

Appendix E

Stage One

Appropriate Assessment

Screening Report

DRAFT WICKLOW - RATHNEW DEVELOPMENT PLAN 2013-2019

DRAFT

WICKLOW - RATHNEW

DEVELOPMENT PLAN 2013 – 2019

April 2012



WICKLOW TOWN COUNCIL & WICKLOW COUNTY COUNCIL

Volume 1

Wicklow Town Council, Town Hall, Market Square, Wicklow Town
Wicklow County Council, County Buildings, Station Road, Wicklow Town

Section 1 Introduction and Background to Appropriate Assessment

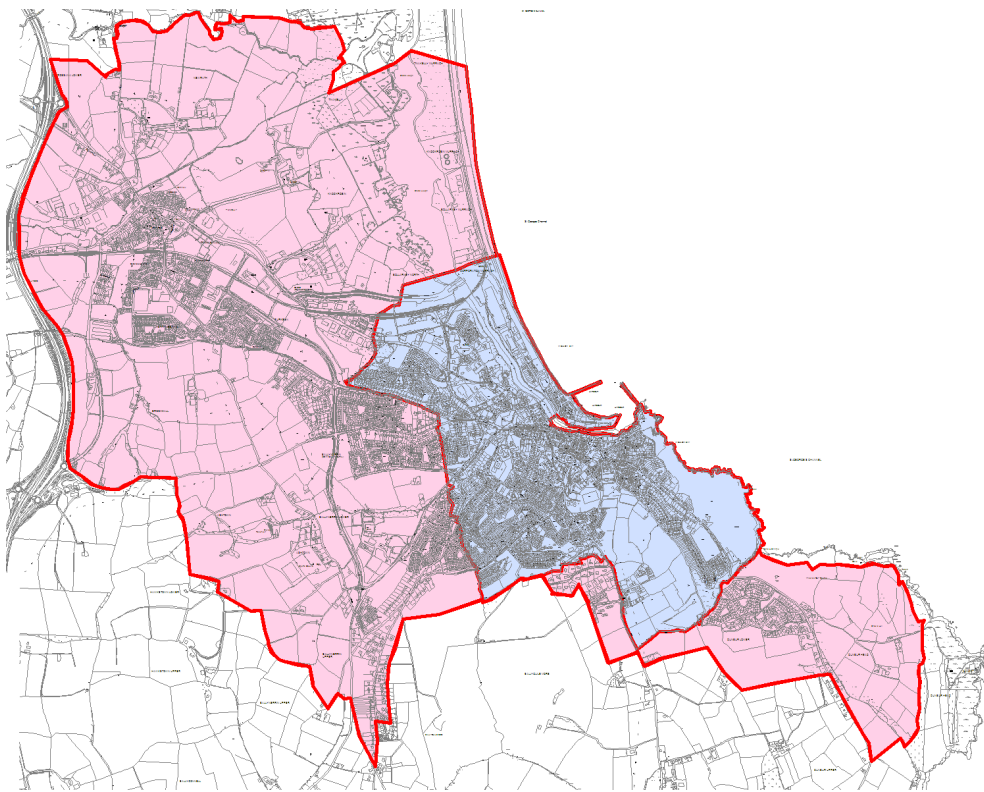
1.1 Introduction

This is the appropriate assessment screening report of the Wicklow - Rathnew Development Plan 2013 – 2019. This report is being carried out in line with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC). The purpose of this report is to assess the likely effects of the proposed Plan either alone or in combination with other projects or plans, on any Natura 2000 site and to consider whether these impacts are likely to be significant and thus require an appropriate assessment.

The report has taken into consideration the European Commissions publication- *Assessment of plans and projects significantly affecting Natura 2000 sites - Methodological guidance on the provisions of Articles 6 (3) and (4) of the Habitats Directive 92/43/EEC*, Circular Letter SEA 1/08 & NPWS 1/08 from the Department of the Environment, Heritage and Local Government and *Appropriate Assessment of Plans and Project in Ireland – Guidance for Planning Authorities* (December 2009) from the Department of the Environment, Heritage and Local Government.

1.2 The Wicklow - Rathnew Development Plan

The Wicklow - Rathnew Development Plan will set out an overall strategy for the proper planning and sustainable development of the administrative area of Wicklow Town and the Wicklow Environs Area (as detailed in Map1.1 below) for the period 2013 to 2019.



Map No.1.1 Wicklow Town and Environs Boundaries

- Wicklow Town
- Wicklow Environs including Rathnew



North

© Ordnance Survey Ireland. All rights reserved. Licence Number 2012/35/CCMA/Wicklow County Council

1.3 Legislative Context:

The EU Habitats Directive

The assessment of impacts on Designated European Sites i.e. Special Areas of Conservation & Special Protection Areas, finds its origins in the EU Directive on the Conservation of Habitats, Flora and Fauna (92/43/EEC), more commonly known as the “Habitats Directive” which came into force in 1994 and was transposed into Irish law in 1997. “The Habitats Directive” provides legal protection for habitats and species of European importance.

The Habitats Directive was formulated as a direct result of the continuous deterioration of natural habitats and the increasing impacts on wild species arising in the most part as a result of development and agricultural activity. The main aim of the EC Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species at a favourable conservation status, introducing robust protection for those habitats and species of European importance.

The conservation status of a habitat is defined in Article 1 of the Directive as the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions, as well as the long-term survival of its typical species. The conservation status of a natural habitat will be taken as favourable when:

- Its natural range and the areas it covers within that range are stable or increasing,
- The specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future,
- The conservation status of its typical species is favourable¹

Articles 3 to 9 provide the legislative means to protect habitats and species of European Community interest through the establishment and conservation of a EU-wide network of sites known as Natura 2000. These are Special Areas of Conservation (SACs), designated under the Habitats Directive, and Special Protection Areas (SPAs), designated under the Conservation of Wild Birds Directive (79/409/ECC).

In its implementation the Habitats Directive introduces the ‘Precautionary Principle’ approach towards proposals whereby projects can only be permitted having ascertained that there is not likely to be any significant impact on the conservation status of the designated site.

As set out in MN2000² the conservation of natural habitats and habitats of species forms the most ambitious and far-reaching challenge of the Habitats Directive. This is set out in Article 6 of the Directive, which governs the conservation, and management of Natura 2000 sites. In this context Article 6 is viewed as one of the most important of the 24 articles of the directive being the one which determines the relationship between conservation and land use.

Article 6 of the Directive has three main provisions. This structure provides for a clear distinction between Article 6(1) and (2) which define a general regime while Article 6(3) and (4) define the procedures to be applied to specific circumstances.

A) Article 6(1) makes provision for the establishment of the necessary conservation measures, and is focused on positive and proactive interventions. This relates to the development of conservation Management Plans specifically designed for designated sites.

B) Article 6(2) makes provision for avoidance of habitat deterioration and significant species disturbance. Its emphasis is therefore preventive.

C) Article 6(3) and (4) set out a series of procedural and substantive safeguards governing plans and projects likely to have a significant effect on a Natura 2000 site.

¹ Council Directive 92/43/EEC

² MANAGING NATURA 2000 SITES, The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC (2000)

Article 6 is seen to reflect the overall aim of the Habitats Directive “promoting biodiversity by maintaining or restoring certain habitats and species at ‘favourable status’ within the context of Natura 2000 sites” while taking into account economic, social, cultural and regional requirements as a means to achieving sustainable development

The Habitats Directive and the Development Plan:

In accordance with Section 11 of Part II of the Planning and Development Acts 2000 (as amended), Wicklow Town Council in conjunction with Wicklow County Council has carried out its review of the Wicklow Town Development Plan 2007-13 and the Wicklow Environs and Rathnew Local Area Plan 2008-14, including Action Six Local Area Plan 2006-12.

The Planning and Development Acts 2000 (as amended) under section 10 (2)(c) states that a Development Plan shall include objectives for the “*the conservation and protection of the environment including, in particular, the archaeological and natural heritage and the conservation and protection of European sites and any other sites which may be prescribed for the purposes of this paragraph*”.

The consequences of this piece of legislation ensure that prior to the plan stage, a 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 are carried out. This process is carried out under the SEA Directive (2001/42/EC).

A strategic Environmental Assessment of the Wicklow Town and Environs Development has been carried out in accordance with this legislation however in addition to this process and following the EU ruling under case 418/04 EC Commission v Ireland, an appropriate assessment screening of the land use plan must be carried out.

An Appropriate Assessment is an assessment carried out under Article 6(3) of the Habitats Directive. As discussed above Article 6(3) alongside Article 6(4) sets out a series of procedural and substantive safeguards governing plans and projects likely to have a significant effect on a Natura 2000 site. Article 6(3) specifically states that:

*“Any plan or project **not directly connected with** or necessary to the management of the site **but likely to have a significant effect** thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public”.* This appropriate assessment screening exercise evaluates, based on scientific knowledge the potential impacts of a plan on the conservation objectives of any Natura 2000 site. The impacts assessed include the indirect and cumulative impacts of the plan, considered with any current or proposed activities, developments or policies impacting on the site.

1.4 Stages of the Appropriate Assessment

This appropriate assessment has been prepared in accordance with the European Commission Environment DG document *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*, referred to as the “EC Article 6 Guidance Document (EC2000)”. The guidance within this document provides a non-mandatory methodology for carrying out assessments required under Article 6(3) and 6(4) of the Habitats Directive, and is viewed as an interpretation of the EU Commission’s document “*Managing Natura 2000 sites. (2002)*”. This Assessment has also taken into consideration the Department of the Environment, Heritage and Local Government publication *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning*

Authorities (December 2009). This guidance is not a legal interpretation, but represents the current situation and understanding, and is regarded as a work in progress.

