objective for the "reservation and rezoning of land at Rathnew for a transport interchange and employment opportunities". Land shall be reserved for a proposed transport interchange. The transport interchange shall accommodate the construction of a station or depot with waiting areas, park and ride facilities, additional parking for buses and bicycles, and taxi ranks.	A1		B1 B2 B3 HH1 S1 W1 W2 M1 CH1 CH2 L1				MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9
It is noted that the Wicklow and Environs IFPLUT, 2003 was prepared to provide detailed land use and transportation proposals for the future growth of the Wicklow development centre, having particular regard to land-use patterns that complement local public transport, walking and cycling. In order to promote sustainable integrated development in terms of land use and transport objectives, the IFPLUT set out the following seven land use objectives for the Plan area (although the LAP sets out to conform with these objectives it is noted that they are not listed Plan):							
• Redevelopment of Wicklow town as a commercial and leisure centre;				√			
• Redevelopment of Wicklow Port area;				√			
• Development of a neighbourhood centre in Action Areas 6 and 8;			B1 B2 B3 HH1 S1 W1 W2 M1 CH1 L1	A1			MM2 MM3 MM4 MM5 MM6 MM8 MM9
• Transfer of employment close to Wicklow Town Railway Station;	A1		B1 B2 B3 HH1 W1 W2 M1				MM2 MM3 MM4 MM5 MM6 MM8 MM9
• Reservation and rezoning of land at Rathnew for a transport interchange and employment opportunities;	A1		B3 HH1 W1 W2 M1 CH1 CH2 L1				MM2 MM3 MM4 MM5 MM6 MM8
• Increase of residential densities and concentration of development along the route of a proposed local bus service; and	A1 S1 L1		B3 HH1 W1 W2 M1 CH1 CH2				MM2 MM3 MM4 MM5 MM6

• Containment of development to prevent urban sprawl.	A1 B3 S1 L1		HH1 W1 W2 M1 CH1 CH2				MM2 MM3 MM4 MM5 MM6
A multi-purpose community facility shall be provided. The facility shall include the following: (i) a crèche, and (ii) meeting rooms, office, bathroom and kitchenette space, with minimum floor area 225m <sup>2</sup> .			B1 B2 B3 HH1 S1 W1 W2 M1 CH1 CH2 L1				MM2 MM3 MM4 MM5 MM6 MM8 MM9
Particular regard shall be paid to protecting the residential amenity of existing residential properties on the R752 out of Rathnew. A maximum of 2 storeys above ground level shall be permitted on land adjoining these properties.	CH2 L1						
Prior to any development taking place within Action Area 10 a comprehensive study relating to the development of a substantial 'Transport Hub' must be carried out in conjunction with Bus Éireann and Iarnród Éireann. Once the exact type of 'Transport Hub' has been established this 'Hub' must be fully constructed and fully functional prior to the occupation of any residential development. Only 40% of the entire residential element of AA10 shall be constructed prior to the 'Transport Hub' being fully functional.	A1		B1 B2 B3 HH1 S1 W1 W2 M1 CH1 CH2 L1				MM2 MM3 MM4 MM5 MM6 MM7 MM8 MM9



### 8.4.11 Action Area 11 Objectives<sup>29</sup>

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation Measure Code(s)</u> (see Section 9)
Provide for Employment uses on lands measuring 3.55 ha, which shall be in keeping and connected to the employment lands within Action Area 1. The use of these employment lands will require the development of high quality environments that will not adversely affect the natural environment of the area and accordingly height and site development standard restrictions will be employed accordingly. These developments should employ a plot ratio in accordance with the County Development Plan; small building units will be encouraged with high quality landscaping. The development of these lands shall include an overall site master plan that incorporates details such as phasing, planting, landscaping, the use proposed and the visual impact of the development. The amenities of adjoining properties shall be protected.			S1 HH1 B3		✓		MM2 MM3 MM4 MM5 MM8 MM9
Reserve 3.41 ha for the future expansion of the College Campus zoning.			S1 HH1 B3		✓		MM2 MM3 MM4 MM5 MM8 MM9
Reserve 16.96 ha of land as solely Open Space.			S1 HH1 B3		✓		MM2 MM3 MM4 MM5 MM8 MM9
A Flood Impact Assessment shall be prepared relating to the development of this Action Area.			S1 HH1 B3		✓		MM2 MM3 MM4 MM5 MM8 MM9

<sup>29</sup> This inclusion of AA11 in the Plan area would be likely to have a potential conflict with status of SEOs S1 and B3 - due to the addition of greenfield area into the Plan area - and SEO HH1 - due to flooding potential. However, such conflict would be likely to be mitigated by complying with mitigation measures integrated into the LAP, including all those recommended in the ER, as well as by the measures relating to Open Space and a Flood Impact Assessment which are included as part of the AA11's objectives.

