Variation No. 1 of the County Wexford Development Plan 2007-2013

Appropriate Assessment

Screening Determination Report

Determination of the need for Appropriate Assessment in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Council Directive 92/43/EEC, as amended)

Wexford County Council
Planning & Development

Introduction

Wexford County Council carried out a formal screening process of Proposed Variation No. 1 to determine whether Appropriate Assessment in accordance with Article 6(3) of the Habitats Directive was required.

This document set out the determination by Wexford County Council and the relevant supporting screening reports.

The determination is set out in Part 1.

The Screening Report relating to the proposed Variation No. 1 (July 2011) is included in Part 2 of this document.

The Council subsequently made Material Alterations to the Variation (the Material Alterations to the Variation have been subsumed into the body of the Variation). These alterations were formally screened to determine whether an Appropriate Assessment was required. This screening report, dated October 2011, forms an Addendum to the main Screening Report and is included in Part 3 of this document.

During the public display of the proposed Material Alterations one submission was received from the Department of Arts, Heritage and the Gaeltacht. While this submission agreed with the conclusions of the Appropriate Assessment Screening Report, the Department had some concern with the use of the paragraph which states that *no development will be permitted which will give rise to significant adverse impacts on the integrity of the Natura 2000 sites on the basis of proposed Variation Number 1.* The Department recommended that this should be further explained and suggested that the Council should refer back to an objective in the Development Plan. Addendum 2, dated December 2011, outlines how the Department's recommendation has been taken on board and how the relevant sections of the July 2011 and October 2011 reports are amended by this Addendum. Addendum 2 is included in Part 4 of this document.

Part 1

Determination as to whether or not a draft Land use plan would adversely affect the integrity of a European site

Determination

Wexford County Council carried out a formal screening process of Proposed Variation No. 1 to determine whether Appropriate Assessment Article 6(3) of the Habitats Directive was required. The screening process was carried out in accordance with the Commission's methodological guidance (EC, 2002) to determine a) whether the plan or project is directly connected to or necessary for the management of the site and b) whether the plan, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site(s) in view of the site(s) conservation objectives.

Wexford County Council determined that an Appropriate Assessment of Proposed Variation No 1 to the County Development Plan 2007-2013 was not required having regard to:

- The characteristics of the Plan
- The reports of WYG dated July 2011, October 2011 and December 2011 included with this determination, in particular the assessment of the implications of the Proposed Variation in Section 4.5, the 'Finding of No Significant Effects Report Matrix' and the 'Conclusions' of the main Screening Report and the respective sections in the Addendum reports, and
- The consultations with the Prescribed Bodies and in particular the National Parks and Wildlife Service

Forward Planning Section
Wexford County Council
December 2011

Part 2

Appropriate Assessment Screening Determination Report prepared by WYG Ireland

Proposed Variation No. 1 of the County Wexford Development Plan 2007-2013

Appropriate Assessment

Screening Report

Determination of the need for Appropriate Assessment in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Council Directive 92/43/EEC, as amended by Council Directive 97/62/EC) & Circular Letter SEA 1/08 & NPWS 1/08

Wexford County Council
Planning & Development

July 2011

WYG Ireland
part of the WYG group

Wexford County Council

Appropriate Assessment Screening of the Proposed Variation No. 1 of the County Wexford Development Plan 2007-2013

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1 Introduction

1.1 Background

This report assesses the likely significant effects that the Proposed Variation No. 1 of the County Wexford Development Plan 2007-2013 may have on the Special Areas of Conservation and Special Protection Areas which are in proximity to the geographical area covered by the Proposed Variation (*i.e.* Core Strategy).

The Special Areas of Conservation are designated under the EU's Habitats Directive by statutory instrument (the Habitats Regulations 1997) and the Special Protection Areas are designated by statutory instrument under the EU's Birds Directive 1979 and so are, like SACs, of international importance.

Under the EU Habitats Directive (92/43/EEC) Competent Authorities are required to undertake Appropriate Assessments (AA) of any plan or project not directly connected with or necessary to the management of a Natura 2000 sites but likely to have a significant effect thereon, either individually or in combination with other plans or projects.

This assessment examines the implications of proceeding with this Core Strategy in view of the conservation objectives of associated Natura 2000 sites.

1.2 Legislative Background

An Appropriate Assessment is an evaluation of the potential impacts of a plan (or project) on the conservation objectives of a Natura 2000 site, and the development, where necessary, of mitigation or avoidance measures to preclude negative effects.

The main purpose of an Appropriate Assessment is to identify the possible effects of implementing a Plan/Project on the conservation objectives and integrity of Natura 2000 sites[1].

The Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna – the 'Habitats Directive' provides legal protection for habitats and species of European importance. Article 2 of the Habitats Directive requires the maintenance or restoration of habitats and species of interest to the EU in a favourable condition. The Directive was transposed into Irish law by the European Communities (Natural Habitats) Regulations, SI 94/1997.

Articles 6(3) and 6(4) of the Habitats Directive sets out the decision-making tests for Plans or Projects affecting Natura 2000 sites.

Article 6(3) establishes the requirement for Appropriate Assessment:

"*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 the 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*".

[1] Any Natura 2000 sites within the likely zone of impact of the plan or project. Generally 15km but can vary (Appropriate Assessment of Plans and Projects in Ireland, Guidance for Planning Authorities (February 2010)).

Article 6(4) of the Directive deals with alternative solutions, the test of "*imperative reasons of overriding public interest*" (IROPI) and compensatory measures:

"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted".

2 Methodology

2.1 Introduction

The Habitats Directive Screening Assessment has been prepared taking cognisance of the following legislation and guidelines:

- European Commission, Assessment of plans and projects affecting Natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (Luxembourg, 2002)
- Council Directive 92/43/EEC Appropriate Assessment of Plans, Scott Wilson, Levett-Therivel Sustainability Consultants, Treweek Environmental. (2006)
- European Communities MANAGING NATURA 2000 SITES. The provisions of Article 6, of the 'Habitats' Directive 92 / 43 / CEE (2000)
- Department of the Environment Heritage and Local Government (DoEHLG) Circular letter SEA 1 / 08 & NPWS 1 / 08 dated 15 February, 2008
- Department of the Environment Heritage and Local Government (DoEHLG) Appropriate Assessment Guidance for Planning Authorities (December 2009) and amended March 2010.

2.2 Brief Overview of Methodology

The Appropriate Assessment process follows four stages as outlined below:

Stage 1 – Screening of the Proposed Variation of the Development Plan 2007-2013

The Screening Process will identify the likely impacts upon the Natura 2000 sites of the Proposed Variation of the 2007 Development Plan, either alone or in combination with other Plans and Projects and considers whether these impacts are likely to be significant.

Ultimately, this process determines whether or not a Natura Impact Report (formally Appropriate Assessment) is required *i.e.* whether the variation to Plan (*i.e.* the inclusion the Core Strategy) is likely to negatively affect the conservation objectives of Natura 2000 sites. This will be done by examining the policies and objectives of the Core Strategy and subsequent proposed amendments to chapters of the current Plan and determining if there are any potential impacts on the conservation objectives of the Natura 2000 sites.

This Screening Assessment will:

- Determine whether the variation of the Development Plan is directly connected with or necessary to the management of the site;
- Describe the variation of the Development Plan and other plans and projects that, 'in combination' have the potential to have significant effects on a European site;
- Identify the potential effects on the European site and;
- Assess the significance of any effects on the European site.

Stage 2 – Appropriate Assessment

The Appropriate Assessment would determine the potential impacts of the variation to the 2007 Plan on the conservation objectives of the Natura 2000 sites (including Natura 2000 sites within a 15km radius of the Plan's boundary) and where necessary, mitigation or avoidance measures to preclude negative effects are recommended. The impacts assessed include the indirect and cumulative impacts of approving the variation to the Plan, considered with any current or proposed activities, developments or policies impacting on the site(s). The potential impacts of policies and objectives outside the Natura 2000 sites but that potentially may impact upon them (known as 'ex situ' impacts) must also be included in the assessment.

Stage 3 – Assessment of Alternative Solutions

Stage 3 involves the examination of alternative ways of achieving the Proposed Variation to the Plan that avoids adverse impacts on the integrity of the Natura 2000 site(s).

Stage 4 – Assessment of Compensatory Measures

Stage 4 is an assessment of compensatory measures, where, in the light of an assessment of imperative reasons of overriding public interest, it is deemed that the variation to the 2007 Plan should proceed.

Stage 1 and 2 above relate to Article 6(3) of the Habitats Directive and Stages 3 and 4 relate to Article 6(4).

2.3 Cumulative Effects

The National Spatial Strategy 2002-2020, National Development Plan 2007-2013 and the Regional Planning Guidelines for the South-East Region (RPGs) 2010-2022, set the planning framework within which the variation to the 2007 Wexford Development Plan has been prepared with the objective of achieving an optimal balance of social, economic and physical development in the Plan area.

The effects of higher level Strategies and Plans are considered insofar as they inform the variation to the Plan. Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable Regulations and Directives.

3 Proposed Variation to the Plan

3.1 Core Strategy

The Planning and Development (Amendment) Act 2010 requires planning authorities to include Core Strategies in their development plans. The purpose of a Core Strategy is to articulate a medium to long term quantitatively based strategy for the spatial development of an area.

The Core Strategy is required to include details of a 'settlement hierarchy' for the area and provide population projections for settlements and rural areas in the hierarchy. These projections must be derived from the population targets set down by the parent Regional Planning Guidelines (RPGs).

The Core Strategy is also required to provide details to show that rural areas and objectives relating to retail development are in accordance with Section 28 Guidelines of the Minister and that the Housing Strategy is in accordance with the National Spatial Strategy (NSS) and RPGs.

The Strategy will present a medium to long term evidenced based strategy for the spatial development of County Wexford. In accordance with the requirements of the Planning and Development (Amendment) Act 2010, it shall show that the development objectives in the Plan are consistent, as far as practicable, with national and regional development objectives set out in the National Spatial Strategy (NSS) and Regional Planning Guidelines (RPGs).

The Strategy will:

- set out the vision for the County and the strategic aims to deliver this vision;

- provide details on how the Plan and the Housing Strategy conforms to the objectives of the NSS and RPGs; set out the Settlement Strategy and Settlement Hierarchy for the County;
- allocate population growth target to the towns, villages and the rural areas in the hierarchy. The population allocations will be based on the targets set out in the RPGs;
- provide details of the national and regional road network and the inter-urban and commuter rail routes in the County;
- provide details to show that the retail development objectives in the Plan have regard to the Government's Retail Development Guidelines; and
- provide details on rural areas in accordance with the Government's 'Sustainable Rural Housing Guidelines'.

The Strategy is supported by the strategic Transportation Strategy in Chapter 3, the Economic Development Strategy in Chapter 4, the Housing Strategy in Chapter 5 and the Retail Strategy in Appendix A of the Development Plan.

The Core Strategy vision for the County is "*To build on the strengths of the county by facilitating sustainable development through the provision of high quality employment opportunities and residential development supported by quality urban and rural environments with physical and social infrastructure to support communities throughout the County"*.

The strategic aims for achieving this vision include:

- Developing sustainable and vibrant communities and providing attractive places to live and work;

- Broadening and strengthening the economic base of the county by encouraging the sustainable growth of employment, enterprise and economic activity, and in particular facilitate innovation and enterprise in indigenous industries;
- Integrating land use planning with transportation planning so as to facilitate improved public transport provision and reduce the distance that people need to travel to work, schools, services and recreational facilities;
- Develop the County's transport system so as to contribute towards an accessible Region with efficient and fully integrated transport systems;
- Protecting and enhancing the County's rural assets and recognising the housing, employment, social and recreational needs of those in rural areas;
- Facilitating the provision of housing in a range of appropriate locations to meet the needs of the county's population, with particular emphasis on facilitating access to housing to suit different household and tenure needs;
- Developing the tourism potential of the county in a balanced and sustainable manner; and
- Protecting, conserving and enhancing the County's built, natural and cultural heritage.

A complete review of the County Wexford Development Plan 2007-2013 has commenced. The next Plan for the County, which will be operational for the period 2013-2019, will include a new Core Strategy together with a new Housing Strategy and Retail Strategy. The review will incorporate all Section 28 Guidelines that have been enacted by the Minister since the adoption of the current Plan. The review of the Plan will also be subject to the requirements of the Strategic Environmental Assessment under the EU SEA Directive, Appropriate Assessment under the EU Habitats Directive and Water Framework Directive.

Hence, for the purpose of this assessment we will be screening the Core Strategy policies and objectives in terms of impacts on Natura 2000 sites and also subsequent proposed

amendments to the text in Chapters 1, 3, 4, 6, 7 and 8 of the current 2007 Development Plan.

3.1.1 Core Strategy - Polices & Objectives

In this section we table the proposed policies and objectives relating to the proposed Core Strategy and the proposed amendments to text of the current Plan.

Settlement Strategy Policies and Objectives

Policy SS1
The Council shall implement the Settlement Strategy of the National Spatial Strategy and the Regional Planning Guidelines for the South East Region by concentrating development into designated settlements of Wexford Town, New Ross, Gorey, Enniscorthy, Bunclody and Castlebridge.
Policy SS2
The Council shall ensure that an appropriate quantum of land is zoned at suitable locations in the County in accordance with the Settlement Strategy, Settlement Hierarchy and population projections contained in the Core Strategy. Development on such lands will be subject to adequate and appropriate infrastructure, in particular wastewater, water, transport, waste management, community services and amenities being available.
Policy SS3
The Council shall promote the necessary physical and social infrastructure in the settlements identified in Table 2.4 and make them more attractive places to live.
Policy SS4
The Council shall ensure that the Hub and Larger Towns, will in as far as practical, be self sufficient, incorporating employment activities, retail services, social and community facilities.
Objective SS1
It is an objective of the County Council to prepare Local Area Plans for the following

areas: Bridgetown, Castlebridge, Carrick on Bannow, Coolgreany, Courtown, Camolin, Kilmore Quay, Kilmuckridge Wellington Bridge.
Objective SS 2
It is an objective of the County Council to prepare Village Design Statements in order to encourage sympathetic design of new buildings into existing villages for the following areas: Arthurstown, Duncannon, Rosslare, Craanford, Duncormick, Curracloe, Oilgate, Bree, Duncormick
Objective SS3
The Council, having regard to the proper planning and sustainable development of the area, will consider the development of new rural settlements. Such schemes will be subject to the preparation of a Local Area Plan by the County Council.

Rural Housing Policy

Policy RSS 1
The Council shall cater for the housing needs of persons with rural linkages who have a requirement to live in the area.
Policy RSS 2
Urban generated housing development shall be directed into designated settlements.
Policy RSS 3
The Council shall give priority to the development of settlements with adequate wastewater and water infrastructure and those settlements targeted for infrastructural investment (see Table 2.4).
Policy RSS 4
The demand for permanent residential development in Structurally Weak Rural Areas should be accommodated as it arises, subject to proper planning and sustainable

development of the area.
Policy RSS 5
The Council shall attach an occupancy condition to all individual one off rural dwellings on un-zoned land in areas defined as Under Strong Urban Pressure and Stronger Rural Areas, pursuant to Section 47 of the Planning and Development Act 2000, restricting the use of the dwelling to the applicant and their immediate family, as a place of permanent residence. The period of occupancy will be limited to a period of five years from the date of first occupation.

Proposed Amendments to other Chapters of the Plan

The remaining chapters and sections in the 2007 Plan have been reviewed to ensure consistency with the Core Strategy *i.e.* Sections 1.1 to Section 2.4 of the Proposed Variation.

These amendments are outlined below:

- Where it is proposed to delete text this will be shown in ~~strikethrough text~~.
- Where it is proposed to include additional text this will be shown in **bold and underlined**.

Chapter 1 Planning Context and County Profile

Section 1.0.2 Legal Context

Wexford County Council as a Planning Authority has a duty to make a Development Plan for its functional area and to review it every six years. The County Development Plan sets out an overall strategy for the proper planning and sustainable development of the County. The legal basis for Development Plans is contained in the Planning and Development 2000~~-2006~~ **(as amended).**

Chapter 3 Transportation

Section 3.4.0

Rail infrastructure in County Wexford consists of the Rosslare to Dublin line and the Rosslare to Waterford line. ~~Both lines are used for freight and passenger purposes~~. The Rosslare to Dublin service is used for freight and passenger purposes. It carried some 400,000 passengers in 2005.

The Rosslare to Waterford line's primary purpose was for the transportation of sugar beet. **However, it also provided an invaluable passenger service and connection to the region's Gateway of Waterford City.** This rail link is was under-utilised due to ageing infrastructure and outdated rolling stock and coupled with the loss of sugar production the viability of this railway line ~~is~~ **came** under threat. **The line closed on the 20th September 2010.**

It is an objective of the Plan to **re-open** and upgrade this route and the settlement strategy aims to underpin this policy by promoting settlement patterns that will utilise this transport node.

Objective T14

To seek the **re-opening and** ~~ongoing~~ upgrading of the Rosslare-Waterford rail service for passengers and freight.

Chapter 4 Economic Development

The strategy is based upon the principles of the National Spatial Strategy, the Regional Planning Guidelines for the South-East 2010-2022 and the Wexford County Development Board's **Economic Development Strategies.** ~~'Remodelling the Model County'.~~

Chapter 4 Economic Development

Section 4.1.2 Regional Planning Guidelines for the South-East Region 2010-2022

The RPGs for the South-East region identifies:

- ~~Provision of first class business and technology parks;~~
- ~~Development of quality industrial estates to accommodate small to medium size indigenous enterprises;~~
- ~~Development of higher education and training facilities;~~
- ~~Additional incubator units at other locations.~~

The RPGs identify certain conditions which must apply to support increased economic activity and regional competitiveness. These conditions are:

- **A critical mass of population, a range of skills, an innovation capacity and good business and transport linkages. There should be an attractive environment for people to live in.**
- **The potential for development of economic activity must be driven by advantages derived from exchange of information, collaboration, innovation, adoption of best practices and mobilisation of finance and skills. The establishment of a University in the South-East by utilising and building upon the existing network of third level educational establishments at Wexford, Waterford, Kilkenny and Carlow, would be a key driver for the region.**
- **Strong cities and towns are needed to support a competitive business environment, working in partnership with strong rural areas and ensuring an effective supply of employment opportunities and services.**

Chapter 4 Economic Development

Section 4.1.3 Wexford County Development Board

The Wexford County Development Board is committed to developing a vibrant local economy ~~by:~~

- ~~Developing a strong business culture;~~
- ~~Attracting foreign investment;~~
- ~~Promoting indigenous industry;~~
- ~~Promoting the development of micro-enterprises;~~
- ~~Developing a strong agricultural and horticultural sector.~~

The Board's report 'Action for Change' recognises the economic challenges facing the County. Unemployment has become the main issues facing local economies and improved inter-agency collaboration must focus on job creation and providing a supportive environment. The following key actions are identified:

- **Maximising employment potential;**
- **Support business development and job creation;**
- **Maximise Tourism 'Brand' identity of Wexford-develop Wexford as the Natural Heritage and Culture Destination of Ireland.**
- **In 2010 the Board's report 'Positioning Wexford for the Upturn-Towards Sustainable Growth and Development' which identified the following sectors as the pillars of growth for Wexford:**
- **Tourism**
- **Financial Services**
- **Health Life Sciences, (a collective term used to describe the pharmaceutical, biotechnology and medical devices and diagnostics sectors).**
- **Food**

- **Sustainable Construction, (renewable energies and the retrofitting of buildings).**

Chapter 4 Economic Development

Section 4.2.0 Strategy

While recognising that the **strengths of our local** economy ~~remains robust~~, economic analysis of the ~~County highlights t~~he following issues **face the County:**

- ~~While unemployment levels fell significantly during the period of the last plan 2001-2006 but is still above the national average. Unemployment levels have increased dramatically~~. In April 2006 6,529 people were signing on the Live Register. This figure had increased to 19,479 people in April 2011.

Chapter 4 Economic Development

4.4.0 Retail Strategy

The Wexford County Retail Strategy makes projections for the retail space requirements for both convenience and comparison goods shopping for 2011 and 2016. The review of the retail strategy has updated these projections using the population projection forecast, which are used throughout this Development Plan and which are based upon the latest data available from the preliminary Census 2006. **The Strategy has not been realigned to take account of the population targets set down by the Regional Planning Guidelines for the South East Region 2010-2022. The realignment with regional population targets will have knock on effects on the projections for retail space requirements. This will be addressed when a new Retail Strategy is prepared in tandem with the next County Development Plan 2013-2019.**

Chapter 5 Housing Strategy

In accordance with its statutory requirements, the Council will endeavour to meets the needs of those requiring accommodation through its own house building programme and a range of social housing option. **The Strategy has not been realigned with the**

population targets set down by the RPGs. This will be addressed when a new Housing Strategy is prepared in tandem with the next County Development Plan 2013-2019.

Chapter 6 Infrastructure, Energy and Waste
Section 6.2.0 Water Supply
Update on Water Services Investment Programme

- **The Taghmon Water Supply Scheme (Water Treatment Plant Upgrade) is completed.**
- **The Gorey Regional Water Supply Scheme (Network) is nearing completion.**
- **The Bunclody Water Supply Scheme (SLI) (Network) is under construction.**
- **Stages 1 and 2 of the Water Conservation Programme are completed.**

Contracts to start before 2012

- **Gorey Regional Water Supply Scheme (Contract 4 Water Treatment Plant Upgrade, Reservoir and Pumps).**
- **New Ross Water Supply Scheme-Water Treatment Plant Upgrade.**
- **Water Conservation Stage 3 Works-Watermains Rehabilitation Project Phase 1.**

Schemes at Planning Stage up to 2012

- **Enniscorthy and Sow Regional Water Supply Scheme.**
- **Water Conservation Stage 3 Works.**

Chapter 6 Infrastructure, Energy and Waste

Section 6.3.0 Wastewater Treatment Capital Investment Programme

Capital Investment Programme

~~Primary Growth Area~~ **Hub**	Wexford
~~Secondary Growth Area~~ **Larger Towns**	New Ross, Enniscorthy, Gorey
District Towns	**Bunclody** **Castlebridge** **Courtown** **Rosslare Harbour**
Strategic Growth Areas	~~Bunclody,~~ Ferns, Clonroche, Camolin, Campile, Wellington Bridge~~, Rosslare Harbour,~~ Ballycullane
District Growth Areas	Fethard, Coolgreany, Kilmuckridge, Kilmore Quay, Taghmon, ~~Castlebridge~~, Carrick on Bannow, ~~Courtown~~.
Local Growth Areas	Rosslare, Duncormick, Arthurstown, Duncannon, Curracloe, Oilgate

Update on Capital Investment Programme

The New Ross Sewerage Scheme and the Bunclody Sewage Scheme have been upgraded and commissioned.

Upgrading of the following schemes is scheduled to commence before 2012:

1. Enniscorthy Sewerage Scheme Phase 3 (Wastewater Treatment Plan upgrade and Network)

2. Gorey Sewerage Scheme (Wastewater Treatment Plant Upgrade)

3. Castlebridge Sewerage Scheme (SLI) (Network and Wastewater Treatment Plant Upgrade)

4. Taghmon Sewerage Scheme (SLI) (Wastewater Treatment Plant)

5. Fethard-on-Sea Sewerage Scheme (Wastewater Treatment Plant and Network)

6. Piercestown Sewerage Scheme (SLI) (Wastewater Treatment Plant)

Schemes at Planning Stage up to 2012

1. Wexford Sewerage Scheme

2. Village Sewerage Schemes for Arthurstown, Ballycanew, Ballyhack, Campile, Clonroche, Duncannon and Wellingtonbridge.

Chapter 7 Community, Culture and Education

Section 7.0 Community, Culture and Education

Policy C1

The Council shall facilitate the provision of adequate community facilities in accordance with the County Development Board ~~Strategy~~ **Strategies as outlined in Remodelling the Model County 2002-2012 and Action for Change: Wexford County Development Board Strategy 2009-2012** in relation to the provision of childcare, play, sports and the arts.

Chapter 8 Tourism, Recreation and Leisure

Section 8.1.3 Holiday Homes

Therefore the Council will seek to ensure that holiday home development is located in the established settlements **of the Hub, Larger Towns, District Towns, Strategic Growth Areas, District Growth Areas and Local Growth Areas as listed** in Table ~~2.1~~ **2.4** (Settlement Strategy section) and that such development relates sympathetically to the scale and level of development and facilities in the locality.

4 Appropriate Assessment Screening

4.1 Introduction

The Appropriate Assessment Screening process will determine whether the Proposed Variation is likely to have a significant effect on the conservation objectives and the integrity of Natura 2000 sites within the Plan boundary and also within 15km of the Plan boundary. This buffer zone was chosen as a precautionary measure to ensure that all affected Natura 2000 sites are included in this Screening process.

The Screening Process will identify the likely impacts of the policies and objectives of the proposed Core Strategy and resultant amendments to the current chapters of the Plan, either alone or in combination with other plans and projects and will consider whether these impacts are likely to be significant.

Ultimately, this process determines whether or not an Appropriate Assessment and the production of a Natura Impact Report is required *i.e.* whether the Proposed Variation to the plan is likely to negatively affect the conservation objectives of Natura 2000 sites.

4.2 Management of the Site

For a Plan to be 'directly connected with or necessary to the management of the site', the 'management' component must refer to management measures that are for conservation purposes, and the 'directly' element refers to measures that are solely conceived for the conservation management of a site.

This Proposed Variation to the Wexford County Development Plan 2007-2013 is an spatial planning framework for County Wexford and is not directly connected to the management of any Natura 2000 sites.

4.3 Natura 2000 Sites in and within 15 km of the Plan Area

The European Communities (Habitats) Directive 1992, established a network of sites throughout Europe, which are of international importance. It is comprised of Special Protection Areas (SPA) and Special Areas of Conservation (SAC) which together are known as Natura 2000 sites. Special Protection Areas aim to protect birds and this designation originates from the Birds Directive 1979. There is 9 SPA's and 16 SAC's in the Plan Area (see **Figure 1** below).

Following guidance from the Department of the Environment, Heritage and Local Government, all Natura 2000 sites within both the Plan area and an area extending 15km around it are considered. They are mapped on **Figure 1** and listed on the following table.

Table 1: Natura 2000 Sites (SPA and SAC's) within the Development Plan Area and within 15km of the Plan Area

Designation	Site Name & Code	Qualifying Interest
Designation within Project Area		
Special Area of Conservation	Ballyteigue Burrow SAC (Site Code 000696)	Fixed Dune, Dune Heath , Lagoon
	Bannow Bay SAC (Site Code 000697)	Embyonic Shifting Dunes, White Dunes, Fixed Grey Dunes, Halophilous Scrub, Atlantic Salt Meadows, Mediterranean Salt Meadows, Estuary
	Cahore Polders & Dunes SAC (Site Code 000700)	Fixed Dunes, Marram Dunes, Embryonic Shifting Dunes, Drift Lines
	Lady's Island Lake SAC (Site Code 000704)	Coastal Lagoon , Shingle Barrier, Dunes

Designation	Site Name & Code	Qualifying Interest
	Saltee Islands SAC (Site Code 000707)	Reefs, Grey Seal
	Screen Hills SAC (Site Code 000708)	Oligotrophic Lakes, Dry Heath
	Tacumshin Lake SAC (Site Code 000709)	Lagoon, Drift Lines, Perennial vegetation of Stony Banks, Embryonic, Shifting and Marram Dunes
	Raven Point Nature Reserve SAC (Site Code 000710)	Drift Lines, 5 types of Dune Systems
	Hook Head SAC (Site Code 000764)	Large Shallow Inlets and Bays, Reef and Sea Cliffs
	Blackstairs Mountains SAC (Site Code 000770)	Dry Heath
	Slaney River Valley SAC (Site Code 000781)	Alluvial Wet Woodland, Floating River vegetation Estuaries, Tidal Mudflats Old Oak Woodlands Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Twaite Shad, Atlantic Salmon, Otter
	Kilmuckridge-Tinnaberna Sandhills SAC (Site Code 001741)	Marram Dunes, Fixed Dunes
	Kilpatrick Sandhills SAC (Site	Fixed Dune and Dune Heath

Designation	Site Name & Code	Qualifying Interest
	Code 001742)	
	Long Bank SAC (Site Code 002161)	Submerged Sandbanks
	River Barrow & River Nore SAC (Site Code 002162)	Estuary, Mudflats, Salt Meadows, Floating River Vegetation, Dry Heath, Marginal River Vegetation, Petrifying Springs, Old Oak Woods, Alluvial Woods, White-clawed Crayfish, Freshwater Pearl Mussel, Whorl snail, Shad, Lampreys, Salmon, Otter, Killarney Fern
	Carnsore Point SAC (Site Code 002269)	Intertidal mud/sand flats & reefs
Special Protection Area	Saltee Islands SPA (Site Code 004002)	Breeding Seabirds, Peregrine, Chough
	Lady's Island Lake SPA (Site Code 004009)	Wintering Waterfowl, Whooper Swan, Golden Plover
	Cahore Marshes SPA (Site Code 004143)	Wigeon, Golden Plover, Lapwing, Greenland White-fronted goose Wetlands & Waterbirds

Designation	Site Name & Code	Qualifying Interest
	The Raven SPA (Site Code 004019)	Greenland White-fronted Geese, Red-throated Diver, Great Northern Diver, Slavonian Grebe, Golden Plover, Bar-tailed Godwit, Little Tern
	Ballyteigue Burrow SPA (Site Code 004020)	Golden Plover, Bar-tailed Godwit, Little Tern
	Bannow Bay SPA (Site Code 004033)	Brent Geese, Golden Plover, Bar-tailed Godwit
	Tacumshin Lake SPA (Site Code 004092)	Greenland White- fronted Goose, Whooper Swan, Bewick's Swan, Golden Plover
	Keeragh Islands SPA (Site Code 004118)	Tern species
	Wexford Harbour and Slobs SPA (Site Code 004076)	Little Grebe, Great Crested Grebe, Cormorant, Grey Heron, Bewick's Swan, Whooper Swan, Light-bellied Brent Goose, Shelduck, Wigeon, Teal, Mallard, Pintail, Scaup, Goldeneye, Red-breasted Merganser, Hen Harrier, Coot, Oystercatcher, Golden Plover, Grey Plover, Lapwing, Knot, Sanderling, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Redshank, Black-headed Gull, Lesser Black-backed Gull, Little Tern, Greenland White-fronted goose, Wetlands & Waterbirds.