Stage one of the Methodological Guidance is the screening process, which examines the likely effects of a project, either alone or in combination with other projects or plans upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant. This stage of the screening process involves four steps, which fall under the following headings:

1. **Management of the site** - *Involves determining whether or not the project or plan is directly connected with or necessary to the management of the site*
2. **Description of the project or plan** - *Describing the project or plan and the description and characterisation of other projects or plans that in combination have the potential for having significant effects on the Natura 2000 site*
3. **Characteristics of the site** - *Identifying the potential affects on the Natura 2000 site(s)*
4. **Assessment of Significance** - *Assessing the significance of any effects on the Natura 2000 site(s).*

Stage 2 of the process “Appropriate Assessment” follows stage 1 where, following an evaluation of the plan it has been established the plan is likely to have a significant affect on any Natura 2000 site. This stage involves the following:

- A description of the Natura 2000 sites that will be considered further in the Appropriate Assessment process;
- A description of significant impacts on the conservation feature of these sites likely to occur from the proposed development;
- Recommendations.

The Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures. First, the plan should aim to avoid any negative impacts on European sites by identifying possible impacts early in the plan-making, and writing the plan in order to avoid such impacts. Second, mitigation measures should be applied, if necessary, during the Appropriate Assessment process to the point where no adverse impacts on the site(s) remain. If the plan is still likely to result in adverse effects, and no further practicable mitigation is possible, then it is rejected. If no alternative solutions are identified and the plan is required for imperative reasons of overriding public interest (IROPI) under Article 6(4) of the Habitats Directive, then compensation measures are required for any remaining adverse effect.

Section 2 Screening

2.1 Management of the site

Determining whether or not the project or plan is directly connected with or necessary to the management of the site.

Plans or projects that are directly connected with or necessary to the nature conservation and management of a Natura 2000 site are exempt from the need for Stage 2 Appropriate Assessment. For this exemption to apply, management should be interpreted narrowly as nature conservation management in the sense of Article 6(1) of the Habitats Directive, for example the relationship between the proposed plan and the management of the Natura site should be shown to be direct and not a by-product of the plan.

The proposed plan is a land use management plan and is not directly connected with or necessary to the nature conservation management of Natura sites, and as such the exemption does not apply.

2.2 Description of the project or plan

Describing the project or plan and the description and characterisation of other projects or plans that in combination have the potential for having significant effects on the Natura 2000 site

2.2.1 The Wicklow - Rathnew Development Plan

The purpose of the Wicklow - Rathnew Development Plan 2013-2019 is:

- To provide a blueprint for the sustainable development of the plan area in order to realise its full potential in the interest of the town and county;
- To provide a detailed framework for the management and regulation of development and use of land that will guide day to day planning decisions;
- To include proposals for the development and use of land and to zone lands for specific purposes, which will provide guidance and information for developers and the public;
- To promote the economic, social and cultural development of the town and its environs;
- To give local communities the opportunity to participate in the planning process as it relates to their local area and their daily lives.

2.2.2 Vision and Strategic Goals

The overarching purpose of the plan is set out under section 2.1 of the plan under 'Vision' where it is the strategic vision for Wicklow Town, Environs and Rathnew to be a prosperous and growing *community* in the garden County of Wicklow, offering a unique and high quality of life by providing for a sustainable and local work/life balance; within a quality *environment* for all who live, work and visit the area.

This vision alongside a number of strategic objectives provides the overall strategy to be implemented by Wicklow Town Council and Wicklow County Council in order to fulfill their role in providing for the proper planning and sustainable development of Wicklow and its Environs for the period up to 2019.

The key strategic objectives of the plan are set out below:

- Strengthening and consolidating Wicklow Town as the County town to ensure that it remains the economic and social hub of the community by making the town a more attractive place to live and do business, by improving the public realm, by encouraging infill development and brownfield regeneration, by protecting the built and natural heritage and by improving movement throughout the town
- Re-enforcing and protecting the identity of Rathnew as a separate stand alone entity in the wider settlement; by providing local services in an attractive, thriving village and to facilitate the educational potential of Clermont Campus for the benefit of the local and regional community
- Integrating land use planning and transport planning, with the dual aim of reducing the distance that people need to travel to work, shops, schools and places of recreation and social interaction and facilitating the delivery of improved public transport
- To enhance existing housing areas and to provide for high quality new housing at appropriate locations and to ensure the development of a range of house types, sizes and tenures in order to meet the differing needs of all in society and to promote balanced communities
- Cultivating the port and manufacturing employment tradition in the settlement while facilitating a broad range of enterprise development thereby avoiding dependence on a specific sector
- To recognise and protect through policies of the Plan, the unique character, built heritage, seaside location, maritime history, natural environment of the area, ensuring that this heritage can continue to contribute positively to overall quality of life, recreation and tourism role of the settlement and by developing existing traditional coastal and estuarine walks.

- Ensuring that the quality and setting of the natural environment is protected and strengthened through the Plan so that maximum associated ecosystem services in terms of flood attenuation, biodiversity, quality of life, tourism and recreation may be realised for the benefit of the local and wider community.
- Supporting social and community development and in particular, to link the development of new housing to the delivery of necessary community facilities, including schools, playing pitches, health facilities and other community services
- To recognise the needs of all society and ensure that all strategies, policies and objectives do not inhibit or exclude any individuals or groups from being part of their community's development
- Maximising the use of existing infrastructure and targeting new investment in infrastructure to that which can generate the highest returns to the community
- To address the climate change challenge as a plan dynamic, directly in the areas of flooding and renewable energy and indirectly through integrating climate change and sustainable development into all aspects of plan policy and objectives.

2.2.3 Strategic Environmental Assessment and AA

As part of the Development Plan process and in accordance with Directive 2001/42/EC a Strategic Environmental Assessment was carried out where potential impacts on Biodiversity Flora and Fauna have been examined. As part of the SEA process the objectives of the plan were evaluated against Strategic Environmental Objectives such as those relating to biodiversity flora and fauna. Where potential/probable conflicts were found to exist between the policies that make up the plan and the strategic environmental objectives (SEOs), the objectives were in the first instance amended or where this was not possible, appropriate mitigation measures were put in place in order to ensure that impacts were avoided.

2.2.4 Features of the Plan that could impact upon Natura 2000 sites

The key aspects of the Plan that could give rise to direct/indirect impacts upon Natura 2000 sites will principally be related to zonings. In particular, the need to consolidate use of lands at the Murrough, and to maximise use of those lands serviced by the port access route, could potentially pose a threat to neighbouring Natura sites.

Human pressure on sites can be manifested in a number of ways either directly in the form of land take, trampling and disturbance by people themselves; or indirectly, for example, in the form of water quality deterioration resulting from a run off of pollutants during construction phases. It is therefore essential that zonings in the Plan take account of these indirect impacts and ensure adequate buffering and other mitigation measures are put in place.

Objectives of the plan that will contribute towards the protection of Natura 2000 sites in accordance with the requirements of the Habitats Directive have been included by the plan makers and as a result of the SEA process.

2.2.4 Other Instruments

Numerous other higher-level measures further mitigate potential impacts of the Plan. These measures include EU Directives, national legislation and various guidelines. Principal among these are the following:

The Habitats Directive (HD): The European Council Directive on the Conservation of natural habitats and of wild fauna and flora (92/43/EEC) (Habitats Directive)

The Water Framework Directive (WFD): The Water Framework Directive 2000/60/EC

The National Biodiversity Plan (NBP): UN Convention on Biological Diversity 1992 - National Biodiversity Plan 2010- 2016 is as a result of this.

The Wildlife Act (WA): Wildlife Act 1976 and Wildlife (Amendment) Act 2000 (Wildlife Act)
The Birds Directive (BD): The 1979 European Council Directive on the Conservation of Wild Birds (79/409/EEC) (Birds Directive)
The Ramsar Convention (R): Convention on Wetlands of International Importance (Ramsar)
The Bathing Water Directive (BW): Bathing Water Directive (76/160/EEC)
The Urban Waste Water Treatment Directive (WW): (91/271/EEC) (amended by Directive 98/15/EEC)

Section 3 Description of Natura 2000 Sites

3.1 Natura sites located within 15km. of the Plan area

This section of the screening process describes the Natura 2000 sites within a 15km radius of the plan area. A 15km buffer zone was chosen as a precautionary measure to ensure that all potentially affected Natura 2000 sites are included in the screening process (Map 2). The Murrough Wetlands SPA and SAC occur within, and to the immediate north of the Plan boundary. Wicklow Head SPA is located to the south east of the Plan area, while Wicklow Reef SAC occurs off shore to the north of the Head.

Table 1 (cSACs) and Table 2 (SPAs) list the Natura 2000 sites that are within a 15km range of the plan area. The Qualifying Features for each SAC site and the Features of Interest and Special Conservation Interests of the SPAs have been obtained through a review of the documentation available on each site from the National Parks and Wildlife Service (NPWS) website www.npws.ie. Each qualifying feature also has a standard EU code and these are presented in brackets.

3.2 Priority Species and Habitats

A number of species and habitats are given 'Priority' status in the Habitats Directive by the EU because they are considered to be particularly vulnerable and are mainly, or exclusively, found within the European Union.

There are no 'Priority Species' known from Ireland.

Priority Habitats are present in Ireland and a number of them are present in Wicklow's cSACs. These are prefixed with an asterisk in Table 1 (e.g. *Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* [7210]). The importance of Priority habitats is emphasised at several places in the Directive (Articles 4 and 5 and Annex III), not only in terms of the selection of sites, but also in the measures required for site protection (Article 6) and surveillance (Article 11).