## 8.4.12 Phasing of Development

	Likely to <u>Improve</u> status of SEOs	Probable <u>Conflict</u> with status of SEOs- unlikely to be mitigated	Potential <u>Conflict</u> with status of SEOs- likely to be mitigated	<u>Uncertain</u> interaction with status of SEOs	<u>Neutral</u> Interaction with status of SEOs	<u>No Likely</u> interaction with status of SEOs	<u>Mitigation</u> <u>Measure</u> <u>Code(s)</u> (see Section 9)
<p>The development of each of the identified Action Areas can generally proceed independently without an area wide clear sequence of phasing. For each of the identified Action Area, the Planning Authority will require a detailed site-specific internal phasing plan to be prepared and agreed as part of the required individual site master plans. Each phasing plan shall set out a detailed programme for the delivery of critical physical infrastructure together with the upgrade works required to the existing public infrastructure to facilitate development.</p> <p>The major identified infrastructural deficit in the LAP area is quality of life infrastructure including the provision of community, social and recreational facilities together with public realm improvements.</p> <p>It is considered that the release of the identified Action Areas for large-scale development has the capacity to significantly address these community and social infrastructure deficits and to contribute positively to public realm improvements.</p> <p>Accordingly, it shall be a requirement that public realm improvements and quality of life infrastructure will be provided in advance of or in tandem with each development phase in order to cater for existing and emerging populations.</p>				✓			

## Section 9 Mitigation Measures

### 9.1 Introduction

Mitigation measures are measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse impacts on the environment of implementing the LAP.

Mitigation involves ameliorating significant negative effects. Where there are significant negative effects, consideration is given in the first instance to preventing such effects or, where this is not possible for stated reasons, to lessening or offsetting those effects. Mitigation measures can be roughly divided into those that: avoid effects; reduce the magnitude or extent, probability and/or severity of effect; repair effects after they have occurred, and; compensate for effects, balancing out negative impacts with other positive ones.

#### 9.1.1 MM1: Designated Ecological Sites

Planning applications where part or all of the subject site lies within a zone that extends from the boundary of any designated ecological site to the next field boundary or to a distance of 50 metres, whichever is closer, must be accompanied by an eco-hydrological assessment. This must comply with Section 18 of the European Communities (Natural Habitats) Regulations 1997 and identify and evaluate the direct and indirect effects which the development would be likely to have upon the designated site, ecological connectivity and drainage. Such planning applications must also be accompanied by evidence of consultation between the applicant and the National Parks and Wildlife Service about the assessment.

The need for eco-hydrological assessments for planning applications outside this zone shall be decided upon on a site by site basis depending on local ecological and drainage conditions and other factors as appropriate. In such cases the applicant should consult with Wicklow County Council's Planning Department about the need for such an assessment.

#### 9.1.2 MM2: Watercourses

Planning applications within a horizontal distance of 10 m from the banks of rivers and streams must demonstrate that any development would not impact upon the aquatic biodiversity of the streams and rivers or the habitats which sustain them.

The development of greenway linkages at certain locations - including along the Rathnew River and along the stream in the vicinity of the Marlon Reservoir - should be examined with the objective of facilitating non-motorised transport modes.

#### 9.1.3 MM3: Ecological Networks

Planning applications must: identify all ecological corridors (including hedgerows and masonry stone walls), likely to be significantly affected, which are present on the relevant lands; identify any losses to these corridors which would result if the application in question was granted and; show that such losses would be fully offset if the application was to be granted through the replacement of the relevant corridors, with corridors composed of similar species or materials, before any losses to the existing corridors occur.

Where such opportunity exists between high value biodiversity areas applicants should be encouraged to enhance existing networks or create new networks between local biodiversity areas.

#### 9.1.4 MM4: Water Quality Protection

In order for permission to be granted to new developments, there must be sufficient capacity available to appropriately treat the waste water resulting from such developments.

New development must be served by either:

- a. Providing new capacity for public waste water treatment either through the provision of a new public waste water treatment plant or through allocation of additional capacity

to a existing waste water treatment plant(s) and extending the existing public waste water treatment catchment to serve developments within the plan area

Or:

- b. Treating waste water through the use individual waste water treatment systems, such as septic tanks.

If development is served by 'b' then the conditions outlined in the EPA's (2000) 'Wastewater Treatment Manuals Treatment Systems for Single Houses' (as updated by upcoming revisions) shall be complied with, and:

- (i) Planning applications must demonstrate that discharges to waters resulting from the granting of the application will comply with standards established under the relevant River Basin Management Plan or interim recognized standards pending adoption of the relevant River Basin Management Plan
- (ii) Applicants must submit a site suitability report alongside the planning application which outlines the likely effects on water quality which will be caused as a result of use of the relevant single waste water treatment system on site. This report shall be carried out by an appropriately qualified person. The appropriateness of the qualifications of such a person will be decided by the Planning Authority.
- (iii) The applicant, if successful with the relevant application, shall submit certification from an appropriately qualified person stating that the treatment system and associated percolation / filter area have been installed in accordance with the requirements of the EPA's (2000) 'Wastewater Treatment Manuals - Treatment Systems for Single Houses' (as updated by upcoming revisions). The applicant shall also submit agreement to maintain the complete system in accordance with the manufacturer's maintenance recommendations, for the lifetime of the system.

Note: If capacity in a public waste water treatment scheme is not made available to all development within the plan area in the long term then existing septic tanks,

percolation areas and proprietary effluent systems may require to be upgraded in the long term in line with the conditions specified above and a monitoring system set up to the same effect.

### **9.1.5 MM5: River Basin District (RBD) Management Plan**

When published, the relevant policies and objectives of the Eastern River Basin Management Plan should be integrated into the Local Area Plan through amendment or otherwise.

### **9.1.6 MM6: Archaeological Heritage**

Planning applications within or adjacent to a buffer zone of 30m from a Site on the Sites and Monument Register must be accompanied by: an archaeological assessment detailing the impacts which the relevant development would have on archaeology in the area, including those impacts relating to the context of archaeology in the surrounding landscape.