Designation	Site Name & Code	Qualifying Interest
Designation within 15km of Plan Boundary		
Special Area of Conservation	Ardmore Head SAC (Site Code 002123)	Dry coastal heath and vegetated sea cliffs.
	Ballyman Glen SAC (Site Code 000713)	Petrifying springs with tufa formation Alkaline fens
	Blackwater River (Cork/Waterford) SAC (Site Code 002170)	Estuary, Mudflats, Shingle Banks, Salt Meadows, Floating River Vegetation, Old Oak Woods, Alluvial Woodland, Yew Woodland, Freshwater Pearl Mussel, White-clawed Crayfish, Shad, Lampreys, Salmon, Otter, Killarney Fern
	Bray Head SAC (Site Code 000714)	Vegetated sea cliffs of the Atlantic and Baltic coasts, European dry heaths, Semi-natural dry grasslands and scrubland facies on calcareous substrates
	Buckroney-Britt as Dunes And Fen (Site Code 000729)	Annual vegetation of drift lines, Perennial vegetation of stony banks, Mediterranean salt meadows (*Juncetalia maritimi*) Embryonic shifting dunes, Shifting dunes along the shoreline with Ammophila arenaria (white dunes), Fixed coastal dunes with herbaceous vegetation (grey dunes), Atlantic decalcified fixed dunes, Dunes with Salix repens, Humid dune slacks, Alkaline fens

Designation	Site Name & Code	Qualifying Interest
	Carriggower Bog (Site Code 000716)	Transition mires and quaking bogs
	Comeragh Mountains SAC (Site Code 001952)	Blanket bog, Dry, Wet and Alpine Heath, Rocky Slopes, Oligotrophic Lakes, Floating River Vegetation, Shining Sicklemoss
	Cullahill Mountain SAC (Site Code 000831)	Orchid Rich Calcareous Grassland
	Deputy's Pass SAC (Site Code 000717)	Old sessile oak woods with Ilex and Blechnum in British Isles
	Galmoy Fen SAC (Site Code 001858)	Alkaline fens
	Glen Of The Downs SAC (Site Code 000719)	Old sessile oak woods with Ilex and Blechnum in British Isles
	Glendine Wood SAC (Site Code 002324)	Semi-natural Woodland with rare assemblages of Ground Flora.
	Helvick Head SAC (Site Code 000665)	Vegetated Sea Cliffs and Dry Heath.
	Holdenstown Bog SAC (Site Code 001757)	Transition mires and quaking bog, active raised bog
	Hugginstown Fen SAC (Site code 000404)	Alkaline Fen
	Knocksink Wood SAC (Site Code 000725)	Petrifying springs with tufa formation (*Cratoneurion*), Alluvial forests with Alnus glutinosa and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*)

Designation	Site Name & Code	Qualifying Interest
	Lower River Suir SAC (Site Code 002137)	Alluvial Wet Woodlands and Yew Wood, Floating River Vegetation, Atlantic Salt Meadows, Old Oak Wood and Eutrophic Tall Herbs, Sea Lamprey, Brook Lamprey, River Lamprey, Freshwater Pearl Mussel, Crayfish, Twaite Shad, Atlantic Salmon, Otter
	Magherabeg Dunes SAC (Site Code 001766)	Annual vegetation of drift lines, Embryonic shifting dunes, Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes), Fixed coastal dunes with herbaceous vegetation (grey dunes) Atlantic decalcified fixed dunes (*Calluno-Ulicetea*) Petrifying springs with tufa formation (*Cratoneurio*n)
	Nier Valley Woodlands (Site Code 000668)	European dry heaths, Old sessile oak woods with Ilex and Blechnum in British Isles
	Spahill And Clomantagh Hill SAC (Site Code 000849)	Orchid Rich Calcareous Grassland
	The Loughans SAC (Site Code 000407)	Turlough
	The Murrough Wetlands SAC (Site Code 002249)	Annual vegetation of drift lines, Perennial vegetation of stony banks, Atlantic salt

Designation	Site Name & Code	Qualifying Interest
		meadows (Glauco-Puccinellietalia maritimae), Mediterranean salt meadows (*Juncetalia maritimi*), Calcareous fens with Cladium mariscus and species of the *Caricion davallianae*, Alkaline fens
	Thomastown Quarry SAC (Site Code 002252)	Petrifying Springs
	Tramore Dunes And Backstrand SAC (Site Code 000671)	Mudflats and sandflats not covered by seawater at low tide, Annual vegetation of drift lines, Perennial vegetation of stony banks, Salicornia and other annuals colonizing mud and sand, Spartina swards (*Spartinion maritimae*), Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*), Mediterranean salt meadows (*Juncetalia maritimi*), Embryonic shifting dunes, Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes), Fixed coastal dunes with herbaceous vegetation (grey dunes)
	Vale Of Clara (Rathdrum Wood) SAC (Site Code 000733)	Old sessile oak woods with Ilex and Blechnum in British Isles
	Wicklow Mountains SAC (Site Code 002122)	Otter (*Lutra lutra*), Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflora*e, Natural dystrophic lakes and ponds,

Designation	Site Name & Code	Qualifying Interest
		Northern Atlantic wet heaths with *Erica tetralix*, European dry heaths, Alpine and Boreal heaths, Species-rich Nardus grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe), Blanket bog (*active only), Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*), Calcareous rocky slopes with chasmophytic vegetation, Siliceous rocky slopes with chasmophytic vegetation, Old sessile oak woods with Ilex and Blechnum in British Isles.
Special Protection Area	Wicklow Mountains SPA (Site code 004040)	Merlin, Peregrine, Ring Ouzel, Red Grouse, Goosander, Redstart, Wood Warbler, Garden Warbler and Blackcap.
	Poulaphouca Reservoir SPA (Site Code 004063)	Greylag Goose, Lesser Black-backed Gull
	The Murrough SPA (Site Code 004186)	Brent Goose, Greylag, Goose, Wigeon, Teal, Blackheaded, Gull, Herring Gull
	Tramore Back Strand SPA (Site Code 004027)	Brent Geese, Golden Plover, Grey Plover, Black-tailed Godwit, Bar-tailed Godwit, Lapwing, Dunlin, Sanderling

Designation	Site Name & Code	Qualifying Interest
	Blackwater Callows SPA (Site Code 004094)	Whooper swan, Bewick's Swan, Golden Plover, Kingfisher
	Mid-Waterford Coast SPA (Site Code 004193)	Peregrine, Chough
	Dungarvan Harbour SPA (Site Code 004032)	Brent Goose, Black-tailed Godwit , Bar-tailed Godwit, of international importance, Nationally important numbers of Shelduck, Wigeon, Red-breasted Merganser, Grey Plover, Golden Plover, Lapwing, Knot, Sanderling, Dunlin, Redshank and Turnstone
	Helvick Head to Ballyquinn SPA (Site Code 004192)	Peregrine, Chough, Kittiwake and Guillemot
	Blackwater Estuary SPA (Site Code 004028)	Little Egret, Golden Plover, Bar-tailed Godwit, Sandwich Tern, Roseate Tern, Common Tern

4.4 Conservation Objectives

Management planning for nature conservation sites has a number of aims. These include:

- To identify and evaluate the features of interest for a site;
- To set clear objectives for the conservation of the features of interest;
- To describe the site and its management;
- To identify issues (both positive and negative) that might influence the site;
- To set out appropriate strategies/management actions to achieve the objectives.

Generic conservation objectives have been compiled for some SAC's and SPA's. These are based on the sites' qualifying features. In time, specific conservation objectives will be written for the features of interest within each Designated Site.

Below outlines the conservation objectives for each Natura 2000 site.

	Natura 2000 Site	Conservation Objectives
Sites within Plan Boundary		
Special Protection Areas (SPA)	Saltee Islands SPA (Site Code 004002)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Lady's Island Lake SPA (Site Code 004009	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Cahore Marshes SPA (Site Code 004143)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	The Raven SPA (Site Code 004019)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Ballyteigue Burrow SPA (Site Code 004020)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Bannow Bay SPA (Site Code	• To maintain the bird species of special conservation interest for which this SPA has been listed at

	Natura 2000 Site	Conservation Objectives
	004033)	favourable conservation status.
	Tacumshin Lake SPA (Site Code 004092)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Keeragh Islands SPA (Site Code 004118)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Wexford Harbour and Slobs SPA (Site Code 004076)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
Special Area of Conservation	Ballyteige Burrow SAC (Site Code 000696)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Bannow Bay SAC (Site Code 000697)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

	Natura 2000 Site	Conservation Objectives
	Cahore Polders & Dunes SAC (Site Code 000700)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Lady's Island Lake SAC (Site Code 000704)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Saltee Islands SAC (Site Code 000707)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Screen Hills SAC (Site Code 000708)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site.

	Natura 2000 Site	Conservation Objectives
		• To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Tacumshin Lake SAC (Site Code 000709)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with
	Raven Point Nature Reserve SAC (Site Code 000710)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Hook Head SAC (Site Code 000764)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities
	Blackstairs Mountains SAC (Site Code 000770)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and

	Natura 2000 Site	Conservation Objectives
		biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Slaney River Valley SAC (Site Code 000781)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Kilmuckridge-Tinnaberna Sandhills SAC (Site Code 001741)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Kilpatrick Sandhills SAC (Site Code 001742)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Long Bank SAC (Site Code	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at

	Natura 2000 Site	Conservation Objectives
	002161)	favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	River Barrow & River Nore SAC (Site Code 002162)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Carnsore Point SAC (Site Code 002269)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
Sites within 15km of Plan Boundary		
Special Protection Areas (SPA)	Wicklow Mountains SPA (Site code 004040)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Poulaphouca	• To maintain the bird species of special conservation

	Natura 2000 Site	Conservation Objectives
	Reservoir SPA (Site Code 004063)	interest for which this SPA has been listed at favourable conservation status.
	The Murrough SPA (Site Code 004186)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Tramore Back Strand SPA (Site Code 004027)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Blackwater Callows SPA (Site Code 004094)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Mid-Waterford Coast SPA (Site Code 004193)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Dungarvan Harbour SPA (Site Code 004032)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Helvick Head to Ballyquinn SPA (Site Code 004192)	• To maintain the bird species of special conservation interest for which this SPA has been listed at favourable conservation status.
	Blackwater	• To maintain the bird species of special conservation

	Natura 2000 Site	Conservation Objectives
	Estuary SPA (Site Code 004028)	interest for which this SPA has been listed at favourable conservation status.
Special Area of Conservation	Ardmore Head SAC (Site Code 002123)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status.
	Ballyman Glen SAC (Site Code 000713)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status.
	Blackwater River (Cork/Waterford) SAC (Site Code 002170)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Bray Head SAC (Site Code 000714)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Buckroney-Britt as Dunes And Fen (Site Code	• To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation status; the two priority habitats *fixed coastal dunes

	Natura 2000 Site	Conservation Objectives
	000729)	(38.5%) and *Atlantic decalcified fixed dunes (6.5% in mosaic) and the other eight Annex I habitats, alkaline fen (12.5%), shifting dunes along the shoreline (5.4%), dunes with Salix repens (7%), embryonic shifting dunes (3.2%), humid dune slacks (2.5%), Mediterranean salt meadows (<1%), annual vegetation of drift lines (<1%) and perennial vegetation of stony banks (<1%). • To maintain other habitats at favourable conservation status, including sandy beach, dune scrub, rivers and streams, lowland wet and dry grassland, bedrock shore, reedbeds and sea cliffs. • To maintain the populations of notable species on the site at favourable conservation status, including Meadow Saxifrage, Wild Asparagus, Green flowered Helleborine, Bird'sfoot and Spring Vetch and other notable plants within the site and the following Annex I bird species Golden Plover, Whooper Swan and Kingfisher. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Carriggower Bog SAC (Site Code 000716)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site.

	Natura 2000 Site	Conservation Objectives
		• To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Comeragh Mountains SAC (Site Code 001952)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Cullahill Mountain SAC (Site Code 000831)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Deputy's Pass SAC (Site Code 000717)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Galmoy Fen SAC (Site Code 001858)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status.

	Natura 2000 Site	Conservation Objectives
		• To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Glen Of The Downs SAC (Site Code 000719)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Glendine Wood SAC (Site Code 002324)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Helvick Head SAC (Site Code 000665)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Holdenstown	• To maintain the Annex I habitats and Annex II

	Natura 2000 Site	Conservation Objectives
	Bog SAC (Site Code 0001757)	species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities
	Hugginstown Fen SAC (Site code 000404)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Knocksink Wood SAC (Site Code 000725)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Lower River Suir SAC (Site Code 0002137)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with

	Natura 2000 Site	Conservation Objectives
		landowners, legal users and relevant authorities.
	Magherabeg Dunes SAC (Site Code 001766)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Nier Valley Woodlands (Site Code 000668)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Spahill And Clomantagh Hill SAC (Site Code 000849)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	The Loughans SAC (Site Code 000407)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and

	Natura 2000 Site	Conservation Objectives
		biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	The Murrough Wetlands (Site Code 002249)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Thomastown Quarry SAC (Site Code 0002252)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Tramore Dunes And Backstrand (Site Code 000671)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Vale Of Clara (Rathdrum	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at

	Natura 2000 Site	Conservation Objectives
	Wood) SAC (Site Code 000733)	favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.
	Wicklow Mountains SAC (Site Code 002122)	• To maintain the Annex I habitats and Annex II species for which the SAC has been selected at favourable conservation status. • To maintain the extent, species richness and biodiversity of the entire site. • To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

4.5 Assessment Criteria

This section assesses the likelihood of potential impacts from the Proposed Variation of the 2007 County Development Plan on the Natura 2000 sites.

In practice and as outlined in the EU 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", and the national guidance document 'Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities', impacts that could potentially occur through the implementation of a Core Strategy, can be categorised under a number of headings:

- Loss/Reduction of habitat area – *e.g.* as a result of transport infrastructure *etc.;*
- Disturbance to key species – *e.g.* as a result of increased public access to protected sites and increased recreational pressure;
- Habitat or species fragmentation – *e.g.* through urbanisation;
- Reduction in species density – *e.g.* transport infrastructure, land intensification *etc.;*
- Changes in key indicators of conservation value such as decrease in water quality and quantity *e.g.* through inadequate wastewater treatment, runoff of pollutants during construction and operational phases of development.

This Screening Assessment has been completed taking cognisance of the existing development plan's policies, objectives and provisions in the plan for the protection of the environment and sites protected under European legislation.

Current Plan Natural Heritage Policies
Policy NH1
The Council shall support the conservation of the abundance and diversity of habitats characteristic of County Wexford and their dependent plant and animal communities and

Current Plan Natural Heritage Policies
will facilitate and co-operate with national agencies, local and community groups in their protection.
Objectives NH1
Prohibit development which would damage or threaten the integrity of sites of international or national importance, designated for their habitat/wildlife or geological/geomorphological importance including the proposed Natural Heritage Areas, candidate Special Areas of Conservation, Special Protection Areas and Statutory Nature Reserves.
Objective NH2
To encourage and assist individuals, environmental organisations and community groups in the conservation of nature.

The polices and provisions of this Core Strategy and subsequent amendment to text of the current Plan (see **Section 3** of this report), have been devised to anticipate and avoid the need for development that would be likely to significantly and adversely affect the integrity of any Natura 2000 sites.

It is also worth noting that any such developments permitted on foot of this variation shall be required to conform to National and European regulations and legislation for the prevention of environmental effects which would adversely impact on the integrity and conservation objectives of Natura 2000 sites[2].

[2]Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

4.5.1 Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 sites.

In general, any development that may result from the implementation of a Core Strategy, such as the construction of housing, roads, rail, water and wastewater infrastructure, gas, electricity and telecommunications infrastructure, could lead to a number of impacts depending on where the development is sited, the scale of development and types and quantities of emissions. These impacts could include the loss/reduction of habitat area and disturbance to key species in a SAC/SPA or lead to changes in key indicators of conservation, such as deterioration in water quality, for example. However, polices and objectives of this Core Strategy and subsequent amendment to the text of the current 2007 Plan, have been devised to anticipate and avoid the need for development that would be likely to significantly and adversely affect the integrity of any Natura 2000 sites.

The key proposed amendment to Chapter 3 Transportation, resulting from the Core Strategy, relates to the re-opening of the of the Rosslare-Waterford rail service. This line closed on the 20th September 2010. The upgrading of this rail service was a key objective of the 2007 Development Plan. Objective NH1 of the current plan "*Prohibit development which would damage or threaten the integrity of sites of international or national importance, designated for their habitat/wildlife or geological/geomorphological importance including the proposed Natural Heritage Areas, candidate Special Areas of Conservation, Special Protection Areas and Statutory Nature Reserves*" will ensure that that any works required for this re-opening and upgrade will not significantly impact on the integrity and conservation objectives of Natura 2000 sites (*e.g.* River Barrow & River Nore SAC, Lower River Suir SAC, Bannow Bay SAC/SPA, Ballyteige Burrow SPA/SAC, Carnsore Point SAC and Wexford Harbour & Slobs SPA which are all in the vicinity of the Rosslare-Waterford Railway line).

As mentioned in the Core Strategy, the NSS identifies the N11-M11 as a Strategic Radial corridor from the South-East to Dublin. The national primary route serves the eastern section of the Country. The NSS identifies the N25 Wexford to Cork and the N80 Enniscorthy to Carlow national primary routes as Strategic Linking Corridors. These routes serve the south and northwest of the county respectively. The RPG's supports the upgrading of the N80 and improvements to linkages from the south-east region to the midlands. The RPG's have been subject to an SEA and AA. Any upgrades or improvements to road infrastructure will be required adhere to Objective NH1 of the 2007 Plan and would be subject to an appropriate project level environmental assessment and Habitats Directive assessment. This will ensure that that any works required for any improvements or upgrades will not significantly impact on the integrity and conservation objectives of Natura 2000 sites (*e.g.* N25 Wexford to Cork - River Barrow and River Nore SAC, Lower River Suir SAC, Slaney River Valley SAC, Wexford Harbour and Slobs SPA; N80 Enniscorthy to Carlow - Slaney River Valley SAC and Blackstairs Mountain SAC).

Proposed amendments to Chapter 6 Infrastructure, Energy and Waste relate to water supply and waste water schemes. Any such projects would be subject to an Environmental Assessment, Appropriate Assessment Screening (and Appropriate Assessment if deemed require) and for the case of the waste water treatment works they will be required to be compliant with the conditions of an given EPA waste water discharge licence or certificate of authorisation. Key threats to many Natura 2000 sites are point source discharges from WWTWs. Therefore, any proposed improvements to WWTW's within the Core Strategy will have a corresponding benefit for receiving waters in terms of improving effluent quality.

The Core Strategy provides details of the projected population growth for towns and villages in the Wexford county settlement hierarchy, as well as smaller towns and villages under 1,500 persons and rural areas. The allocation of projected population growth is underpinned by the population targets and settlement strategy set out in the RPGs.

In terms of population projections, three of the four main towns (Enniscorthy, New Ross and Gorey) will have reduced population projections when compared with the 2007 Development Plan, thereby leading to a potential reduction in development pressures on Natura 2000 sites in the vicinity of these main towns (*e.g.* Slaney River Valley SAC, River Barrow and River Nore SAC).

Wexford Town however, is placed at the top of the County's settlement hierarchy and is the centre piece of the County's settlement strategy given its designation as Hub in the NSS and RPGs. In order to develop and maximise its role as a Hub a critical mass of population is required. The RPGs indicate that critical mass will only be achieved if populations of 30,000 or more are realised. The RPGs have set about achieving this by allocating a population target of 26,700 for Wexford Town by 2022.

Potential impacts on Natura 2000 sites may arise if, for example, increased population growth in Wexford town cannot be served by water and wastewater infrastructure. It is noted however in the Proposed Variation that targeted investment in transport links and other socio-economic infrastructure will be essential to facilitate the achievement of critical mass in the Hub.

Any proposed upgrade in infrastructure (*e.g.* Wexford Sewerage Scheme, road infrastructure upgrade/improvements *etc.*) will be required to adhere to Objective NH1 of the 2007 Plan and would be subject to an appropriate project level environmental assessment and Habitats Directive assessment. This will ensure that that any works required to meet the population projection will not significantly impact on the integrity and conservation objectives of Natura 2000 sites.

4.5.2 Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 sites by virtue of:

Size and scale

Where it is considered that potential developments arising from this Core Variation (*e.g.* waste water treatment plant upgrades, road improvements, *etc*) may impact upon sensitive or designated sites, because of their proximity or scale, an Appropriate Assessment screening and Environmental Assessment (*e.g.* EIA, EIR) will be sought, where deemed necessary.

No projects, which would give rise to significant adverse direct, indirect or secondary impacts on the integrity of the Natura 2000 sites, arising from the size or scale of the project, shall be permitted on the basis of this Proposed Variation (either individually or in combination with other plans or projects)[2].

Land take

No projects giving rise to significant adverse direct, indirect or secondary impacts on the integrity of the Natura 2000 sites having regard to their conservation objectives, arising from land take shall be permitted on the basis of this Plan (either individually or in combination with other plans or projects)[2].

The delivery of infrastructure relating to this Core Strategy (*e.g.* rail, water treatment works, waste water treatment works *etc*) shall be subject to a Habitats Directive Assessment (HDA) in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC).

[2]Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

It should be noted that there is no zoning in the County Development Plan 2007-2013 and therefore there is no land being rezoned/dezoned/phased or reserved. Changes to zoning will be under the individual Town Plans and Local Area Plans produced under the new County Development Plan.

Distance from the Natura 2000 site or key feature of the site

As noted above, there is no zoning in the County Development Plan 2007-2013 and therefore there is no land being rezoned/dezoned/phased or reserved. Changes to zoning will be under the individual Town Plans and Local Area Plans produced under the new County Development Plan.

No projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, having regard to their conservation objectives, arising from their location, shall be permitted on the basis of the Proposed Variation to the County Development Plan (either alone or in combination with other plans or projects)[2].

Resource requirements (water abstraction *etc.*)

The Core Strategy details the proposed amendment to Chapter 6 Infrastructure Energy and Waste of the 2007 County Development Plan. Chapter 6.2 relates to an update on the Water Services Investment Programme. All projects relating to resource requirements in this Proposed Variation (*e.g.* water abstractions relating to water supply schemes for example) will be subject to an Appropriate Assessment Screening (and Appropriate Assessment, if deemed required) and relevant Environmental Assessments.

Hence, no projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, arising from their resource requirements (*e.g.*

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(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

water abstraction) will be facilitated or shall be permitted on the basis of the Proposed Variation to the County Development Plan (either alone or in combination with other plans or projects)[2].

Emissions and waste (disposal to land, water or air)

The proposed amendment to text in Chapter 6 of 2007 Plan is an update on the Waste Water Capital Investment Programme. Upgrades to sewerage schemes will strengthen the protection of receiving waters.

No projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, arising from emissions and waste are facilitated or shall be permitted on the basis of the Proposed Variation to the County Development Plan (either alone or in combination with other plans or projects)[2].

Transportation requirements

The key proposed amendments to Chapter 3 Transportation, resulting from the Core Strategy *i.e.* the Proposed Variation to the 2007 Plan, relates to the re-opening of the of the Rosslare-Waterford rail service. This line closed on the 20th September 2010. The upgrading of this rail service was a key objective of the 2007 Development Plan. Objective NH1 of the current plan "*Prohibit development which would damage or threaten the integrity of sites of international or national importance, designated for their habitat/wildlife or geological/geomorphological importance including the proposed Natural Heritage Areas, candidate Special Areas of Conservation, Special Protection Areas and Statutory Nature Reserves*" will ensure that any works required for this re-opening and upgrade or indeed any other infrastructure development (*e.g.* road upgrades/improvements) will not significantly impact on the integrity and conservation objectives of Natura 2000 sites.

[2]Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

In line with the Habitats Directive and indeed the South East Regional Planning Guidelines, Wexford County Council will ensure the protection of the Natura 2000 network of SAC's and SPA's and compliance with the requirements of Article 6 of the Habitats Directive by ensuring that screening for Appropriate Assessment is carried out at all levels in the planning process, where required.

Excavation requirements;

No projects giving rise to significant adverse direct, indirect or secondary impacts on the integrity of the Natura 2000 sites, having regard to their conservation objectives, arising from excavation requirements shall be permitted on the basis of this Plan (either individually or in combination with other plans or projects)[2].

Duration of Construction, operation, decommissioning, *etc*

The Proposed Variation is an Interim Core Strategy as agreed with the Department of Environment. A complete review of the County Wexford Development Plan 2007-2013 has commenced. The next Plan for the County, which will be operational for the period 2013-2019, will include a new Core Strategy together with a new Housing Strategy and Retail Strategy. The review will incorporate all Section 28 Guidelines that have been enacted by the Minister since the adoption of the current Plan. The review of the Plan will also be subject to the requirements of the Strategic Environmental Assessment under the EU SEA Directive, Appropriate Assessment under the EU Habitats Directive and Water Framework Directive.

[2]Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

4.5.3 Describe any likely changes to the site arising as a result of:

Reduction of habitat area

The Proposed Variation does not propose any additional land take within Natura 2000 sites.

Any projects resulting from this Proposed Variation shall be subject to a Habitats Directive Assessment (HDA) in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC, where required.

Disturbance to key species & habitat or species fragmentation

Wexford County Council shall take appropriate steps to avoid disturbances of key species and habitat or species fragmentation within designated sites in order to comply with the policies and objectives set out in **Chapter 9** of the County Development Plan 2007 and in accordance with the Core Strategy Vision to "*protect, conserving and enhancing the County Build, natural and cultural heritage*".

Reduction in species density

Wexford County Council shall take appropriate steps to avoid reduction in species density within designated sites in accordance with the policies and objectives set out in **Chapter 9** of the County Development Plan 2007.

Changes in key indicators of conservation value (water quality *etc.*)

Wexford County Council shall take appropriate steps to avoid changes in key indicators of conservation value in accordance with the policies and objectives set out in **Chapter 9** of the County Development Plan.

Climate change

No projects giving rise to significant adverse changes in climatological conditions affecting the Natura 2000 sites shall be permitted on the basis of the provisions of this Plan (either individually or in combination with other plans or projects)[2].

4.5.4 Describe any likely impacts on the Natura 2000 site as a whole in terms of:

Interference with the key relationship that define the structure of the site

This Proposed Variation will not impact on the relationships that define the structure of Natura 2000 sites.

Interference with key relationships that define the function of the site

The Proposed Variation will not impact on the relationships that define the function of Natura 2000 sites.

4.5.5 Provide Indicators of significance as a result of the identification of effects set out above in terms of;

Loss, fragmentation, disruption, disturbance & change to key elements of the site (*e.g.* water quality *etc.*).

Wexford County Council shall take appropriate steps to avoid the deterioration of designated sites (through habitat/species loss, fragmentation, disturbance *etc.*) in accordance with the policies and objectives set out in **Chapter 9** of the County Development Plan 2007 and by complying with the strategic aims for achieving the "*Vision for County Wexford*" *e.g.* "*protecting, conserving and enhancing the County Build, natural and cultural heritage*".

[2]Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

Any projects resulting from this Proposed Variation shall be subject to a Habitats Directive Assessment (HDA) in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC), where required.

4.5.6 Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.

Not applicable.

4.6 Finding of No Significant Effects Report Matrix

Name of project or plan:

Wexford County Development Plan 2007-2013 Proposed Variation No. 1

Name and location of Natura 2000 sites:

See **Section 4** for Natura 2000 sites within plan boundary and those within 15km of plan boundary.

Description of the project or plan:

See **Section 3** for Core Strategy and proposed amendments to 2007 County Development Plan.

Is the Proposed Variation necessary to management of Natura 2000 Sites?

The Draft Variation (Core Strategy) is not directly connected with or necessary to the management of the Natura 2000 sites in the County but rather the future planning and sustainable development of the County.

Are there other projects or plans that together with the project or plan being assessed could affect the sites (provide details)?

This Variation once adopted will form part of the County Development Plan 2007 which sets the framework for the sustainable development of the County.

The Proposed Variation is set within the framework of higher level plans including the existing County Development Plan and the National Spatial Strategy and Regional Planning Guidelines.

A complete review of the County Wexford Development Plan 2007-2013 has commenced. The next Plan for the County, which will be operational for the period 2013-2019, will include a new Core Strategy together with a new Housing Strategy and Retail Strategy. The review will incorporate all Section 28 Guidelines that have been enacted by the Minister since the adoption of the current Plan. The review of the Plan will also be subject to the requirements of the Strategic Environmental Assessment under the EU SEA Directive, Appropriate Assessment under the EU Habitats Directive and Water Framework Directive.

The assessment of significance of effects

Describe how the project of plan (alone or in combination) is likely to affect the Natura 2000 site:

In general, any development that may result from implementation of a Core Strategy could lead to a number of impacts depending on where development is sited, the scale of development and types and quantities of emissions. However, polices and provisions of this Core Strategy and subsequent amendment to text in the current Plan, have been devised to anticipate and avoid the need for development that would be likely to significantly and adversely affect the integrity of any Natura 2000 sites.

Any developments permitted on foot of this variation shall be required to conform with National and European regulations and legislation for the prevention of environmental effects which would adversely impact on the integrity and conservation objectives of Natura 2000 sites. This along with the implementation of the County's natural heritage policies will ensure that no development will be permitted that will significantly adversely impact on Natura 2000 sites[2].

The key proposed amendment to Chapter 3 Transportation, resulting from the Core Strategy, relates to the re-opening of the of the Rosslare-Waterford rail service. This line closed on the 20th September 2010. The upgrading of this rail service was a key objective of the 2007 Development Plan. Objective NH1 of the current plan "*Prohibit development which would damage or threaten the integrity of sites of international or national importance, designated for their habitat/wildlife or geological/geomorphological importance including the proposed Natural Heritage Areas, candidate Special Areas of Conservation, Special Protection Areas and Statutory Nature Reserves*" will ensure that that any works required for this re-opening and upgrade will not significantly impact on the integrity and conservation objectives of Natura 2000 sites.

[2]Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

As mentioned previously, the NSS identifies the N11-M11 as a Strategic Radial corridor form the south-east to Dublin. The national primary route serves the eastern section of the Country. The NSS identifies the N25 Wexford to Cork ad N80 Enniscorthy to Carlow national primary routes as Strategic Linking Corridors. These routes serve the south and northwest of the county respectively. The RPG's supports the upgrading of the N80 and improvements to linkages from the south-east region to the midlands. Any upgrades or improvements to road infrastructure will be required adhere to Objective NH1 of the 2007 Plan and would be subject to an appropriate project level environmental assessment and Habitats Directive assessment. This will ensure that that any works required for any improvements or upgrades will not significantly impact on the integrity and conservation objectives of Natura 2000 sites (*e.g.* N25 Wexford to Cork - River Barrow and River Nore SAC, Lower River Suir SAC, Slaney River Valley SAC, Wexford Harbour and Slobs SPA; N80 Enniscorthy to Carlow - Slaney River Valley SAC and Blackstairs Mountain SAC).

Proposed amendments to Chapter 6 Infrastructure, Energy and Waste relate to water supply and waste water schemes. Any such projects would be subject to an Environmental Assessment, Appropriate Assessment Screening (and Appropriate Assessment if deemed require) and for the case of the waste water treatment works they will be required to be compliant with the conditions of EPA waste water discharge licence or certificate of authorisation. Key threats to many Natura 2000 sites are point source discharges from WWTWs. Therefore, any proposed improvements to WWTWs within the Core Strategy will have a corresponding benefit for receiving waters in terms of improving effluent quality.