Map 2



Table 1 Special Areas of Conservation (SACs) within 15km of the Plan boundary

Site Code	Site Name	Qualifying Features	
		Annex 1 Habitat (* Indicates priority habitat)	Annex II Species
002249	The Murrough Wetlands	<ul style="list-style-type: none"> • Annual vegetation of drift lines [1210] • Perennial vegetation of stony banks [1220] • Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • *Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210] • Alkaline fens [7230] 	
002274	Wicklow Reef	<ul style="list-style-type: none"> • Reefs [1170] 	
001766	Maherabeg Dunes	<ul style="list-style-type: none"> • Annual vegetation of drift lines [1210] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] • *Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] • *Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2150] • *Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220] 	
000717	Deputy's Pass Nature Reserve	<ul style="list-style-type: none"> • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles [91A0] 	
000733	Vale of Clara (Rathdrum Wood)	<ul style="list-style-type: none"> • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles [91A0] 	
002122	Wicklow Mountains	<ul style="list-style-type: none"> • Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoto-Nanojuncetea</i> [3130] • Natural dystrophic lakes and ponds [3160] • Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] • European dry heaths [4030] • Alpine and Boreal heaths [4060] • Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* [6230] • Blanket bog (*active only) [7130] • Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) [8110] • Calcareous rocky slopes with chasmophytic vegetation [8210] • Siliceous rocky slopes with chasmophytic 	Otter (<i>Lutra lutra</i>) [1355]

		<ul style="list-style-type: none"> vegetation [8220] • Old sessile oak woods with Ilex and Blechnum in British Isles [91A0] 	
000729	Buckroney-Brittas Dunes and Fen	<ul style="list-style-type: none"> • Annual vegetation of drift lines [1210] • Perennial vegetation of stony banks [1220] • Mediterranean salt meadows (Juncetalia maritimi) [1410] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes)* [2130] • Atlantic decalcified fixed dunes (Calluno-Ulicetea)* [2150] • Dunes with Salix repens ssp.argentea (Salix arenariae) [2170] • Humid dune slacks [2190] • Alkaline fens [7230] 	
000716	Carriggower Bog	<ul style="list-style-type: none"> • Transition mires and quaking bogs [7140] 	
000719	Glen of the Downs	<ul style="list-style-type: none"> • Old sessile oak woods with Ilex and Blechnum in British Isles [91A0] 	

Table 2 Special Protection Areas (SPAs) within 15km. of the Plan boundary

Site Code	Site Name	Special Conservation Interests & Features of Interest
004186	The Murrough	<ul style="list-style-type: none"> • Red-throated Diver (Gavia stellata) [A001] • Greylag Goose (Anser anser) [A043] • Light-bellied Brent Goose (Branta bernicla hrota) [A046] • Wigeon (Anas penelope) [A050] • Teal (Anas crecca) [A052] • Black-headed Gull (Larus ridibundus) [A179] • Herring Gull (Larus argentatus) [A184] • Little Tern (Sterna albifrons) [A195] • Wetlands & Waterbirds [A999]
004040	Wicklow Mountains National Park	<ul style="list-style-type: none"> • Merlin (Falco columbarius) [A098] • Peregrine (Falco peregrinus) [A103]
004127	Wicklow Head	<ul style="list-style-type: none"> • Kittiwake (Rissa tridactyla) [A188]

3.3 Conservation objectives

The Habitats Directive aims, *inter alia*, to maintain or restore the favourable conservation status of habitats and species which have been identified as the qualifying features of sites designated as Special Areas of Conservation (SACs) and the Special Conservation Interests of Special Protection Areas (SPAs). These two designations are collectively known as the Natura 2000 network.

A Natura 2000 site's Conservation Objectives are defined by NPWS and are "intended to ensure that the relevant Annex 1 habitats and Annex II species present on a site are maintained in a favourable condition" (Guidelines produced by the DEHLG on Appropriate Assessment 2010).

The DOEHLG Guidelines state that, "The conservation objectives derive from the qualifying interests, the Natura 2000 standard data form, and the management plan for the site, with summary information contained in the site synopsis". With the exception of Magherabeg Dunes SAC, conservation management plans have not been prepared for Natura sites in the Plan area. Conservation Statements are however available for the following SAC's and list the relevant management issues and threats; Deputy's Pass, Vale of Clara and Carrigower Bog. A Management Plan is available for the Wicklow Mountains National Park which encompasses the Wicklow Mountains SAC and SPA and provides a source of information on management issues and threats.

The process is underway by NPWS for setting detailed site-specific conservation objectives for habitats and species, however as of yet these have not been identified for Natura sites within the scope of the Plan area. Generic conservation objectives have been compiled for the SAC and SPAs within the Plan area. These are based on maintaining/restoring the favourable conservation condition of the habitats and species for which sites are selected.

Favourable conservation status of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

The NPWS has identified the following as the Conservation Objective for the SACs in Wicklow: *To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected* (see Table 1)

For all the SPAs in Wicklow the NPWS has identified the following as the Conservation Objective: *To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA* (See Table 2)

The qualifying features and special conservation interests of the Natura sites are listed in tables 1 and 2. Further descriptive detail of site characteristics, quality and importance, and vulnerability of these features, are available on the Natura 2000 standard data forms for each site on www.npws.ie. These have been collated and are included in the individual site descriptions in Appendix 1.

Section 4 Assessment of Impacts

4.1 Introduction

Assessment is the process of evaluating the importance or significance of project/plan impacts (whether adverse or beneficial). This is essentially a judgment, built up from the collation of available information and the use of objective criteria and standards.

4.2 Assessment of Likely impacts on Natura 2000 sites

This Assessment will examine and evaluate the significance on impact, if any of the Wicklow - Rathnew Development Plan on each of the Natura 2000 sites located within 15 km of the Plan area. Table 3 provides details of each Natura site's conservation objectives and its management issues and threats. These are largely derived from available data in the form of site synopsis and/or conservation management plans. Additional threats have been identified, based on documented threats to Habitats Directive Annex 1 habitats and Annex II species in Ireland as set out in *"The Status of EU Protected Habitats and Species in Ireland". NPWS 2008*. Not all of these threats will apply to all SACs in which these species and habitats are present; however gathering this information on the perceived threats to the qualifying features of the sites is an important prerequisite for assessing what are the 'likely significant effects' on the sites resulting from the Plan.

The possible impacts that might arise from the Plan have been examined in the context of a number of factors that could potentially affect the integrity of the Natura 2000 sites. These factors are as follows; Reduction in Habitat area; Disturbance to Key Species; Habitat of Species Fragmentation; Reduction in Species Density; changes in Key Indicators of Conservation Value (Water Quality etc). The assessment of significance is based on Direct¹, Indirect² and Cumulative³ Impact assessment criteria.

The Assessment of Significance table also references and discusses as relevant, specific objectives within the plan that may have an impact on the designated sites in accordance with their individual conservation objectives.

¹ Direct Impacts of the plan on the designated site are those impacts which arise directly from the objectives of the plan i.e. land take, excavation works etc.

² Indirect Impacts of the plan on the designated site relate to those impacts of the plan which have a knock on effect on the designated site i.e. the provision of a new water supply scheme serving the plan area may not be located within a designated site however the abstraction of such water may indirectly impact on the habitat itself.

³ Cumulative= Individual affects from disparate projects may add up or interact to cause additional effects not apparent when looking at the individual effect at one time or in isolation.

Table 3.1 The Murrough Wetlands SAC

Natura 2000 Site

The Murrough Wetlands SAC 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. The site includes area of marine water to a distance of 200 m from low water mark. There is a railway on top of the beach and much agricultural reclamation of the marshes/ salt marshes.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
<p>Annual vegetation of drift lines [1210]</p> <p>Perennial vegetation of stony banks [1220]</p> <p>Atlantic salt meadows (Glauco-Puccinellietalia maritima) [1330]</p> <p>Mediterranean salt meadows (Juncetalia maritimi) [1410]</p> <p>*Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210]</p> <p>Alkaline fens [7230]</p>	<p>Human disturbance</p> <p>Development pressure</p> <p>Water pollution risk</p> <p>Nutrient enrichment from surrounding farmland</p> <p>Access and recreational pressure</p> <p>The inclusion of the BirdWatch reserve and the state-owned foreshore in the site gives additional protection.</p> <p>Grazing</p> <p>Sand and Gravel extraction</p> <p>Sea defence or coastal protection works</p> <p>Infilling and reclamation</p>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected</p>	None	None	None	<p>W1, W2,W3,W4,W5, W6,W7,W8,W9,W10, W11</p> <p>WS 1, WS2, WS3, WS4</p> <p>AE1, AE2, AE3</p> <p>TR1, TR2</p> <p>TP3, TP4, TP5</p> <p>NH1, NH2</p> <p>FL1</p> <p>CW4, CW7</p> <p>LP1</p> <p>CZ2, CZ1, CZ5</p> <p>E2, E3, E5, E8</p> <p>Port3, PL1,Harbour3, HP1</p> <p>OS9, OS2,</p>	None

	Invasive species						
<p>Assessment</p> <p>The Plan puts in place a number of provisions to ensure that there are no direct adverse impacts of the Plan on this site. The zoning of the site as a 'Conservation Zone', coupled with associated objectives NH 1 and NH2 safeguards against a reduction in habitat area through development. The inclusion of lands adjacent to this site in the 'Conservation Zone' mitigates against surrounding landuses that would have an adverse impact on the site, and against habitat fragmentation. Objectives for Open Space (OS 9 and OS 2) ensure regard is given to impacts on Natura 2000 sites. The zoning of 'Murrough North Opportunity' allows for the continued operation of existing established landuses but ensures adequate mitigation to prevent developments which would adversely impact on Natura 2000 sites (EMP 11).</p> <p>Human disturbance and recreational pressures are key management issues for this site, in particular as the area is currently heavily used for recreation. The Plan strives to promote sustainable eco tourism (TP3) and to alleviate current recreational pressures through the improved management of trails and recreational uses (objectives NH2 (v), CZ2, TP4, CW7). These provisions should help to address recreational issues and contribute positively to the conservation of the site.</p> <p>The site is water dependant, and therefore vulnerable to land use changes which could in turn effect changes in water quality or hydrology. This issue is addressed through the 'Conservation Zone' and also through the Flood Management objectives, derived through the Flood Risk Management Assessment carried out for this Plan. The Plan has undergone a Strategic Environmental Assessment, with both the SEA and plan-making processes being informed from an early stage, by the requirements of the Habitats Directive and Floods Directive, in terms of ensuring protection of Natura 2000 sites and ensuring that flood risk is appropriately addressed in plan making decisions.</p> <p>The waste water treatment capacity of the Plan area is adequate to meet current and future needs and adequate mitigation measures are in place regarding waste management, air emissions, water systems, litter and illegal dumping. It is not considered that the Plan will give rise to any changes in water quality, hydrology or air quality at the site.</p> <p>Existing sea defence and/or coastal protection works are identified as management issues for the site and are addressed in the Plan by coastal Zone management objective CZ5, ensuring that any future works are in accordance with EU Habitats directive.</p> <p>The Wicklow Town & Environs Plan sets out a framework for the proper planning and sustainable development of the plan area and includes numerous objectives designed to mitigate against flood risk and to safeguard the natural environment generally, all of which should have positive impacts on the conservation objectives of the site.</p> <p>The Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives. Having regard to the purpose and provisions of the Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site</p>							