### **9.1.7 MM7: Architectural Heritage**

Planning applications within the Local Area Plan area may be required to be accompanied by an assessment to be undertaken by a certified conservation architect detailing the impacts of the relevant development upon the special interest and character of the surrounding architectural heritage. The planning authority should be consulted at an early stage in this regard in order to determine whether there is a need for such an assessment.

### **9.1.8 MM8: Landscape Heritage**

Planning Applications that have the potential to impinge upon the integrity of significant landscape resources may be required to be accompanied by an assessment of the potential landscape and visual impacts of the proposed development - demonstrating that landscape impacts have been anticipated and avoided to a level consistent with the sensitivity of the landscape.

### **9.1.9 MM9: Designated Ecological Sites II**

No projects giving rise to significant adverse direct, indirect or secondary impacts on Natura 2000 sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans or projects)<sup>30</sup>.

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<sup>30</sup> Except as provided for in Section 6(4) of the Habitats Directive, viz. There must be:  
(a) no alternative solution available,  
(b) imperative reasons of overriding public interest for the plan to proceed; and  
(c) adequate compensatory measures in place.

## Section 10 Monitoring

### 10.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This environmental report puts forward proposals for monitoring the LAP which are adopted alongside the LAP.

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 LAP is achieving its environmental objectives and targets - measures which the LAP can help work towards - whether these need to be reexamined and whether the proposed mitigation measures are being implemented.

### 10.2 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 LAP 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 (see Section 4).

Table 10.1 below shows the indicator and targets which have been selected with regard to the monitoring of the plan.

### 10.3 Sources

Measurements for indicators should come from existing monitoring sources and no new monitoring should be required to take place. Existing monitoring sources exist for each of the indicators and include those maintained by Wicklow County Council and the relevant authorities e.g. the Environmental Protection

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

The *Development Management Process* in Wicklow County Council will provide passive monitoring of various indicators and targets on an application by application basis. Where significant adverse effects 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.

### 10.3.1 Excluded Indicators and Targets

As noted on Table 10.1 below, 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.

In addition, future monitoring data for Indicators A1i (Percentage of population within the plan area travelling to work or school by public transport or non-mechanical means) and A1ii (Average distance travelled to work or school by the population of the Wicklow Environs and Rathnew area) will not be available until the results of the next CSO Census are made available. It is recommended that data for these indicators be sourced for the SEA of the next review of the Plan.

### 10.4 Reporting

A preliminary monitoring evaluation report on the effects of implementing the LAP will be prepared within two years of the making of the plan.

### 10.5 Responsibility

Wicklow County Council are responsible for collating existing relevant monitored data, the preparation of a monitoring report, the



publication of this report and, if necessary, the carrying out of corrective action.

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

## **10.6 Thresholds**

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

- boil notices on drinking water;
- fish kills;
- 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 impacts resulting from development which is granted permission under the LAP.

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
<b>Biodiversity, Flora and Fauna</b>	<p>B1: Percentage of relevant habitats and designated ecological sites lost as a result of implementation of the LAP</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 LAP</p> <p>B3: Percentage loss of connectivity between areas of local biodiversity as a result of implementation of the LAP – 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 LAP</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 LAP</p> <p>B3: No ecological networks or parts thereof which provide significant connectivity between areas of local biodiversity to be lost without remediation as a result of implementation of the LAP</p>	<p>CORINE Mapping, DEHLG Records &amp; Development Management Process in Wicklow County Council</p> <p>Development Management Process in Wicklow County Council &amp; Consultation with the National Parks and Wildlife Service</p> <p>Remote sensing of trees and hedges combined with CORINE mapping</p>
<b>Population and Human Health</b>	HH1: Occurrence (any) of a spatially concentrated deterioration in human health	HH1: No spatial concentrations of health problems arising from environmental factors	Wicklow County Council, EPA, Health and Safety Authority
<b>Soil</b>	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 LAP) at the end of the LAP lifespan	Development Management Process in Wicklow County Council

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
<b>Water</b>	<p>W1: Biotic Quality Rating (Q Value)</p> <p>W2: Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC</p>	<p>W1i: To maintain a biotic quality rating of Q4, in line with the requirement to achieve good water status under the Water Framework Directive, by 2015</p> <p>W1ii: To improve biotic quality ratings, where possible, to Q5</p> <p>W2: Compliance with Groundwater Quality Standards and Threshold Values under Directive 2006/118/EC</p>	<p>EPA</p> <p>As noted under Section 10.3.1, monitoring data may not be available for this indicator when the monitoring evaluation is being prepared.</p>
<b>Air and Climatic Factors</b>	<p>A1i: Percentage of population within the plan area travelling to work or school by public transport or non-mechanical means</p> <p>A1ii: Average distance travelled to work or school by the population of the Wicklow Environs and Rathnew area</p>	<p>A1i: An increase in the percentage of the population travelling to work or school by public transport or non-mechanical means</p> <p>A1ii: A decrease in the average distance travelled to work or school by the population of the Wicklow Environs and Rathnew area</p>	<p>Central Statistics Office:</p> <p>As noted under Section 10.3.1, future monitoring data may not be available for these indicators until results from the next Census are made available.</p>
<b>Material Assets</b>	<p>M1: Number of new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the LAP</p>	<p>M1: No new developments granted permission which cannot be adequately served by a public waste water treatment plant over the lifetime of the LAP</p>	<p>Development Management Process in Wicklow County Council</p>