As mentioned in **Section 4.5.1**, population projections for three of the four main towns (Enniscorthy, New Ross and Gorey) will have reduced population projections when compared with the 2007 Development Plan, thereby leading to a potential reduction in development pressures on Natura 2000 sites in the vicinity of these main towns (*e.g.* Slaney River Valley SAC, River Barrow and River Nore SAC).

Wexford Town however, is placed at the top of the County's settlement hierarchy and is the centre piece of the County's settlement strategy given its designation as Hub in the NSS and RPGs. In order to develop and maximise its role as a Hub a critical mass of population is required. The RPGs indicate that critical mass will only be achieved if populations of 30,000 or more are realised. The RPGs have set about achieving this by allocating a population target of 26,700 for Wexford Town by 2022.

Potential impacts on Natura 2000 sites may arise if, for example, the increased population growth in Wexford town cannot be served by water and wastewater infrastructure. The Proposed Variation notes that that targeted investment in transport links and other socio-economic infrastructure will be essential to facilitate the achievement of critical mass in the Hub.

Any proposed upgrade in infrastructure (*e.g.* Wexford Sewerage Scheme, road infrastructure upgrade/improvements etc.) will be required to adhere to Objective NH1 of the 2007 Plan and would be subject to an appropriate project level environmental assessment and Habitats Directive assessment. This will ensure that that any works required to meet the population projection will not significantly impact on the integrity and conservation objectives of Natura 2000 sites.

Explain why these effects are not considered significant:

Any developments permitted on foot of this variation shall be required to conform with National and European regulations and legislation for the prevention of environmental effects which would adversely impact on the integrity and conservation objectives of Natura 2000 sites. This along with the County's natural heritage policies will ensure that no development will be permitted that will significantly adversely impact on Natura 2000 sites.

List of agencies consulted:

As part of the SEA Screening, the following statutory bodies were consulted.

- Environmental Protection Agency (EPA)
- Department of Environment, Community and Local Government (DoECLG)
    - Copy also sent to Department of Arts, Heritage & the Gaeltacht, having regard to the recent transfer of Heritage and NPWS Section from former Department of Environment, Heritage and Local Government.
- Department of Communications, Energy and Natural Resources (DCENR)

Regard was taken of submissions received during the preparation of this screening assessment.

Data collection to carry out the assessment

Who carried out this assessment?

WYG Environmental & Planning Ireland Ltd.

Sources of data

Existing records and information published by the NPWS and EPA.

Level of assessment completed

A desktop study was completed utilising existing information from the relevant state authorities.

Where the full results of the assessment can be accessed and viewed?

Please see public notice announcing Proposed Variation of Plan.

5 Conclusion

This Screening Report for the Appropriate Assessment of the Proposed Variation to the County Development Plan 2007-2013, has been carried out in accordance with the Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC as published by the European Commission.

Many development that may result from implementation of a Core Strategy, could lead to a number of impacts depending on where development is sited, the scale of development and types and quantities of emissions. However, the polices and provisions of this Core Strategy and subsequent amendment to text in the current Plan, have been devised to anticipate and avoid the need for development that would be likely to significantly and adversely affect the integrity of any Natura 2000 sites.

All developments permitted on foot of this variation shall be required to conform to National and European regulations and legislation for the prevention of environmental effects which would adversely impact on the integrity and conservation objectives of Natura 2000 sites. This along with the one of the County's strategic aims for achieving the County Vision "*Protecting, conserving and enhancing the County's built, natural and cultural heritage*" and the natural heritage policies and objectives contained in the 2007 County Development Plan will ensure that no development will be permitted that will significantly adversely impact on Natura 2000 sites[2].

Therefore, in accordance with the Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, it is concluded that the Proposed Variation to the County Development Plan does not require any further assessment to demonstrate compliance with the Directive.

[2]Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

In order to determine whether an appropriate assessment in accordance with Article 6(3) of the Habitats Directive is required Wexford County Council has carried out a formal Screening process. This Screening report has been carried out in accordance with the Commission's methodological guidance (EC, 2002) to determine a) whether the plan or project is directly connected to or necessary for the management of the site and b) whether the plan, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site(s) in view of the site(s) conservation objectives.

Subject to consultation with NPWS, Wexford County Council propose to determine, subject to further consultations, that an appropriate assessment of Proposed Variation No 1 to the County Development Plan 2007-2013 is not required having regard to:

- The characteristics of the plan
- The report of WYG dated July 2011 and in particular the assessment of the implications of the Proposed Variation in Section 4.5, the 'Finding of No Significant Effects Report Matrix' and the 'Conclusion'
- The consultations with the prescribed bodes carried out for the SEA

Forward Planning Section
Wexford County Council
July 2011

Legend

- 15Km buffer (indicative only)
- Outline of County Wexford
- Special Areas of Conservation
- Special Protected Areas

ST GEORGE'S CHANNEL
Muir Bhreatan

ATLANTIC OCEAN
An tAigéan Atlantach

No Tile
No Tile
No Tile
No Tile
No Tile
No Tile

N

0 5 10 Kilometres

Base Map Copyright Ordnance Survey Ireland and Government of Ireland
Reproduced under licence, Number: EN 0004907

Wexford Screening
Outline of Protected Areas

Figure 1

Job Number: CE08590	Date: July 2011
Finalised by: PG	Office: 1404
Drawn By: P A Groves - GIS/ArcMap 9.2	

WYG Ireland

Appendix A

Site Synopses

SITE SYNOPSIS

SITE NAME : BALLYTEIGE BURROW

SITE CODE : 000696

This coastal site extends eastwards and northwards from the village of Kilmore Quay in County Wexford. A long, narrow spit of coarse sand and gravel with an impressive sand dune system (Ballyteige Burrow) forms most of the seaward boundary of this site. Behind the spit lies a shallow, tidal sea inlet and estuary of the Duncormick River (The Cull). The eastern portion of this inter-tidal system was reclaimed in the 19th century by construction of the Cull Bank and is now polderland, most of which is intensively farmed grassland and arable land. The western portion of The Cull retains semi-natural habitat including mudflats which are exposed at low tide, and saltmarsh. The site contains several coastal habitats listed on Annex I of the E.U. Habitats Directive, including three priority habitats: fixed dune, dune heath and lagoon. Most of the site is designated a Nature Reserve.

A dominating feature of this site is its large dune system, many of the dunes reaching over 20m high. Embryonic shifting dunes and Marram dunes occur along the seaward side with more stable fixed dunes and dune heath inland, though blow-outs occur throughout. Typically, plants such as Marram (*Ammophila arenaria*), Portland Spurge (*Euphorbia portlandica*), Sea-holly (*Eryngium maritimum*), Sea Stork's-bill (*Erodium cicutarium*) and Carline Thistle (*Carlina vulgaris*) are common on the seaward dunes.

The fixed dunes occupy the central ridge of the Burrow. These are well developed and species-rich. The vegetation is predominantly low-growing and contains species such as Common Restharrow (*Ononis repens*), Wild Pansy (*Viola tricolor* subsp. *curtisii*), Sea Stork's-bill, Common Centaury (*Centaurium erythraea*), Wild Thyme (*Thymus praecox*) and Red Fescue (*Festuca rubra*).. Cattle have not grazed the eastern end of the site since 1987 and, as a result, there is an increase in dune scrub encroachment and a decrease in species diversity. The dominant species here are Red Fescue and Burnet Rose (*Rosa pimpinellifolia*), while Bracken (*Pteridium aquilinum*) is common.

One of the most notable features at Ballyteige is the presence of developing acid heath within the (calcareous) fixed grey dune area. This is very unusual in Irish dune systems. The vegetation here is dominated by Bracken, with some Gorse (*Ulex europaeus*) and low-growing herbs. In addition, along with the classical foredune/fixed grey dune sequence, there are some unusual incipient slack/blowout complexes. These are eroded down in places to the shingle base on which the dunes rest.

Saltmarsh vegetation fringes The Cull, featuring Sea Aster (*Aster tripolium*), Sea Arrowgrass (*Triglochin maritima*), Sea Lavender (*Limonium humile*) and Hard-grass (*Parapholis strigosa*), with well-developed mats of Glasswort (*Salicornia* sp.) and

patches of Cord-grass (*Spartina* sp.). Salt meadows with Sea Rush (*Juncus maritimus*) have formed behind the dyke at the eastern end of the site. Part of the saltmarsh complex contains halophilous scrub vegetation. This is a very rare habitat in Ireland, with only two known extant locations - Ballyteige and Bannow Bay. This habitat is characterised by the rare Perennial Glasswort (*Arthrocnemum perenne*).

A series of drainage channels and a small pond, which are largely artificial in origin, now have a flora and fauna characteristic of lagoons. The channels have a maximum depth of 3 m. Seawater enters mainly be percolation through the dunes along the southern shore and apparently by leakage of the sluice on the Cull at high tide. While the aquatic vegetation in much of the site is poor, two lagoonal specialists, Tassel-weed (*Ruppia maritima*) and the green alga *Chaetomorpha linum*, occur. An additional lagoonal specialist, the Red Data Book charophyte *Chara canescens*, was recorded here as recently as 1991. The fauna of the lagoonal habitat is rich, diverse and typically lagoonal. A total of 60 taxa were recorded in a survey in 1998, in addition to several further taxa recorded previously. Eleven of these are considered as lagoonal specialists in Britain or Ireland (*Lekanesphaera hookeri, Palaemonetes varians, Sigara stagnalis, Sigara concinna, Agabus conspersus, Enochrus bicolor, Hydrobia ventrosa, Conopeum seurati, Neomysis integer, Notonecta viridis, Plea leachi*). While the habitat is particularly degraded, restoration is considered easy and long-term prospects are good.

This site is host to a range of rare plant species. Wild Asparagus (*Asparagus officinalis*) is frequent among dune vegetation, while Lesser Centaury (*Centaurium pulchellum*) is associated with damp dune slacks. Borrer's Saltmarsh-grass (*Puccinellia fasciculata*) and Perennial Glasswort (*Arthrocnemum perenne*) occur on the saltmarsh. There is also a recent record for Sea Pea (*Lathyrus japonicus*). All five species are protected under the Flora (Protection) Order 1999. Henbane (*Hyoscyamus niger*), a species which is considered as threatened in Ireland, also occurs at Ballyteige. The dunes here also have an interesting lichen flora: the scarce species *Usnea articulata* occurs here, and this is the only known site in Ireland for another lichen, *Fulgensia fulgens*.

The Cull and adjacent reclaimed land provide important habitat for wintering waterfowl and Brent Goose occur here in internationally important numbers (average maximum count of 219 individuals over the winters 1994/95 - 1997-98). Nationally important numbers of Lapwing (2737) and Black-tailed Godwit (161) occur. Two species listed on Annex I of the Birds Directive occur regularly in winter, Golden Plover (2441) and Bar-tailed Godwit (79), while another species, Little Tern, breeds at Callenstown strand.

The invertebrate fauna of the site includes a number of scarce species, examples being the bumble bees *Bombus distinguendus* and *B. sylvarum*, the jewel wasp *Hedychridium ardens* and the ant *Tetramorium caespitum*.

The dune system is used for cattle grazing. The appropriate grazing level is a critical factor in maintaining the diversity of dune systems. Coastal systems in general are threatened by disturbance of the substrate, removal of sand/shingle, etc.

This coastal site is of major ecological value for its range of good quality coastal habitats, including three habitats given priority status on Annex I of the EU Habitats Directive - fixed dune, dune heath and lagoon. The dune system is of excellent quality, physically well-developed and with a rich flora which includes five protected species. The importance of the site for wintering waterfowl further enhances its value.

20.3.2003

SITE SYNOPSIS

SITE NAME: BANNOW BAY

SITE CODE: 000697

Bannow Bay is a relatively large estuarine site, approximately 14 km long, on the south coast of Co. Wexford. Small rivers and streams to the north and south-west flow into the bay and their sub-estuaries from part of the site. The bay contains large areas of mud and sand and the underlying geology is mainly of Ordovician slates with the exception of the areas to the east of Bannow Island which are underlain by Cambrian slates.

Eleven coastal habitats listed on Annex I of the E.U. Habitats Directive occur within the site. The estuary, including the saltmarshes, makes up approximately 83% of the site. At low tide up to 75% of the substrate is exposed. There are mud flats in the narrow northern part and also in the south-west and south-east. The sediments of the inner estuary associated with the Corock and Owenduff Rivers are generally black anoxic mud with some fine sand and broken shell. Mats of green algae (*Enteromorpha* spp.) are present and seaweeds (*Fucus* spp.) have colonised stony substrates, particularly further south.

Salt marshes of exceptional species diversity and rarity are found above the sand and mudflats, particularly at the south of the site. Habitats associated with *Spartina* sp. and *Salicornia* spp. occur in the salt marsh and on its fringes. A diverse range of *Salicornia* spp. has been recorded including *Salicornia pusilla, S. ramosissima, S. europaea, S. fragilis* and *S. dolichostachya.* Narrow shingle beaches up to 30 m wide occur in places along the edge of the estuary. The fringing reed communities are mainly confined to the tributaries and are relatively small in extent. They support Sea Club-rush (*Scirpus maritimus*), Grey Club-rush (*S. tabernaemontani*), Hemlock Water-dropwort (*Oenanthe crocata*) and abundant Common Reed (*Phragmites australis*).

The main areas of saltmarsh are on the islands at Clonmines; at the mouth of the tributary at Clonmines; at the mouth of the tributary at Taulaght; close to Saint Kieran's House; at the north-west of Big Burrow; at the south-east of Bannow Island and at the west of Rabbit Burrow in Fethard Bay. Very small fragmented linear strips of saltmarsh occur in the upper estuary as far north as the confluence of the Corock and Owenduff Rivers and along the other tributaries. The dominant type of saltmarsh present is Atlantic salt meadow although the Mediterranean type is also present; both of these habitats are listed on Annex I of the E.U. Habitats Directive. Typical species of the former include Common Saltmarsh-grass (*Puccinellia maritima*), Sea Aster (*Aster tripolium*), Sea Thrift (*Armeria maritima*), Sea Plantain (*Plantago maritima*), Red Fescue (*Festuca rubra*), Creeping Bent (*Agrostis stolonifera*), Saltmarsh Rush (*Juncus gerardii*), Sea Arrow-grass (*Triglochin maritima*) and Sea Beet (*Beta maritima*). An abundance of Sea Purslane (*Halimione portulacoides*) is found in the Fethard and in part of the Taulaght saltmarshes. In the larger areas of saltmarsh Sea Rush (*Juncus maritimus*), a species more typical of Mediterranean salt meadows, is found. Other plants recorded are Lax-flowered Sea-lavender (*Limonium humile*) and Common Scurvy-grass (*Cochlearia officinalis*).

Halophilous scrub, another Annex I habitat, occurs in four of the larger saltmarsh areas. It is characterised by the presence of the legally protected plant Perennial Glasswort (*Arthrocnemun perenne*) which occurs in only a few sites in the country.

A mosaic of sand dune habitats which are listed on Annex I of the E.U. Habitats Directive occur in three areas at the edge of the estuary. Embryonic shifting dunes and White dunes are characterised by the presence of Lyme Grass (*Leymus arenarius*), Marram grass (*Ammophila arenaria*), Sea Spurge (*Euphorbia paralias*) and Sea Holly (*Eryngium maritimum*) in both Big Burrow and to the south east of Bannow Island.

The priority habitat fixed grey dunes is also present. Typical species here include Bird's-foot Trefoil (*Lotus corniculatus*), Kidney Vetch (*Anthyllis vulneraria*), Wild Thyme (*Thymus praecox*), Stork's-bill (*Erodium* spp.), Ribwort Plantain (*Plantago lanceolata*), Common Restharrow (*Ononis repens*), Mouse-ear Hawkweed (*Hieracium pilosella*), Field Wood-rush (*Luzula campestris*) and Wild Carrot (*Daucus carota*). Some areas of this dune type contain a carpet of the moss *Tortula ruraliformis* and lichens (*Cladonia* sp.). There is some Gorse (*Ulex* sp.) present beside the mossy area at the south-east of the site. Bee Orchid (*Ophrys apifera*) and Pyramidal Orchid (*Anacamptis pyramidalis*) have also been recorded. Sharp Rush (*Juncus acutus*) occurs in a dune slack associated with the grey dunes at Big Burrow. At the west of the system east of Bannow Island the dunes are quite high, reaching almost *c*. 15m. Non-native plant species, including Tree Mallow (*Lavatera arborea*) occur in several parts of the site.

Some freshwater habitats occur at the northern end of the site. These consist mainly of a mosaic of marsh, reedbed and Willow (*Salix* spp.). Species present include Common Reed, with young willows scattered throughout and Hemlock Water-dropwort abundant in the ground layer. In other areas the wetland vegetation consists of a mosaic of *Phragmites* reed bed, patches of Hard Rush (*Juncus inflexus*), Meadowsweet (*Filipendula ulmaria*), Creeping Buttercup (*Ranunculus repens*), Marsh Bedstraw (*Galium palustre*), Greater Tussock-sedge (*Carex paniculata*), Marsh Marigold (*Caltha palustris*) and occasional Bulrush (*Typha latifolia*) along some old drains. The wetland areas generally merge into a narrow band of dense scrub dominated by Blackthorn (*Prunus spinosa*) and Whitethorn (*Crataegus monogyna*) with some Ash (*Fraxinus excelsior*), Willow and Gorse.

Most of the estuary has been designated a Special Protection Area (SPA) under the E.U. Birds Directive, because of its significant bird interest, particularly during the winter. Parts of this area have also been designated a Wildfowl Sanctuary. There are large numbers of wintering wildfowl and waders who feed on the mudflats and sandflats and use the fringing vegetation of reedbed and saltmarsh for roosting and feeding. Populations present include internationally important numbers of Light-bellied Brent Goose (819), and nationally important numbers of Shelduck (475), Pintail (85), Golden Plover (3144), a species listed on Annex I of the E.U. Birds Directive, Lapwing (2,000), Knot (508), Dunlin (3,850), Black-tailed Godwit (697), Bar-tailed Godwit (334) and Redshank (377) (all figures mean peaks 1994/95 to 1997/98).

Important breeding populations found within the site include two species listed on Annex I of the E.U. Birds Directive (Little Tern and Kingfisher), a colony of Sand Martins in the cliffs at the west of the site and a heronry with approximately 15 breeding pairs. The rare Reed Warbler may also breed in the area. Otter and Common Seal occur within the site.

Landuse at the site consists mainly of shellfish farming; approximately 20 ha of the intertidal area is under cultivation. Current annual production of Oysters is approximately 100 tonnes, concentrated mainly on three farms. There are other farms, but these are only in the initial stages of cultivation and current production is negligible. There is evidence of poor farm management in some locations. There are numerous abandoned trestles in the intertidal zone and along the top of the shore. Grading equipment is permanently left on the shore and some areas of saltmarsh are being used as a grading area for Oysters. In some areas damage is caused to the shingle vegetation and to the substrate by tractors accessing the aquaculture farms. Any further increase in aqualculture poses a threat.

Other landuses include shooting, bird watching, conservation management, grazing in some of the dune areas, horse-riding on the beach and Big Burrow sand dunes, picnicing, swimming, sailboarding, jet-skiing, line fishing and bait digging. The removal of sand and beach material also occurs at the site.

The site is of considerable conservation significance for the large number of E.U. Habitats Directive Annex I habitats that it contains, including the priority habitat fixed grey dune. The legally protected Red Data Book plant species Perennial Glasswort also occurs. The site is also an SPA because of the important numbers of wintering wildfowl it supports, including an internationally important population of Light-bellied Brent Goose.

7.12.1999

SITE SYNOPSIS

SITE NAME: BLACKSTAIRS MOUNTAINS

SITE CODE: 000770

The Blackstairs Mountains are located along the border of the counties Wexford and Carlow, forming a mountain chain that runs in a north-east/south-west direction for approximately 22 km and including six peaks over 520 m. The range has a core of granite, and on the Carlow side, erosion has cut deeply into the dome exposing successive layers of granite, giving a steeply stepped slope. On the east side some overlying Ordovician slates and sandstones are evident.

The site is important for extensive areas of dry heath - a habitat listed under Annex I of the E.U. Habitats Directive. The higher, steeper slopes are covered with a dense, tall carpet dominated by Heather (*Calluna vulgaris*) and Bilberry (*Vaccinium myrtillus*) with small amounts of Crowberry (*Empetrum nigrum*), Bell Heather (*Erica cinerea*) and Cross-leaved Heath (*E. tetralix*). Occasionally Common Bent-grass (*Agrostis capillaris*) and Mat Grass (*Nardus stricta*) are also found. Abundant moss cover is present, particularly in those areas which have escaped burning - *Racomitrium lanuginosum, Hypnum cupressiforme, Polytrichum commune, Hylocomnium splendens* and *Rhytidiadelphus squarrosus*. Stiff Sedge (*Carex bigelowii*) occurs on the stony ground on the west side of the range.

Lower down the slopes the heath is dominated by Gorse (*Ulex europaeus*), with some of the species listed above, and Heath Bedstraw (*Galium saxatile*) and Tormentil (*Potentilla erecta*). Bracken (*Pteridium aquilinum*) is also abundant on the lower slopes, particularly on the western flanks. Upland grassland is found on those slopes which have been heavily grazed. Grassland species include Mat Grass and Common Bent-grass. Heath Bedstraw and the mosses *Hylocomnium splendens* and *Rhytidiadelphus squarrosus* are also found.

Wet heath occurs in mosaic with dry heath towards the base of some of the steeper slopes and is also found outside the western edge of the commonage. Typical species include Purple Moor-grass (*Molinia caerulea*), bog mosses such as *Sphagnum capillifolium* and *S. palustre* and sometimes Bog Asphodel (*Narthecium ossifragum*). There are relatively extensive tracts of a peat/heath mosaic on the gentle slopes at the east of the southern section of the site and within the commonage. Bog Cotton (*Eriophorum* spp.) is dominant here with small amounts of Purple Moor-grass and over 90% cover of bog mosses. Some very wet patches with Soft Rush (*Juncus effusus*) occur.

A series of lowland bogs north of Mount Leinster and around Black Rock Mountain have recently been identified which have considerable local importance. These occur around Ballycrystal, south-west of Black Rock Mountain, where the highest feeders of the Urrin River rise, and around Crann on the north of the Black Rock ridge, where feeders of the Clody River rise just south of the Wexford/Carlow border. In these

bogs considerable populations of Cranberry (*Vaccinium oxycoccos*) have been found in 1990. The Crann bogs also have abundant Bog-myrtle (*Myrica gale*), uncommon in the county. Other species of interest that occur in the Urrin and Clody bogs include Marsh St. John's-wort (*Hypericum elodes*), Pale Butterwort (*Pinguicula lusitanica*) and Lesser Skullcap (*Scutellaria minor*). The Crann bogs include quite extensive stands of Purple Moor-grass, and Water Horsetail (*Equisetum fluviatile*) is widespread. The bogs are reduced to fragments bordering improved grassland or forestry.

Mount Leinster is the highest mountain of the range (795 m). On the east side of the summit a few plants with arctic or alpine affinities occur such as the scarce Starry Saxifrage (*Saxifraga stellaris*) and the Stag's-horn Clubmoss (*Lycopodium clavatum*).

The headwaters of the Urrin River are included within the site. Habitats along it include patches of deciduous woodland dominated by Birch (*Betula pubescens*). Further south the woodland becomes more dense and consists of Alder (*Alnus glutinosa*), Willows (*Salix* spp.), Hazel (*Corylus avellana*) and Holly (*Ilex aquifolium*). The woodland in the south of the area is comprised of Oak (*Quercus petraea*). There are also patches of peaty marsh with species similar to those listed for the lowland bog. The scarce Ivy-leaved Bellflower (*Wahlenbergia hederacea*) and Mountain Fern (*Thelypteris limbosperma*) occur along the Urrin River, while Cowberry (*Vaccinium vitis-idaea*), also a scarce species, is found in heath in a number areas of the site. Small Cudweed (*Logfia minima*), a Red Data Book species that is protected under the Flora (Protection) Order (1999), has been recorded in heathy grassland on the site. The rare, Red Data Book species Bird's Foot (*Ornithopus perpusillus*) is found in dry, sandy places at Knockroe in Co. Carlow. Small numbers of Red Grouse use the site – their numbers have declined here in recent years.

Landuse within the site is centred on grazing. Overall sheep numbers are low, though there are some pockets where high numbers are found. In these areas there are patches of bare ground, an abundance of Mat Grass and in others upland grassland replaces the heath. Burning of the Heather is carried out on what appears to be a rotational basis. Heather is regenerating in the burnt areas. From a distance the age structure is evident in the different hues of brown to be seen. Cattle are out-wintered on the slopes just inside the boundary of the commonage. Severe poaching is associated with this, especially where supplementary feeding is carried out. Coniferous forestry is present over much of the slopes of the mountain (overside of the site), extending to a height of 640 m north of Mount Leinster.

The Blackstairs Mountains pcSAC is the only example of moorland above 300 m in counties Wexford and Carlow. It includes good examples of dry heath, a habitat that is listed on Annex I of the E.U. Habitats Directive. The plant and animal communities are typical of the uplands and the growth of Heather is particularly profuse, rivalling some of the larger areas of Heather cover in Co. Wicklow.

11.6.2002

SITE SYNOPSIS

SITE NAME: CAHORE POLDERS AND DUNES

SITE CODE: 000700

This site is located just south of Cahore Point, 10 km south of Courtown, Co. Wexford. The site comprises a sand dune system that extends along the coast for over 4 km, backed by areas of polder grassland, wetland and drainage channels. It is underlain by rocks of Cambrian age.

The site is a candidate SAC selected for fixed dunes, Marram dunes, embryonic shifting dunes and drift lines, all habitats that are listed on Annex I of the E.U. Habitats Directive.

A sand dune ridge and sandy beach forms the eastern boundary of the site. These dunes are highest in the north (up to 18 m high) and gradually becoming lower towards the south. The dunes display a well-developed zonation of fixed dunes grading eastwards to Marram (*Ammophila arenaria*)-dominated dunes, embryo dunes and, at the top of the beach, driftline vegetation. At the northern end of the site the dunes support mature fixed dune vegetation, including such species as False Oat-grass (*Arrhenatherium elatius*), Lesser Meadow-rue (*Thalictrum minus*), Red Fescue (*Festuca rubra*), Burnet Rose (*Rosa pimpinellifolia*), Marram, Barren Strawberry (*Fragaria vesca*), Carline Thistle (*Carlina vulgaris*), Wild Asparagus (*Asparagus officinalis* subsp. *prostratus*), Pyramidal Orchid (*Anacamptis pyramidalis*), Lady's Bedstraw (*Galium verum*), Cowslip (*Primula vulgaris*), Cat's-ear (*Hypochoeris radicata*), Devil's-bit Scabious (*Succisa pratensis*), Wood Sage (*Teucrium scorodonia*), Sheep's-bit (*Jasione montana*), Germander Speedwell (*Veronica chamaedrys*). Several of these species are indicative of the fact that these dunes are old and somewhat decalcified through leaching. Undergrazing in this area has allowed the spread of Bracken (*Pteridium aquilinum*), Bramble (*Rubus fruticosus*), Gorse (*Ulex europaeus*) and Sea-buckthorn (*Hippophae rhamnoides*), which occur in dense patches. Over the years there has been loss of dune habitat in this area to houses, caravan parks and erosion by the sea. Fixed dune vegetation at the southern end of the site is younger and undisturbed, and supports a rich variety of species, including Marram, Burnet Rose, Wild Carrot (*Daucus carota*), Portland Spurge (*Euphorbia portlandica*), Sea Spurge (*Euphorbia paralias*), Moore's Horsetail (*Equisetum* x *moorei*), Common Centaury (*Centaurium erythraea*), Sea Holly (*Eryngium maritimum*), Kidney Vetch (*Anthyllis vulneraria*), Common Restharrow (*Ononis repens*), Dewberry (*Rubus caesius*), Pignut (*Conopodium majus*), Fairy Flax (*Linum catharticum*), Thyme-leaved Sandwort (*Arenaria serpyllifolia*), Biting Stonecrop (*Sedum acre*), Sand Pansy (*Viola tricolor* subsp. *curtisii*), Heath Dog-violet (*Viola canina*), Sand Cat's-tail (*Phleum arenarium*), Common Milkwort (*Polygala vulgaris*), Creeping Willow (*Salix repens*), Red Fescue, Lady's Bedstraw, Yellow-wort (*Blackstonia perfoliata*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Sand Sedge (*Carex arenaria*), Rayless Ragwort (*Senecio jacobaea* var. *flosculosus*), Umbellate Hawkweed (*Hieracium umbellatum*), amongst others. These dunes also

support a good range of bryophyte and lichen species. Most of these species are also to be found in the less overgrown areas of fixed dunes at the northern end of the site.

Marram dunes are found as a band *c.* 30 m wide on the seaward side of the fixed dunes, particularly in the southern half of the site, and are dominated almost exclusively by Marram. A narrow band of embryonic shifting dunes (5-8 m wide) with Sand Couch (*Elymus farctus*), Marram, Sea Holly and Curled Dock (*Rumex crispus*) is found on the seaward edge of these dunes. Below the embryo dunes at the top of the beach is a narrow band (4-5 m wide) of drift line vegetation with such species as Sea Rocket (*Cakile maritima*), Frosted Orache (*Atriplex laciniata*) and Prickly Saltwort (*Salsola kali*).

The dunes grade westwards to polder grassland. This area was formerly a wetland, which has been drained and reclaimed to provide improved grassland for grazing animals. These grasslands are relatively species-poor but are important feeding areas for large numbers of wintering waterfowl. Numerous drainage channels traverse the polders; these are lagoonal in character and have been colonised by brackish water species. The presence of brackish water in these channels is the result of inefficiencies in flap valves which have allowed seawater to enter; however, with recent improvements to these valves it remains to be seen if the brackish water plant and animal communities present in the channels are maintained. A variety of aquatic and emergent plant species occur in the channels, including Soft Hornwort, (*Ceratophyllum submersum*), Water Milfoil (*Myriophyllum* sp.), Water Crowfoot (*Ranunculus* sp.), Common Reed (*Phragmites australis*), Grey Club-rush (*Scirpus lacustris* subsp. *tabernaemontani*) and, recorded in 2002, Water Fern (*Azolla filiculoides*). Several artificial, more or less freshwater ponds occur near the southern end of the site and support a variety of aquatic and emergent plant species, including Water-plantain (*Alisma plantago-aquatica*), Branched Bur-reed (*Sparganium erectum*), Common Duckweed (*Lemna minor*), Ivy-leaved Duckweed (*Lemna trisulca*),Water Horsetail (*Equisetum fluviatile*), Amphibious Bistort (*Polygonum amphibium*), Water-cress (*Nasturtium officinale*), Soft Hornwort, Bulrush (*Typha latifolia*), Common Spike-rush (*Eleocharis palustris*), Water mint (*Mentha aquatica*), Broad-leaved Pondweed (*Potamogeton natans*), amongst others.