Table 3.2 Wicklow Reef SAC							
Natura 2000 Site							
Wicklow Reef SAC is located on the mid-east coast of Ireland and is just offshore from Wicklow Head, Co. Wicklow. There are strong tidal streams in the area. The substrate is a mixture of cobbles, bedrock and sand that is subject to the strong tidal streams of the east coast. The reef is a biogenic reef constructed by the polychaete Sabellaria alveolata							
Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
Reefs [1170]	Extent of impact of offshore fisheries on this habitat has not been documented	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected	None	None	None	W1, W2,W3,W4,W5, W6,W7,W8,W9,W10, W11 WS 1, WS2, WS3, WS4 AE1, AE2, AE3 TR1, TR2 TP6 NH1, NH2 FL1 E3 CZ1, CZ2, CZ5	None
Assessment							
Given that this site lies offshore, it is not considered that the Plan will give rise to any direct impacts on the site in terms of reduction in habitat area, disturbance to key species, habitat or species fragmentation or reduction in species density.							
There is a scarcity of information about documented threats or management issues for this site with offshore fisheries activity identified as the only potential threat. The Plan is a land use plan that will have no impact on the nature or extent of offshore fisheries activity. It is also considered unlikely that the Plan will give rise to any other impacts indirectly on the site, given that it sets out a framework for the proper planning and sustainable development of the plan area and puts in place adequate mitigation measures regarding environmental protection, water and air quality and the avoidance and mitigation of coastal flood risk, offshore wind energy and coastal erosion measures.							
The Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives. Having regard to the purpose and provisions of the Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site							

Table 3.3 **Magherabeg Dunes SAC****Natura 2000 Site**

Magherabeg Dunes SAC is situated on the south Co. Wicklow coast and extending south from Ardmore Point for up to 2 km, this site comprises a mature dune system and adjacent drift banks. The Three Mile Water River flows through the site before entering the sea. Some swamp vegetation occurs behind the dunes. The drift banks are covered by deciduous woodland and dense scrub. Bedrock and low cliffs are exposed at Ardmore Point, and Ardmore Head is covered by dry grassland and scrub.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
Annual vegetation of drift lines [1210]	Erosion		None	None	None	W1, W2,W3,W4,W5, W6,W7,W8,W9,W10, W11	None
Embryonic shifting dunes [2110]	Succession to scrub and woodland					WS 1, WS2, WS3, WS4	
Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]	Grazing					AE1, AE2, AE3	
	Water quality and pollution					TR1, TR2	
	Silage storage					TP6	
	Recreational use					NH1, NH2	
						FL2, FL3, FL4, FL5, FL6	
*Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]	Sand and Gravel extraction						
	Sea defence or coastal protection works						
*Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2150]	Development						
	Non native species spread						
*Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220]	Land reclamation						
	Drainage						
	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected						

Assessment

Given the distance of this site at over 5kms from the Plan boundary it is not considered that the provisions set out in the Plan will cause any direct impacts on this site in terms of reduction in habitat area, disturbance to key species, habitat or species fragmentation or reduction in species density.

The site is water dependant, and therefore vulnerable to land use changes which could in turn effect changes in water quality or hydrology. However, given that; the waste water treatment capacity of the Plan area is adequate to meet current and future needs; the drinking water for the Plan area is abstracted from the Vartry River which is unconnected with this site; and adequate mitigation measures are in place regarding air and water pollution, it is not considered that the Plan will give rise to any changes in water quality, hydrology or air quality at the site. Furthermore, the Plan includes provisions relating to Flood Management, derived through the Flood Risk Management Assessment carried out for this Plan. The Plan has undergone a Strategic Environmental Assessment, with both the SEA and plan-making processes being informed from an early stage, by the requirements of the Habitats Directive and Floods Directive, in terms of ensuring protection of Natura 2000 sites and ensuring that flood risk is appropriately addressed in plan making decisions.

The Wicklow Town & Environs Plan sets out a framework for the proper planning and sustainable development of the plan area and does not relate to lands outside the plan boundary. The site in question falls within the jurisdiction of the Wicklow County Development Plan where a number of policies and objectives are set out in order to protect and preserve such sites.

The Development Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives. Having regard to the purpose and provisions of the Development Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site

Table 3.4 Deputy's Pass Nature Reserve SAC

<p>Natura 2000 Site</p> <p>Deputy's Pass Nature Reserve SAC is situated on the eastern flank of a glacial overflow channel, aligned in a south west to north east direction. The underlying rock is a mixture of cambrian and lower silurian deposits. Soils are acid brown earths to podzolics. Deputy's Pass wood is the most intact remnant of the once extensive Glenealy Oakwoods, now largely replaced with conifers. Apart from afforestation, the main landuse in the area surrounding the site is pastoral farming.</p>							
Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
Old sessile oak woods with Ilex and Blechnum in British Isles [91A0]	Commercial forestry Dumping Footpaths Horse riding Invasive and alien species Lack of regeneration Small size	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected	None	None	None	W1, W2,W3,W4,W5, W6,W7,W8,W9,W10, W11 WS 1, WS2, WS3, WS4 AE1, AE2, AE3 TR1, TR2 TP6 NH1, NH2	None

Assessment

Given the distance of this site at over 5kms from the plan boundary it is not considered that the provisions set out in the Plan will cause any direct impacts on this Nature Reserve in terms of reduction in habitat area, disturbance to key species, habitat or species fragmentation or reduction in species density. It is not considered that the Plan will give rise to any changes in water quality, hydrology or air quality at the site. The waste water treatment capacity of the Plan area is adequate to meet current and future needs, and adequate mitigation measures are in place regarding air and water pollution.

The main management issues for the site indicate that commercial activities, recreational usage, dumping and the invasion of Alien Species are the main issues facing the site. The Wicklow Town & Environs Plan sets out a framework for the proper planning and sustainable development of the plan area and does not relate to lands outside the plan boundary. The site falls within the jurisdiction of the Wicklow County Development Plan where a number of policies and objectives are set out in order to protect and preserve such sites.

While the Plan does have objectives to promote tourism, these are primarily based upon consolidating and improving the existing tourism assets in the Plan area, and improving recreational connectivity in the Plan area. There is an objective, TP 6 of the Plan to link Wicklow – Rathnew with other towns and villages via cycle and walking trails which could potentially lead to increased recreational visitors to Glenealy and indirectly to the site. However it is considered that potential impacts would be of a minor nature given the distance of the site from the village. In any effect, as is stated in the objective, individual projects such as this would be individually screened and appropriately assessed in accordance with the EU Habitats Directive.

The site is in state ownership with a structure in place to deal with management issues and threats, including accessibility and regulation of uses.

The Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives.

Having regard to the purpose and provisions of the Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site.

Table 3.5 Vale of Clara (Rathdrum Wood) SAC

Natura 2000 Site

Vale of Clara (Rathdrum Wood) SAC is situated in a deep, steeply-sided valley through which runs the Avonmore River. Underlying rock is schist, which weathers to an orange-brown, sandy loam of Ph 4.1-4.9. A distinct mor humus, often several centimetres thick, overlies the mineral soil. Apart from the oak-dominated woods, there is much mixed wood with non-native species, as well as commercial conifer stands. Old river terraces are present along parts of the valley, and there are occasional rock outcrops.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
Old sessile oak woods with Ilex and Blechnum in British Isles [91A0]	Conifer plantations Deer poaching Invasive and alien species Grazing Illegal tree felling Industrial developments Litter and dumping Recreational activities Residential development Water quality	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected	None	None	None	W1, W2,W3,W4,W5, W6,W7,W8,W9,W10, W11 WS 1, WS2, WS3, WS4 AE1, AE2, AE3 TR1, TR2 TP6 NH1, NH2	None

Assessment

Given the distance of this site at approx 10kms from the plan boundary it is not considered that the provisions set out in the Plan will cause any direct impacts on this site in terms of reduction in habitat area, disturbance to key species, habitat or species fragmentation or reduction in species density.

Indirectly, it is not considered that the Plan will give rise to any changes in water quality, hydrology or air quality at the site, given the distance from the Plan area combined with the fact that the waste water treatment capacity of the Plan area is adequate to meet current and future needs, and adequate mitigation measures are in place regarding air and water pollution.

The main management issues for the site indicate that commercial activities, the regeneration of exotic conifers and spread of other invasive species, as well as dumping and recreational usage are the main issues facing the site. The Wicklow Town & Environs Plan sets out a framework for the proper planning and sustainable development of the plan area and does not relate to lands outside the plan boundary. The site falls within the jurisdiction of the Wicklow County Development Plan where a number of policies and objectives are set out in order to protect and preserve such sites.

While the Plan does have objectives to promote tourism, these are primarily based upon consolidating and improving the existing tourism assets in the Plan area, and improving recreational connectivity in the Plan area. There is an objective, TP 6 of the Plan to link Wicklow – Rathnew with other towns and villages via cycle and walking trails which could potentially lead to increased recreational visitors to Rathdrum and indirectly to the site. However it is considered that potential impacts would be insignificant, given the distance of the site from the town. In any effect, as is stated in the objective, individual projects such as this would be individually screened and appropriately assessed in accordance with the EU Habitats Directive.

The Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives. Having regard to the purpose and provisions of the Development Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site.