Environmental Component	Selected Indicator(s)	Selected Target(s)	Sources
<b>Cultural Heritage</b>	<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>CH2: Number of unauthorised developments occurring which result in physical loss or loss entries to the Record of Protected Structures and/or their context within the surrounding landscape where relevant.</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>CH2: No unauthorised developments occurring which result in physical loss or loss entries to the Record of Protected Structures and/or their context within the surrounding landscape where relevant.</p>	<p>Development Management Process in Wicklow County Council</p> <p>Development Management Process in Wicklow County Council</p>
<b>Landscape</b>	L1: Number of complaints received from statutory consultees regarding avoidable impacts on the landscape - especially with regard to Wicklow Environs and Rathnew's sensitive landscape features and designated scenic views - resulting from development which is granted permission under the LAP	L1: No developments permitted which result in avoidable impacts on the landscape - especially with regard to Wicklow Environs and Rathnew's sensitive landscape features and designated scenic views - resulting from development which is granted permission under the LAP	Development Management Process in Wicklow County Council

**Table 10.1 Selected Indicators and Targets for Monitoring**

## Appendix I Site Synopses

### Candidate Special Areas of Conservation

**Site Name: The Murrough Wetlands**  
**Site Code: 002249**

The Murrough is a coastal wetland complex which stretches for 15 km from Ballygannon to north of Wicklow town, and in parts, extends inland for up to 1 km. A shingle ridge stretches the length of the site and carries the mainline Dublin-Wexford railway.

The site supports a number of habitats listed on Annex I of the EU Habitats Directive and a number of bird species listed on Annex I of the EU Birds Directive, as well as a wide range of important migratory birds. There are also many rare plants in the site.

On the seaward side, driftline vegetation includes species such as Sea Rocket (*Cakile maritima*), Sea Sandwort (*Honkenya peploides*), Sea Holly (*Eryngium maritimum*) and Yellow-horned Poppy (*Glaucium flavum*). The rare and legally protected Oyster Plant (*Mertensia maritima*) (Flora (Protection) Order, 1999) has been recorded on the gravelly shore in the past but is now considered to be extinct from this locality.

Low sand hills occur at Kilcoole, with Marram (*Ammophila arenaria*) and Lymegrass (*Leymus arenarius*). In other areas and further inland a rich grassy sward, which is most extensive in the south end of the site, has developed. Typical species include Sweet Vernal-grass (*Anthoxanthum odoratum*), Crested Dog's-tail (*Cynosurus cristatus*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Burnet Rose (*Rosa pimpinellifolia*) and Pyramidal Orchid (*Anacamptis pyramidalis*). A community dominated by Silverweed (*Potentilla anserina*) and Strawberry Clover (*Trifolium fragiferum*) occurs in some of the wetter, grassy areas. In some places, particularly at the south of the site, a Gorse (*Ulex*) heath has developed on the stony ridge.

Saltmarsh is present within the site in two distinct areas. At the southern end of the site, Broad Lough, a brackish, partly tidal lake, has a well developed saltmarsh community which

includes Sea Rush (*Juncus gerardii*), Common saltmarsh-grass (*Puccinellia maritima*), Sea Aster (*Aster tripolium*), Sea Purslane (*Hamelione portulacoides*) and Common Scurvy-grass (*Cochlearia officinalis*). Common Reed (*Phragmites australis*) is abundant along the western shore, along with some Sea Clubrush (*Scirpus maritimus*).

Saltmarsh is also present in the northern end of the site in the vicinity of the Breaches. Though this has been greatly affected by drainage in the late 1980s and early 1990s, localised Sea Couch (*Elymus pycnanthus*) still occurs. The grassland which was improved as a result of the drainage is now influenced by seepage and flooding of saline waters.

An area of fen occurs at Five Mile Point. Here Black Bog-rush (*Schoenus nigricans*) is dominant, with Marsh Pennywort (*Hydrocotyle vulgaris*), Purple Moor-grass (*Molinia caerulea*), heather (*Calluna vulgaris*), Cross-leaved heath (*Erica tetralix*), Devil's-bit Scabious (*Succisa pratensis*) and a wide variety of orchids also present. The rare, Narrow-leaved Marsh Orchid (*Dactylorhiza traunsteineri*) has also been recorded here. Fen Sedge (*Cladium mariscus*) is present where the ground is wetter. This in turn, merges into areas dominated by Common Reed. Fen is found in mosaic with reed bed, and wet woodland in the townland of Blackditch.

A fine wet woodland occurs at Blackditch. Birch (*Betula pubescens*) is the dominant species with some Alder (*Alnus glutinosa*), Willow (*Salix* spp.) and Ash (*Fraxinus excelsior*) also present. The ground flora of this wooded area is often quite dense. This wood also contains a rich invertebrate community with at least eight rare or notable species of fly (Diptera) occurring, including *Syntormon setosus*, a species unknown elsewhere in Britain or Ireland.