The site is notable for the presence of a number of rare and scarce plants. Wild Asparagus has been recorded from the north end of the dune ridge; this taxon is listed on the Flora (Protection) Order, 1999. Moore's Horsetail, the hybrid between Rough Horsetail (*E. hyemale*) and Branched Horsetail (*E. ramosissimum*), occurs commonly on the sand dunes. This hybrid is particularly notable for the fact that it does not grow with either parent, one of which, *E. ramosissimum*, has not even been recorded from Ireland. It is confined to the coastline of Wexford and Wicklow and is listed on the Flora (Protection) Order, 1999. Drainage ditches in the polders support Soft Hornwort. This is a very rare and only relatively recently recorded species in Ireland, and in the Republic is otherwise known only from similar situations in south Co. Wexford. Water Fern, an introduced species that floats on water was recenty recorded from drainage ditches in the site. Umbellate Hawkweed has its only known Co. Wexford site on the Cahore dunes. The relatively scarce Sharp Rush (*Juncus acutus*), Hound's-tongue (*Cynoglossum vulgare*) and Marsh Helleborine (*Epipactis palustris*) have also been recorded from the site.

Cahore Dunes and Polders is of major ornithological importance as a site for wintering waterfowl. The improved grassland provides a feeding site for a sub-flock of the Wexford Harbour Greenland White-fronted Goose population. Numbers are of national importance, with a mean of 286 for the five winters 1996/97 to 2000/01. Both Whooper and Bewick's Swans also occur, though in relatively low numbers with means of 28 and 9 respectively. The site supports nationally important populations of a further four species – Wigeon (1,568), Golden Plover (3,787), Shoveler (54) and Lapwing (2,054) (all quoted figures are means for the five winters 1996/97 to 2000/01). Other species which occur in significant numbers are Teal (470), Mallard (179) and Curlew (536).

The Gatekeeper butterfly has been recorded from dunes in the site.

Cahore Polders and Dunes is a site of considerable conservation, including as it does, good examples of fixed dune, Marram dune, embryonic shifting dune and drift line habitat; all of these habitats are listed on Annex I of the E.U. Habitats Directive, and fixed dunes with priority status. The presence of a number of species that are listed on the Flora (Protection) Order, 1999 and of other rare species is notable. It is also of high conservation value as a site for wintering waterfowl, in particular Greenland White-fronted Goose, Golden Plover, Lapwing and Wigeon.

17.06.2003

SITE SYNOPSIS

SITE NAME: CARNSORE POINT

SITE CODE: 002269

This site is situated in the south-east of Co. Wexford and comprises the area of sea and underlying bedrock and sediments off Carnsore Point. The coastal boundary follows the High Water Mark from just north of Greenore Point to Tacumshin Lake; the seaward boundary follows a line just to the west of Black Rock, south of the Barrels Rocks, east of the Bailies and as far north as South Long light. The bedrock of the site is of granite, felsite and other intrusive rocks rich in silica. Most of the site comprises rocky reefs that are typically strewn with boulders, cobbles and patches of sand, both on the shore and underwater, and areas of intertidal mud/sand flats. The site is exposed to the prevailing wind and swells from the west. Tidal streams tend to be moderate but are strong in some areas. Offshore, Barrels Rocks are extremely exposed to the full force of Atlantic swells.

Carnsore Point has good examples of intertidal and subtidal reef communities typical of areas that are very exposed to moderately exposed to wave action. Both on the shore and underwater, the reefs are typically strewn with boulders, cobbles and patches of sand.

The intertidal reef to the east of Carnsore Point is moderately exposed to wave action. It has an extensive area of granite with the limpet, *Patella vulgata*, the topshell, *Osilinu* (=*Monodonta*) *lineatus*, and abundant juvenile barnacles in the upper shore. The midshore has a poorly defined band of *Fucus vesiculosus* followed by luxuriant knotted wrack *Ascophyllum nodosum* with the epiphyte *Polysiphonia lanosa*. The low shore is characterised by *Fucus serratus* with occasional *Laminaria digitata* and the green algae *Cladophora rupestris*. The communities at each are typical for this type of shore.

There is a good example of a subtidal reef community very exposed to wave action in shallow water at Barrels Rocks characterized by abundant *Mytilus edulis* with the brown alga, *Alaria esculenta*, an understorey of pink coralline algal crusts and *Corallina officinalis* with the hydroid, *Tubularia* sp on steep surfaces. Also in shallow water but in areas with a little less exposure to wave action species rich (81 - 110 species) kelp park of *Laminaria hyperborea* is found with an understory of hydroids, sponges, and bryozoans but at two sites this community is unusual. At south-east of Splagh rock the understory is very similar to the sea squirt commuity of *Stolonica socialis* and *Polyclinum aurantium* whereas north east of Terchen the bivalve *Musculus discors* carpets much of the area with a variety of sponges, hydroids, sea squirts and bryozoans.

In deeper water at depths of 11-30 m there are excellent examples of the sea squirt community dominated by the sea squirts *Polyclinum aurantium* with the bryozoan *Flustra foliacea*. *Stolonica socilais* may also be present in this community. There is

an unusual variation of this community where the dominant sea squirt is *Polycarpa scuba* (= *rustica*) and the bryozoan *Flustra foliacea* is absent and at another site *Distomus variolosus* is the most abundant sea squirt. At 23 m low lying rock surrounded by coarse sand is covered by the bivalve *Musculus discors* which considered to be an uncommon community.

A number of species with a limited distribution in Ireland occur at two or more sites within the area. These are the sponge *Tethyspira spinosa,* the anemone *Cataphellia brodricii* and the sea squirts *Distomus variolosus*, *Stolonica socialis* and *Archdistoma aggregatum,* and *Polycarpa scuba*. The sea squirt *Sidnyum elegans* and the recently described bryozoan *Schizomavella sarniensis* each occur at a single site. *Tethyspira spinosa* is only known from the Saltees, Hook Head and Roaringwater Bay in Ireland. *Cataphellia brodricii* occurs in this community and in shallow water both around the Saltee Islands and other areas in the south-east. *Stolonica socialis* in Ireland is only known from the south-east and north-west coasts and in Britain in the south, south-west, and English Channel. *Sidnyum elegans* has not previously been recorded in Ireland and to date all records are from the south-east and it has a limited distribution in Britain. *Archdistoma aggregatum* is known from a few sites in south-west Britain, Northern Ireland, the Saltee Islands, Carnsore Point area and south of the River Shannon Estuary. *Polycarpa scuba* (=*rustica*) is only known from the Irish Sea, English Channel and Brittany.

The littoral sediment communities of Carnsore Point are represented by a moderately exposed shore at Carne Beach. There are talitrid amphipods living under drift algae on the strand line. The midshore is populated by polychaete worms (*Arenicola marina*, *Scolelepis foliosa* and *Nephthys cirrosa*), and the burrowing amphipod, *Bathyporeia pelagica*. The low shore is characterized by *Nephthys cirrosa*, crustacea (*Crangon crangon* and *Portumnus latipes*) and the bivalve mollusc (*Angulus tenuis*).

The site is of considerable conservation significance for the presence of intertidal mud/sand flats and of reefs, both habitats that are listed on Annex I of the E.U. Habitats Directive.

SITE SYNOPSIS

SITE NAME: HOOK HEAD

SITE CODE: 000764

The site of conservation interest at Hook Head comprises an area of marine subtidal reefs to the south and east of the Hook Head Peninsula and includes the sea cliffs from Hook Head to Baginbun and Ingard Point. The peninsula forms the eastern side of Waterford Harbour, while to the east it adjoins the estuary mouth of Bannow Bay. Hook Head itself is composed of Carboniferous limestone overlain by Devonian Old Red Sandstone and is palaeontologically of international importance. The site contains three habitats listed under the EU Habitats Directive, i.e. large shallow inlets and bays, reefs and sea cliffs.

Subtidally the reefs are aligned in a north-east/south-west orientation and are typically strewn with boulders, cobbles and patches of sand and gravel. They are exposed to prevailing winds and swells from the west and tidal streams tend to be moderate but are strong in some areas. There are also a number of isolated reefs that project from a sand plain. The reefs around Hook Head have excellent examples of tideswept communities and species richness is high in both the shallow and deep-water communities. The latter is characterised by cushion sponges, with branching sponges and the rose 'coral' *Pentapora foliacea*. In addition the sponge *Stryphnus ponderosa,* the sea squirts *Sidnyum elegans*, *Distomus variolosus* and *Stolonica socialis* and the brittlestar *Amphiura securigera* are present. These species have a limited distribution in Ireland. The rare red algae *Schizymenia dubyi* also occurs.

The sublittoral sediments within this area consist of exposed, tideswept patches of duned gravel and moderately exposed silty sand with only weak tidal streams. The duned gravel is characterised by the burrowing sea cucumber *Neopendactyla mixta* and the burrowing brittlestar *Amphiura securigera* whilst the silty sand is relatively barren. *Amphiura securigera* in Ireland, has only been recorded from the south east, the Kenmare River and in Northern Ireland where it is considered rare.

The sea cliffs, which extend for a distance of c. 15 km, are mostly low, usually not more than 10 m though they extend up to 30 m near Baginbun Head. Both clay and rock cliffs are represented. The vegetation of the cliffs, as well as the underlying rocky shoreline, is characterised by species such as Thrift (*Armeria maritima*), Rock Samphire (*Crithmum maritimum*), Rock Sea-lavender (*Limonium binervosum*), Sea Plantain (*Plantago maritima*), Buck's Horn Plantain (*Plantago coronopus*), Rock Sea-spurrey (*Spergularia rupicola*) and Sea Mayweed (*Matricaria maritima*). The cliffs are also of ornithological interest for breeding Choughs (*Pyrrhocorax pyrrhocorax*), Ravens (*Corvus corax*) and Peregrines (*Falco peregrinus*), and there is a small seabird colony, mainly of Guillemots, near Baginbun. The headland is a noted landfall point for migrants.

In summary, this site is of conservation importance for its subtidal reef and shallow bay communities, and their diversity of species, as well as for the vegetated sea cliffs. These habitats are listed under the EU Habitats Directive. The rocky coastline is also important for breeding Ravens, Choughs and Peregrines. The latter two are listed on Annex I of the EU Birds Directive.

07.09.2001

SITE SYNOPSIS

SITE NAME: KILMUCKRIDGE - TINNABERNA SANDHILLS

SITE CODE: 001741

This narrow coastal site extends for almost 4 km along the Wexford coastline, from 3 km east of Kilmuckridge in the north to Ballynamona in the south.

The site is comprised of a fine-grained sandy beach up to 50 m wide, backed by steep clay cliffs at the southern end and sand dunes at the northern end. The cliffs are up to 15 m high, and are eroding in places. They support a patchy vegetation that includes Wild Carrot (*Daucus carota*), Common Bird's-foot-trefoil (*Lotus corniculatus*) and Yarrow (*Achillea millefolium*).

North of Tinnaberna, the cliffs are replaced by gently undulating sand dunes. These are up to 150 m wide and have a species-rich flora typical of fixed dunes. Marram (*Ammophila arenaria*) is abundant, particularly on the fore dunes. Other species found on the dunes include Sheep's-bit (*Jasione montana*), Wild Pansy (*Viola tricolor)*, Sand Sedge (*Carex arenaria*), Pyramidal Orchid (*Anacamptis pyramidalis*), Common Bird's-foot-trefoil, Common Restharrow (*Ononis repens*) and Yellow-wort (*Blackstonia perfoliata*).

Further inland the low sand ridges have a luxurient growth of mosses and lichens, most notably Dog Lichen (*Peltigera canina*), and the fern *Polypodium vulgare* is common in the area. A dense scrub of Sea Buckthorn (*Hippophae rhamnoides*) has encroached onto the fixed dune area - the spread of this invasive, introduced species will require to be monitored and controlled. Northwards, the sand dunes are relatively undisturbed and free of Sea Buckthorn, but lack the diversity of higher plant species and abundance of lower plants found on the dunes in the south.

Two streams meander across the site at the northern end and flow into the sea. They are fringed by small areas of wet woodland, with Alder (*Alnus glutinosa*) and Grey Willow (*Salix cinerea*) being the main tree species. The ground flora includes Wild Angelica (*Angelica sylvestris*), Greater Tussock-sedge (*Carex paniculata*), Hemlock Water-dropwort (*Oenanthe crocata*), Common Nettle (*Urtica dioica)* and Yellow Iris (*Iris pseudacorus*).

The scarce, Night-flowering Catchfly (*Silene noctiflora*), which is mainly found in the south-east, occurs on cliffs in the site. Moore's Horsetail (*Equisetum* x *moorei*), a rare hybrid which is confined to the coasts of Wicklow and Wexford, is also found. There is an old record from the site for the Red Data Book species, Sea Stock (*Matthiola sinuata*); this species has not, however, been seen recently at this or any other site in Ireland and is thought to be extinct.

The site contains a good diversity of coastal habitats and plant species and, apart from the presence of Sea Buckthorn, it is presently relatively undisturbed. It is of particular

conservation significance for its Marram dunes and fixed dunes, both habitats listed on Annex I of the EU Habitats Directive. The presence of several scarce plants adds to the importance of the site.

10.2.1997

SITE SYNOPSIS

SITE NAME : KILPATRICK SANDHILLS

SITE CODE : 001742

Kilpatrick Sandhills are located about 8km south of Arklow town, and just south of the Wicklow/Wexford county border. The site is comprised of a mosaic of coastal habitats but primarily a mature sand dune system which extends along 2 km of coastline.

Various stages of sand dune formation can be seen, from small fore-dunes which are stabilized by Marram Grass (*Ammophila arenaria*) to mature fixed dunes colonised by a species-rich sward of grasses and herbaceous plants. Red Fescue (*Festuca rubra*) is the dominant grass among fixed dune vegetation. Other species present include Lady's Bedstraw (*Galium verum*), Kidney Vetch (*Anthyllis vulneraria*), Wild Thyme (*Thymus praecox*) and Sheep's-bit (*Jasione montana*). On the older dunes, there is an abundance of legumes (Leguminosae) including Bird's-foot Trefoil (*Lotus corniculatus*), White Clover (*Trifolium repens*), Hop Trefoil (*Trifolium campestre*) and Lesser Trefoil (*Trifolium dubium*). Further inland, on the more mature grey dunes, Burnet Rose (*Rosa pimpinellifolia*) is common. The scarce species, Lesser Meadow-rue (*Thalictrum minus*), occurs among the vegetation of the more mobile dunes.

On the landward side of the dunes, in the middle of the site, there is a low-lying marsh which is dominated by Bulrush (*Typha latifolia*), with Branched Bur-reed (*Sparganium erectum*), Yellow Iris (*Iris pseudacorus*), Tubular Water-dropwort (*Oenanthe fistulosa*), Wild Angelica (*Angelica sylvestris*) and Sedges (*Carex* spp.). To the west of the marsh is an area of wet scrub woodland. The canopy is formed of Alder (*Alnus glutinosa*) and Willow (*Salix* spp.), with Bramble (*Rubus fruticosus* agg.), Honeysuckle (*Lonicera periclymenum*), Great Horsetail (*Equisetum telmateia*), Wood Dock (*Rumex sanguineus*) and Narrow Buckler-fern (*Dryopteris carthusiana*) among the ground flora.

The sandhills give way on the south-western side to a heathy scrub dominated by Gorse (*Ulex europaeus*), Blackthorn (*Prunus spinosa*) and Bramble. At the northern end of the site is a rocky headland, Kilmichael Point, which affords fine views along the coastline. Rock outcrops occur where the overlying clay drift has eroded, exposing cliffs which rise in steps to about 10m. The headland supports a species-rich coastal grassland and cliff vegetation, including the scarce species, Rock Sea-lavender (*Limonium binervosum*).

The Red Data Book species, Sea Stock (*Matthiola sinuata*), has been observed among rocky crevices here in the past, but has not been recorded recently. The species is now regarded as extinct in Ireland.

At the southern end of the site, the sand dunes and beach are used by visitors for amenity purposes. Parts of the site are also used for grazing cattle. Grazing is a critical factor in coastal systems: the correct grazing pressure maintains species-rich open swards and curtails scrub encroachment. Over-exposure to grazing and amenity usage can cause damage to dune vegetation and exacerbate dune erosion.

The site is ecologically important as a good example of a mature and fairly intact sand dune system which shows the developmental stages of dunes from fore dunes to mature grey dunes. A good diversity of habitats and species are present. Fixed dunes and dune heath are priority habitats under Annex I of the European Habitats Directive.

SITE SYNOPSIS

SITE NAME: LADY'S ISLAND LAKE

SITE CODE: 000704

This site, situated in the extreme south-east of Ireland, is comprised of a shallow, brackish coastal lagoon separated from the sea by a sand and shingle barrier. The site includes the intertidal reef of Carnsore Point, and the area of reef to the west of the point.

The littoral reef at Carnsore is strewn with boulders, cobbles and patches of sand. It is exposed to prevailing wind and swells from the west. Tidal streams tend to be moderate but are strong in some areas. The bedrock is igneous granite, felsite and other intrusive rocks rich in silica. There is an extensive lichen zone at the top of the shore that is a good example of the wide bands of the lichens *Ramalina* spp, *Verrucaria* sp. mixed. with encrusting orange lichens, followed by a wide band of the black lichen *Verrucaria* sp. In the upper shore there is a very extensive zone of barnacles (*Semibalanus balanoides*), gastropod snails (*Littorina neritoides*) and limpets (*Patella vulgata*). This is followed by a narrow zone of *Fucus serratus* and *Mastocarpus stellatus*. At the bottom of the shore, the sublittoral fringe is characterised by the kelp *Laminaria digitata*, with serrated wrack *Fucus serratus* and thong weed *Himanthalia elongata* frequent and *Alaria esculenta* occasional. An understorey of red algae is present. The communities are representative of this type of shore.

The lagoon habitat within the site is an excellent example of a sedimentary lagoon with a sand/shingle barrier. It is by far the largest and best example of this type of lagoon in the country and is in a relatively natural condition, despite regular breaching of the gravel barrier. The flora is typically brackish with two species of Tasselweed (*Ruppia maritima and R. cirrhosa)* and the Red Data Book charophyte species *Lamprothamnion papulosum* and *Chara canescens* (both lagoonal specialists). The fauna of the lagoon is rich with 44 taxa recorded in a short period in 1996. At least 13 lagoonal specialist species have been recorded which is the highest number for any lagoonal habitat in the country and at least 4 species appear to be rare. Three coleopteran indicator species were recorded in 1996, indicating an ecologically well developed site, and two of these are very rare species (*Atheta gyllenhalli, A. liliputana*).

The barrier system which stretches along the entire seaward part of this site from Carnsore Point westwards towards Tacumshin comprises the best example in Ireland of a landward moving (transgressive) system of gravel-based barrier. The sequence of back barrier washover and seepage structures are among the best in Europe, and, indeed, Lady's Island remains the last "intact" example in Europe. The substrate is predominantly sandy. The barrier is overlain for the most part by sand dunes, principally embryonic shifting dunes and marram dunes but also some more fixed areas. The vegetation is very typical of shingle or stony bank habitat. Species present

include Marram Grass (A*mmophila arenaria),* Sea Rocket *(Cakile maritima),* Sea Samphire *(Crithmum maritimum),* Sea Holly *(Eryngium maritimum),* Yellow-horned Poppy *(Glaucium flavum)* Sea Sandwort *(Honkenya peploides)* and Mayweed *(Tripleurospermum maritimum)*. Of particular note is the occurrence of Cottonweed (*Othanthus maritimum)*, an extremely rare plant which has its main Irish population here.

A rich swamp and freshwater marsh vegetation occurs at Ring Marsh. Elsewhere, the lagoon is fringed by marsh or wet grassland.

In addition to Cottonweed and the two charophyte species, three other Red Data Book species occur within the site: Lesser Centaury (*Centaurium pulchellum*), Penny Royal (*Mentha pulegium*) and Golden Dock (*Rumex maritimus*).

The lagoon has an internationally important tern colony, with four species breeding regularly - Sandwich (c.1,100 pairs), Roseate (107 pairs), Common (c.500 pairs) and Arctic (c.215 pairs) (figures are for 1999). These breed mostly on Inish island (which is outside of site), with only Arctic breeding on the smaller Sgarbheen island in recent years. An excellent diversity of duck species breed, including rare or scarce species such as Gadwall, Garganey, Shoveler and possibly Wigeon. Oystercatcher, Redshank and Lapwing breed on the islands. The site formerly supported internationally important numbers of wintering waterfowl, but in recent years numbers have declined drastically, possibly due to a decline in the abundance of their main food source, *Ruppia* spp.. Nowadays numbers are only of regional or local importance. Over the four winters 1994/95 to 1997/98 the main species were: Wigeon (652), Teal (200), Pochard (258), Tufted Duck (93), Scaup (46), Lapwing (1080) and Curlew (221).

This site is of high conservation importance, having three habitats which are listed on Annex I of the EU Habitats Directive and one of these (lagoons) with priority status. The site also has important ornithological interests.

SITE SYNOPSIS

SITE NAME : LONG BANK

SITE CODE : 002161

Long Bank and Holdens Bed are situated several kilometres to the east of Rosslare and Wexford Harbour on the East coast. They are at the southern end of a series of offshore sand banks that run from Arklow to the south of Rosslare. Long Bank is approximately 12 km in length and, at its widest, is approximately 1.4 km in width, while Holdens Bed is approximately 3.7 km in length and 1.4 km wide. The two banks are separated by a channel and are separated from the Lucifer Bank to the east by an area of deeper water.

Offshore sand banks are generally constructed of sediment that ranges from cobbles to coarse sand and the sand is duned in large waves at least a meter in height and several meters in width. Where the current is strong the surface fauna is typically very sparsely scattered, with, e.g. an occasional starfish, crabs or hermit crabs. These banks, however, frequently have a distinctive meiofauna living within them and can be important feeding grounds for birds.

The site is of conservation importance for its submerged sandbanks, a habitat that is listed on Annex I of the EU Habitats Directive.

04.09.2001

SITE SYNOPSES

SITE NAME: RAVEN POINT NATURE RESERVE

SITE CODE: 000710

The Raven is situated on the north side of Wexford Harbour, incorporating the dynamic sand system of Raven Point and the coast running north to Curracloe House. The site is designated as a National Nature Reserve.

The site incorporates a large sand dune system comprising a suite of coastal habitats listed on Annex I of the EU Habitats Directive. The dynamic nature of the system is best seen at the southern end of the site where sand flats, lagoons, driftlines and small dune slacks develop and are being continuously transformed by the activity of the sea and the wind. There has been heavy erosion along the eastern side of the site in recent years, but the sand dune system on the south-western end of the Raven is accreting, building towards the west along the wall which is the southern boundary of the Wexford Slobs, at about 3m per year.

The site was planted with commercial conifer forest in the 1930s and 1950s, partly as a coast defence measure to stabilise the dunes and protect the slob behind. Species planted include Sitka Spruce (*Picea sitchensis*), Monkey Puzzle (*Araucaria araucana*), Contorta Pine (*Pinus contorta*), Corsican Pine (*P. nigra*), Monterey Pine (*P. radiata*) and Scot's Pine (*P. sylvestris*). Under these conifers two communities can be recognised: a Bracken (*Pteridium aquilinum*) / Bramble (*Rubus fruticosus*) / Ivy (*Hedera helix*) community with Bluebell (*Hyacinthoides non-scripta*) and a mixed grass and sedge community with Common Bent (*Agrostis capillaris*), Sweet Vernal-grass (*Anthoxanthum odoratum*) and Sand Sedge (*Carex arenaria*). In some wetter parts of the commercial forest, the understorey vegetation is dominated by Creeping Willow (*Salix repens*).

The unplanted areas of fixed dunes are fairly typical of the habitat, with a low open sward of grasses, herbs, bryophytes and lichens occurring amongst areas of Marram (*Ammophila arenaria*). Species present include Red Fescue *(Festuca rubra),* Common Bird's-foot-trefoil *(Lotus corniculatus)*, Lady's Bedstraw (G*alium verum),* Sea Pansy *(Viola tricolor* subsp. *curtisii),* Biting Stonecrop *(Sedum acre)*, Field Wood-rush (*Luzula campestris),* Rest Harrow *(Ononis repens),* Kidney Vetch *(Anthyllis vulneraria)* and Early Hair-grass (*Aira praecox)*. The moss and lichen component includes *Hypnum cupressiforme, Tortula ruraliformis, Rhytidiadelphus triquetris, Peltigera* spp. and *Cladonia* spp. Towards the southern end of the system Burnet Rose (*Rosa pimpinellifolia)* and Brambles (*Rubus fruticosus* agg.*)* become more frequent in fixed areas. A feature of the site is the presence of dune slacks. Some of the current slack communities are associated with artificial ponds that were originally created as forest fire control reservoirs. Where the slacks maintain moist conditions, characteristic species include Creeping Willow, Common Sedge *(Carex nigra),* Bog Pimpernal *(Anagallis tenella),* Heath Grass *(Danthonia decumbens)* and the mosses *Pseudoscleropodium purum, Rhytidiadelphus triquetris* and *Calliergon*

cuspidatum. The Sea Rush (*Juncus acutus)*, which displays a disjunct distribution in Ireland, is recorded from these slacks. Other interesting species include Broad-leaved Helleborine (*Epipactis helleborine)* and the rare Round-leaved Wintergreen (*Pyrola rotundifolia* subsp. *maritimus).* Many of these slacks have dried up due to the afforestation though Creeping Willow and some of the other character species remain common.

Dune ridges with Marram Grass (*Ammophila arenaria)* occur in a band along the eastern and south-eastern sides of the site. Other species present include Sea Spurge (*Euphorbia paralias),* Portland Spurge *(E. portlandica)* and Sea Holly (*Eryngium maritimum).* These dunes are not particularly high, generally reaching heights of not more than 5 m. Good examples of embryonic dunes occur on the seaward side of the marram dunes. Species present include Sea Rocket (*Cakile maritima),* Sea Couch *(Elymus farctus)* and Prickly Saltwort (*Salsola kali).* Associated with the embryonic dunes and the upper beach area is a band of annual driftline vegetation.

A number of rare and protected plants have also been recorded from this dune system including Round-leaved Wintergreen (*Pyrola rotundifolia* subsp. *maritima*), Lesser Centaury (*Centaurium pulchellum*) and Wild Asparagus (*Asparagus officinalis* subsp. *prostratus*).

Apart from the planted areas, the site supports a wide range of vegetation communities, the main ones of which may be simply grouped into mobile dune, fixed dune, dune slack and salt marsh communities. The site is particularly important for six dune and drift line habitats that are listed on Annex I of the EU Habitats Directive, i.e. embryonic shifting dunes, Marram dunes, fixed dunes, dune slack, dunes with Creeping Willow and drift lines. A small, though good example of Atlantic salt meadow occurs below the fixed dunes at the more sheltered western side of the point. Typical species are present including Thrift (*Armeria maritima*) and Common Saltmarsh-grass (*Puccinellia maritima*).

A number of ponds were created as water reservoirs for forest-fire control, but more have been created as part of the introduction to the site of the Natterjack Toad (*Bufo calamita*), a rare, legally protected Red Data Book species. The toads are breeding successfully and appear to have established themselves in the site.

The Raven has important bird interests, being part of the Wexford Slobs and Harbour complex. Of critical significance is that it forms the principal night roost for the internationally important Wexford Harbour population of Greenland White-fronted Geese. In the four winters 1994/95 to 1997/98, seven species occurred in nationally important numbers as follows (numbers are average maxima over the 4 winters): Cormorant (216), Red-breasted Merganser (38), Grey Plover (732), Knot (288), Sanderling (149), Dunlin (1,510) and Black-tailed Godwit (167). Golden Plover (570) and Bar-tailed Godwit (113) also occur, these species being of especial conservation interest as they are listed on Annex I of th EU Birds Directive. The Raven has been an important breeding site for Little Tern (e.g. 26 pairs in 1984) but in recent years conditions have been less suitable due to the spread of marram grass and the terns have bred elsewhere in Wexford Harbour.

The dunes support a diverse invertebrate fauna with significant species in the fore dunes, *Ammophila* dunes and fixed dune grassland. Notable species include two rare carabid beetles (Coleoptera) *Nebria complanata* and *Pristonychus terricola*, the robber fly *Epitryptus cowini* (Diptera), the snail-killing fly *Pherbellia knutsoni* (Diptera) and the weevil *Ceuthorrhynchus hirtulus* (Coleoptera). A rare woodlouse *Armadillidium album* (Isopoda) has also been recorded from the dunes. The invertebrates of the marine and intertidal habitats have also been described at this site: the sheltered intertidal shore to the west of Raven Point supports communities of bivalves and worms (e.g. *Cerastoderma edule, Arenicola marina*). The steeper shore to the north-east of the Point, which are predominantly sandy sediment, supports a sparser fauna, but with one notable species *Pseudorchestoidea brito* - a sandhopper which is known from only one other location in Ireland.

Curracloe is a popular summer resort and parts of the Raven receive high recreational pressure. In particular, pony trekking has caused erosion of the embryonic dunes in some places. It is planned to gradually remove all the conifers from the sand dune system. Some selected areas will be clearfelled, others will be left as scrub pine. After harvesting the conifers, certain areas behind the dunes will be planted with hardwoods, including Alder (*Alnus glutinosa*) and Sessile Oak (*Quercus petraea*). Other areas, in particular the more low-lying areas of former dune slack, will be left to regenerate naturally.

The Raven Point Nature Reserve is an excellent example of a dynamic dune system, that contains a suite of coastal habitats listed on Annex I of the EU Habitats Directive including five dune types and drift lines. It also provides a roosting site for an internationally important flock of Greenland White-fronted Geese, a species listed on Annex I of the EU Birds Directive.

28.11.2000

SITE SYNOPSIS

SITE NAME: RIVER BARROW AND RIVER NORE

SITE CODE: 002162

This site consists of the freshwater stretches of the Barrow/Nore River catchments as far upstream as the Slieve Bloom Mountains and it also includes the tidal elements and estuary as far downstream as Creadun Head in Waterford. The site passes through eight counties – Offaly, Kildare, Laois, Carlow, Kilkenny, Tipperary, Wexford and Waterford. Major towns along the edge of the site include Mountmellick, Portarlington, Monasterevin, Stradbally, Athy, Carlow, Leighlinbridge, Graiguenamanagh, New Ross, Inistioge, Thomastown, Callan, Bennettsbridge, Kilkenny and Durrow. The larger of the many tributaries include the Lerr, Fushoge, Mountain, Aughavaud, Owenass, Boherbaun and Stradbally Rivers of the Barrow and the Delour, Dinin, Erkina, Owveg, Munster, Arrigle and King's Rivers on the Nore. Both rivers rise in the Old Red Sandstone of the Slieve Bloom Mountains before passing through a band of Carboniferous shales and sandstones. The Nore, for a large part of its course, traverses limestone plains and then Old Red Sandstone for a short stretch below Thomastown. Before joining the Barrow it runs over intrusive rocks poor in silica. The upper reaches of the Barrow also runs through limestone. The middle reaches and many of the eastern tributaries, sourced in the Blackstairs Mountains, run through Leinster Granite. The southern end, like the Nore runs over intrusive rocks poor in silica. Waterford Harbour is a deep valley excavated by glacial floodwaters when the sea level was lower than today. The coast shelves quite rapidly along much of the shore.