Table 3.6 Wicklow Mountains SAC

Natura 2000 Site

Wicklow Mountains SAC is an extensive upland site comprising much of the Wicklow Mountains and extending into Co. Dublin. The solid geology is mainly Leinster granites, flanked by Ordovician schists, mudstones and volcanics. The area has been glaciated and features fine examples of high corrie lakes, deep valleys and moraines. Most of the site is over 300m, with much ground over 600m and the highest peak of Lugnaquilla at 925m. The site includes the headwaters of several major rivers, including the Liffey, the Dargle and the Slaney. The substrate over much of the site is peat, with poor mineral soil on the slopes and lower ground. Exposed rock and scree is a feature. The dominant habitats on the site are blanket bog, heaths and upland grassland.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
<p>Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes-Nanojuncetea [3130]</p> <p>Natural dystrophic lakes and ponds [3160]</p> <p>Northern Atlantic wet heaths with Erica tetralix [4010]</p> <p>European dry heaths [4030]</p> <p>Alpine and Boreal heaths [4060]</p> <p>Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* [6230]</p> <p>Blanket bog (*active only) [7130]</p> <p>Siliceous scree of the montane to snow levels (Androsacetalia alpinae and</p>	<p>Overgrazing</p> <p>Peat extraction</p> <p>Burning</p> <p>Invasive and alien species</p> <p>Recreational activities</p> <p>Erosion</p> <p>Water quality</p> <p>Afforestation</p> <p>Water pollution</p> <p>Clearance of riparian vegetation.</p>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected</p>				<p>W1, W2,W3,W4,W5, W6,W7,W8,W9,W10, W11</p> <p>WS 1, WS2, WS3, WS4</p> <p>AE1, AE2, AE3</p> <p>TR1, TR2</p> <p>TP6</p> <p>NH1, NH2</p>	

Galeopsietalia ladani) [8110]							
Calcareous rocky slopes with chasmophytic vegetation [8210]							
Siliceous rocky slopes with chasmophytic vegetation [8220]							
Old sessile oak woods with Ilex and Blechnum in British Isles [91A0]							
Otter (Lutra lutra) [1355]							

Assessment

Given the distance of this site at approx 15kms from the plan boundary it is not considered that the provisions set out in the Plan will cause any direct impacts on this site in terms of reduction in habitat area, disturbance to key species, habitat or species fragmentation or reduction in species density.

The site is in state ownership. The main management issues for the site are identified in the National Park Management Plan and are addressed through that structure. Management of the site is addressed through the regulation of access, grazing, peat extraction, recreation and other uses.

Indirectly, it is not considered that the Plan will give rise to any changes in water quality, hydrology or air quality at the site, given the distance from the Plan area combined with the fact that the waste water treatment capacity of the Plan area is adequate to meet current and future needs, and adequate mitigation measures are in place regarding air and water pollution.

While the Plan does have objectives to promote tourism, these are primarily based upon consolidating and improving the existing tourism assets in the Plan area, and improving recreational connectivity in the Plan area. There is an objective, TP 6 of the Plan to link Wicklow – Rathnew with other towns and villages via cycle and walking trails which could potentially lead to increased recreational visitors indirectly to the site. However it is considered that potential impacts would be insignificant, given the distance of the site from the Plan area. Also, other structures are in place, namely, the Laragh Glendalough Settlement and Tourism Plan and the Wicklow Mountains National Park Management Plan to address visitor access and recreational issues.

The Wicklow Town & Environs Plan sets out a framework for the proper planning and sustainable development of the plan area and does not relate to lands outside the plan boundary. The site in question falls within the jurisdiction of the Wicklow County Development Plan and the Laragh Glendalough Settlement and Tourism Plan, where a number of policies and objectives are set out in order to protect and preserve such sites.

The Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives. Having regard to the purpose and provisions of the Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site.

Table 3.7 **Buckroney- Brittas Dunes and Fen SAC****Natura 2000 Site**

Buckroney- Brittas Dunes and Fen SAC is an extensive sand dune and fen system that covers an 8 km stretch of the coastline of Co. Wicklow. The site contains three sand dune systems – Brittas Bay, Buckroney and Pennycomequick. Sediment source is mainly siliceous (low shell fragment content), with maximum carbonate levels of 3.5%. The dunes have cut off the outflow of a small river at Mizen Head and a large fen has developed. Its proximity to Dublin City makes Brittas Bay a very popular recreational area. Parts of the dune systems have already been developed as caravan parks and golf course. Part of the Buckroney dune system has been acquired by National Parks and Wildlife for conservation use.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes)* [2130] Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>)* [2150] Dunes with <i>Salix repens ssp. argentea</i> (<i>Salix arenariae</i>) [2170] Humid dune slacks [2190] Alkaline fens [7230]	Agricultural stocking pressures Development Drainage and water abstraction Land reclamation Recreational use Grazing Sand and Gravel extraction Sea defence or coastal protection works Non native	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected	None	None	None	W1, W2,W3,W4,W5, W6,W7,W8,W9,W10, W11 WS 1, WS2, WS3, WS4 AE1, AE2, AE3 TR1, TR2 TP6 NH1, NH2	None

	species spread						
<p>Assessment</p> <p>Given the distance of this site at over 5kms from the Plan boundary it is not considered that the provisions set out in the Plan will cause any direct impacts on this site in terms of reduction in habitat area, disturbance to key species, habitat or species fragmentation or reduction in species density.</p> <p>The site is water dependant, and therefore vulnerable to land use changes which could in turn effect changes in water quality or hydrology. However, given that; the waste water treatment capacity of the Plan area is adequate to meet current and future needs; the drinking water for the Plan area is abstracted from the Vartry River which is unconnected with this site; and adequate mitigation measures are in place regarding air and water pollution, it is not considered that the Plan will give rise to any changes in water quality, hydrology or air quality at the site</p> <p>The Wicklow Town & Environs Plan sets out a framework for the proper planning and sustainable development of the plan area and does not relate to lands outside the plan boundary. The site in question falls within the jurisdiction of the Wicklow County Development Plan where a number of policies and objectives are set out in order to protect and preserve such sites.</p> <p>The Development Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives. Having regard to the purpose and provisions of the Development Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site</p>							

Table 3.8 Carrigower Bog SAC

Natura 2000 Site

Carrigower Bog SAC is an upland valley bog complex on the Calary plateau on the eastern side of the Wicklow Mountains. It comprises a mosaic of wet blanket bog and poor fen vegetation, along with such related habitats as heath, wet grassland and Betula-Salix scrub. There is no open water other than pools. The Vartry River skirts the western side of site. The bog was exploited for peat up to about 100 years ago but now old cuttings are well revegetated. An area of conifer plantation is included. Surrounding landuse is mostly semi-improved grassland and forestry.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
Transition mires and quaking bogs [7140]	Dumping Forestry Grazing Run-off Water level management Drainage Reclamation Pollution	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected	None	None	None	W1, W2,W3,W4,W5, W6,W7,W8,W9,W10, W11 WS 1, WS2, WS3, WS4 AE1, AE2, AE3 NH1, NH2	None

Assessment

Given the distance of this site at over 10kms from the Plan boundary it is not considered that the provisions set out in the Plan will cause any direct impacts on this site in terms of reduction in habitat area, disturbance to key species, habitat or species fragmentation or reduction in species density.

The site is vulnerable to changes in hydrology, the main threat being a lowering of the water table due to drainage attempts in the locality. Part of the site is semi-improved grassland and any intensification of grazing could be damaging. Forestry is widespread in the area and is a general threat. The site falls within the jurisdiction of the Wicklow County Development Plan where a number of policies and objectives are set out in order to protect and preserve such sites.

It is not considered that the Plan will give rise to any changes in water quality, hydrology or air quality at the site. While drinking water to the Plan area is abstracted from the Vartry River at Annagolan, the Water systems objectives in the Plan, namely WS 1 and W9 mitigate against potential negative effects on supplying water systems, and ensure the protection, improvement and sustainable use of all waters in the Plan area in accordance with the EU Water Framework Directive, the River Basin Management Plans and associated Programme of Measures. (The Eastern Region River Basin Management Plan itself has undergone an appropriate assessment to ensure that it does not give rise to adverse effects on Natura sites.) W11 seeks to minimise wastage and demand for water through ongoing monitoring and improvement of the local authority controlled water distribution system and requiring new developments to incorporate water efficiency

measures which should prove beneficial for reducing demand on this resource.

The Wicklow Town & Environs Plan sets out a framework for the proper planning and sustainable development of the plan area and does not relate to lands outside the plan boundary.

The Development Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives.

Having regard to the purpose and provisions of the Development Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site

Table 3.9 Glen of the Downs SAC

Natura 2000 Site

Glen of the Downs SAC is situated in a glacial overflow channel cut in a NW-SE direction through Cambrian quartzite. In the valley bottom there is a narrow band of alluvium associated with a small stream, but the steep slopes are covered with a thin, sandy brown-earth/brown podzolic soil which becomes progressively thinner up the slopes. This is reflected in the trees which become shorter and more stunted up the slopes. The soil is very dry over much of the site, particularly so on the NE side.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
Old sessile oak woods with Ilex and Blechnum in British Isles [91A0]	Future Road Widening Invasive and alien species	To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected	None	None	None	W1, W2,W3,W4,W5, W6,W7,W8,W9,W10, W11 WS 1, WS2, WS3, WS4 AE1, AE2, AE3 TR1, TR2 NH1, NH2	None

Assessment

Given the distance of this site at between 10-15kms from the plan boundary it is not considered that the provisions set out in the Plan will cause any direct impacts on this site in terms of reduction in habitat area, disturbance to key species, habitat or species fragmentation or reduction in species density.

The site is in state ownership with a structure in place to deal with management issues and threats, including accessibility and regulation of uses.

It is not considered that the Plan will give rise to any changes in water quality, hydrology or air quality at the site, given that the waste water treatment capacity of the Plan area is adequate to meet current and future needs, and adequate mitigation measures are in place regarding air and water pollution.

While the Plan does have objectives to promote tourism, these are primarily based upon consolidating and improving the existing tourism assets in the Plan area, and improving recreational connectivity in the Plan area.

The Wicklow Town & Environs Plan sets out a framework for the proper planning and sustainable development of the plan area and does not relate to lands outside the plan boundary. The site in question falls within the jurisdiction of the Wicklow County Development Plan where a number of policies and objectives are set out in order to protect and preserve such sites.

The Development Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives. Having regard to the purpose and provisions of the Development Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site.