A wide range of freshwater and brackish marsh habitats occur within the site. These vary from reed-marsh dominated by reeds and Rushes (*Juncus* spp.), to those of Sedges (*Carex* spp.) with other areas supporting a mixture of Sedges and Yellow Iris (*Iris pseudacorus*) also occurring. A wide variety of grasses and herbs are also found. These include Meadowsweet (*Filipendula ulmaria*), Silverweed and Common Spikerush (*Eleocharis palustris*). The scarce,

Marsh Pea (*Lathyrus palustris*) occurs in one area. The marshes merge into wet grassland in many areas. Where grazing pressure is low, a herb-rich sward occurs with species such as Ragged Robin (*Lychnis flos-cuculi*), Cuckoo Flower (*Cardamine pratensis*), Meadowsweet and Spotted Orchid (*Dactylorhiza maculata*) occurring. Sedges are abundant in the wetter areas. Where drains have been cut, there are many other species such as Greater Spearwort (*Ranunculus lingua*), Bogbean (*Menyanthes trifoliata*) and the scarce Reed Sweetgrass (*Glyceria maxima*).

The Murrough is an important site for wintering waterfowl and breeding birds. Annex I bird species present include Red-throated Diver, Little Egret, Bewick's Swan, Whooper Swan, Greenland White-fronted Goose, Golden Plover, Kingfisher, Sandwich Tern and Little Tern. Average peak winter counts from 1994/95 - 1997/98 showed the site to have an internationally important population of Brent Geese (1,318, which is much higher than it was in the early 90s), nationally important populations of Wigeon (1,518), Teal (772), Common Scoter (103) and Lapwing (3,140) and regionally or locally important populations of Whooper Swan (80), Little Grebe (22), Shelduck (95), Gadwall (9), Mallard (391), Shoveler (22), Golden Plover (615), Curlew (605) and Redshank (181). Greylag Geese numbers were nationally important in the early 90s but these numbers have dropped off. The average peak is now 213.

Little Tern breed on the shingle beach near The Breaches and this is the largest colony on the east coast (c.50 pairs in 1993, an average of 37 pairs over the ten year period 1988-1998). Redshank, Oystercatcher, Ringed Plover and Water Rail also breed. The reedbeds at Broad Lough provide habitat for Reed Warbler and the rare Bearded Tit has bred here. Otter has been reported regularly from the Murrough.

Recent farming and drainage practices and afforestation have greatly reduced the area and quality of the wetlands habitats - the area between Kilcoole and Newcastle is particularly affected. In 1997 there was some levelling of the sand hills below Killoughter station. Pollution, reclamation and further drainage would adversely affect this site.

This site is of importance as it is the largest coastal wetland complex on the east coast of

Ireland. Although much affected by drainage, it still contains a wide range of coastal and freshwater habitats including five listed on Annex I of the EU Habitats Directive, some of which contain threatened plants. Areas on the site contain a rich invertebrate fauna, including several rarities. It is an important site for both wintering and breeding birds and supports a wide variety of species listed on Annex I of the EU Birds Directive.

18.1.2000

**Site Name: Wicklow Reef**

**Site Code: 002274**

Wicklow Reef is situated just to the north of Wicklow Head on the east coast of county Wicklow. The substrate is a mixture of cobbles, bedrock and sand and is subject to strong tidal streams. Reefs are listed under Annex I of the EU Habitats Directive.

Wicklow Reef is an example of a subtidal reef constructed by the honeycomb worm *Sabellaria alveolata*. In Irish waters this worm normally constructs reefs on intertidal rocks, in areas subject to some sand scour, and such reefs are widespread but uncommon. *Sabellaria alveolata* subtidal reefs are known to occur in the Mediterranean but this example is an extremely unusual feature and may be the first record for Britain and Ireland.

The reef occurs at a depth of 12-30 m and reaches a thickness of at least 0.3-0.5 m. It is composed of consolidated sand grains formed into a honeycomb structure by the activities of the worm. There is a good diversity of species associated with the reef, including hydroids (*Hydrallmania falcata*), a variety of polychaete worms, the snail *Calliostoma zizyphinum*, the bivalves *Musculus discor* and *Mytilus edulis*, molluscs, bryzoans, barnacles, amphipods and crabs, starfish, brittlestars and sea squirts. Three of the species associated with this biogenic reef are rare in Irish waters. The bryozoan *Phaeostachys spinifera* is only known from five locations, with the majority on the west coast and no records in the Irish sea south of Co. Antrim. The polychaete *Eulalia ornata* and the amphipod *Uncia crenatipalma* are only known from one and two sites respectively in Ireland. Wicklow Reef is of high conservation value as it is the only documented example in Ireland of a biogenic reef.

02.09.2001



## Special Protection Areas

**Site Name: The Murrough**

**Site Code: 004186**

The Murrough SPA comprises a coastal wetland complex that stretches for 13 km from Kilcoole Station, east of Kilcoole village in the north to Wicklow town in the south, and extends inland for up to 1 km in places. The site includes an area of marine water to a distance of 200m from the low water mark. A shingle ridge runs along the length of the site and carries the Dublin-Wexford railway line.

Beside the shingle shore is a stony ridge supporting perennial vegetation. Driftline vegetation on the seaward side includes species such as Sea Rocket (*Cakile maritima*), Sea Sandwort (*Honkenya peploides*), Sea Holly (*Eryngium maritimum*) and Yellow-horned Poppy (*Glaucium flavum*). Low sand hills occur at Kilcoole, with Marram (*Ammophila arenaria*) and Lyme-grass (*Leymus arenarius*). In other areas and further inland a rich grassy sward, which is most extensive in the south end of the site, has developed. A community dominated by Silverweed (*Potentilla anserina*) and Strawberry Clover (*Trifolium fragiferum*) occurs in some of the wetter, grassy areas. In some places, particularly at the south of the site, a Gorse (*Ulex*) heath has developed on the stony ridge.