The site is a candidate SAC selected for alluvial wet woodlands and petrifying springs, priority habitats on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for old oak woodlands, floating river vegetation, estuary, tidal mudflats, *Salicornia* mudflats, Atlantic salt meadows, Mediterranean salt meadows, dry heath and eutrophic tall herbs, all habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive - Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Nore Freshwater Pearl Mussel, Crayfish, Twaite Shad, Atlantic Salmon, Otter, Desmoulin's Whorl Snail *Vertigo moulinsiana* and the Killarney Fern.

Good examples of Alluvial Forest are seen at Rathsnagadan, Murphy's of the River, in Abbeyleix estate and along other shorter stretches of both the tidal and freshwater elements of the site. Typical species seen include Almond Willow (*Salix triandra*), White Willow (*S. alba*), Grey Willow (*S. cinerea*), Crack Willow (*S. fragilis*), Osier (*S. viminalis*), with Iris (*Iris pseudacorus*), Hemlock Water-dropwort (*Oenanthe crocata*), Angelica (*Angelica sylvestris*), Thin-spiked Wood-sedge (*Carex strigosa*), Pendulous Sedge (*C. pendula*), Meadowsweet (*Filipendula ulmaria*), Valerian (*Valeriana officinalis*) and the Red Data Book species Nettle-leaved Bellflower (*Campanula trachelium*). Three rare invertebrates have been recorded in this habitat at Murphy's of the River. These are: *Neoascia obliqua* (Diptera: Syrphidae), *Tetanocera freyi* (Diptera: Sciomyzidae) and *Dictya umbrarum* (Diptera: Sciomyzidae).

A good example of petrifying springs with tufa formations occurs at Dysart Wood along the Nore. This is a rare habitat in Ireland and one listed with priority status on Annex I of the EU Habitats Directive. These hard water springs are characterised by lime encrustations, often associated with small waterfalls. A rich bryophyte flora is typical of the habitat and two diagnostic species, *Cratoneuron commutatum* var. *commutatum* and *Eucladium verticillatum,* have been recorded.

The best examples of old Oak woodlands are seen in the ancient Park Hill woodland in the estate at Abbeyleix; at Kyleadohir, on the Delour, Forest Wood House, Kylecorragh and Brownstown Woods on the Nore; and at Cloghristic Wood, Drummond Wood and Borris Demesne on the Barrow, though other patches occur throughout the site. Abbeyleix Woods is a large tract of mixed deciduous woodland which is one of the only remaining true ancient woodlands in Ireland. Historical records show that Park Hill has been continuously wooded since the sixteenth century and has the most complete written record of any woodland in the country. It supports a variety of woodland habitats and an exceptional diversity of species including 22 native trees, 44 bryophytes and 92 lichens. It also contains eight indicator species of ancient woodlands. Park Hill is also the site of two rare plants, Nettle-leaved Bellflower and the moss *Leucodon sciuroides.* It has a typical bird fauna including Jay, Long-eared Owl and Raven. A rare invertebrate, *Mitostoma chrysomelas,* occurs in Abbeyleix and only two other sites in the country. Two flies *Chrysogaster virescens* and *Hybomitra muhlfeldi* also occur. The rare Myxomycete fungus, *Licea minima* has been recorded from woodland at Abbeyleix.

Oak woodland covers parts of the valley side south of Woodstock and is well developed at Brownsford where the Nore takes several sharp bends. The steep valley side is covered by Oak (*Quercus* spp.), Holly (*Ilex aquifolium*), Hazel (*Corylus avellana*) and Birch (*Betula pubescens*) with some Beech (*Fagus sylvatica*) and Ash (*Fraxinus excelsior*). All the trees are regenerating through a cover of Bramble (*Rubus fruticosus* agg.), Foxglove (*Digitalis purpurea*) Wood Rush (*Luzula sylvatica*) and Broad Buckler-fern (*Dryopteris dilatata*).

On the steeply sloping banks of the River Nore about 5 km west of New Ross, in County Kilkenny, Kylecorragh Woods form a prominent feature in the landscape. This is an excellent example of a relatively undisturbed, relict Oak woodland with a very good tree canopy. The wood is quite damp and there is a rich and varied ground flora. At Brownstown a small, mature Oak-dominant woodland occurs on a steep slope. There is younger woodland to the north and east of it. Regeneration throughout is evident. The understorey is similar to the woods at Brownsford. The ground flora of this woodland is developed on acidic, brown earth type soil and comprises a thick carpet of Bilberry (*Vaccinium myrtillus*), Heather (*Calluna vulgaris*), Hard Fern (*Blechnum spicant*), Cow-wheat (*Melampyrum* spp.) and Bracken (*Pteridium aquilinum*).

Borris Demesne contains a very good example of a semi-natural broad-leaved woodland in very good condition. There is quite a high degree of natural re-generation of Oak and Ash through the woodland. At the northern end of the estate Oak species predominate. Drummond Wood, also on the Barrow, consists of three blocks of deciduous woods situated on steep slopes above the river. The deciduous trees are mostly Oak species. The woods have a well established understorey of Holly (*Ilex aquifolium*), and the herb

layer is varied, with Brambles abundant. Whitebeam (*Sorbus devoniensis*) has also been recorded.

Eutrophic tall herb vegetation occurs in association with the various areas of alluvial forest and elsewhere where the flood-plain of the river is intact. Characteristic species of the habitat include Meadowsweet (*Filipendula ulmaria*), Purple Loosestrife (*Lythrum salicaria*), Marsh Ragwort (*Senecio aquaticus*), Ground Ivy (*Glechoma hederacea*) and Hedge Bindweed (*Calystegia sepium*). Indian Balsam (*Impatiens glandulifera*), an introduced and invasive species, is abundant in places.

Floating River Vegetation is well represented in the Barrow and in the many tributaries of the site. In the Barrow the species found include Water Starworts (*Callitriche* spp.), Canadian Pondweed (*Elodea canadensis*), Bulbous Rush (*Juncus bulbosus*), Milfoil (*Myriophyllum* spp.), *Potamogeton* x *nitens*, Broad-leaved Pondweed (*P. natans*), Fennel Pondweed (*P. pectinatus*), Perfoliated Pondweed (*P. perfoliatus*) and Crowfoots (*Ranunculus* spp.). The water quality of the Barrow has improved since the vegetation survey was carried out (EPA, 1996).

Dry Heath at the site occurs in pockets along the steep valley sides of the rivers especially in the Barrow Valley and along the Barrow tributaries where they occur in the foothills of the Blackstairs Mountains. The dry heath vegetation along the slopes of the river bank consists of Bracken (*Pteridium aquilinum*) and Gorse (*Ulex europaeus*) species with patches of acidic grassland vegetation. Additional typical species include Heath Bedstraw (*Galium saxatile*), Foxglove (*Digitalis purpurea*), Common Sorrel (*Rumex acetosa*) and Bent Grass (*Agrostis stolonifera*). On the steep slopes above New Ross the Red Data Book species Greater Broomrape (*Orobanche rapum-genistae*) has been recorded. Where rocky outcrops are shown on the maps Bilberry (*Vaccinium myrtillus*) and Wood Rush (*Luzula sylvatica*) are present. At Ballyhack a small area of dry heath is interspersed with patches of lowland dry grassland. These support a number of Clover species including the legally protected Clustered Clover (*Trifolium glomeratum*) - a species known from only one other site in Ireland. This grassland community is especially well developed on the west side of the mud-capped walls by the road. On the east of the cliffs a group of rock-dwelling species occur, i.e. English Stonecrop (*Sedum anglicum*), Sheep's-bit (*Jasione montana*) and Wild Madder (*Rubia peregrina*). These rocks also support good lichen and moss assemblages with *Ramalina subfarinacea* and *Hedwigia ciliata*.

Dry Heath at the site generally grades into wet woodland or wet swamp vegetation lower down the slopes on the river bank. Close to the Blackstairs Mountains, in the foothills associated with the Aughnabrisky, Aughavaud and Mountain Rivers there are small patches of wet heath dominated by Purple Moor-grass (*Molinia caerulea*) with Heather (*Calluna vulgaris*), Tormentil (*Potentilla erecta*), Carnation Sedge (*Carex panicea*) and Bell Heather (*Erica cinerea*).

Saltmeadows occur at the southern section of the site in old meadows where the embankment has been breached, along the tidal stretches of in-flowing rivers below Stokestown House, in a narrow band on the channel side of Common Reed (*Phragmites*) beds and in narrow fragmented strips along the open shoreline. In the larger areas of salt meadow, notably at Carrickcloney, Ballinlaw Ferry and Rochestown on the west bank; Fisherstown, Alderton and Great Island to Dunbrody on the east bank, the Atlantic and

Mediterranean sub types are generally intermixed. At the upper edge of the salt meadow in the narrow ecotonal areas bordering the grasslands where there is significant percolation of salt water, the legally protected species Borrer's Saltmarsh-grass (*Puccinellia fasciculata*) and Meadow Barley (*Hordeum secalinum*) (Flora Protection Order, 1987) are found. The very rare Divided Sedge (*Carex divisa*) is also found. Sea Rush (*Juncus maritimus*) is also present. Other plants recorded and associated with salt meadows include Sea Aster (*Aster tripolium*), Sea Thrift (*Armeria maritima*), Sea Couch (*Elymus pycnanthus*), Spear-leaved Orache (*Atriplex prostrata*), Lesser Sea-spurrey (*Spergularia marina*), Sea Arrowgrass (*Triglochin maritima*) and Sea Plantain (*Plantago maritima*).

Salicornia and other annuals colonising mud and sand are found in the creeks of the saltmarshes and at the seaward edges of them. The habitat also occurs in small amounts on some stretches of the shore free of stones.

The estuary and the other Habitats Directive Annex I habitats within it form a large component of the site. Extensive areas of intertidal flats, comprised of substrates ranging from fine, silty mud to coarse sand with pebbles/stones are present. Good quality intertidal sand and mudflats have developed on a linear shelf on the western side of Waterford Harbour, extending for over 6 km from north to south between Passage East and Creadaun Head, and in places are over 1 km wide. The sediments are mostly firm sands, though grade into muddy sands towards the upper shore. They have a typical macro-invertebrate fauna, characterised by polychaetes and bivalves. Common species include *Arenicola marina*, *Nephtys hombergii*, *Scoloplos armiger*, *Lanice conchilega* and *Cerastoderma edule*.

The western shore of the harbour is generally stony and backed by low cliffs of glacial drift. At Woodstown there is a sandy beach, now much influenced by recreation pressure and erosion. Behind it a lagoonal marsh has been impounded which runs westwards from Gaultiere Lodge along the course of a slow stream. An extensive reedbed occurs here. At the edges is a tall fen dominated by sedges (*Carex* spp.), Meadowsweet, Willowherb (*Epilobium* spp.) and rushes (*Juncus* spp.). Wet woodland also occurs. This area supports populations of typical waterbirds including Mallard, Snipe, Sedge Warbler and Water Rail.

The dunes which fringe the strand at Duncannon are dominated by Marram grass (*Ammophila arenaria*) towards the sea. Other species present include Wild Sage (*Salvia verbenaca*), a rare Red Data Book species. The rocks around Duncannon ford have a rich flora of seaweeds typical of a moderately exposed shore and the cliffs themselves support a number of coastal species on ledges, including Thrift (*Armeria maritima*), Rock Samphire (*Crithmum maritimum*) and Buck's-horn Plantain (*Plantago coronopus*).

Other habitats which occur throughout the site include wet grassland, marsh, reed swamp, improved grassland, arable land, quarries, coniferous plantations, deciduous woodland, scrub and ponds.

Seventeen Red Data Book plant species have been recorded within the site, most in the recent past. These are Killarney Fern (*Trichomanes speciosum*), Divided Sedge (*Carex divisa*), Clustered Clover (*Trifolium glomeratum*), Basil Thyme (*Acinos arvensis*), Hemp nettle (*Galeopsis angustifolia*), Borrer's Saltmarsh Grass (*Puccinellia fasiculata*),

Meadow Barley (*Hordeum secalinum*), Opposite-leaved Pondweed (*Groenlandia densa*), Autumn Crocus (*Colchicum autumnale*), Wild Sage (*Salvia verbenaca*), Nettle-leaved Bellflower (*Campanula trachelium*), Saw-wort (*Serratula tinctoria*), Bird Cherry (*Prunus padus*), Blue Fleabane (*Erigeron acer*), Fly Orchid (*Ophrys insectifera*), Broomrape (*Orobanche hederae*) and Greater Broomrape (*Orobanche rapum-genistae*). Of these the first nine are protected under the Flora Protection Order 1999. Divided Sedge (*Carex divisa*) was thought to be extinct but has been found in a few locations in the site since 1990. In addition plants which do not have a very wide distribution in the country are found in the site including Thin-spiked Wood-sedge (*Carex strigosa*), Field Garlic (*Allium oleraceum*) and Summer Snowflake (*Leucojum aestivum*). Six rare lichens, indicators of ancient woodland, are found including *Lobaria laetevirens* and *L. pulmonaria*. The rare moss *Leucodon sciuroides* also occurs.

The site is very important for the presence of a number of EU Habitats Directive Annex II animal species including Freshwater Pearl Mussel (*Margaritifera margaritifera* and *M. m. durrovensis*), Freshwater Crayfish (*Austropotamobius pallipes*), Salmon (*Salmo salar*), Twaite Shad (*Alosa fallax fallax*), three Lamprey species - Sea (*Petromyzon marinus*), Brook (*Lampetra planeri*) and River (*Lampetra fluviatilis*), the marsh snail *Vertigo moulinsiana* and Otter (*Lutra lutra*). This is the only site in the world for the hard water form of the Pearl Mussel *M. m. durrovensis* and one of only a handful of spawning grounds in the country for Twaite Shad. The freshwater stretches of the River Nore main channel is a designated salmonid river. The Barrow/Nore is mainly a grilse fishery though spring salmon fishing is good in the vicinity of Thomastown and Inistioge on the Nore. The upper stretches of the Barrow and Nore, particularly the Owenass River, are very important for spawning.

The site supports many other important animal species. Those which are listed in the Irish Red Data Book include Daubenton's Bat (*Myotis daubentoni*), Badger (*Meles meles*), Irish Hare (*Lepus timidus hibernicus*) and Frog (*Rana temporaria*). The rare Red Data Book fish species Smelt (*Osmerus eperlanus*) occurs in estuarine stretches of the site. In addition to the Freshwater Pearl Mussel, the site also supports two other freshwater Mussel species, *Anodonta anatina* and *A. cygnea*.

The site is of ornithological importance for a number of E.U. Birds Directive Annex I species including Greenland White-fronted Goose, Whooper Swan, Bewick's Swan, Bar-tailed Godwit, Peregrine and Kingfisher. Nationally important numbers of Golden Plover and Bar-tailed Godwit are found during the winter. Wintering flocks of migratory birds are seen in Shanahoe Marsh and the Curragh and Goul Marsh, both in Co. Laois and also along the Barrow Estuary in Waterford Harbour. There is also an extensive autumnal roosting site in the reedbeds of the Barrow Estuary used by Swallows before they leave the country.

Landuse at the site consists mainly of agricultural activities – many intensive, principally grazing and silage production. Slurry is spread over much of this area. Arable crops are also grown. The spreading of slurry and fertiliser poses a threat to the water quality of the salmonid river and to the populations of Habitats Directive Annex II animal species within the site. Many of the woodlands along the rivers belong to old estates and support many non-native species. Little active woodland management occurs. Fishing is a main tourist attraction along stretches of the main rivers and their tributaries and there are a number of Angler Associations, some with a number of beats. Fishing stands and styles

have been erected in places. Both commercial and leisure fishing takes place on the rivers. There is net fishing in the estuary and a mussel bed also. Other recreational activities such as boating, golfing and walking, particularly along the Barrow towpath are also popular. There is a golf course on the banks of the Nore at Mount Juliet and GAA pitches on the banks at Inistioge and Thomastown. There are active and disused sand and gravel pits throughout the site. Several industrial developments, which discharge into the river, border the site. New Ross is an important shipping port. Shipping to and from Waterford and Belview ports also passes through the estuary.

The main threats to the site and current damaging activities include high inputs of nutrients into the river system from agricultural run-off and several sewage plants, overgrazing within the woodland areas, and invasion by non-native species, for example Cherry Laurel and Rhododendron (*Rhododendron ponticum*). The water quality of the site remains vulnerable. Good quality water is necessary to maintain the populations of the Annex II animal species listed above. Good quality is dependent on controlling fertilisation of the grasslands, particularly along the Nore. It also requires that sewage be properly treated before discharge. Drainage activities in the catchment can lead to flash floods which can damage the many Annex II species present. Capital and maintenance dredging within the lower reaches of the system pose a threat to migrating fish species such as lamprey and shad. Land reclamation also poses a threat to the salt meadows and the populations of legally protected species therein.

Overall, the site is of considerable conservation significance for the occurrence of good examples of habitats and of populations of plant and animal species that are listed on Annexes I and II of the E.U. Habitats Directive respectively. Furthermore it is of high conservation value for the populations of bird species that use it. The occurrence of several Red Data Book plant species including three rare plants in the salt meadows and the population of the hard water form of the Pearl Mussel which is limited to a 10 km stretch of the Nore, add further interest to this site.

6.10.2006

SITE SYNOPSIS

SITE NAME: SALTEE ISLANDS

SITE CODE: 000707

This site comprises the Saltees Islands and a large area of the surrounding seas. There are two islands (Great Saltee and Little Saltee) and a constellation of islets and rocks. The islands are situated between 4 and 5 km off the south Wexford coast. As a group, they constitute a broken reef that protrudes from a seabed of sand and shell. The reef has a north-east/south-west orientation and is typically strewn with boulders, cobbles and patches of sand and gravel. Bedrock is metamorphic schist and gneiss. The site is of high conservation importance for marine habitats, with reefs, sea caves, large shallow bays, and intertidal sediments well represented.

The subtidal reefs range from being rugged bedrock with steep sided gullies to large boulders mixed with sand or cobbles and pebbles and are exposed to moderately exposed to wave action. The communities present are excellent examples of those typical of tideswept areas and many have fauna and flora that are tolerant of sand scour. The area is notable for the range of colonial sea squirts present. With the exception of a few examples the communities are very species rich, ranging from 78 to 117 species. No other area surveyed during the BioMar Survey had so many species rich communities. In shallow water the reefs support a forest of mixed kelp species with scour tolerant fauna on tideswept bedrock or a kelp forest of *Laminaria hyperborea* with a faunal cushion and foliose red algae. With increasing depth the kelp thins to a kelp park. The kelp understory ranges from a turf of hydroids, bryozoans and sponges and numerous colonial sea squirts to a community characterised by the bryozoan *Flustra foliacea* or an understory foliose red algae. On the sides of boulders a community with deadman's fingers *Alcyonium digitatum*, the keel worm *Pomatoceros triqueter,* and algal and bryozoan crusts is found.

In deeper water (15-30 metres) animal dominated reef communities occur. The most notable of these is a community dominated by the sea squirt *Stolonica socialis* and the bryozoan *Flustra foliacea*. This community is rich in colonial seasquirts in which *Archidistoma aggregatum, Sidnyum elegans* and *Distomus variolosus* and the solitary *Pyura squammata* occur.

Stolonica socialis in Ireland is only known from the south-east and north-west, while *Sidnyum elegans* has not previously been recorded in Ireland. *Distomus variolosus* in Ireland is only known from between Galway and Tralee Bay on the west coast and the east and south-east coasts. *Pyura squammata* appears to have a widespread but local distribution in Ireland. The sea anemone *Cataphellia brodricii* occurs in this community and in shallow water both around the Saltee Islands and other areas in the south-east. The only other records for this species are from Roaringwater Bay, Co. Cork. Where the bedrock is steep or large boulders are present the community present may be cushion sponges, branching sponges, *Nemartesia sp*. of hydroids and the 'rose coral' *Pentapora foliacea* or one of *Alcyonium digitatum* with massive sponges and

Nemartesia species. Beds of the brittlestars *Ophiothrix fragilis* and *Ophiocomina nigra* are also found in the area and on very steep to vertical reefs the plumose anemone *Metridium senile* may be found.

Species not mentioned above but that are found in the area with limited distribution in Britain and Ireland and considered to be worthy of conservation are the sponges *Tethyspira spinosa* and *Plocamilla coriacea*, the hydroids *Aglaophenia acacia* and *Tamarisca tamarisca, Halecium muricatum* and *Sertularella gaudichaudi,* seaslugs *Okenia aspersa* and the bryozoan *Schizomavella sarniensis* and burrowing brittlestar *Amphiura securigera*. The majority of these species occur in the ascidian dominated communities and the *Stolonica socialis* community in particular. *Tethyspira spinosa* is only known from the Saltees and Roaringwater Bay in Ireland. *Plocamilla coriacea* is a recently described species only recorded from the Saltees, Carnsore Point and Tuscar Rock, Co. Wexford and Kilkieran Bay, Co. Galway. *Aglaophenia acacia* is a southern species and occurs at several sites around the Saltees with only one previous record in Ireland. Prior to the BioMar survey the only 20th century records for *Halecium muricatum* in Britain and Ireland were from the Isle of Man. This species is now known to occur at the Saltees and in Co. Donegal. The records for *Sertularella gaudichaudi* from this area are the only Irish records. The sea slug *Okenia aspersa* occurs at two sites in the area and these are the only recent records for Ireland. *Schizomavella sarniensis* is a recently described species of bryozoan and to date in Ireland has only been recorded from around the Saltees. The current known distribution of the burrowing brittlestar *Amphiura securigera* in Ireland appears to be the south-east of the country and Kenmare River, Co. Cork..

The littoral sediments of the Saltee Islands area are moderately exposed to wave action. Talitrid amphipods live under drift algae on the strand line. The midshore is characterized by polychaete worms (*Hediste diversicolor*, *Malacoceros fuliginosus*, *Spio filicornis* and *Arenicola marina*), crustaceans (*Crangon crangon*) and crabs (*Carcinus maenas*). The low shore is characterized by the polychaete worms *Spio filicornis* and *Lanice conchilega*, the burrowing crustacean *Atylus swammerdamei*, crabs and bivalve molluscs *Fabulina fabula* and occasional *Cerastoderma edule*. The sublittoral sediment around the Saltees is composed of exposed, tideswept shelly gravel characterised by the burrowing sea cucumber *Neopendactyla mixta* with hydroids and bryozoans attached to cobbles.

Both islands have exposed rocky cliffs on the south and east sides. On Great Saltee these are mostly c.30 m high, and about half this on Little Saltee. The cliffs have a typical sea-cliff flora, with Thrift (*Armeria maritima),* Sea Campion *(Silene maritima*), Sea Plantain (*Plantago maritima),* Sea Aster *(Aster tripolium),* Scurvy Grass *(Cochlearia officinalis),* Rock Spurrey *(Spergularia rupicola)*, Scentless Mayweed *(Matricaria maritima),* Red Fescue *(Festuca rubra),* Sea Spleenwort *(Asplenium marinum)* and Sea Samphire (*Crithmum maritimum).* Sea Stork's-bill (*Erodium maritimum)* also occurs and Golden-samphire (*Inula crithmoides)* has been recorded in the past. Excellent displays of lichens (*Ramalina* and *Xanthoria spp*.) are shown. The northern and western sides of both islands are fringed with shingle and boulder shores, with small areas of intertidal sandflats. Sea caves occur at the base of the cliffs on Great Saltee. Some of these are sub-littoral and some have boulder beaches at the back.

Since the abandonment of farming on the islands (apart from sheep grazing on Little Saltee), Bracken (*Pterdium aquifolium*) has become dominant over much of the terrestrial areas and often occurs in association with Bluebells (*Hyacinthoides non-scripta*). Brambles (*Rubus fruticosus*) are also frequent. Dry grassland still occurs in some of the old fields, with species such as Yorkshire Fog (*Holcus lanatus*), Ground Ivy (*Glecoma hederacea*), Ragwort (*Senecio jacobaea),* Nettles (*Urtica dioica*) and Thistles (*Cirsium spp*.).

Several springs and seepage areas provide habitat diversity. Species present include Water Cress (*Nasturtium officinale*), Jointed Rush (*Juncus articulatus*), Bog Stitchwort (*Stellaria alsine*), Marsh Pennywort (*Hydrocotyle vulgaris*) and, in at least one location, Early Marsh Orchid (*Dactylorhiza incarnata*).

The Saltee Islands are internationally important for their colonies of breeding seabirds. Notable are the Gannets on Great Saltee (2,050 pairs in 2000), Cormorants on Little Saltee (273 pairs in 2000), Shags on both islands (265 pairs), Fulmars, (525 pairs 1998-2000), Kittiwakes (2,125 pairs in 1999), and the auks – Guillemots (21,436 individuals), Razorbills (c.4,000 individuals) and Puffins (1,822 individuals). There is also a small Manx Shearwater colony (c.150-175 pairs) on Great Saltee. The breeding populations of large gulls have declined dramatically in recent years. The Lesser Black-backed Gull colony is still important (245 pairs), but numbers of Herring Gull (c.50 pairs) and Great Black-backed Gull (c.90) are now very low.

Peregrine Falcon breeds (1-2 pairs) and Chough (1 pair) occurs at the eastern edge of its Irish range. Both of these species are listed on Annex I of the EU Birds Directive. Great Saltee is a major site for spring and autumn landbird migration. Very large numbers of pipits, Swallows and martins, thrushes, warblers and finches occur, while smaller numbers of a great variety of other species (some very rare in Ireland) are also recorded. The island is also a good site for migrant Lepidoptera, especially Red Admirals, Painted Ladies, Clouded Yellows, Silver Y moths and Humming-bird Hawk Moths.

Great Saltee has a breeding population of Grey Seals, one of the very few in eastern Ireland. Up to 120 animals are present in autumn and up to 20 pups are produced annually.

This site is of high conservation importance for the occurrence of several habitats which are listed on Annex I of the EU Habitats Directive, of which reefs are of exceptional quality and diversity. The site is of international importance for breeding seabirds and also has two species which are listed on Annex I of the EU Birds Directive. In addition, the site has a breeding population of Grey Seal, an Annex II species on the EU Habitats Directive.

3.9.2001

SITE SYNOPSIS

SITE NAME: SCREEN HILLS

SITE CODE: 000708

The Screen Hills are located in the south-east of Ireland just north of the Wexford Slobs. The site is characterised by the glacial landscape known as "kettle and kame". This term refers to kettlehole lakes in hollows between hills.

The site contains two habitats listed on Annex I of the EU Habitats Directive: oligotrophic lakes and dry heath formations. The many lake basins mark the positions of former ice blocks in an acidic, sandy moraine. The lakes in the site are of two types: those which are more low-lying and in contact with groundwater are influenced by what is occurring over a wide area. Other lakes are suspended at a height above the regional water-table and are influenced by the area immediately surrounding them. These lakes can usually be considered oligotrophic although nutrient input from the adjacent land may change this. The lakes vary in size, most being pond-sized, and have widely different plant and animal communities. These include bog formation in all stages, from open sandy shores with only a narrow band of emergent vegetation, to wide rafts of floating fen type vegetation, to small *Sphagnum* bogs with Royal Fern (*Osmunda regalis*), to consolidated Heather/ Willow/ Birch (*Calluna/Salix/Betula*). Many plant species which are rare in south-east Ireland are currently found in these lakes. They include Fen Sedge (*Cladium mariscus*),White Water-lily (*Nymphaea alba*), Shoreweed (*Littorella uniflora*) and Lesser Bladderwort (*Utricularia minor*). Species of good quality boggy habitats are widespread, such as Lesser Tussock-sedge (*Carex diandra*), Marsh Cinquefoil (*Potentilla palustris*), Marsh St. John's-wort (*Hypericum elodes*), Lesser Water-plantain (*Baldellia ranunculoides*) and Water Dock (*Rumex hydrolapathum*). Lake edges in grazed fields have species typical of exposed mud such as Water-purslane (*Lythrum portula*), Nodding Bur-marigold (*Bidens cernua*), Trifid Bur-marigold (*B. tripartita*) and Lesser Marshwort (*Apium inundatum*). Six-stamened Waterwort (*Elatine hexandra*) has been recorded but not recently re-found.

Dry heath at the site is extensive and species-rich. The heath vegetation at the site differs from most heaths elsewhere in the virtual absence of Heather, and in the presence of a diverse range of annual species. Substantial populations of the following Red Data Book species have been found at this very important and complex site and in other localities on and adjoining the moraine: Slender Cudweed (*Logfia minima*), Heath Cudweed (*Omalotheca sylvatica*), Hairy Bird's-foot-trefoil (*Lotus subbiflorus*) and Bird's-foot (*Ornithopus perpusillus*). Musk Thistle (*Carduus nutans*), another Red Data Book species, is also present in large numbers. It may have been introduced with cattle feed, but is thoroughly established. Other typical plant species of the heath at this site include Common Bent (*Agrostis capillaris*), Sweet Vernal-grass (*Anthoxanthum odoratum*), Sorrel (*Rumex acetosella*), Tormentil (*Potentilla erecta*), Violets (*Viola* spp.), Common Cudweed (*Filago vulgaris*), Common Bird's-foot-trefoil (*Lotus corniculatus*), Bracken (*Pteridium aquilinum*)

Gorse (*Ulex europaeus*) and the uncommon Knotted Clover (*Trifolium striatum*), Lesser Trefoil (*T. dubium*) and Annual Knawel (*Scleranthus annuus*).

The site is under threat because of reclamation for intensive agriculture. Some fields have been re-seeded with Perennial Rye-grass (*Lolium perenne*), while others have been brought into crop production. This process of agricultural improvement eventually leads to the loss of rare plant habitat and also increases the risk of pollution to the lakes.

The Screen Hills contain important examples of two habitats listed on Annex I of the EU Habitats Directive. The presence of several Red Data Book plant species adds further importance to this site.