Table 3.10 The Murrough SPA

Natura 2000 Site

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. The site includes area of marine water to a distance of 200 m from low water mark. There is a railway on top of the beach and much agricultural reclamation of the marshes/saltmarshes.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
Red-throated Diver (Gavia stellata) [A001] Greylag Goose (Anser anser) [A043] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Wigeon (Anas penelope) [A050] Teal (Anas crecca) [A052] Black-headed Gull (Larus ridibundus) [A179] Herring Gull (Larus argentatus) [A184] Little Tern (Sterna albifrons) [A195] Wetlands & Waterbirds [A999]	Human disturbance Development pressure Water pollution risk Nutrient enrichment from surrounding farmland Access and recreational pressure is affecting the vegetation of the shingle shore which, in turn, causes disturbance to birds. The inclusion of the BirdWatch reserve and the state-owned foreshore in the site gives additional protection	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA	None	None	None	W1, W2,W3,W4,W5, W6,W7,W8,W9,W10, W11 WS 1, WS2, WS3, WS4 AE1, AE2, AE3 TR1, TR2 TP3, TP4, TP5 NH1, NH2 FL1 CW4, CW7 LP1 CZ2, CZ1, CZ5 E2, E3, E5, E8 Port3, PL1,Harbour3, HP1 OS9, OS2,	None

Assessment

The Plan puts in place a number of provisions to ensure that there are no direct adverse impacts of the Plan on this site. The zoning of the site as a 'Conservation zone', coupled with associated objectives NH 1 and NH2 safeguards against a reduction in habitat area through development. The inclusion of lands adjacent to this site in the 'Conservation Zone' mitigates against surrounding landuses that would have an adverse impact on the site and against habitat fragmentation. Objectives for Open Space (OS 9 and OS 2) ensure regard is given to impacts on Natura 2000 sites. The zoning of 'Murrrough North Opportunity' allows for the continued operation of existing established landuses but ensures adequate mitigation to prevent developments which would adversely impact on Natura 2000 sites (EMP 11).

Human disturbance and recreational pressures are key management issues for this site, in particular as the area is currently heavily used for recreation. The Plan strives to promote sustainable eco tourism (TP3) and to alleviate current recreational pressures through the improved management of trails and recreational uses (objectives NH2 (v), CZ2, TP4, CW7). These provisions should help to address recreational issues and contribute positively to the conservation of the site.

The site is water dependant, and therefore vulnerable to land use changes which could in turn effect changes in water quality or hydrology. This issue is addressed through the 'conservation zone' and also through the Flood Management objectives, derived through the Flood Risk Management Assessment carried out for this Plan. The Plan has undergone a Strategic Environmental Assessment, with both the SEA and plan-making processes being informed from an early stage, by the requirements of the Habitats Directive and Floods Directive, in terms of ensuring protection of Natura 2000 sites and ensuring that flood risk is appropriately addressed in plan making decisions.

The waste water treatment capacity of the Plan area is adequate to meet current and future needs and adequate mitigation measures are in place regarding waste management, air emissions, water systems, litter and illegal dumping. It is not considered that the Plan will give rise to any changes in water quality, hydrology or air quality at the site.

Existing sea defence and/or coastal protection works are identified as management issues for the site and are addressed in the Plan by coastal Zone management objective CZ5, ensuring that any future works are in accordance with EU Habitats directive.

The Wicklow Town & Environs Plan sets out a framework for the proper planning and sustainable development of the plan area and includes numerous objectives designed to mitigate against flood risk and to safeguard the natural environment generally, all of which should have positive impacts on the conservation objectives of the site.

The Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives.

Having regard to the purpose and provisions of the Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site

Table 3.11 Wicklow Head SPA

Natura 2000 Site

Wicklow Head is a rocky headland with extensive exposures of mica-schist. It is situated approximately 3 km south of Wicklow town. A lighthouse is located near the base of the cliffs. The cliffs, which extend for about 3 km, 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.

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
Kittiwake (<i>Rissa tridactyla</i>) [A188]	Recreation Overfishing	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA	None	None	None	W1, W2,W3,W4,W5, W6,W7,W8,W9,W10, W11 WS 1, WS2, WS3, WS4 AE1, AE2, AE3 TR1, TR2 TP3, TP4, TP5 NH1, NH2 FL1 CW4, CW7 LP1 CZ2, CZ1, CZ5 E2, E3, E5, E8 Port3, PL1,Harbour3, HP1 OS9, OS2,	None

Assessment

The Plan puts in place a number of provisions to ensure that there are no direct adverse impacts of the Plan on this site. The zoning of the site as a 'Conservation zone', coupled with associated objectives NH 1 and NH2 safeguards against a reduction in habitat area through development. The inclusion of lands adjacent to this site in the 'Conservation Zone' mitigates against surrounding landuses that would have an adverse impact on the site and against habitat fragmentation. Objectives for Open Space (OS 9 and OS 2) ensure regard is given to impacts on Natura 2000 sites on all proposals for these areas.

Recreational pressure is identified as a management issue for this site and it may be assumed that human disturbance is a potential threat to the bird populations. The Plan strives to promote sustainable eco tourism (TP3) and to alleviate current recreational pressures through the improved management of trails and recreational uses (objectives NH2 (v), CZ2, TP4, CW7). These provisions should help to address recreational and disturbance issues and contribute positively to the conservation of the site.

Overfishing is identified as a management issue for the site; however as this is a land use Plan it is not considered likely to have any impact on fishing in this area. The Plan has undergone a Strategic Environmental Assessment, with both the SEA and plan-making processes being informed from an early stage, by the requirements of the Habitats Directive and Floods Directive, in terms of ensuring protection of Natura 2000 sites and ensuring that flood risk is appropriately addressed in plan making decisions. The waste water treatment capacity of the Plan area is adequate to meet current and future needs and adequate mitigation measures are in place regarding waste management, air emissions, water systems, litter and illegal dumping. It is not considered that the Plan will give rise to any changes in water quality, hydrology or air quality at the site.

The Wicklow Town & Environs Plan sets out a framework for the proper planning and sustainable development of the plan area and includes numerous objectives designed to mitigate against flood risk and to safeguard the natural environment generally, all of which should have positive impacts on the conservation objectives of the site.

The Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives. Having regard to the purpose and provisions of the Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site

Table 3.12 Wicklow Mountains SPA

Natura 2000 Site

Wicklow Mountains SPA is an extensive upland site, comprising a substantial part of the Wicklow Mountains. The underlying geology of the site is mainly of Leinster granites, flanked by Ordovician schists, mudstones and volcanics. The area was subject to glaciation and features fine examples of glacial lakes, deep valleys and moraines. Most of site is over 300 m, with much ground over 600 m and the highest peak of Lugnaquilla at 925 m. The substrate over much of site is peat, with poor mineral soil occurring on the slopes and lower ground. Exposed rock and scree are features of the site. The dominant habitats present are blanket bog, heaths and upland grassland. Fine examples of native Oak woodlands are found in the Glendalough area. The site, which is within the Wicklow Mountains National Park, is fragmented into about 20 separate parcels of land

Qualifying interests	Management issues and threats	Conservation objectives	Direct Impact(s) of Plan	Indirect Impact(s) of Plan	Cumulative impact(s) of Plan	Relevant objectives included in the Plan	Residual Impacts
Merlin (Falco columbarius) [A098] Peregrine (Falco peregrinus) [A103]	Overgrazing Peat extraction Burning Non-native species Recreational activities Erosion Water quality	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA	None	None	None	W1, W2,W3,W4,W5, W6,W7,W8,W9,W10, W11 WS 1, WS2, WS3, WS4 AE1, AE2, AE3 TR1, TR2 TP6 NH1, NH2	None

Assessment

Given the distance of this site at approx 15kms from the plan boundary it is not considered that the provisions set out in the Plan will cause any direct impacts on this site in terms of reduction in habitat area, disturbance to key species, habitat or species fragmentation or reduction in species density.

The site is in state ownership. The main management issues for the site are identified in the National Park Management Plan and are addressed through that structure. Management of the site is addressed through the regulation of access, grazing, peat extraction, recreation and other uses.

Indirectly, it is not considered that the Plan will give rise to any changes in water quality, hydrology or air quality at the site, given the distance from the Plan area combined with the fact that the waste water treatment capacity of the Plan area is adequate to meet current and future needs, and adequate mitigation measures are in place regarding air and water pollution.

While the Plan does have objectives to promote tourism, these are primarily based upon consolidating and improving the existing tourism assets in the Plan area,

and improving recreational connectivity in the Plan area. There is an objective, TP 6 of the Plan to link Wicklow – Rathnew with other towns and villages via cycle and walking trails which could potentially lead to increased recreational visitors indirectly to the site. However it is considered that potential impacts would be insignificant, given the distance of the site from the Plan area. Also, other structures are in place, namely, the Laragh Glendalough Settlement and Tourism Plan and the Wicklow Mountains National Park Management Plan to address visitor access and recreational issues.

The Wicklow Town & Environs Plan sets out a framework for the proper planning and sustainable development of the plan area and does not relate to lands outside the plan boundary. The site in question falls within the jurisdiction of the Wicklow County Development Plan and the Laragh Glendalough Settlement and Tourism Plan, where a number of policies and objectives are set out in order to protect and preserve such sites.

The Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives. Having regard to the purpose and provisions of the Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of this Natura 2000 site.

4.3 Summary of Assessment of significance

Tables 3.1 to 3.12 assess the potential impact of the Wicklow – Rathnew Development Plan 2013- 2019 on Natura 2000 sites situated within 15 km. of the Plan boundary. This assessment has taken in direct, indirect and cumulative potential impacts arising from the provisions and objectives of the Plan.

The assessment of each of the 12 Natura 2000 sites indicates that the Plan will not cause any significant adverse impacts on any of these sites.

Each of the four Natura 2000 sites that are located either in, or at proximity to the Plan boundary are potentially the most vulnerable to impacts from the Plan. Each of these sites (The Murrough Wetlands SAC, The Murrough SPA, Wicklow Reef SAC and Wicklow Head SPA) has been included in the 'Conservation Zone', with land use objectives which aim to protect the integrity of these sites. At the Murrough, the footprint of the Conservation Zone encompasses employment, hotel and open space lands that immediately adjoin the Natura sites. This provides a buffer to the Natura 2000 sites and thereby increases the degree of protection currently afforded to them.