At the southern end of the site, Broad Lough, a brackish, partly tidal lake, has a well-developed saltmarsh community. Common Reed (*Phragmites australis*) is abundant along the western shore, along with some Sea Club-rush (*Scirpus maritimus*). Saltmarsh is also present in the northern end of the site in the vicinity of the Breaches. An area of fen occurs at Five Mile Point. Here, Black Bog-rush (*Schoenus nigricans*) is dominant. Fen Sedge (*Cladium mariscus*) is present where the ground is wetter. This merges into areas dominated by Common Reed. A wide range of freshwater and brackish marsh habitats occur within the site. These vary from reed-marsh dominated by reeds and rushes (*Juncus* spp.), to those of sedges (*Carex* spp.) with other areas supporting a mixture of sedges and Yellow Iris (*Iris pseudacorus*) also occurring. The marshes merge into wet grassland in many areas and where grazing pressure is low, a herb-rich sward occurs. Sedges are abundant in the wetter areas. Where drains have been cut, there are many other species such as Greater Spearwort

(*Ranunculus lingua*), Bogbean (*Menyanthes trifoliata*) and Reed Sweet-grass (*Glyceria maxima*).

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Red-throated Diver, Greylag Goose, Light-bellied Brent Goose, Wigeon, Teal, Black-headed Gull, Herring Gull and Little Tern. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The shingle ridge at Kilcoole is a traditional nesting area for Little Tern, and the site now supports one of the largest colonies in the country. Numbers vary between years, with an average of 30 pairs recorded for the four years 1999-2002. In 2005, 100 pairs were recorded here. A tern protection scheme and research programme, co-ordinated by BirdWatch Ireland and the National Parks and Wildlife Service, has been in operation since 1985. Breeding success varies from year to year, largely due to predation by foxes, crows and other species.

During the winter this site is important for a number of waterbirds - all population sizes are the mean of peak counts for the 5 years, 1995/96 – 1999/2000. Light-bellied Brent Goose occurs here in internationally important numbers (859). Other species that visit here in nationally important numbers are Red-throated Diver (32), Greylag Goose (300), Wigeon (1,209), Teal (644), Black-headed Gull (997) and Herring Gull (506). Other species that are known to occur here are Little Grebe, Grey Heron, Cormorant, Mute Swan, Whooper Swan, Greenland White-fronted Goose, Shelduck, Gadwall, Shoveler, Mallard, Golden Plover, Ringed Plover, Lapwing, Dunlin, Curlew, Greenshank and Redshank.

Short-eared Owl is recorded here during the winter. Little Egret has bred locally in recent years and this site is a main feeding area, with several birds present regularly. While formerly a rare bird in Ireland, Little Egret is now well-established with most birds occurring in the south-east and south (Counties Wexford, Waterford and Cork). The Murrough is presently at the edge of the species' range. This site is one of the few sites in Ireland where Reed Warbler breeds regularly. It is considered that 1-4 pairs bred each year during the 1980s and

early 1990s, with a minimum of 6 birds in song in 1993. An absence of records since 1996 may be due to under-recording. For some years in the 1980s, Bearded Tit bred - this is the only known site in the country where breeding of this rare species has been proven; there have, however, been no subsequent records. Kingfisher regularly uses the site. Sandwich Tern are recorded from the site during the autumn.

Recent farming and drainage practices and afforestation have greatly reduced the area and quality of the wetlands habitats - the area between Kilcoole and Newcastle is particularly affected. Some levelling of the sand hills near Killougher has also occurred. Pollution, reclamation and further drainage would adversely affect this site.

The Murrough SPA is an important site for wintering waterbirds, being internationally important for Brent Goose and nationally important for Red-throated Diver, Greylag Goose, Wigeon, Teal, Black-headed Gull and Herring Gull. It is probably the most important site in the country for nesting Little Tern. The regular occurrence of Red-throated Diver, Little Egret, Whooper Swan, Greenland White-fronted Goose, Golden Plover, Little Tern, Sandwich Tern, Short-eared Owl and Kingfisher is of note as these species are listed on Annex I of the E.U. Birds Directive. The site also supports a typical diversity of birds associated with reed swamp, including Reed Warbler, a very localised species in Ireland. The site is also of considerable importance for the wide range of coastal and freshwater habitats that it supports, including several that are listed on Annex I of the E.U. Habitats Directive.  
20.8.2007

**Site Name: Wicklow Head**  
**Site Code: 004127**

Wicklow Head is a rocky headland with extensive exposures of mica-schist. It is situated approximately 3 kilometres south of Wicklow town. A lighthouse is located near the base of the cliffs. The cliffs are highest immediately south of the lighthouse where they rise to about 60 m and it is here that most of the seabirds breed. The site comprises the cliffs and cliff-top vegetation, as well as some heath vegetation. The marine area to a distance of 500 m from the base of the cliffs, where seabirds forage, bathe and socialise, is included in the site.

At the top of the cliffs and in rock crevices, thin pockets of soil are colonised by such species as English Stonecrop (*Sedum anglicum*), Sea Pink (*Armeria maritima*), Wild Thyme (*Thymus praecox*), Sheep's Bit (*Jasione montana*), Sea Campion (*Silene vulgaris* subsp. *maritima*) and Hair Grass (*Aira praecox*). Red Fescue (*Festuca rubra*) is frequent over much of this area. In from the cliff-tops, the heath is characterised by Gorse (*Ulex europaeus*) and Bell Heather (*Erica cinerea*). Also present are Heath Bedstraw (*Galium saxatile*), Tormentil (*Potentilla erecta*), some Burnet Rose (*Rosa pimpinellifolia*), Brambles (*Rubus fruticosus*) and Wood Sage (*Teucrium scorodonia*). Dense Bracken (*Pteridium aquilinum*) grows on the slopes north of the lighthouse.