19.7.1999

SITE SYNOPSIS

SITE NAME: SLANEY RIVER VALLEY

SITE CODE: 000781

This site comprises the freshwater stretches of the Slaney as far as the Wicklow Mountains; a number of tributaries the larger of which include the Bann, Boro, Glasha, Clody, Derry, Derreen, Douglas and Carrigower Rivers; the estuary at Ferrycarrig and Wexford Harbour. The site flows through the counties of Wicklow, Wexford and Carlow. Towns along the site but not in it are Baltinglass, Hacketstown, Tinahely, Tullow, Bunclody, Camolin, Enniscorthy and Wexford. The river is up to 100 m wide in places and is tidal at the southern end from Edermine Bridge below Enniscorthy. In the upper and central regions almost as far as the confluence with the Derry River the geology consists of granite. Above Kilcarry Bridge, the Slaney has cut a gorge into the granite plain. The Derry and Bann Rivers are bounded by a narrow line of uplands which corresponds to schist outcrops. Where these tributaries cut through this belt of hard rocks they have carved deep gorges, more than two miles long at Tinahely and Shillelagh. South of Kildavin the Slaney flows through an area of Ordovician slates and grits.

The site is a candidate SAC selected for alluvial wet woodlands, a priority habitat on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for floating river vegetation, estuaries, tidal mudflats and old oak woodlands, all habitats listed on Annex I of the E.U. Habitats Directive. The site is further selected for the following species listed on Annex II of the same directive - Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Twaite Shad, Atlantic Salmon and Otter.

Floating river vegetation is found along much of the freshwater stretches within the site. Species present here include Pond Water-crowfoot (*Ranunculus peltatus*), Water-crowfoot (*Ranunculus* spp.), Canadian Pondweed (*Elodea canadensis*), Broad-leaved Pondweed (*Potamogeton natans*), Water Milfoil (*Myriophyllum* spp.), Common Club-rush (*Scirpus lacustris*), Water-starwort (*Callitriche* spp.), Hemlock Water-dropwort, Fine-leaved Water-dropwort (*Oenanthe aquatica*), Common Duckweed (*Lemna minor*), Yellow Water-lily (*Nuphar lutea*), Unbranched Bur-reed (*Sparganium emersum*) and the moss *Fontinalis antipyretica*. Two rare aquatic plant species have been recorded in this site: Short-leaved Water-starwort (*Callitriche truncata*), a very rare, small aquatic herb found nowhere else in Ireland; and Opposite-leaved Pondweed (*Groenlandia densa*), a species that is legally protected under the Flora Protection Order, 1999.

Good examples of wet woodland are found associated with Macmine marshes, along banks of the Slaney and its tributaries and within reed swamps. Grey Willow (*Salix cinerea*) scrub and pockets of wet woodland dominated by Alder (*Alnus glutinosa*) have become established in places. Ash (*Fraxinus excelsior*) and Birch (*Betula pubescens*) are common in the latter and the ground flora is typical of wet woodland

with Meadowsweet (*Filipendula ulmaria*), Angelica (*Angelica sylvestris*), Yellow Iris, Horsetail (*Equisetum* spp.) and occasional tussocks of Greater Tussock-sedge (*Carex paniculata*). These woodlands have been described as two types: one is quite eutrophic, is dominated by Willow and is subject to a tidal influence. The other is flushed or spring-fed subject to waterlogging but not to flooding and is dominated by Alder and Ash.

Old oak woodlands are best represented at Tomnafinnoge though patches are present throughout the site. At Tomnafinnoge the wood is dominated by mature, widely spaced Sessile Oak (*Quercus petraea*), which were planted around 1700, with some further planting in 1810. There is now a varied age structure with overmature, mature and young trees; the open canopy permits light to reach the forest floor and encourages natural regeneration of Oak. As well as Oak, the wood includes the occasional Beech (*Fagus sylvatica*), Birch (*Betula* sp.), Rowan (*Sorbus aucuparia*) and Scots Pine (*Pinus sylvestris*).

The shrub layer is well-developed with Hazel (*Corylus avellana*) and Holly (*Ilex aquifolium*) occurring. The ground layer consists of Great Wood-rush (*Luzula sylvatica*) and Bilberry (*Vaccinium myrtillus*), with some Bracken (*Pteridium aquilinum*) and Brambles (*Rubus fruticosus* agg.). Herbaceous species in the ground layer include Primrose (*Primula vulgaris*), Wood-sorrel (*Oxalis acetosella*), Common Cow-wheat (*Melampyrum pratense*) and Bluebell (*Hyacinthoides non-scripta*). Many of the trees carry an epiphytic flora of mosses, Polypody Fern (*Polypodium vulgare*), and lichens such as *Usnea comosa, Evernia prunastri*, *Ramalina* spp. and *Parmelia* spp.

Tomnafinnoge Wood is a remnant of the ancient Shillelagh Oak woods, and it appears that woodland has always been present on the site. In the past, the wood was managed as a Hazel coppice with Oak standards, a common form of woodland management in England but not widely practised in Ireland. The importance of the woodland lies in the size of the trees, their capacity to regenerate, their genetic continuity with ancient woodland and their historic interest. The nearest comparable stands are at Abbeyleix, Co. Laois and Portlaw, Co. Waterford.

Below Enniscorthy there are several areas of woodland with a mixed canopy of Oak, Beech, Sycamore (*Acer pseudoplatanus*), Ash and generally a good diverse ground flora. Near the mouth of the river at Ferrycarrig is a steep south facing slope covered with Oak woodland. Holly and Hazel are the main species in the shrub layer and a species-rich ground flora typical of this type of Oak woodland has abundant ferns - *Dryopteris filix-mas, Polystichum setiferum, Phyllitis scolopendrium* - and mosses - *Thuidium tamariscinum, Mnium hornum, Eurynchium praelongum.*

North of Bunclody, the river valley still has a number of dry woodlands though these have mostly been managed by the estates with the introduction of Beech and occasional conifers. The steeper sides are covered in a thick scrub from which taller trees protrude. At the southern end of the site, the Red Data Book species Yellow Archangel (*Lamiastrum galeobdolon*) occurs. Three more Red Data Book species have also been recorded from the site: Basil Thyme (*Acinos arvensis*), Blue Fleabane

(*Erigeron acer*) and Small Cudweed (*Filago minima*). A nationally rare species Summer Snowflake (*Leucojum aestivum*) is also found within the site.

Mixed woodlands occur at Carrickduff and Coolaphuca in Bunclody. Oak trees, which make up the greater part of the canopy, were originally planted and at the present time are not regenerating actively. In time, if permitted, the woodland will probably go to Beech. A fair number of Yew (*Taxus baccata*) trees have also reached a large size and these, together with Holly give to the site the aspect of a south-western Oak wood.

The site is considered to contain a very good example of the extreme upper reaches of an estuary. Tidal reedbeds with wet woodland are present in places. The fringing reed communities support Sea Club-rush (*Scirpus maritimus*), Grey Club-rush (*S. tabernaemontani*) and abundant Common Reed (*Phragmites australis*). Other species occurring are Bulrush (*Typha latifolia*), Reed Canary-grass (*Phalaris arundinacea*) and Branched Bur-reed (*Sparganium erectum*). The reed-swamp is extensive around Macmine, where the river widens and there are islands with swamp and marsh vegetation.

Further south of Macmine are expanses of intertidal mudflats and sandflats and shingly shore often fringed with a narrow band of salt marsh and brackish vegetation. Narrow shingle beaches up to 10 m wide occur in places along the river banks and are exposed at low tide. Upslope the shingle is sometimes colonised by Saltmarsh Rush (*Juncus gerardi*), Townsend's Cord-grass (*Spartina townsendii*), Common Saltmarsh-grass (*Puccinellia maritima*), Sea Aster (*Aster tripolium*), Hemlock Water-dropwort (*Oenanthe crocata*) and Himalayan Balsam (*Impatiens glandulifera*).

Wexford Harbour is an extensive, shallow estuary which dries out considerably at low tide exposing large expanses of mudflats and sandflats. The harbour is largely sheltered by the Raven Point to the north and Rosslare Point in the south.

Other habitats present within the site include species-rich marsh in which sedges such as *Carex disticha, Carex riparia* and *Carex vesicaria* are common. Among the other species found in this habitat are Yellow Iris (*Iris pseudacorus*), Water Mint (*Mentha aquatica*), Purple Loosestrife (*Lythrum salicaria*) and Soft Rush (*Juncus effusus*). Extensive marshes occur to the west of Casltebridge associated with the tidal areas of the River Sow.

The site supports populations of several species listed on Annex II of the EU Habitats Directive including the three Lampreys - Sea Lamprey (*Petromyzon marinus*), River Lamprey (*Lampetra fluviatilis*) and Brook Lamprey (*Lampetra planeri*), Otter (*Lutra lutra*), Salmon (*Salmo salar*), small numbers of Freshwater Pearl Mussel (*Margaritifera margaritifera*) and in the tidal stretches, Twaite Shad (*Alosa fallax fallax*). A survey of the Derreen River in 1995 estimated the population of Freshwater Pearl Mussel at about 3,000 individuals. This is a significant population, especially in the context of eastern Ireland. The Slaney is primarily a spring salmon fishery and is regarded as one of the top rivers in Ireland for early spring fishing. The upper Slaney and tributary headwaters are very important for spawning.

The site supports important numbers of birds in winter. Little Egret are found annually along the river. This bird is only now beginning to gain a foothold in Ireland and the south-east appears to be its stronghold. Nationally important numbers of Black-tailed Godwit, Teal, Tufted Duck, Mute Swan, Little Grebe and Black-headed Gull are found along the estuarine stretch of the river. The mean of the maximum counts over four winters (1994/98) along the stretch between Enniscorthy and Ferrycarrig is: Little Egret (6), Golden Plover (6), Wigeon (139), Teal (429), Mallard (265), Tufted Duck (171), Lapwing (603), Shelduck (16), Black-tailed Godwit (93), Curlew (81), Red-breasted Merganser (11), Black-headed Gull (3030), Goldeneye (45), Oystercatcher (19), Redshank (65), Lesser Black-backed Gull (727), Herring Gull (179), Common Gull (67), Grey Heron (39), Mute Swan (259) and Little Grebe (17). Wexford Harbour provides extensive feeding grounds for wading birds and Little Terns, which are listed on Annex I of the E.U. Birds Directive have bred here in the past. The Reed Warbler, which is a scarce breeding species in Ireland, is regularly found in Macmine Marshes but it is not known whether or not it breeds in the site. The Dipper also occurs on the river.

The site supports many of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Pine Marten, Badger, Irish Hare and Daubenton's Bat. Common Frog (*Rana temporaria*), another Red Data Book species, also occurs within the site.

Agriculture is the main landuse. Arable crops are important. Improved grassland and silage account for much of the remainder. The spreading of slurry and fertiliser poses a threat to the water quality of this salmonid river and to the populations of Annex II animal species within it. Run-off is undoubtedly occurring, as some of the fields slope steeply directly to the river bank. In addition, cattle have access to the site in places. Fishing is a main tourist attraction along stretches of the Slaney and its tributaries and there are a number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. Both commercial and leisure fishing takes place. There are some gravel pits along the river below Bunclody and many of these are active. There is a large landfill site adjacent to the river close to Hacketstown and at Killurin. Boating, bait-digging and fishing occur in parts of Wexford Harbour.

Waste water outflows, runoff from intensive agricultural enterprises, a meat factory at Clohamon and a landfill site adjacent to the river and further industrial development upstream in Enniscorthy and in other towns could all have potential adverse impacts on the water quality unless they are carefully managed. The spread of exotic species is reducing the quality of the woodlands.

The site supports populations of several species listed on Annex II of the EU Habitats Directive, and habitats listed on Annex I of this directive, as well as important numbers of wintering wildfowl including some species listed on Annex I of the EU Birds Directive. The presence of wet and broad-leaved woodlands increases the overall habitat diversity and the occurrence of a number of Red Data Book plant and animal species adds further importance to the Slaney River site.

24.10.2006

SITE SYNOPSIS

SITE NAME: TACUMSHIN LAKE

SITE CODE: 000709

Tacumshin Lake is a shallow coastal lagoon situated on the south Co. Wexford coast about half way between Kilmore Quay and Carnsore Point and 15 km south of Wexford town. The lagoon was formerly a shallow sea bay which over time has been separated from the sea by a gravel/sand spit that has extended across the mouth of the bay from east to west, due to long-shore drift.

At times in the past this spit completely land-locked the lagoon, and at the end of the 19th century when this situation prevailed for some time the lake was drained by means of a large bore pipe set through the gravel/sand bar. Some of the drained lake bed was used by growing cereal crops. In the mid-1970s the spit again closed off the lagoon from the sea. The water level rose after exceptionally heavy rainfall and flooded several hundred hectares of low lying surrounding farmland. To relieve flooding the farmers reactivated the old drainage pipe and installed a second pipe at a lower level. The capacity of these two pipes is insufficient to prevent the lagoon filling up in winter when inflow from streams is greater than the outflow through the pipes. Thus, from about November to May the water level normally reaches the HWM as shown on the 6" O.S. maps, while from May to November the water level approximates to that of LWM as shown on the 6" O.S. maps. To speed the drainage from the lagoon two main drains were excavated leading to the landward end of the pipes.

The spit separating the lagoon from the sea has been built up by tide-borne gravels and wind-blown sand. The patches were formed from water and wind-borne silts and sands, consolidated by salt marsh vegetation. The lake bed is composed of silt and sand deposited by incoming tides and feeder streams. The surrounding lands are composed of glacial till.

The lagoon bed sediments support extensive areas of Glasswort (*Salicornia* spp.) where conditions remain brackish in summer. Other areas support Lesser Sea-spurrey (*Spergularia marina*). The permanent water bodies (including the excavated channels) and the marshy areas associated with stream inlets are colonised by Common Reed (*Phragmites australis*), Sea Club-rush (*Scirpus maritimus*) and Common Club-rush (*Scirpus lacustris*). Tasselweed (*Ruppia maritima*) forms dense stands in the permanent brackish water in the centre of the lagoon bed. Other typical lagoonal plants present include Horned Pondweed (*Zanichellia palustris*) and the rare charophyte (*Chara canescens*). The patches have dense Fescue (*Festuca* sp.) swards and patches of Sea Purslane (*Halimione portulacoides*) and Sea Rush (*Juncus maritimus*).

The gravel/sand barrier is in two parts, the eastern one being a mature dune system with low-growing herbs and grasses, such as Lady's Bedstraw (*Galium verum*) and

Kidney Vetch (*Anthyllis vulneraria*); the western one has a developing dune vegetation with the pioneering Sea Couch (*Elymus farctus*) dominating. Marram (*Ammophila arenaria*) is found throughout. Lyme Grass (*Leymus arenarius*) is found here at the western edge of its range, while the endangered and legally protected Cottonweed (*Otanthus maritimus*) has been recorded.

The waterfowl population of the lagoon is exceptionally diverse and the area supports large numbers of birds through the whole year, which is unusual among Irish wetlands. In summer the restricted area of water remaining in the lagoon supports a moulting flock of 300-400 Mute Swans, one of the largest concentrations in Ireland. The area is also an important summering site for non-breeding Black-tailed Godwits. During spring and autumn migration large numbers of waders use the lagoon as a resting and feeding area before continuing on to breeding or wintering grounds. Large numbers of Lesser Black-backed Gulls (up to 1,000) gather at the lagoon for some weeks prior to their autumn migration to Iberia. The lagoon is particularly attractive to vagrant North American and Eurasian waterfowl, especially in the autumn.

As water levels gradually rise in early winter large numbers of waterfowl – Mallard (104), Teal (663), Gadwall (51), Wigeon (3608), Pintail (278), Shoveler (118), Tufted Duck (122), Pochard (86), Coot (690), Brent Goose (45), Lapwing (5043), Black-tailed Godwit (131) and Curlew (268) congregate at the lagoon to feed on its rich food resources. The lagoon was formerly used by a large colony of Herring Gull and in 1975 90 pairs of the rare Roseate Tern attempted to nest on the Little Patch. In autumn the abundant insect life of the dry lake bed and Sea-spurrey (*Spergularia*) stands provide food for large numbers of migrating Swallows and Martins which also use the reed beds as a night roosting area, with up to 10,000 individuals being recorded in recent years.

The site is of particular conservation significance for its lagoon, which is an excellent example of a sedimentary lagoon with a gravel/sand barrier, that supports a wide variety of plants and animals, including many lagoonal specialist species. It is one of the largest examples of a lagoon in the country. This habitat, which is both threatened and declining throughout Europe, is listed on Annex I of the E.U. Habitats Directive with priority status. Good examples of four other habitats that are listed on Annex I of this directive occur within the site, i.e. drift lines, perennial vegetation of stony banks, embryonic shifting dunes and Marram dunes. Tacumshin Lake is also an important ornithological site and has been designated a Special Protection Area under the E.U. Birds Directive. It is nationally important for nine bird species, especially Gadwall and Pintail. The presence of a number of rare or scarce plant species adds additional interest to the site.

30.11.1999

SITE SYNOPSIS

SITE NAME: BALLYTEIGUE BURROW SPA

SITE CODE: 004020

This site is located on the south coast of Co. Wexford between the towns of Kilmore Quay and Cullenstown. It comprises a sand and shingle barrier beach, approximately 8 km in length, and the estuary of the Duncormick River. The extensive overlying sand spit is known as the Burrow, while the estuary that it encloses is known as the Cull.

The site has a range of coastal habitats, including various types of sand dunes, salt meadows, and intertidal sand and mud flats. Former estuarine areas adjacent to the site have been reclaimed as polders and are intensively managed for agriculture. The dune system includes embryonic shifting dunes and Marram (*Ammophila arenaria*) dunes along the seaward side with more stable fixed dunes and dune heath inland. Typically, plants such as Marram, Portland Spurge (*Euphorbia portlandica*) and Sea-holly (*Eryngium maritimum*) are common on the seaward dunes. The fixed dunes are well-developed and species-rich and include species such as Common Restharrow (*Ononis repens*), Wild Pansy (*Viola tricolor* subsp. *curtisii*), Common Centaury (*Centaurium erythraea*), Wild Thyme (*Thymus praecox*) and Red Fescue (*Festuca rubra*). In places, scrub is encroaching and Bracken (*Pteridium aquilinum*) and Burnet Rose (*Rosa pimpinellifolia*) are common. The dune heath element is typified by Bracken and Gorse (*Ulex europaeus*).

Saltmarsh vegetation fringes The Cull, with such species as Sea Aster (*Aster tripolium*), Sea Arrowgrass (*Triglochin maritima*), Sea Lavender (*Limonium humile*) and Glasswort (*Salicornia* spp.). Part of the saltmarsh complex contains halophilous scrub vegetation, a very rare habitat in Ireland. The estuary empties almost entirely on most tides, apart from the main central channel. Sediments vary from muds in the innermost areas, especially towards Duncormick, to sands elsewhere. In addition to the Duncormick River, the estuary receives the flow from a network of canals which drain the extensive polders to the east and north-east of the site. Water quality of the inflowing freshwater is moderate to poor.

The principal ornithological importance of Ballyteigue Burrow SPA is wintering waterfowl, with an internationally important population of Brent Goose (290, average maximum in the five winters 1995/96-1999/00). It also supports nationally important numbers of Shelduck (167), Ringed Plover (133), Golden Plover (4,630), Lapwing (7,808), Black-tailed Godwit (474) and Bar-tailed Godwit (582). A range of other species occur in numbers of regional importance, including Wigeon (306), Grey Plover (69), Dunlin (1,020) and Redshank (206). Both the Golden Plover and Bar-tailed Godwit populations represent just over 3% of the respective national totals, while the Lapwing population is almost 4% of the total. The estuarine habitats provide feeding and roosting areas for the waterfowl species, though a lot of the birds also feed on the intensively managed lands of the adjacent polders.

Cullenstown Strand has a small colony of breeding Little Tern, though nesting may not occur in every year.

The site is host to a range of rare Red Data Book plant species, including Wild Asparagus (*Asparagus officinalis*), Borrer's Saltmarsh-grass (*Puccinellia fasciculata*), Perennial Glasswort (*Arthrocnemum perenne*) and Lesser Centaury (*Centaurium pulchellum*), and is the only Irish site for the protected (Flora (Protection) Order, 1999) lichen *Fulgensia fulgens*. The invertebrate fauna of the site includes a number of scarce species, examples being the bumble bees *Bombus distinguendus* and *B. sylvarum*, the jewel wasp *Hedychridium ardens* and the ant *Tetramorium caespitum*.

This coastal site is of high ecological value for its range of good quality coastal habitats, several being listed on Annex I of the E.U. Habitats Directive. It is a major site for wintering waterfowl, with an internationally important population of Brent Goose and a further six species with populations of national importance. Of particular note is that two of the species, Golden Plover and Bar-tailed Godwit, are listed on Annex I of the E.U. Birds Directive. Little Tern is also listed on Annex I of this Directive. Most of the site is designated as a Nature Reserve.

16.2.2004

SITE SYNOPSIS

SITE NAME: BANNOW BAY SPA

SITE CODE: 004033

Situated on the south coast of Co. Wexford, Bannow Bay is a large, very sheltered, estuarine system with a narrow outlet to the sea. It is up to 14 km along its north-east/south-west axis and has an average width of about 2 km. A number of small- to medium-sized rivers flow into the site, the principal being the Owenduff and the Corock which enter at the top end of the estuary. Very extensive intertidal mud and sand flats are exposed at low tide. The sediments have a rich macroinvertebrate fauna, with such species as Peppery Furrow-shell (*Scrobicularia plana*), Ragworm (*Hediste diversicolor*) and Lugworm (*Arenicola arenaria*) occurring frequently. Mats of green algae (*Enteromorpha* spp.) are present on the intertidal flats and shorelines. Salt marshes are well-developed in the sheltered areas of the site and are characterised by species such as Common Saltmarsh-grass (*Puccinellia maritima*), Sea Aster (*Aster tripolium*), Thrift (*Armeria maritima*), Sea Plantain (*Plantago maritima*), Red Fescue (*Festuca rubra*), Saltmarsh Rush (*Juncus gerardi*) and Sea Rush (*Juncus maritimus*). Swards of Glasswort (*Salicornia* spp.) occur on the lower zones of the salt marshes and extend onto the intertidal flats. Halophilous scrub, a very rare habitat in Ireland, occurs in the saltmarsh areas, and is characterised by the presence of the protected (Flora (Protection) Order, 1999) plant Perennial Glasswort (*Arthrocnemun perenne*). Some freshwater habitats occur at the northern end of the site. These consist mainly of a mosaic of marsh, reedbed and willows (*Salix* spp.).

Bannow Bay supports an excellent diversity of wintering waterfowl and is one of the most important sites in the south-east. Of particular note is an internationally important population of Brent Goose (561 - all figures are average peaks for the 5 winters 1995/96-1999/00). The site also supports nationally important numbers of a further twelve species as follows: Shelduck (500), Pintail (52), Oystercatcher (711), Golden Plover (1,955), Grey Plover (142), Lapwing (2,950), Knot (508), Dunlin (3,038), Black-tailed Godwit (546), Bar-tailed Godwit (471), Curlew (891) and Redshank (377). The populations of Shelduck and Black-tailed Godwit are of particular note as they comprise 3.4% and 2.0% of the respective national totals. Other species which occur in numbers of regional importance include Wigeon (412), Teal (256), Ringed Plover (38) and Turnstone (50). The intertidal sand and mud flats provide excellent feeding for the waterfowl species, while suitable high tide roosts are provided by the salt marshes and other shoreline habitats. Part of the site is a Wildfowl Sanctuary. The site has been well monitored since the 1970s.

There are no serious imminent threats to the wintering birds. However, shellfish farming is carried out over much of the intertidal areas and may cause disturbance to birds and/or their habitats.

Bannow Bay SPA provides an excellent example of an enclosed estuarine system, with habitats generally of good quality. It is of international importance for Brent

Geese and supports a further twelve species in numbers of national importance. Of particular significance is that two species, Golden Plover and Bar-tailed Godwit, are listed on Annex I of the E.U. Birds Directive.

SITE SYNOPSIS

SITE NAME: CAHORE MARSHES SPA

SITE CODE: 004143

Cahore Marshes SPA is located just south of Cahore Point on the north Co. Wexford coast. It comprises an area of polder grassland and some arable land interspersed by canals and drainage channels. The drainage canals and sluices were installed in the mid 19th century to reclaim wetlands and land that flooded regularly behind the sand dunes. Seawater may occasionally enter the channels and create brackish conditions. The area is underlain by rocks of Cambrian age.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Greenland White-fronted Goose, Wigeon, Golden Plover and Lapwing. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The Cahore Marshes SPA is of ornithological importance as a site for wintering waterfowl. An internationally important population of Greenland White-fronted Goose (634 - five year mean peak counts for the period 1994/95 to 1998/99), which is part of the flock that is based at Wexford Harbour, utilises this site during the winter. Both Whooper Swan (23) and Bewick's Swan (12) also occur, but in relatively low numbers - all figures are mean peak counts for four of the five winters between 1995/96 and 1999/2000. Bewick's Swan had been more numerous in the 1980s, especially in spring, but numbers have declined in line with a national decrease. The site supports nationally important populations of a further three species - Wigeon (1,661), Golden Plover (6,038) and Lapwing (3,455). The Golden Plover population is of particular note as it is represents almost 4% of the all-Ireland population. The site also holds other wintering waterbirds, in smaller numbers, including Shelduck (28), Teal (417), Mallard (244), Shoveler (40), Curlew (635) and Black-headed Gull (326). The site provides excellent feeding for these species, as well as good roost/rest areas.

The Cahore Marshes SPA is of considerable ornithological importance as it provides a feeding area for an internationally important population of Greenland White-fronted Goose. It also holds nationally important populations of three other species. The regular occurrence of Greenland White-fronted Goose, Bewick's Swan, Whooper Swan and Golden Plover is of particular note as these species are all listed on Annex I of the E.U. Birds Directive.

18.5.2010

SITE SYNOPSIS

SITE NAME: KEERAGH ISLANDS SPA

SITE CODE: 004118

The Keeragh Islands are two low-lying islets located just over 1 km offshore from the south Wexford coastline. The site includes the islets and associated rocky shorelines and reefs, as well as the surrounding marine area to a distance of 200 metres.

The islets, which rise to a maximum height of about 10 m above sea level, have a small area of land permanently above the tide line. The vegetation is predominantly maritime in character, with species such as Red Fescue (*Festuca rubra*), Thrift (*Armeria maritima*), Common Scurvygrass (*Cochlearia officinalis*) and Sea Campion (*Silene vulgaris* subsp. *maritima*). The surrounding reefs support a range of seaweeds.

The islands have a Nationally Important breeding colony of Cormorant (206 pairs recorded in 1989), which is considered to be one of the largest in the country. The colony has been well-monitored since it was first recorded in 1968 and there has been a long-term ringing programme. Terns, mainly Arctic Tern, have bred in the past but not since the 1970s. Herring Gull, Great Black-backed Gull and Lesser Black-backed Gull have also bred but no population estimates for recent years are available. A small number of Shag (*c*.10 pairs) were present in 1970.

In winter the islands are a refuge and night roost for flocks of Brent Goose and for ducks, notably Mallard and Wigeon with smaller numbers of Teal and Shoveler.

The Keeragh Islands SPA is of ornithological importance as it has a Nationally Important population of breeding Cormorant. It retains potential for attracting breeding terns, species that are listed on Annex I of the E.U. Birds Directive, though none have been recorded since the 1970s.

SITE SYNOPSIS

SITE NAME: LADY'S ISLAND LAKE SPA

SITE CODE: 004009

This site, situated in the extreme south-east of Ireland, comprises a shallow, brackish coastal lagoon separated from the sea by a sand and shingle barrier.

The lagoon habitat is an excellent example of a sedimentary lagoon with a sand/shingle barrier. It is by far the largest and best example of this type of lagoon in the country and is in a relatively natural condition, despite regular breaching of the gravel barrier. The flora is typically brackish with two species of Tasselweed (*Ruppia maritima* and *R. cirrhosa*) and the Red Data Book charophytes Foxtail Stonewort (*Lamprothamnion papulosum*) and *Chara canescens* (both lagoonal specialists). The fauna of the lagoon is rich with 44 taxa recorded in a short period in 1996. At least 13 lagoonal specialist species have been recorded which is the highest number for any lagoonal habitat in the country and at least 4 species appear to be rare. Three coleopteran (beetle) indicator species were recorded in 1996, indicating an ecologically well-developed site, and two of these are very rare species (*Atheta gyllenhalli, A. liliputana*). A rich swamp and freshwater marsh vegetation occurs at Ring Marsh. Elsewhere, the lagoon is fringed by marsh or wet grassland.

Lady's Island is of ornithological importance for both breeding and wintering birds, and is also an important stop-over point for passage migrants.

The site has one of the highest diversity of breeding wildfowl species in the country. Gadwall is resident, with at least 10 pairs breeding. It is one of the few sites in the country where Garganey have been known to breed, with probably 1-2 pairs in most years. Shoveler, another scarce nesting duck, breeds (1-3 pairs). Marsh Harrier (1-2 birds) is a regular visitor to Lady's Island in spring and summer, with Ring Marsh a favoured spot. Breeding may be attempted in some years.

Lady's Island formerly supported internationally important numbers of wintering waterfowl, but in recent years numbers have declined drastically, possibly partly due to a decline in the abundance of their main food source, *Ruppia* spp. Nowadays numbers are only of regional or local importance. Over the five winters 1995/96 to 1999/00 the main species present were: Whooper Swan (41), Wigeon (819), Teal (184), Pochard (299), Tufted Duck (110), Scaup (46), Coot (63), Lapwing (785), Black-tailed Godwit (43) and Curlew (221). In winter, the resident Gadwall population is supplemented by immigrants and in winter 1998/99 an exceptional total of 330 was recorded, one of the highest totals ever recorded in Ireland for this scarce duck.

Lady's Island is a regular stop-off point, mainly in autumn, for several wader species though numbers can vary considerably between years. Species which are recorded annually are Little Stint (up to 5 birds), Curlew Sandpiper (usually between 10 and 20

birds), Ruff (10-20 birds in most years), Spotted Redshank (1-2 birds), Green Sandpiper (1-2 birds) and Wood Sandpiper (1-2 birds).

Islands within the lagoon support an internationally important tern colony; while these are included in a separate SPA, the lagoon is obviously of importance to the overall breeding success of the terns. Mediterranean Gull, a typical lagoonal species, has bred in the tern colonies, and birds are regularly present on the lagoon. Other species which are occasional visitors to the site, and which are typical lagoonal species, include Black-necked Grebe, Little Gull, Black Tern, and Yellow Wagtail.

Deliberate breaching of the gravel barrier (for flood relief) leads to increased salinity of the lagoon which could be detrimental to its flora and fauna, including the bird species. The lagoon is also prone to eutrophication from agricultural and domestic effluents. Increased recreational activities in the area, including water sports, may cause disturbance to breeding and wintering birds. A population of feral Greylag Geese present at the site could have negative interactions with some bird species.