Land adjoining the Port Access Route has been rezoned in the Plan from residential to employment use, with employment uses on the site to be restricted to light industrial uses only. This land use, in addition to the Conservation Zone buffer, and objectives NH1, NH2 and NH3, will ensure that the integrity of the Natura 2000 site is safeguarded. The Open Space zonings of land at Wicklow Head provides a buffer to the adjoining Natura 2000 sites, and, in addition to the Conservation Zone buffer, and objectives NH1, NH2 and NH3, will ensure that the integrity of Wicklow Reef SAC and Wicklow Head SPA is safeguarded.

Water Quality: Overall the Plan sets out to achieve the targets of the Eastern River Basin Management Plan 2009-2015. Objectives of the Plan strengthen in particular the protection of the Vartry River through the designation of an Open Space area that provides a buffer to the length of the river system that is within the plan area. Land adjoining the Rathnew, Burkeen and Marlton river systems has been zoned as Open Space, where possible, thus providing an ecological buffer to these river systems. A large part of the coastal and estuarine waters are protected by virtue of their location within Natura 2000 sites and the 'Conservation Zone'. The following objectives in the Plan adequately mitigate against potential negative impacts on water quality; WS1-WS6, W1-W9.

In accordance with the 'Flood Risk Management Guidelines for Planning Authorities' (DoEHLG, OPW, 2009), a Flood Risk Assessment (FRA) of the Draft Plan has been prepared. This assessment has ensured that inappropriate development has been avoided in areas that are at risk of flooding. The objectives FL1-FL6 of the Plan ensure that flood risk has been reduced and mitigated throughout the plan area. It is therefore not considered that the Plan will lead to changes in water level or hydrology at any Natura site.

Drinking water to the areas of Ashford, Rathnew and Wicklow Town and its environs are supplied by the 'Wicklow Water Supply Scheme'. This scheme is supplied from the Cronroe Water Treatment Plant and Reservoir in Ashford, where water, abstracted from the Vartry River at Annagolan, is treated and mixed with treated water from the Dublin Regional Supply at Vartry Reservoir in Roundwood. Water from the Cronroe Water Treatment Plant is distributed throughout the plan area via a number of intermediary storage reservoirs, including Broomhall, Seacrest, Ballynerrin, Greenhills and Mariner's Point reservoirs. Pending the completion of a new pipeline from the Vartry supply to the Cronroe Reservoir by 2013, the town will have sufficient water supply to meet the needs of projected population growth. It is therefore not considered that the Plan will give rise to any additional demands for water supply, which in turn could have an impact on the integrity of Natura 2000 sites.

Objectives for the promotion of tourism and recreation activities in the Plan area are primarily based upon consolidating and improving the existing tourism assets in the Plan area, improving recreational connectivity in the Plan area, and improving management of existing recreational trails and activities to help alleviate existing threats and pressures. This approach should bring positive benefits for the conservation objectives of those sites within or close to the Plan area. There is an objective of the Plan to link Wicklow – Rathnew with other towns and villages via cycle and walking trails, which could potentially lead to increased visitors to settlements such as Glenealy, Rathdrum and Laragh, and indirectly to increased recreational pressures at the Natura sites at Deputy's Pass SAC, Vale of Clara (Rathdrum Wood) SAC and Wicklow Mountains SAC/SPA. However any

potential impacts on the sites in question is considered insignificant given the location of sites outside of the settlement boundaries and/or the current management structures already in place to address these issues.

The Plan has been prepared in accordance with the European, National and Regional legislation which set the framework for the achievement of the optimal balance of social, economic and physical development within the plan area. The effects of higher-level strategies and plans are considered insofar as they inform the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable regulations and directives.

Having regard to the purpose and provisions of the Plan it is considered that the Plan (either individually or in combination with other plans or projects) shall not give rise to significant adverse impacts on the integrity of any Natura 2000 sites.

4.4 Conclusions and Recommendations

The likely impacts that will arise from the Wicklow-Rathnew Development Plan 2013-2019 have been examined in the context of a number of factors that could potentially affect the integrity of Natura 2000 sites and have been presented in Tables 3.1-3.12. It is the conclusion of this screening statement that there will be no adverse impacts on the integrity of any Natura 2000 sites located within 15km of the Plan area and that a stage 2 Appropriate Assessment is not required.

Appendix (i) Natura Site Descriptions

The Murrough Wetlands SAC

Site characteristics

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. The site includes area of marine water to a distance of 200 m from low water mark. There is a railway on top of the beach and much agricultural reclamation of the marshes/ salt marshes.

Quality and importance

The site is of high importance for the good numbers and wide variety of waterfowl species that it holds in winter and on passage. The improved grassland provides feeding for Greylag Geese (*Anser anser*). This is one of a handful of sites around the south and east coasts at which Reed Warbler (*Acrocephalus scirpaceus*) has in recent years proved to be a regular breeding species. For some years in the 1980s, Bearded Tit (*Panurus biarmicus*) bred here at its only site in Ireland, emphasizing the potential of this site to hold the community of reedswamp species present in Great Britain, but largely absent in Ireland. The shingle beach is a breeding site for the country's largest colony of Little Tern (*Sterna albifrons*), and supports 19% of the all-Ireland population.

Vulnerability

The proximity of the site to Wicklow town and Kilcoole village is a threat in that there is pressure on the area for housing and increased disturbance. From that flows the risk of water pollution. It is suspected that the system is receiving high nutrient loading from the surrounding farmland. Access and recreational pressure is affecting the vegetation of the shingle shore which, in turn, causes disturbance to birds. The inclusion of the BirdWatch reserve and the state-owned foreshore in the site gives additional protection.

Wicklow Reef

Site characteristics

The site is located on the mid-east coast of Ireland and is just offshore from Wicklow Head, Co. Wicklow. There are strong tidal streams in the area. The substrate is a mixture of cobbles, bedrock and sand that is subject to the strong tidal streams of the east coast. The reef is a biogenic reef constructed by the polychaete *Sabellaria alveolata*.

Quality and Importance

This biogenic reef is well developed with sections of reef up to 0.6 m thick. It is the only documented example in Ireland making this a site of very high importance.

Vulnerability

This reef is vulnerable to any mechanical disturbance by pots and in particular fishing gear being dragged across the surface of the reef. If only a small part of the reef is disturbed, and this disturbance is not repeated with any frequency, the reef should be able to repair itself.

Maherabeg Dunes

Site characteristics

Situated on the south Co. Wicklow coast and extending south from Ardmore Point for up to 2 km, this site comprises a mature dune system and adjacent drift banks. The Three Mile Water River flows through the site before entering the sea. Some swamp vegetation occurs behind the dunes. The drift banks are covered by deciduous woodland and dense scrub. Bedrock and low cliffs are exposed at Ardmore Point, and Ardmore Head is covered by dry grassland and scrub.

Quality and importance

Despite its small size, this site is important as a fine example of an intact sand dune system which shows the various developmental stages of dunes, with embryonic dunes, white dunes, grey fixed dunes and decalcified fixed dunes all represented. A fine transition is also shown between sand dunes and drift banks, the latter wooded with native deciduous species. Also present is a good example of petrifying springs on the cliff-face at Ardmore. The quality of all the habitats is good. A rare hybrid sedge, *Carex x grossii* (*C. hirta* x *C. vesicaria*), has been recorded.

Vulnerability

At present, this site does not appear to be vulnerable to any particular pressures. There is no public access to the area and therefore recreational pressures are low. Natural erosion is evident in the southern part of site. The dry grassland at Ardmore Point is grazed by cattle but the dunes have not been grazed in recent years.

Deputy's Pass Nature Reserve SAC

Site Characteristics

This site is situated on the eastern flank of a glacial overflow channel, aligned in a south west to north east direction. The underlying rock is a mixture of cambrian and lower silurian deposits. Soils are acid brown earths to podzolics. Deputy's Pass wood is the most intact remnant of the once extensive Glenealy Oakwoods, now largely replaced with conifers. Apart from afforestation, the main landuse in the area surrounding the site is pastoral farming.

Quality and Importance

This wood is a good example of the *Blechno-quercetum petraeae* association which is characteristic of the valleys of Wicklow mountains. Oak is dominant over more than half of the site, the remainder being a mix of deciduous (native and nonnative species) and coniferous woodland. The structure and species composition of the oak-dominated areas appear typical and there is natural regeneration. A narrow area of wet woodland (*Fraxinus icorylus*) along a small stream adds diversity to the site. This wood, although relatively small, is an important link in a series of oakwoods which extend from Glen of the Downs across to the Glendalough area.

Vulnerability

Site is a Nature Reserve and not considered vulnerable.

Vale of Clara (Rathdrum Wood) SAC

Site characteristics

Situated in a deep, steeply-sided valley through which runs the Avonmore River. Underlying rock is schist, which weathers to an orange-brown, sandy loam of Ph 4.1-4.9. A distinct mor humus, often several centimetres thick, overlies the mineral soil. Apart from the oak-dominated woods, there is much mixed wood with non-native species, as well as commercial conifer stands. Old river terraces are present along parts of the valley, and there are occasional rock outcrops.

Quality and importance

A relatively large oak-dominated woodland and a good example of the dry acid oakwoods of eastern Ireland. Evidence indicates that the site has been wooded to varying degrees since at least the early 1700's. Despite damage from afforestation with conifers the wood is still of high quality, with a wide range of age classes. The red data species *Cephalanthera longifolia* has been recorded. Past management practices since 1700's are well documented with continued management for conservation, this site will become one of the most extensive oak woods in Ireland.

Vulnerability

The main threat to this site is the regeneration of exotic conifers.

The Vale of Clara woodland, situated mostly on the east side of the Avonmore River, immediately north of Rathdrum, between 107m and 244 m above sea level, forms an integral part of one of the most scenic valleys in

Wicklow. The Oak woods are good examples of the species-poor Blechno-Quercetum vegetation community, a habitat listed on Annex I of the EU Habitats Directive and are best developed in the Cronybyrne area.