Wicklow Head has important seabird colonies. A census in 1999 recorded the following: Fulmar 62 pairs, Shag 11 pairs, Herring Gull 20 pairs, Kittiwake 956 pairs, Guillemot 420 individuals and Razorbill 186 individuals. A survey of Black Guillemots in April 1998 resulted in 70 individual birds within the SPA site. The Kittiwake and Black Guillemot populations are of National Importance.

The site also supports a pair of breeding Peregrines, a species listed on Annex I of the EU Birds Directive. Ravens nest annually on the cliffs, and the heath supports such species as Stonechat, Whitethroat and Linnet.

This site is important as it has a well-documented seabird colony, with two species having populations of national importance. The occurrence of Peregrine Falcon adds to the interest of the site.  
27.2.2002

## Natural Heritage Areas

**Site Name: Wicklow Head**  
**Site Code: 000734**

Wicklow Head is a rocky headland with extensive exposures of mica-schist. It is situated about a mile south of Wicklow town. A coastguard station and lighthouse are located on the headland.

The southern side of the headland is indented with inlets. The sheer cliffs provide nesting sites for sea birds, mostly Kittiwakes and smaller numbers of Fulmars, Razorbills and Guillemots. Black Guillemots, Herring Gulls and a few pairs

of Shags also nest. Ravens nest annually on the cliffs. The exposed rocks provide a habitat for a considerable range of lichens.

At the top of the cliffs and in rock crevices, thin pockets of soil are colonised by English Stonecrop (*Sedum anglicum*), Sea Pink (*Armeria maritima*), Wild Thyme (*Thymus drucei*), Sheep's Bit (*Jasione montana*), Bladder Campion (*Silene vulgaris*) and Hair Grass (*Aira praecox*). Red Fescue (*Festuca rubra*) is dominant over much of this area.

Behind the headland there is a heath with Gorse (*Ulex europaeus*) and Bell Heather (*Erica cinerea*). Also present are Heath Bedstraw (*Galium saxatile*), Tormentil (*Potentilla erecta*), some Burnet Rose (*Rosa pimpinellifolia*), Buckthorn (*Prunus spinosa*), Brambles (*Rubus fruticosus*) and Wood Sage (*Teucrium scorodonia*). Dense bracken (*Pteridium aquilinum*) grows on the slopes north of the lighthouse.

A strip of scrub grows in a depression along the south western part of the site. It follows the line of a stream which flows down towards a shingle beach. The scrub is dominated by Willow (*Salix atrocinerea*), while Brambles (*Rubus fruticosus*), Purple Loosestrife, (*Lythrum salicaria*), Creeping Buttercup (*Ranunculus repens*) and Broad Buckler Fern (*Dryopteris dilatata*) also occur.

Open wet areas at the northern end of the scrub are dominated by Purple Moor-grass (*Molinia caerulea*), Bird's-foot Trefoil (*Lotus corniculatus*), Water Mint (*Mentha aquatica*), Angelica (*Angelica sylvestris*) and Common Sedge (*Carex nigra*). A Badger set was found in this area.

This site is important as a good example of a rocky headland showing nice rock exposures on steep cliffs, which also provide habitat for regionally important concentrations of nesting sea birds. The small area of heath, grassland and wet scrub increase the habitat diversity of this coastal site.

15.2.95

**Site Name: The Murrough**  
**Site Code: 000730**

The Murrough is a coastal wetland complex which stretches for 15 km from Ballygannon to north of Wicklow town, and in parts, extends

inland for up to 1 km. A shingle ridge stretches the length of the site and carries the mainline Dublin-Wexford railway.

The site is important as it supports a number of habitats listed on Annex I of the EU Habitats Directive, a number of bird species listed on Annex I of the EU Birds Directive as well as a wide range of migratory birds not listed on Annex I of this directive.

On the seaward side, shingle colonising species such as Sea Rocket (*Cakile maritima*), Sea Sandwort (*Honkenya peploides*), Sea Holly (*Eryngium maritimum*) and Yellow-horned Poppy (*Glaucium flavum*) are found in the habitat called driftline vegetation. The rare and legally protected Oyster Plant (*Mertensia maritima*) (Flora Protection Order, 1987) has been recorded on the gravelly shore in the past but is now considered to be extinct from this locality.

Beside the shingle shore is a stony ridge of perennial vegetation. Low sand hills occur at Kilcoole, with Marram (*Ammophila arenaria*) and Lyme Grass (*Leymus arenarius*). In other areas and further inland, a rich grassy sward which is most extensive in the south end of the site, has developed. Typical species include Sweet vernal-grass (*Anthoxanthum odoratum*), Crested Dog's-tail (*Cynosurus cristatus*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Burnet Rose (*Rosa pimpinellifolia*) and Pyramidal Orchid (*Anacamptis pyramidalis*). A community dominated by Silverweed (*Potentilla anserina*) and Strawberry Clover (*Trifolium fragiferum*) occurs in some of the wetter, grassy areas. In some areas, particularly at the south of the site a Gorse (*Ulex*) heath has developed on the stony ridge.