This important site supports one of the best examples of a lagoonal bird fauna in the country. Of particular note is that several of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, including Marsh Harrier, Ruff and Wood Sandpiper, as well as Whooper Swan and Golden Plover in winter. The site is important both for breeding and wintering birds and is one of the top sites in the country for Gadwall.

19.5.2005

SITE SYNOPSIS

SITE NAME: SALTEE ISLANDS SPA

SITE CODE: 004002

The site comprises the two islands, Great Saltee and Little Saltee, situated some 4-5 km off the south Wexford coast. The bedrock of the islands is of Precambrian gneiss and granite. Both islands have exposed rocky cliffs on their south and east – those on Great Saltee being mostly *c*. 30 m high, those on Little Saltee about half this height. The cliffs support a typical sea-cliff flora, with Thrift (*Armeria maritima*), Sea Campion (*Silene maritima*), Sea Plantain (*Plantago maritima*), Sea Aster (*Aster tripolium*), Common Scurvy-grass (*Cochlearia officinalis*), Rock Sea-spurrey (*Spergularia rupicola*), Scentless Mayweed (*Matricaria maritima*), Red Fescue (*Festuca rubra*), Sea Spleenwort (*Asplenium marinum*) and Rock Samphire (*Crithmum maritimum*). Sea Stork's-bill (*Erodium maritimum*) also occurs and the scarce Golden-samphire (*Inula crithmoides*) has been recorded in the past. The cliffs also support a variety of lichens (*Ramalina* and *Xanthoria* spp.). The northern and western sides of both islands are fringed with shingle and boulder shores, backed by boulder clay cliffs, as well as small areas of intertidal sandflats. Sea caves occur at the base of the cliffs on Great Saltee.

Since the abandonment of farming on the islands (apart from sheep and cattle grazing recently re-introduced on Little Saltee), Bracken (*Pteridium aquilinum*) has become dominant over much of the terrestrial areas and often occurs in association with Bluebells (*Hyacinthoides non-scripta*). Brambles (*Rubus fruticosus*) are also common. Dry grassland occurs in some of the old fields and here a variety of grassland species occur, including Yorkshire Fog (*Holcus lanatus*), Ragwort (*Senecio jacobaea*), Common Nettle (*Urtica dioica*) and thistles (*Cirsium* spp.). Several springs and seepage areas provide habitat diversity and species present include Water-cress (*Nasturtium officinale*), Jointed Rush (*Juncus articulatus*), Bog Stitchwort (*Stellaria alsine*), Marsh Pennywort (*Hydrocotyle vulgaris*) and, in at least one location, Early Marsh-orchid (*Dactylorhiza incarnata*). In places there are dense stands of Hogweed (*Heracleum sphondylium*). On Great Saltee there are Cordylines (*Cordyline australis*) along the main path (planted in the 1950s), and in the garden area are found Sycamore (*Acer pseudoplatanus*), Elder (*Sambucus ebulus*), Ash (*Fraxinus excelsior*), Alder (*Alnus glutinosa*), willow (*Salix* sp.), Hawthorn (*Crataegus monogyna*) and Olearia (*Olearia* sp.).

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Fulmar, Manx Shearwater, Gannet, Cormorant, Shag, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Razorbill and Puffin. The site is also of special conservation interest for holding an assemblage of over 20,000 breeding seabirds.

The Saltee Islands are internationally important for holding an assemblage of over 20,000 breeding seabirds. The nationally important Gannet colony on Great Saltee

has been well documented since its establishment in the1920s and 2,446 pairs were present in 2004. The following species have populations of national importance (all counts in the 1999/2000 breeding seasons): Fulmar (525 pairs), Cormorant (273 pairs), Shag (268 pairs), Lesser Black-backed Gull (175 pairs), Great Black-backed Gull (*c*. 90 pairs), Herring Gull (73 pairs), Kittiwake (2,125 pairs), Guillemot (21,436 individuals), Razorbill (5,200 individuals) and Puffin (1,822 individuals). An estimated 250 pairs of Manx Shearwater occur on these islands. Seabird populations are monitored annually and large numbers of chicks, especially of Gannets, auks and Shags, are ringed.

Peregrine Falcon breeds (1-2 pairs) and Chough (1 pair) occurs at the eastern edge of its Irish range. Both of these species are listed on Annex I of the E.U. Birds Directive.

Great Saltee is a major site for spring and autumn landbird migration and was the site for Ireland's first bird observatory. While the observatory is no longer operational, substantial numbers of migrants are still ringed annually. Large numbers of pipits, swallows and martins, thrushes, warblers and finches occur, while smaller numbers of a great variety of other species (some very rare in Ireland) are also recorded. The island is also a good site for migrant Lepidoptera, especially Red Admirals, Painted Ladies, Clouded Yellows, Silver Y moths and Humming-bird Hawk-moths.

Great Saltee has a breeding population of Grey Seal (a species that is listed on Annex II of the E.U. Habitats Directive), one of the very few in eastern Ireland. Up to 120 animals are present in autumn and up to 20 pups are produced annually.

Renovated old farm buildings on both islands are used by the owners, mainly in summer.

This site is of international importance for breeding seabirds and has two further species (Peregrine and Chough) which are listed on Annex I of the E.U. Birds Directive. It is one of the best documented sites in the country and is monitored annually.

15.9.2006

SITE SYNOPSIS

SITE NAME: TACUMSHIN LAKE SPA

SITE CODE: 004092

Tacumshin Lake is a shallow coastal lagoon situated on the south Co. Wexford coast. The lagoon was formerly a shallow sea bay which, due to longshore drift, has over time become separated from the sea by a gravel/sand spit that extends across the mouth of the bay from east to west. At times in the past the lagoon was completely land-locked by the spit and, at the end of the 19th century, when this situation prevailed for some time, the lake was drained by means of a large bore pipe set through the gravel/sand bar. In the mid-1970s the spit again closed off the lagoon from the sea. To relieve subsequent flooding of surrounding farmland, the old drainage pipe was reactivated and a second pipe installed at a lower level. The capacity of these two pipes is insufficient to prevent the lagoon filling up in winter when inflow from streams is greater than the outflow through the pipes. To speed the drainage from the lagoon two main drains were excavated leading to the landward end of the pipes.

The lagoon bed sediments support extensive areas of Glasswort (*Salicornia* spp.) where conditions remain brackish in summer. Other areas support Lesser Sea-spurrey (*Spergularia marina*). The permanent water bodies (including the excavated channels) and the marshy areas associated with stream inlets are colonised by Common Reed (*Phragmites australis*), Sea Club-rush (*Scirpus maritimus*) and Common Club-rush (*Scirpus lacustris*). Tasselweed (*Ruppia maritima*) forms dense stands in the permanent brackish water in the centre of the lagoon bed. Other typical lagoonal plants present include Horned Pondweed (*Zanichellia palustris*) and the rare charophyte (*Chara canescens*). Areas of salt marsh, "the patches" have dense Red Fescue (*Festuca rubra*) swards, with Sea Purslane (*Halimione portulacoides*) and Sea Rush (*Juncus maritimus*). The gravel/sand barrier is in two sections, the eastern one being a mature dune system with low-growing herbs and grasses, such as Lady's Bedstraw (*Galium verum*) and Kidney Vetch (*Anthyllis vulneraria*), while the western section has a developing dune vegetation with the pioneering Sea Couch (*Elymus farctus*) dominating. Marram (*Ammophila arenaria*) is found throughout and Lyme Grass (*Leymus arenarius*) also occurs. The endangered Red Data Book species, Cottonweed (*Otanthus maritimus*), has been recorded from the site in the past and is currently the subject of a re-introduction programme here.

The waterfowl population of the lagoon is exceptionally diverse and the area supports large numbers of birds through the whole year, which is unusual among Irish wetlands. In winter, Tacumshin is a principal roost for internationally important populations of both Whooper Swan (213) and Bewick's Swan (189), the latter species now being very localised in Ireland. Both of these swans feed mainly on improved grassland in the vicinity of the site. A further 13 waterfowl species occur in numbers of national importance, i.e. Little Grebe (71), Mute Swan (218), Wigeon (4,725), Gadwall (119), Teal (975), Pintail (322), Shoveler (107), Tufted Duck (420), Coot

(1,669), Golden Plover (3,932), Grey Plover (85), Lapwing (5,302) and Black-tailed Godwit (538) - all figures are average peaks for the 5 seasons 1995/96-1999/00). Of particular note is that the Pintail population represents over 16% of the national total, whilst those of Wigeon, Gadwall and Coot are each just over 5% of the respective totals. Other species using the site in winter include Greenland White-fronted Goose (36), Dunlin (374), Curlew (391), Brent Goose (115), Shelduck (61), Pochard (314), Mallard (196), Redshank (74), Greenshank (6), Black-headed Gull (157) and Lesser Black-backed Gull (146). The site provides both feeding and roosting habitat for the various species, though some such as Golden Plover and Lapwing also feed outside of the site.

Marsh Harrier is a regular visitor in summer and nesting by this very scarce bird of prey is a possibility. Tacumshin is one of the few sites in Ireland where Garganey occurs regularly, and nesting probably occurs in most years. The swamp vegetation supports a good breeding population of the localised Reed Warbler (*c.* 10 pairs), whilst Sedge Warbler breeds commonly.

Tacumshin is an important site for passage waders, including Ruff (often more than 40 birds are recorded), Little Stint (more than 200 birds have occurred though up to 40 or 50 is more usual), Curlew Sandpiper (30 or more is regular), Green Sandpiper (up to 5 in most years), Spotted Redshank (up to 5 in most years) and the very scarce Wood Sandpiper (between 2 and 5 birds in most years). The lagoon is particularly attractive to vagrant North American and Eurasian waterfowl, with species such as Pectoral Sandpiper occurring annually. In autumn the abundant insect life of the dry lake bed provide food for large numbers of migrating Swallows and Martins which also use the reed beds as a night roosting area, with up to 10,000 individuals being recorded in recent years. Large numbers of Lesser Black-backed Gull (up to 1,000) gather at the lagoon for some weeks prior to their autumn migration southwards and some linger into the early winter period.

The lagoon habitat is potentially threatened by implementation of a more effective drainage system. In recent years parts of the lagoon and sand dune system have been seriously damaged by horse racing activities and such activities remain a threat. Significant disturbance occurs in summer and autumn due to a range of recreational activities, including dog exercising, bird watching and driving of cars.

Tacumshin Lake SPA is one of the most important ornithological sites in the country. The occurrence of internationally important populations of Whooper Swan and Bewick's Swan is of especial note, as is the presence of nationally important populations of an additional 13 wintering waterfowl species. It is one of the top sites in the country for species such as Pintail and Gadwall. It is also of importance for its summer visitors, including such rare and localised species as Marsh Harrier, Garganey and Reed Warbler. The site is also notable for a range of passage waders. Also of note is that a number of the species that occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Bewick's Swan, Golden Plover, Ruff, Wood Sandpiper and Marsh Harrier. Greenland White-fronted Goose which uses the site on occasions is also listed on Annex I of this directive.

31.3.2005

SITE SYNOPSES

SITE NAME: THE RAVEN SPA

SITE CODE: 004019

The Raven SPA is situated on the north side of Wexford Harbour, incorporating the dynamic sand dune system of Raven Point and the coastal strip running north to Blackwater Head. The seaward boundary of the site extends a distance of 2 km from the shoreline.

The Raven sand dune system comprises a suite of coastal habitats listed on Annex I of the EU Habitats Directive. The dynamic nature of the system is best seen at the southern end of the site where sand flats, lagoons, driftlines and small dune slacks develop and are being continuously transformed by the activity of the sea and the wind. Much of the dunes was planted with commercial conifer forest in the 1930s and 1950s, partly as a coastal defence measure to stabilise the dunes and protect the polder behind. The unplanted areas of fixed dunes are fairly typical of the habitat, with a low open sward of grasses, herbs, bryophytes and lichens occurring amongst areas of Marram Grass (*Ammophila arenaria*). Species present include Red Fescue (*Festuca rubra*), Common Bird's-foot Trefoil (*Lotus corniculatus*), Lady's Bedstraw (*Galium verum*), and Sea Pansy (*Viola tricolor* subsp. c*urtisii*). A feature of the site is the presence of dune slacks. Some of the current slack communities are associated with artificial ponds that were originally created as forest fire control reservoirs. Where the slacks maintain moist conditions, characteristic species include Creeping Willow (*Salix repens*), Common Sedge (*Carex nigra*) and Heath-grass (*Danthonia decumbens*). Dune ridges with Marram Grass (*Ammophila arenaria*) occur in a more or less continuous band as far as Blackwater Head. A number of rare and protected plants have also been recorded from this dune system including Round-leaved Wintergreen (*Pyrola rotundifolia* subsp. *maritima*), Lesser Centaury (*Centaurium pulchellum*) and Wild Asparagus (*Asparagus officinalis* subsp. *prostrata*). A small, though good example of Atlantic salt meadow occurs below the fixed dunes at the more sheltered western side of Raven Point.

The sheltered intertidal shore to the west of Raven Point supports communities of bivalves and worms (e.g. Common Cockle (*Cerastoderma edule*), Lugworm (*Arenicola marina*). The steeper shore to the north-east of the Point, which is predominantly sandy sediment, supports a sparser fauna, but with one notable species *Pseudorchestoidea brito* - a sandhopper which is known from only one other location in Ireland.

The Raven has important bird interests, being part of the Wexford Slobs and Harbour complex. Of critical significance is that it forms the principal night roost for the internationally important Wexford Harbour population of Greenland White-fronted Geese. A range of other waterfowl species are attracted to the site during winter, both for feeding and roosting purposes. The shallow waters within the site are particularly suitable for divers, grebes and seaduck. Counts during the five

winters 1995/96 to 1999/00 recorded the following species in Nationally Important numbers (figures are average maxima over the 5 winters): Cormorant (218), Common Scoter (3,234), Red-breasted Merganser (84), Grey Plover (448) and Sanderling (81). The Scoter population represents over 25% of the national total. The population of Red-throated Diver (77) is also of national importance and these shallow waters support one of the largest populations in the country. Other species which occur in significant numbers include Great Northern Diver (24), Great Crested Grebe (10), Slavonian Grebe (4), Wigeon (67), Mallard (75), Golden Plover (569), Lapwing (115), Knot (131), Dunlin (552), Bar-tailed Godwit (112), Curlew (93), Black-headed Gull (386) and Common Gull (157). Other species using the site include Shelduck (16), Oystercatcher (93) and Ringed Plover (12).

In addition to the Greenland White-fronted Geese, the occurrence of Red-throated Diver, Great Northern Diver, Slavonian Grebe, Golden Plover and Bar-tailed Godwit is of especial conservation interest as these are listed on Annex I of the E.U. Birds Directive.

The Raven SPA is an important breeding site for Little Tern, with up to 30 pairs in some years. The birds nest on the shingle and sandy beaches or on offshore sandbanks. Numbers vary a lot between years, partly due to the suitability of potential nesting habitat after the winter storms. A number of pairs of Ringed Plover breed on the sandy beaches.

This site is of international ornithological importance as it provides crucial roosting habitat for the Wexford Harbour flock of Greenland White-fronted Geese. The site also provides habitat for a range of other species, including six which have populations of National Importance; the Raven is probably the most regular site in the country for Slavonian Grebe. Of particular significance is that six of the wintering species are listed on Annex I of the E.U. Birds Directive, i.e. Red-throated Diver, Great Northern Diver, Slavonian Grebe, Golden Plover, Bar-tailed Godwit and Greenland White-fronted Goose. Little Tern, a species breeding in the site, is also listed on Annex I of this directive. Owing to the recognised importance of the area, Raven Point is a statutory Nature Reserve and a Ramsar site.

SITE SYNOPSIS

SITE NAME: WEXFORD HARBOUR AND SLOBS SPA

SITE CODE: 004076

Wexford Harbour is the lowermost part of the estuary of the River Slaney, a major river that drains much of the south-east region. The site is divided between the natural estuarine habitats of Wexford Harbour, the reclaimed polders known as the North and South 'Slobs', and the tidal section of the River Slaney. The seaward boundary extends from the Rosslare peninsula in the south to the area just west of The Raven Point in the north. Shallow marine water is a principal habitat, but at low tide extensive areas of intertidal flats are exposed. These vary from rippled sands in exposed areas to sandy-muds in the more sheltered areas, especially at Hopeland and the inner estuary to the west of Wexford bridge. The flats support a rich macro-invertebrate fauna, including the bivalves Cockle (*Cerastoderma edule*), Baltic Tellin (*Macoma balthica*) and Peppery Furrow-shell (*Scrobicularia plana*), the polychaetes Lugworm (*Arenicola marina*), Catworm (*Nepthys hombergi*) and Ragworm (*Hediste diversicolor*) and the crustacean *Corophium volutator*. Beds of mussels (*Mytilus edulis*) also occur. Salt marshes fringe the intertidal flats, especially in the sheltered areas such as Hopeland and towards Castlebridge. The Slobs are two flat areas of farmland, mainly arable and pasture grassland, empoldered behind 19th century sea-walls. The lands are drained by a network of channels which flow into two central channels, in parts several hundred metres in width. Water from the channels is pumped into the sea with electric pumps. The channels often support swamp vegetation. The river section of the site is extensive, extending to Enniscorthy, a distance of almost 20 km from Wexford town. It is noticeably tidal as far as Edermine Bridge but with tidal influence right up to Enniscorthy. In places, such as the Macmine marshes, it is several hundreds metres wide and here reedswamp is well developed

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Little Grebe, Great Crested Grebe, Cormorant, Bewick's Swan, Whooper Swan, Greenland White-fronted Goose, Light-bellied Brent Goose, Shelduck, Wigeon, Teal, Mallard, Pintail, Scaup, Goldeneye, Red-breasted Merganser, Hen Harrier, Coot, Oystercatcher, Golden Plover, Grey Plover, Lapwing, Knot, Sanderling, Dunlin, Black-tailed Godwit, Bar-tailed Godwit, Curlew, Redshank, Black-headed Gull, Lesser Black-backed Gull and Little Tern. The site is also of special conservation interest for holding an assemblage of over 20,000 wintering waterbirds. The E.U. Birds Directive pays particular attention to wetlands, and as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The site is of international importance for several species of waterbirds but also because it regularly supports well in excess of 20,000 waterbirds (average peak of 49,030 for the 5 winters 1996/97-2000/01). Wexford Harbour and Slobs is one of the top three sites in the country for numbers and diversity of wintering birds. The

combination of estuarine habitats, including shallow waters for grebes, diving duck and seaduck, and the farmland of the polders, which include freshwater drainage channels, provides optimum feeding and roost areas for a wide range of species. Of particular importance is that it is one of the two most important sites in the world for Greenland White-fronted Goose (9,353) (all given figures for species are average peaks for the 5 winters 1995/96-1999/00). The geese feed almost entirely within the Slobs and roost at The Raven (a separate SPA). The site also has internationally important populations of Mute Swan (519), Light-bellied Brent Goose (1,469), Bar-tailed Godwit (1,843) and Black-tailed Godwit (768).

There are at least a further 25 species of wintering waterbirds which occur in numbers of national importance, i.e. Great Crested Grebe (123), Little Grebe (77), Cormorant (443), Whooper Swan (120), Bewick's Swan (191), Shelduck (903), Wigeon (2,838), Gadwall (37), Teal (1,601), Mallard (3,121), Pintail (78), Scaup (416), Goldeneye (151), Red-breasted Merganser (226), Coot (353), Oystercatcher (1,800), Golden Plover (5,590), Grey Plover (1,412), Lapwing (11,944), Knot (566), Sanderling (262), Dunlin (3,037), Curlew (1,924), Redshank (535), Black-headed Gull (6,136) and Lesser Black-backed Gull (1,036). Other species that use the site include Ringed Plover (69), Turnstone (41), Greenshank (12), Shoveler (24), Tufted Duck (114), Pochard (218), Common Gull (100+) and Little Egret. Several of the above populations represent substantial proportions of the national totals, especially Shelduck (6.2%), Scaup (6.6%), Red-breasted Merganser (6.2%), Grey Plover (21.9% and the top site in the country) and Black-headed Gull (6.1%). The Slobs is the most important and indeed one of the few sites in the country which supports a regular flock of Bewick's Swan. Numbers of wintering birds are often swelled by hard-weather movements from Britain and Europe, notably Golden Plover and Lapwing.

The site is a regular location for scarce passage waders such as Ruff, Spotted Redshank and Green Sandpiper, as well as Curlew Sandpiper in varying numbers. The rare Wood Sandpiper is seen each year, mainly in autumn.

Short-eared Owl and Hen Harrier are regular visitors in small numbers to the Slobs during winter. Of particular note is the presence of the Hen Harrier communal roost site.

The site is important for Little Tern as it has can hold a nationally important breeding colony (30 pairs were recorded in 2000). The Slobs support a nesting colony of Tree Sparrow, a very localised species in Ireland that is listed in the Irish Red Data Book. Another very localised breeding species, Reed Warbler, is well established within the swamp vegetation along the River Slaney and on the South Slob (estimated as at least 10 pairs).

A range of duck species breed, including Teal, Tufted Duck and, probably in most years, Shoveler.

The site supports populations of Borrer's Saltmarsh-grass (*Puccinellia fasciculata*) and Short-leaved Water-starwort (*Callitriche truncata*), both protected, Red Data Book species. The Slobs are well known for their population of Irish Hare.

Part of the North Slob is a Nature Reserve and much of this slob is managed for the benefit of the wintering geese. Monitoring of the wintering birds of the Slobs extends back to the 1960s and nowadays there is an ongoing monitoring and research programme. The North Slob has a wildfowl collection and an interpretative centre.

There are no imminent significant threats to the wintering bird populations. In the long-term, however, projected increases in sea level could cause problems in maintaining the Slobs as farmland. In recent times, the South Slob has become less suitable due to changes in landuse, including forestry operations, and a sustained programme of scaring. An increase in the amount of new housing in the vicinity of the North Slob has led to increased levels of disturbance in recent times. Localised reclamation has occurred in Wexford Harbour and any further reclamation of estuarine habitat is undesirable. Aquaculture occurs in Wexford Harbour though it is not known what effects, if any, this has on the bird populations.

Wexford Harbour and Slobs SPA is one of the most important ornithological sites in the country. It is of world importance for Greenland White-fronted Goose, and supports internationally important populations of a further four species (Mute Swan, Light-bellied Brent Goose, Black-tailed Godwit and Bar-tailed Godwit). In addition, it has 25 species of wintering waterbirds with populations of national importance. Also of significance is that several of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Little Egret, Whooper Swan, Bewick's Swan, Greenland White-fronted Goose, Hen Harrier, Golden Plover, Bar-tailed Godwit, Ruff, Wood Sandpiper, Little Tern and Short-eared Owl. The site is an important centre for research, education and tourism.

29.5.2007

SITE SYNOPSIS

SITE NAME: ARDMORE HEAD

SITE CODE: 002123

This site is situated on a small headland to the east of the village of Ardmore on the west Waterford coastline. The site consists of sea cliffs and associated coastal habitats. The cliffs, which form part of the Ardmore Syncline, are of moderate height (up to 40 m), continuous and precipitous. They are also well indented, and have numerous small ledges which support breeding seabirds. The aspect of the cliffs is mostly east and south facing, but there is a small section facing north.

Cliff vegetation consists of Sea-spurrey (*Spergularia* spp.), Sea Campion (*Silene vulgaris* subsp. *maritima*), Thrift (*Armeria maritima*), Buck's-horn Plantain (*Plantago coronopus*) and Scurvy Grass (*Cochleria* spp.). Other flora includes Sea Beet (*Beta vulgaris*), Yarrow (*Achillea millefolium*) and Wild Carrot (*Daucus carota*). In places below the cliffs there are boulder and some shingle shorelines. Small rocky islets, which are continuously washed over, also occur. An area of open marine water is included within the site, partly to give some protection to the seabirds which nest on the ledges above.

The dominant habitat within the site is dry coastal heath (which is best viewed west of Ram's Head). Species present include an abundance of Heather (*Calluna vulgaris*), with Bell Heather (*Erica cinerea*), Western Gorse (*Ulex gallii*), Wood Sage (*Teucrium scorodonia*) and Bent Grasses (*Agrostis* spp.). In the eastern part of the site, the heath is dominated by Burnet Rose (*Rosa pimpinellifolia*) and grass species. The heath merges into the cliff vegetation but also into dry grassland, especially at Ardmore Head. Here the grassland vegetation is dominated by Cocksfoot (*Dactylis glomerata*), Bent Grasses (*Agrostis* spp.), Bramble (*Rubus fruticosus*), Black Knapweed (*Centaurea nigra*) and Wild Thyme (*Thymus* spp.).

At the north of the site are small patches of scrub with species such as Hawthorn (*Crataegus monogyna*), Sycamore (*Acer pseudoplatanus*), Bramble (*Rubus fruticosus*) and Bracken (*Pteridium aquilinum*). The understorey consists of Ramsons (*Allium ursinum*), Wild Celery (*Apium graveolens*) and Nettles (*Urtica dioica*).

Six species of seabirds were recorded breeding on the ledges during a survey from 1985 to 1987. The most numerous bird is the Kittiwake - this has declined somewhat in recent years (1989-1993) though c. 800 pairs still nest, a population of National Importance. Other species are Fulmar (38 pairs), Shag (6 pairs), Herring Gull (78 pairs) Great Black-backed Gull (2 pairs), Razorbill (7 individuals) and Guillemot (6 individuals). The site is noted for the presence of Chough, with 1-2 pairs. Chough is listed under Annex I of the EU Bird's Directive.

Landuse at the site consists of tourism/recreational activities. A path is located along the cliff for much of the site. In addition there is St. Declan's holy well and old ruined church at the north of the site. The grass around the church is mown regularly. Drift net fishing is carried out in the sea surrounding the site.

Although small, this site is of conservation value as it displays good examples of the type of sea cliff and dry heath characteristic of the south coast. Both of these habitats are listed on Annex I of the EU Habitats Directive. The breeding seabirds and Chough add to the ecological interest.

17.5.1999

SITE SYNOPSIS

SITE NAME: BALLYMAN GLEN

SITE CODE: 000713

Ballyman Glen is situated approximately 3 km north of Enniskerry. It is orientated in an east-west direction with a stream running through the centre. The glen is bounded mostly by steeply sloping pasture with Gorse (*Ulex europaeus*) and areas of wood and scrub.

This site is a candidate SAC selected for alkaline fen and petrifying springs, both habitats listed on Annex I of the EU Habitats Directive.

The glen contains a small strip of fen, which runs along the county boundary and extends into County Dublin. This fen is very alkaline and is associated with petrifying spring/seepage areas that have given rise to thick deposits of marl. The vegetation of the main part of the fen is dominated by Greater Tussock-sedge (*Carex paniculata*), Tall Fescue (*Festuca arundinacea*), Butterworts (*Pinguicula vulgaris* and *P. lusitanica*), Black Bog-rush (*Schoenus nigricans*) and Broad-leaved Cottongrass (*Eriophorum latifolium*). The site is particularly notable for its orchids, which includes Early Marsh-orchid (*Dactylorhiza incarnata*), Narrow-leaved Marsh-orchid (*D. traunsteineri*) and Marsh Helleborine (*Epipactis palustris*). In addition, twenty species of sedge have been recorded in the area, including the scarce Long-stalked Yellow-sedge (*Carex lepidocarpa*). The fen area is being invaded by Downy Birch (*Betula pubescens*). Associated with the fen, and also with the woodland elsewhere in the site, are petrifying springs. These lime-encrusted seepage areas are rich in bryophytes including such diagnostic species as Great Horsetail (*Equisetum telmateia*), *Cratoneuron commutatum* and *C. filicinum*.

Wet woodland and scrub occur along the margins of the stream for most of the length of the glen, extending outwards in areas to create inaccessible and species-rich patches of woodland. The canopy is dominated by Alder (*Alnus glutinosa*), Willow (*Salix* spp.) and Ash (*Fraxinus excelsior*). The woodland has a dense shrub layer which includes Hawthorn (*Crataegus monogyna*) and Spindle (*Euonymus europaeus*), and a diverse ground flora with Marsh Hawks-beard (*Crepis paludosa*), Sanicle (*Sanicula europaea*), Herb-Robert (*Geranium robertianum*), Bugle (*Ajuga reptans*), Horsetails (*Equisetum* spp.), Meadowsweet (*Filipendula ulmaria*) and some sedges (*Carex* spp.). Areas of marsh are found in the wetter areas by the stream, particularly at the western end of the site.

There is an area of broad-leaved woodland on the steeper southern slopes of the glen. Common species occurring here are Ash and Sycamore (*Acer pseudoplatanus*), with Brambles (*Rubus fruticosus* agg.) colonizing the more open areas.

An area of land that slopes towards the fen has been used as a landfill site for domestic refuse. The site is also used a clay pigeon shoot and shattered clay pigeons

are scattered throughout the area. Fens are rare in Wicklow/Dublin and this is one of only two sites in Wicklow for the Narrow-leaved Marsh-orchid. The fen vegetation is well developed, with an unusually large number of sedge species present. The presence of alkaline fen and of petrifying spring/seepage areas on the site is particularly notable, as these habitats are listed, the latter with priority status, on Annex I of the EU Habitats Directive.

SITE SYNOPSIS

SITE NAME: BLACKWATER RIVER (CORK/WATERFORD)

SITE CODE: 002170

The River Blackwater is one of the largest rivers in Ireland, draining a major part of Co. Cork and five ranges of mountains. In times of heavy rainfall the levels can fluctuate widely by more than 12 feet on the gauge at Careysville. The peaty nature of the terrain in the upper reaches and of some of the tributaries gives the water a pronounced dark colour. The site consists of the freshwater stretches of the River Blackwater as far upstream as Ballydesmond, the tidal stretches as far as Youghal Harbour and many tributaries, the larger of which includes the Licky, Bride, Flesk, Chimneyfield, Finisk, Araglin, Awbeg (Buttevant), Clyda, Glen, Allow, Dalua, Brogeen, Rathcool, Finnow, Owentaraglin and Awnaskirtaun. The extent of the Blackwater and its tributaries in this site, flows through the counties of Kerry, Cork, Limerick, Tipperary and Waterford. Towns along, but not in the site, include Rathmore, Millstreet, Kanturk, Banteer, Mallow, Buttevant, Doneraile, Castletownroche, Fermoy, Ballyduff, Rathcormac, Tallow, Lismore, Cappoquin and Youghal.

The Blackwater rises in boggy land of east Kerry , where Namurian grits and shales build the low heather-covered plateaux. Near Kanturk the plateaux enclose a basin of productive Coal Measures. On leaving the Namurian rocks the Blackwater turns eastwards along the northern slopes of the Boggeraghs before entering the narrow limestone strike vale at Mallow. The valley deepens as first the Nagles Mountains and then the Knockmealdowns impinge upon it. Interesting geological features along this stretch of the Blackwater Valley include limestone cliffs and caves near the villages and small towns of Killavullen and Ballyhooly; the Killavullen caves contain fossil material from the end of the glacial period. The associated basic soils in this area support the growth of plant communities which are rare in Cork because in general the county's rocks are acidic. At Cappoquin the river suddenly turns south and cuts through high ridges of Old Red Sandstone. The Araglin valley is predominantly underlain by sandstone, with limestone occurring in the lower reaches near Fermoy.