Wicklow Mountains SAC

Site characteristics

An extensive upland site comprising much of the Wicklow Mountains and extending into Co. Dublin. The solid geology is mainly Leinster granites, flanked by Ordovician schists, mudstones and volcanics. The area has been glaciated and features fine examples of high corrie lakes, deep valleys and moraines. Most of the site is over 300m, with much ground over 600m and the highest peak of Lugnaquilla at 925m. The site includes the headwaters of several major rivers, including the Liffey, the Dargle and the Slaney. The substrate over much of the site is peat, with poor mineral soil on the slopes and lower ground. Exposed rock and scree is a feature. The dominant habitats on the site are blanket bog, heaths and upland grassland.

Quality and importance

The site comprises the largest complex of upland habitats in eastern Ireland, with important examples of blanket bog, wet heath and dry heath, extensive in area and mostly of good quality. Alpine heath occurs at high levels, along with calcareous and siliceous rocky habitats harbouring an arctic-alpine flora. A fine series of upland oligotrophic lakes occur and some have *Salvelinus alpinus*. Several oakwoods of moderate quality, typical of the dry acidic woods of eastern Ireland, are found. Seven Red Data Book plant species occur, including the rare *Alchemilla alpina* and *Nitella gracilis* at its only Irish station. The site supports significant populations of breeding *Falco columbarius* and *Falco peregrinus*. The site is important for rare breeding passerines of oakwoods, notably *Phoenicurus phoenicurus* and *Phylloscopus sibilatrix*. The site also has breeding *Turdus torquatus* and *Lagopus lagopus*. *Lutra lutra* occurs on several of the riverine systems.

Vulnerability

The main threat to the quality of habitats on the site is overgrazing by sheep, affecting the bog, heath and rocky habitats and both deer and sheep affecting the woodlands. Localised peat extraction and heavy burning is a threat to the blanket bog. The spread of non-native species is a threat to the quality of the woodlands. Many recreational activities occur within the site and some, such as hill walking and climbing, have potential for disturbance to habitats and species. Peat erosion is frequent on the peaks - this may be a natural process but is likely to be accelerated by activities such as grazing.

Buckroney – Brittas Dunes & Fen SAC

Site characteristics

An extensive sand dune and fen system that covers an 8 km stretch of the coastline of Co. Wicklow. The site contains three sand dune systems – Brittas Bay, Buckroney and Pennycomequick. Sediment source is mainly siliceous (low shell fragment content), with maximum carbonate levels of 3.5%. The dunes have cut off the outflow of a small river at Mizen Head and a large fen has developed. Its proximity to Dublin City makes Brittas Bay a very popular recreational area. Parts of the dune systems have already been developed as caravan parks and golf course. Part of the Buckroney dune system has been acquired by National Parks and Wildlife for conservation use.

Quality and importance

The site contains a range of well-developed dune types, which are typical of those found in eastern Ireland. The dune systems are fairly extensive in area and generally of good quality. Of particular note are the fixed dunes, the decalcified fixed dunes (*Calluno-Ulicetea*), the humid dune slacks, the dunes with *Salix repens* and the shifting Marram dunes. Buckroney fen is a fine example of a diverse wetland system, including alkaline fen, and is one of the most important examples in eastern Ireland. The site is particularly notable for its eastern flora and fauna. In addition to five Red Data Book plant species, there are a number of nationally scarce species including an abundance of *Thelypteris palustris* and *Galium uliginosum*. The invertebrate fauna is of high interest, with some rare species including *Machimus cowini*. *Sterna albifrons* has bred at the site in the past.

Vulnerability

Brittas Bay dunes are subject to intensive agricultural and recreational pressures. Stocking at high densities threatens the older dunes and dune heath. The recent development of a golf course on part of Buckroneys dunes may threaten the hydrology of the overall system. Buckroneys fen is threatened by a general lowering of the water table through drainage and water abstraction. Further reclamation of marginal areas of the fen would be detrimental.

Carriggower Bog SAC

Other site characteristics

The site is an upland valley bog complex on the Calary plateau on the eastern side of the Wicklow Mountains. It comprises a mosaic of wet blanket bog and poor fen vegetation, along with such related habitats as heath, wet grassland and *Betula-Salix* scrub. There is no open water other than pools. The Vartry River skirts the western side of site. The bog was exploited for peat up to about 100 years ago but now old cuttings are well revegetated. An area of conifer plantation is included. Surrounding land use is mostly semi-improved grassland and forestry.

Quality and importance

Transition mires are well represented at this site and likely to be one of the larger examples of the habitat in eastern Ireland. A range of characteristic species occur. The bryophyte flora is probably well developed (though not fully investigated). It supports a suite of invertebrate species of international importance. It also supports important wintering concentrations of *Gallinago gallinago* and *Lymnocyrtus minimus*, and is actually the top site in the country for *Lymnocyrtus minimus*. The site is partly owned by State (NPW).

Vulnerability

A main threat to this site is lowering of the water table due to drainage attempts. A drainage channel has already been dug at the eastern end of site though its impact on the bog is not known. Part of the site is semi-improved grassland and any intensification of grazing could be damaging. Forestry is widespread in the area and is a general threat.

Glen of the Downs SAC

Site characteristics

This site is situated in a glacial overflow channel cut in a NW-SE direction through Cambrian quartzite. In the valley bottom there is a narrow band of alluvium associated with a small stream, but the steep slopes are covered with a thin, sandy brown-earth/brown podzolic soil which becomes progressively thinner up the slopes. This is reflected in the trees which become shorter and more stunted up the slopes. The soil is very dry over much of the site, particularly so on the NE side.

Quality and importance

This wood, situated in an impressive glacial overflow channel, is a good example of the *Blechno-quercetum petraeae* association which is characteristic of the dry valleys of the Wicklow mountains. Oak is dominant over about half the site, the remainder being mostly mixed deciduous woodland. There is a range of habitats from the very dry oak dominated upper slopes to ash-hazel woodland on the valley floor and wet areas beside the stream. The juxtaposition of habitats on the valley floor is particularly valuable for invertebrates, some of those found being very rare in Ireland. Of particular note is the occurrence of *Mycetobia obscura*, known from only one other site in Britain and Ireland. The avifauna of the site is characteristic of Irish woodlands. This wood is the most easterly in a series of oakwoods in Co. Wicklow which extend to the Glendalough area.

Vulnerability

Further road widening is planned which will reduce and modify the habitats on the valley floor.

The Murrough SPA

Site characteristics

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. The site includes area of marine water to a distance of 200 m from low water mark. There is a railway on top of the beach and much agricultural reclamation of the marshes/saltmarshes.

Quality and importance

The site is of high importance for the good numbers and wide variety of waterfowl species that it holds in winter and on passage. The improved grassland provides feeding for Greylag Geese (*Anser anser*). This is one of a handful of sites around the south and east coasts at which Reed Warbler (*Acrocephalus scirpaceus*) has in recent years proved to be a regular breeding species. For some years in the 1980s, Bearded Tit (*Panurus biarmicus*) bred here at its only site in Ireland, emphasizing the potential of this site to hold the community of reedswamp species present in Great Britain, but largely absent in Ireland. The shingle beach is a breeding site for the country's largest colony of Little Tern (*Sterna albifrons*), and supports 19% of the all-Ireland population.

Vulnerability

The proximity of the site to Wicklow town and Kilcoole village is a threat in that there is pressure on the area for housing and increased disturbance. From that flows the risk of water pollution. It is suspected that the system is receiving high nutrient loading from the surrounding farmland. Access and recreational pressure is affecting the vegetation of the shingle shore which, in turn, causes disturbance to birds. The inclusion of the BirdWatch reserve and the state-owned foreshore in the site gives additional protection.

Wicklow Head SPA

Site characteristics

Wicklow Head is a rocky headland with extensive exposures of mica-schist. It is situated approximately 3 km south of Wicklow town. A lighthouse is located near the base of the cliffs. The cliffs, which extend for about 3 km, 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.

Quality and importance

Wicklow Head SPA has a good diversity of breeding seabirds, with nationally important populations of *Rissa tridactyla* and *Cephus grylle*, and regionally important numbers of *Fulmarus glacialis*, *Uria aalge* and *Alca torda*. This seabird colony has developed mostly since the 1970s and has been monitored regularly since. The site also supports a pair of breeding *Falco peregrinus*, and has some typical heathland species, including *Sylvia communis*.

Vulnerability

There are no known significant threats to the seabird colony at present. Casual visitors to the site could cause disturbance though most of the seabirds are on an inaccessible cliff face. Over-fishing in local waters could put pressure on food supplies for the birds. Interference is caused to the nesting peregrines in some years.

Wicklow Mountains SPA

Site characteristics

This is an extensive upland site, comprising a substantial part of the Wicklow Mountains. The underlying geology of the site is mainly of Leinster granites, flanked by Ordovician schists, mudstones and volcanics. The area was subject to glaciation and features fine examples of glacial lakes, deep valleys and moraines. Most of site is over 300 m, with much ground over 600 m and the highest peak of Lugnaquilla at 925 m. The substrate over much of site is peat, with poor mineral soil occurring on the slopes and lower ground. Exposed rock and scree are features of the site. The dominant habitats present are blanket bog, heaths and upland grassland. Fine

examples of native Oak woodlands are found in the Glendalough area. The site, which is within the Wicklow Mountains National Park, is fragmented into about 20 separate parcels of land.

Quality and importance

The site supports good examples of both upland and woodland bird communities. It has breeding *Falco columbarius* and *Falco peregrinus*, as well as *Turdus torquatus* and *Lagopus lagopus*, both of the latter being Red-listed in Ireland. It is the only site in Ireland where *Mergus merganser* breeds regularly. It is important for rare breeding passerines of oakwoods, notably *Phoenicurus phoenicurus* and *Phylloscopus sibilatrix*. It also has *Sylvia borin* and *Sylvia atricapilla*.

Vulnerability

As the site is largely State-owned and within a National Park, there are no significant threats to the bird populations. Some of the peatland habitats are affected by overgrazing by sheep, whilst both deer and sheep reduce regeneration within the woodlands. Localised peat extraction and burning is a threat to the blanket bog and heath habitats. Many recreational activities occur within the site and some, such as hill walking and climbing, could have potential for disturbance to habitats and species if not properly controlled.