Saltmarsh is present within the site in two distinct areas. At the southern end of the site, a brackish, partly tidal lake, Broad Lough, has developed. This lake has a well developed saltmarsh community which includes Sea Rush (*Juncus gerardii*), Common saltmarsh-grass (*Puccinellia maritima*), Sea Aster (*Aster tripolium*), Sea Purslane (*Hamelione portulacoides*) and Common Scurvy Grass (*Cochlearia officinalis*). Common Reed (*Phragmites australis*) is abundant along the western shore, along with some Sea Club-rush (*Scirpus maritimus*).

Saltmarsh is also present in the northern end of the site in the vicinity of the Breaches though

this has been greatly affected by drainage in the late 1980s early 1990s. The grassland which was improved as a result of the drainage is now influenced by seepage and flooding of saline waters.

An area of fen occurs at Five Mile Point. Here Black Bog-rush (*Schoenus nigricans*) is dominant, with Marsh Pennywort (*Hydrocotyle vulgaris*), Purple Moor-grass (*Molinia caerulea*), heather (*Calluna vulgaris*), Cross-leaved heath (*Erica tetralix*), Devil's-bit Scabious (*Succisa pratensis*) and a wide variety of orchids also present. The rare, Narrow-leaved Marsh Orchid (*Dactylorhiza traunsteineri*) has been recorded at Five Mile Point. Fen Sedge (*Cladium mariscus*) is present where the ground is wetter. This in turn, merges into areas dominated by Common Reed. Fen is found in mosaic with reed bed, and wet woodland in the townland of Blackditch.

A fine wet woodland occurs at Blackditch. Birch (*Betula pubescens*) is the dominant species with some Alder (*Alnus glutinosa*), Willow (*Salix* spp.) and Ash (*Fraxinus excelsior*) also present. The ground flora of this wooded area is often quite dense. This wood also contains a rich invertebrate community with at least eight rare or notable species of fly (order Diptera) occurring, including *Syntormon setosus*, a species unknown elsewhere in Britain or Ireland.

A wide range of freshwater and brackish marsh habitats occur within the site. These vary from reed-marsh dominated by reeds and Rushes (*Juncus* spp.), to those of Sedges (*Carex* spp.) with other areas supporting a mixture of Sedges and Yellow Iris (*Iris pseudacorus*) also occurring. A wide variety of grasses and herbs are also found. These include Meadowsweet (*Filipendula ulmaria*), Silverweed and Common Spike-rush (*Eleocharis palustris*). The scarce, Marsh Pea (*Lathyrus palustris*) occurs in one area.

The marshes merge into wet grassland in many areas. Where grazing pressure is low, a herb-rich sward occurs with species such as Ragged Robin (*Lychnis flos-cuculi*), Cuckoo Flower (*Cardamine pratensis*), Meadowsweet and Spotted Orchid (*Dactylorhiza maculata*) occurring. Sedges are abundant in the wetter areas.

Where drains have been cut, there are many other species such as Greater Spearwort

(*Ranunculus lingua*), Bogbean (*Menyanthes trifoliata*) and the scarce Reed Sweet-grass (*Glyceria maxima*). An area of saltmarsh at the Breaches has been largely drained but the localised Sea Couch (*Elymus pycnanthus*) still occurs.

The Murrough is an important site for wintering waterfowl and breeding birds. A number of EU Birds Directive Annex I bird species are found on the site including Red-throated Diver, Little Egret, Bewick's Swan, Whooper Swan, Greenland White-fronted Goose, Golden Plover, Kingfisher, Sandwich Tern and Little Tern.

Winter bird counts in 1994/95 - 1997/98 showed the site to have an internationally important population of Brent Geese (average peak 1,318, which is much higher than it was in the early 90s), nationally important populations of Wigeon (average peak 1,518), Teal (average peak 772), Common Scoter (average peak 103) and Lapwing (average peak 3,140) and regionally or locally important populations of Whooper Swan (average peak 80), Little Grebe (average peak 22), Shelduck (average peak 95), Gadwall (average peak 9), Mallard (average peak 391), Shoveler (average peak 22), Golden Plover (average peak 615), Curlew (average peak 605) and Redshank (average peak 181). Greylag Geese numbers were nationally important in the early 90s but these numbers have dropped off. The average peak is now 213.

Little Tern breed on the shingle beach near The Breaches and this is the largest colony on the east coast (31 pairs in 1992, c. 50 pairs in 1993, an average of 37 pairs over the ten year period 1988-1998 (I-WeBS data)). Redshank, Oystercatcher, Ringed Plover and Water Rail also breed. The reedbeds at Broad Lough provide habitat for Reed Warbler and the rare Bearded Tit has bred here. Otter has been reported regularly from the Murrough.

Recent farming and drainage practices, the development of an airstrip and afforestation have greatly reduced the area and quality of the wetlands habitats - the area between Kilcoole and Newcastle is particularly affected. In 1997 there has been some levelling of the sand hills below Killoughter station. Pollution, reclamation and further drainage would adversely affect this site.

This site is of importance as it is the largest coastal wetland complex on the east coast of

Ireland. Although much affected by drainage, it still contains a wide range of coastal and freshwater habitats, some of which contain threatened plants. Areas on the site contain a rich invertebrate fauna, including several rarities. It is an important site for both wintering and breeding birds and supports a wide variety of EU Birds Directive Annex I bird species.

15.12.1998