The site is a candidate SAC selected for alluvial wet woodlands and Yew wood, both priority habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for floating river vegetation, estuaries, tidal mudflats, *Salicornia* mudflats, Atlantic salt meadows, Mediterranean salt meadows, perennial vegetation of stony banks and old Oak woodlands, all habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive - Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Crayfish, Twaite Shad, Atlantic Salmon, Otter and the Killarney Fern.

Wet woodlands are found where river embankments, particularly on the River Bride, have broken down and where the channel edges in the steep-sided valley between Cappoquin and Youghal are subject to daily inundation. The river side of the embankments was often used for willow growing in the past (most recently at Cappoquin) so that the channel is lined by narrow woods of White and Almond-leaved Willow (*Salix alba* and *S. triandra*) with isolated Crack Willow (*S. fragilis*) and Osier (*S. viminalis*). Grey Willow (*S. cinerea*) spreads naturally into the sites and occasionally, as at Villierstown on the Blackwater and Sapperton on the Bride, forms woods with a distinctive mix of woodland and marsh plants, including Gypsywort (*Lycopus europaeus*), Guelder Rose (*Viburnum opulus*), Bittersweet (*Solanum dulcamara*) and various mosses and algae. These wet woodlands form one of the most extensive tracts of the wet woodland habitat in the country.

A small stand of Yew (*Taxus baccata*) woodland, a rare habitat in Ireland and the EU, occurs within the site. This is on a limestone ridge at Dromana, near Villierstown. While there are some patches of the wood with a canopy of Yew and some very old trees, the quality is generally poor due to the dominance of non-native and invasive species such as Sycamore, Beech and Douglas Fir (*Pseudotsuga menzsisii*). However, the future prospect for this Yew wood is good as the site is proposed for restoration under a Coillte EU Life Programme. Owing to its rarity, Yew woodland is listed with priority status on Annex I of the EU Habitats Directive.

Marshes and reedbeds cover most of the flat areas beside the rivers and often occur in mosaic with the wet woodland. Common Reed (*Phragmites australis*) is ubiquitous and is harvested for thatching. There is also much Marsh Marigold (*Caltha palustris*) and, at the edges of the reeds, the Greater and Lesser Pond-sedge (*Carex riparia* and *C. acutiformis*). Hemlock Water-dropwort (*Oenanthe crocata*), Wild Angelica (*Angelica sylvestris*), Reed Canary-grass (*Phalaris arundinacea*), Meadowsweet (*Filipendula ulmaria*), Nettle (*Urtica dioica*), Purple Loosestrife (*Lythrum salicaria*), Marsh Valerian (*Valeriana officinalis*), Water Mint (*Mentha aquatica*) and Water Forget-me-not (*Myosotis scorpioides*).

At Banteer there are a number of hollows in the sediments of the floodplain where subsidence and subterranean drainage have created isolated wetlands, sunk below the level of the surrounding fields. The water rises and falls in these holes depending on the watertable and several different communities have developed on the acidic or neutral sediments. Many of the ponds are ringed about with Grey Willows, rooted in the mineral soils but sometimes collapsed into the water. Beneath the densest stands are woodland herbs like Yellow Pimpernel (*Lysimachia nemorum*) with locally abundant Starwort (*Callitriche stagnalis*) and Marsh Ragwort (*Senecio palustris*). One of the depressions has Silver Birch (*Betula pendula*), Ash (*Fraxinus excelsior*), Crab Apple (*Malus sylvestris*) and a little Oak (*Quercus robur*) in addition to the willows.

Floating river vegetation is found along much of the freshwater stretches within the site. The species list is quite extensive and includes Pond Water-crowfoot (*Ranunculus peltatus*), Water-crowfoot (*Ranunculus* spp.), Canadian Pondweed (*Elodea canadensis*), Broad-leaved Pondweed (*Potamogeton natans*), Pondweed (*Potamogeton* spp.), Water Milfoil (*Myriophyllum* spp.), Common Club-rush (*Scirpus*

lacustris), Water-starwort (*Callitriche* spp.), Lesser Water-parsnip (*Berula erecta*) particularly on the Awbeg, Water-cress (*Nasturtium officinale*), Hemlock Water-dropwort, Fine-leaved Water-dropwort (*O. aquatica*), Common Duckweed (*Lemna minor*), Yellow Water-lily (*Nuphar lutea*), Unbranched Bur-reed (*Sparganium emersum*) and the moss *Fontinalis antipyretica*.

The grassland adjacent to the rivers of the site is generally heavily improved, although liable to flooding in many places. However, fields of more species-rich wet grassland with species such as Yellow-flag (*Iris pseudacorus),* Meadow-sweet, Meadow Buttercup (*Ranunculus acris*) and rushes (*Juncus* spp.) occur occasionally. Extensive fields of wet grassland also occur at Annagh Bog on the Awbeg. These fields are dominated by Tufted Hair-grass (*Deschampsia cespitosa*) and rushes.

The Blackwater Valley has a number of dry woodlands; these have mostly been managed by the estates in which they occur, frequently with the introduction of Beech (*Fagus sylvatica*) and a few conifers, and sometimes of Rhododendron (*Rhododendron ponticum*) and Laurel. Oak woodland is well developed on sandstone about Ballinatray, with the acid Oak woodland community of Holly (*Ilex aquifolium*), Bilberry (*Vaccinium myrtillus*), Greater Woodrush (*Luzula sylvatica*) and Buckler Ferns (*Dryopteris affinis, D. aemula*) occurring in one place. Irish Spurge (*Euphorbia hyberna*) continues eastwards on acid rocks from its headquarters to the west but there are many plants of richer soils, for example Wood Violet (*Viola reichenbachiana*), Goldilocks (*Ranunculus auricomus*), Broad-leaved Helleborine (*Epipactis helleborine*) and Red Campion (*Silene dioica*). Oak woodland is also found in Rincrew, Carrigane, Glendine, Newport and Dromana. The spread of Rhododendron is locally a problem, as is over-grazing. A few limestone rocks stand over the river in places showing traces of a less acidic woodland type with Ash, False Brome (*Brachypodium sylvaticum*) and Early-purple Orchid (*Orchis mascula*).

In the vicinity of Lismore, two deep valleys cut in Old Red Sandstone join to form the Owenashad River before flowing into the Blackwater at Lismore. These valleys retain something close to their original cover of Oak with Downy Birch (*Betula pubescens*), Holly and Hazel (*Corylus avellana*) also occurring. There has been much planting of Beech (as well as some of coniferous species) among the Oak on the shallower slopes and here both Rhododendron and Cherry Laurel (*Prunus laurocerasus*) have invaded the woodland.

The Oak wood community in the Lismore and Glenmore valleys is of the classical upland type, in which some Rowan (*Sorbus aucuparia*) and Downy Birch occur. Honeysuckle (*Lonicera periclymenum*) and Ivy (*Hedera helix*) cover many of the trees while Greater Woodrush, Bluebell (*Hyacinthoides non-scripta*), Wood Sorrel (*Oxalis acetosella*) and, locally, Bilberry dominate the ground flora. Ferns present on the site include Hard Fern (*Blechnum spicant*), Male Fern (*Dryopteris filix-mas*), Buckler Ferns (*D. dilatata, D. aemula*) and Lady Fern (*Athyrium felix-femina*). There are many mosses present and large species such as *Rhytidiadelphus* spp., *Polytrichum formosum, Mnium hornum* and *Dicranum* spp. are noticeable. The lichen flora is important and includes 'old forest' species which imply a continuity of woodland here since ancient times. Tree Lungwort (*Lobaria* spp.) is the most conspicuous and is widespread.

The Araglin valley consists predominantly of broadleaved woodland. Oak and Beech are joined by Hazel, Wild Cherry (*Prunus avium*) and Goat Willow (*Salix caprea*). The ground flora is relatively rich with Pignut (*Conopodium majus*), Wild Garlic (*Allium ursinum*), Garlic Mustard (*Alliaria petiolata*) and Wild Strawberry (*Fragaria vesca*). The presence of Ivy Broomrape (*Orobanche hederae*), a local species within Ireland, suggests that the woodland, along with its attendant Ivy is long established.

Along the lower reaches of the Awbeg River, the valley sides are generally cloaked with mixed deciduous woodland of estate origin. The dominant species is Beech, although a range of other species are also present, e.g. Sycamore (*Acer pseudoplatanus*), Ash and Horse-chestnut (*Aesculus hippocastanum*). In places the alien invasive species, Cherry Laurel, dominates the understorey. Parts of the woodlands are more semi-natural in composition, being dominated by Ash with Hawthorn (*Crataegus monogyna*) and Spindle (*Euonymus europaea*) also present. However, the most natural areas of woodland appear to be the wet areas dominated by Alder and willows (*Salix* spp.). The ground flora of the dry woodland areas features species such as Pignut, Wood Avens (*Geum urbanum*), Ivy and Soft Shield-fern (*Polystichum setiferum*), while the ground flora of the wet woodland areas contains characteristic species such as Remote Sedge (*Carex remota*) and Opposite-leaved Golden-saxifrage (*Chrysosplenium oppositifolium*).

In places along the upper Bride, scrubby, semi-natural deciduous woodland of Willow, Oak and Rowan occurs with abundant Great Woodrush in the ground flora.

The Bunaglanna River passes down a very steep valley, flowing in a north-south direction to meet the Bride River. It flows through blanket bog to heath and then scattered woodland. The higher levels of moisture here enable a vigorous moss and fern community to flourish, along with a well-developed epiphyte community on the tree trunks and branches.
At Banteer a type of wetland occurs near the railway line which offers a complete contrast to the others. Old turf banks are colonised by Royal Fern (*Osmunda regalis*) and Eared Willow (*Salix aurita*) and between them there is a sheet of Bottle Sedge (*Carex rostrata*), Marsh Cinquefoil (*Potentilla palustris*), Bogbean (*Menyanthes trifoliata*), Marsh St. John's-wort (*Hypericum elodes*) and the mosses *Sphagnum auriculatum* and *Aulacomnium palustre*. The cover is a scraw with characteristic species like Marsh Willowherb (*Epilobium palustre*) and Marsh Orchid (*Dactylorhiza incarnata*).

The soil high up the Lismore valleys and in rocky places is poor in nutrients but it becomes richer where streams enter and also along the valley bottoms. In such sites Wood Speedwell (*Veronica montana*), Wood Anemone (*Anemone nemorosa*), Enchanter's Nightshade (*Circaea lutetiana*), Barren Strawberry (*Potentilla sterilis*) and Shield Fern occur. There is some Wild Garlic, Three-nerved Sandwort (*Moehringia trinervia*) and Early-purple Orchid (*Orchis mascula*) locally, with Opposite-leaved Golden-saxifrage, Meadowsweet and Bugle in wet places. A Hazel stand at the base of the Glenakeeffe valley shows this community well.

The area has been subject to much tree felling in the recent past and re-sprouting stumps have given rise to areas of bushy Hazel, Holly, Rusty Willow (*Salix cinerea* subsp. *oleifoila*) and Downy Birch. The ground in the clearings is heathy with Heather (*Calluna vulgaris*), Slender St John's-wort (*Hypericum pulchrum*) and the occasional Broom (*Cytisus scoparius*) occurring.

The estuary and the other Habitats Directive Annex I habitats within it form a large component of the site. Very extensive areas of intertidal flats, comprised of substrates ranging from fine, silty mud to coarse sand with pebbles/stones are present. The main expanses occur at the southern end of the site with the best examples at Kinsalebeg in Co. Waterford and between Youghal and the main bridge north of it across the river in Co. Cork. Other areas occur along the tributaries of the Licky in east Co. Waterford and Glendine, Newport, Bride and Killahaly Rivers in Waterford west of the Blackwater and large tracts along the Tourig River in Co. Cork. There are narrow bands of intertidal flats along the main river as far north as Camphire Island. Patches of green algae (filamentous, *Ulva* species and *Enteromorpha* sp.) occur in places, while fucoid algae are common on the more stony flats even as high upstream as Glenassy or Coneen.

The area of saltmarsh within the site is small. The best examples occur at the mouths of the tributaries and in the townlands of Foxhole and Blackbog. Those found are generally characteristic of Atlantic salt meadows. The species list at Foxhole consists of Common Saltmarsh-grass (*Puccinellia maritima*), small amounts of Greater Sea-spurrey (*Spergularia media*), Glasswort (*Salicornia* sp.), Sea Arrowgrass (*Triglochin maritima*), Annual Sea-blite (*Suaeda maritima*) and Sea Purslane (*Halimione portulacoides*) - the latter a very recent coloniser - at the edges. Some Sea Aster (*Aster tripolium*) occurs, generally with Creeping Bent (*Agrostis stolonifera*). Sea Couch-grass (*Elymus pycnanthus*) and small isolated clumps of Sea Club-rush (*Scirpus maritimus*) are also seen. On the Tourig River additional saltmarsh species found include Lavender (*Limoniun* spp.), Sea Thrift (*Armeria maritima*), Red Fescue (*Festuca rubra*), Common Scurvy-grass (*Cochlearia officinalis*) and Sea Plantain (*Plantago maritima*). Oraches (*Atriplex* spp.) are found on channel edges.

The shingle spit at Ferrypoint supports a good example of perennial vegetation of stony banks. The spit is composed of small stones and cobbles and has a well developed and diverse flora. At the lowest part, Sea Beet (*Beta vulgaris*), Curled Dock (*Rumex crispus*) and Yellow-horned Poppy (*Glaucium flavum*) occur with at a slightly higher level Sea Mayweed (*Tripleurospermum maritimum*), Cleavers (*Galium aparine*), Rock Samphire (*Crithmum maritimum*), Sandwort (*Honkenya peploides*), Spear-leaved Orache (*Atriplex prostrata*) and Babington's Orache (*A. glabriuscula*). Other species present include Sea Rocket (*Cakile maritima*), Herb Robert (*Geranium robertianum*), Red Fescue (*Festuca rubra*) and Kidney Vetch (*Anthyllis vulneraria*). The top of the spit is more vegetated and includes lichens and bryophytes (including *Tortula ruraliformis* and *Rhytidiadelphus squarrosus*).

The site supports several Red Data Book plant species, i.e. Starved Wood Sedge (*Carex depauperata*), Killarney Fern (*Trichomanes speciosum*), Pennyroyal (*Mentha pulegium*), Bird's-nest Orchid (*Neottia nidus-avis*, Golden Dock (*Rumex maritimus*) and Bird Cherry (*Prunus padus*). The first three of these are also protected under the

Flora (Protection) Order 1999. The following plants, relatively rare nationally, are also found within the site: Toothwort (*Lathraea squamaria*) associated with woodlands on the Awbeg and Blackwater; Summer Snowflake (*Leucojum aestivum*) and Flowering Rush (*Butomus umbellatus*) on the Blackwater; Common Calamint (*Calamintha ascendens*), Red Campion (*Silene dioica*), Sand Leek (*Allium scorodoprasum*) and Wood Club-rush (*Scirpus sylvaticus*) on the Awbeg.

The site is also important for the presence of several Habitats Directive Annex II animal species, including Sea Lamprey (*Petromyzon marinus*), Brook Lamprey (*Lampetra planeri*), River Lamprey (*L. fluviatilis*), Twaite Shad (*Alosa fallax fallax*), Freshwater Pearl-mussel (*Margaritifera margaritifera*), Otter (*Lutra lutra*) and Salmon (*Salmo salar*). The Awbeg supports a population of White-clawed Crayfish (*Austropotamobius pallipes*). This threatened species has been recorded from a number of locations and its remains are also frequently found in Otter spraints, particularly in the lower reaches of the river. The freshwater stretches of the Blackwater and Bride Rivers are designated salmonid rivers.

The Blackwater is noted for its enormous run of salmon over the years. The river is characterised by mighty pools, lovely streams, glides and generally, a good push of water coming through except in very low water. Spring salmon fishing can be carried out as far upstream as Fermoy and is very highly regarded especially at Careysville. The Bride, main Blackwater upstream of Fermoy and some of the tributaries are more associated with grilse fishing.

The site supports many of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Pine Marten, Badger and Irish Hare. The bat species Natterer's Bat, Daubenton's Bat, Whiskered Bat, Brown Long-eared Bat and Pipistrelle, are to be seen feeding along the river, roosting under the old bridges and in old buildings.

Common Frog, a Red Data Book species that is also legally protected (Wildlife Act, 1976), occurs throughout the site. The rare bush cricket, *Metrioptera roselii* (Orthoptera: Tettigoniidae), has been recorded in the reed/willow vegetation of the river embankment on the Lower Blackwater River. The Swan Mussel (*Anodonta cygnea*), a scarce species nationally, occurs at a few sites along the freshwater stretches of the Blackwater.

Several bird species listed on Annex I of the E.U. Birds Directive are found on the site. Some use it as a staging area, others are vagrants, while others use it more regularly. Internationally important numbers of Whooper Swan (average peak 174, 1994/95-95/96) and nationally important numbers Bewick's Swan (average peak 5, 1996/97-2000/01) use the Blackwater Callows. Golden Plover occur in regionally important numbers on the Blackwater Estuary (average peak 885, 1984/85-86/87) and on the River Bride (absolute max. 2141, 1994/95). Staging Terns visit the site annually (Sandwich Tern (>300) and Arctic/Common Tern (>200), average peak 1974-1994). The site also supports populations of the following: Red Throated Diver, Great Northern Diver, Barnacle Goose, Ruff, Wood Sandpiper and Greenland White-fronted Goose. Three breeding territories for Peregrine Falcon are known along the Blackwater Valley. This, the Awbeg and the Bride River are also thought to support

at least 30 pairs of Kingfisher. Little Egret now breed at the site (12 pairs in 1997, 19 pairs in 1998) and this represents about 90% of the breeding population in Ireland.

The site holds important numbers of wintering waterfowl. Both the Blackwater Callows and the Blackwater Estuary Special Protection Areas (SPAs) hold internationally important numbers of Black-tailed Godwit (average peak 847, 1994/95-95/96 on the callows, average peak 845, 1974/75-93/94 in the estuary). The Blackwater Callows also hold Wigeon (average peak 2752), Teal (average peak 1316), Mallard (average peak 427), Shoveler (average peak 28), Lapwing (average peak 880), Curlew (average peak 416) and Black-headed Gull (average peak 396) (counts from 1994/95-95/96). Numbers of birds using the Blackwater Estuary, given as the mean of the highest monthly maxima over 20 years (1974-94), are Shelduck (137 +10 breeding pairs), Wigeon (780), Teal (280), Mallard (320 + 10 breeding pairs), Goldeneye (11-97), Oystercatcher (340), Ringed Plover (50 + 4 breeding pairs), Grey Plover (36), Lapwing (1680), Knot (150), Dunlin (2293), Snipe (272), Black-tailed Godwit (845), Bar-tailed Godwit (130), Curlew (920), Redshank (340), Turnstone (130), Black-headed Gull (4000) and Lesser Black-backed Gull (172). The greatest numbers (75%) of the wintering waterfowl of the estuary are located in the Kinsalebeg area on the east of the estuary in Co. Waterford. The remainder are concentrated along the Tourig Estuary on the Co. Cork side.

The river and river margins also support many Heron, non-breeding Cormorant and Mute Swan (average peak 53, 1994/95-95/96 in the Blackwater Callows). Heron occurs all along the Bride and Blackwater Rivers - 2 or 3 pairs at Dromana Rock; *c*. 25 pairs in the woodland opposite; 8 pairs at Ardsallagh Wood and *c*. 20 pairs at Rincrew Wood have been recorded. Some of these are quite large and significant heronries. Significant numbers of Cormorant are found north of the bridge at Youghal and there are some important roosts present at Ardsallagh Wood, downstream of Strancally Castle and at the mouth of the Newport River. Of note are the high numbers of wintering Pochard (e.g. 275 individuals in 1997) found at Ballyhay quarry on the Awbeg, the best site for Pochard in County Cork.

Other important species found within the site include Long-eared Owl, which occurs all along the Blackwater River, and Barn Owl, a Red Data Book species, which is found in some old buildings and in Castlehyde west of Fermoy. Reed Warbler, a scarce breeding species in Ireland, was found for the first time in the site in 1998 at two locations. It is not known whether or not this species breeds on the site, although it is known to nearby to the south of Youghal. Dipper occurs on the rivers.

Landuse at the site is mainly centred on agricultural activities. The banks of much of the site and the callows, which extend almost from Fermoy to Cappoquin, are dominated by improved grasslands which are drained and heavily fertilised. These areas are grazed and used for silage production. Slurry is spread over much of this area. Arable crops are grown. The spreading of slurry and fertiliser poses a threat to the water quality of this salmonid river and to the populations of Habitats Directive Annex II animal species within it. Many of the woodlands along the rivers belong to old estates and support many non-native species. Little active woodland management occurs. Fishing is a main tourist attraction along stretches of the Blackwater and its tributaries and there are a number of Angler Associations, some with a number of

beats. Fishing stands and styles have been erected in places. Both commercial and leisure fishing takes place on the rivers. Other recreational activities such as boating, golfing and walking are also popular. Water skiing is carried out at Villierstown. Parts of Doneraile Park and Anne's Grove are included in the site: both areas are primarily managed for amenity purposes. There is some hunting of game birds and Mink within the site. Ballyhay quarry is still actively quarried for sand and gravel. Several industrial developments, which discharge into the river, border the site.

The main threats to the site and current damaging activities include high inputs of nutrients into the river system from agricultural run-off and several sewage plants, dredging of the upper reaches of the Awbeg, overgrazing within the woodland areas, and invasion by non-native species, for example Cherry Laurel.

Overall, the River Blackwater is of considerable conservation significance for the occurrence of good examples of habitats and of populations of plant and animal species that are listed on Annexes I and II of the E.U. Habitats Directive respectively; furthermore it is of high conservation value for the populations of bird species that use it. Two Special Protection Areas, designated under the E.U. Birds Directive, are also located within the site - Blackwater Callows and Blackwater Estuary. Additionally, the importance of the site is enhanced by the presence of a suite of uncommon plant species.

7.2.2007

SITE SYNOPSIS

SITE NAME: BRAY HEAD

SITE CODE: 000714

This coastal site is situated in the north-east of Co. Wicklow between the towns of Bray and Greystones. Bedrock geology is Cambrian quartzites and shales (with mudstones and greywackes). Bray Head consists of a plateau of high ground, with five prominent quartzite knolls and has a maximum height of 241 m. The more exposed higher ground has a covering of shallow acidic soils, with protruding bedrock and scree. Elsewhere, deeper soils are formed by drift deposits, calcareous in character.

Heath, a habitat listed on Annex I of the EU Habitats Directive, is the principal habitat over much of the Head. The vegetation of the upper plateau area is dominated by dwarf shrubs, mainly Ling (*Calluna vulgaris),* Bell Heather (*Erica cinerea)* and Gorse (*Ulex europaeus* and *U. gallii*). Broom (*Cytisus scoparius*) also occurs and associated with the gorse and broom is the Red Data Book species Greater Broomrape (*Orobanche rapum-genistae).* In the areas where the shrubs are less dense Tormentil (*Potentilla erecta)*, Milkwort (*Polygala vulgaris)*, Heath Bedstraw (*Galium saxatile)* and a variety of grasses (e.g. *Aira praecox, Agrostis tenuis, Deschampsia flexuosa*) are present. Where rock outcrops occur species such as English Stonecrop (*Sedum anglicum)* and Sheep's-bit Scabious (*Jasione montana)* are found. Bracken (*Pteridium aquifolium)* is dominant in some areas.

The heath communities which occur on the dry slopes above the sea-cliffs, especially those south-facing, are more open in character and dominated by grasses rather than dwarf shrubs. The annual plant communities which develop here are very typical of those found only on sites in south-eastern Ireland. Common species include Wood Sage (*Teucrium scordonia)*, clovers (*Trifolium dubium, T. campestre)*, Scarlet Pimpernal (*Anagallis arvensis)* and Field Madder (*Sherardia arvensis).* An uncommon annual species which can appear abundantly in the heath after a fire event is Yellow Fumitory (*Corydalis claviculata).* Some rare plants are found in this habitat, notably Bird's-foot (*Ornithopus perpusillus)* and Spring Vetch (*Vicia lathyroides)*, both Red Data Book species.

Calcareous dry grassland, typically species-rich, occurs on deposits of glacial till. The primary grass species are Quaking Grass (*Briza media*), Smooth Meadow-grass (*Poa pratensis*) and Red Fescue (*Festuca rubra*). Typical calcicole herbs include Pale Flax (*Linum bienne*), Salad Burnet (*Sangusiorba minor*), Burnet-saxifrage (*Pimpinella saxifrage*), Carline Thistle (*Carlina vulgaris*) and Kidney Vetch (*Anthyllis vulneraria*). Orchids are a feature of this habitat, with five species known from the area - Pyramidal Orchid (*Anacamptis pyramidalis*), Common Spotted Orchid (*Dactylorhiza fuchsii*), Common Twayblade (*Listera ovata*), Fragrant Orchid (*Gymnadenia conopsea*) and Bee Orchid (*Ophrys apifera*). Bloody Crane's-bill

(*Geranium sanguineum*) was refound recently in this community at Bray Head - this is a typical species of the Burren and is very rare in eastern Ireland.

Rocky sea cliffs, another Annex I habitat, form most of the seaward boundary at this site and extend for approximately 2 km. Steep clay cliffs extend southwards for a further 1 km, with a small area of clay cliff also at the northernmost part of site. The rocky cliffs are divided by a railway track built in the 1800s. The lower cliffs are fairly steep in places but above the track they are less steep and often support heath or dry grassland vegetation. In parts the cliffs are up to 60 m in height. Typical species of the more exposed rock areas are Common Scurvy-grass (*Cochlearia officinalis)*, Rock Spurrey (S*pergularia rupicola),* Thrift *(Armeria maritima),* Sea Campion *(Silene maritima),* and Sea Samphire *(Crithmum maritimum)*. On some sections of the cliff face, the locally scarce Tree Mallow (*Lavatera arborea*) is found. Species of the upper cliff flora include Kidney Vetch (*Anthyllis vulneraria)* and Red Fescue. A widespread species found from the mid to upper zones of the cliff face is Ivy (*Hedera helix)*. Associated with the Ivy is the scarce *Rubia peregrina.* The clay cliffs in the southern part of the site are steep and unstable and have little vegetation.

A stand of mostly native woodland occurs in the northern part of the site. This is a fairly pure Sessile Oak (*Quercus petraea)* dominated woodland, with some Ash (*Fraxinus excelsior*) and Birch (*Betula pubescens*). Understorey trees which occur are Holly (*Ilex aquifolium)* and Hawthorn (*Crataegus monogyna*). The wood is on shallow drift and the ground flora often has species more associated with heath than woodlands. Other habitats which are found at this site include bedrock shore, a sandy/shingle beach and an area of shallow marine water.

Bray Head has an important seabird colony. A census in 1999 gave the following populations: Fulmar (55 pairs), Shag (8 pairs), Kittiwake (781+ pairs), Guillemots (286 individuals), Razorbills (191 individuals) and Black Guillemots (123 individuals). A few pairs of gulls also breed. Both the Kittiwake and Black Guillemot populations are of national importance.

Peregrine Falcon, an Annex I species of the EU Birds Directive, breeds, as well as Raven and Kestrel. Characteristic bird species of the heath areas are Stonechat, Whitethroat, Linnet and Skylark.

The heath and grassland habitats at this site are threatened by reclamation for agriculture and also by frequent burning. The site is a popular recreational area and is especially used by walkers.

Bray Head is of high conservation importance as it has good examples of two habitats (sea cliffs and dry heath) listed on Annex I of the EU Habitats Directive. It also supports a number of rare plant species and has ornithological importance.

22.10.1999

SITE SYNOPSIS

SITE NAME: BUCKRONEY-BRITTAS DUNES AND FEN

SITE CODE: 000729

This site is a complex of coastal habitats located about 10 km south of Wicklow town. It comprises two main sand dune systems, Brittas Bay and Buckroney Dunes, connected on the coast by the rocky headland of Mizen Head. The dunes have cut off the outflow of a small river at Mizen Head and a fen, Buckroney Fen, has developed on the site. A further small sand dune system occurs south of Pennycomequick Bridge. Ten habitats listed on the EU Habitats Directive, including two priority habitats, occur within the site.

Along much of the higher parts of the beach, typical annual strandline vegetation occurs. Species such as Sea Rocket (*Cakile maritima*), Prickly Saltwort (*Salsola kali*) and Spear-leaved Orache (*Atriplex prostrata*) are frequent in this zone, with the scarcer Yellow-horned Poppy (*Glaucium flavum*) present in places. Embryonic dune development occurs at the southern part of Brittas and more widely at Buckroney and Pennycomequick. Typical species are Couch-grass (*Elymus* sp.), Sand Sedge (*Carex arenaria*) and Sea Sandwort (*Honkenya peploides*). The main dune ridges are dominated by Marram (*Ammophila arenaria*), with herbaceous species such Sea Spurge (*Euphorbia paralias*), Sea Holly (*Eryngium maritimum*) and Rest Harrow (*Ononis repens*) occurring throughout. The main dune ridges are well developed reaching heights of 10 m at Brittas. The northern end of the Brittas system has fine examples of parabolic dunes.

Stable fixed dunes, a priority habitat on Annex I of the EU Habitats Directive, are well developed at Brittas and Buckroney. Marram is less frequent and is replaced by Red Fescue (*Festuca rubra*). A rich flora occurs, especially in the more open areas. Common species include Pyramidal Orchid (*Anacamptis pyramidalis),* Common Milkwort *(Polygala vulgaris),* Wild Pansy (*Viola tricolor* subsp. *curtisii*), Carline Thistle (*Carlina vulgaris*), Biting Stonecrop (*Sedum acre*), Wild Thyme (*Thymus praecox*) and Common Bird's-foot-trefoil *(Lotus corniculatus).* The mature areas of fixed dune also contain Burnet Rose (*Rosa pimpinellifolia),* Bracken *(Pteridium aquilinum),* Wood Sage *(Teucrium scordonia)* and Common Sorrel (*Rumex acetosa).* Mosses such as *Tortula ruralis* subsp. *ruraliformis, Rhytidiadelphus triquetris*, and *Homalothecium lutescens* are frequent, along with lichens (*Cladonia* spp., *Peltigera canina).*

This is one of the few Irish east coast sites to possess good examples of wet dune slacks and dunes with Creeping Willow (*Salix repens*). These dunes have a rich and varied flora, including such species as Creeping Willow*,* Water Mint *(Mentha aquatica),* Silverweed *(Potentilla anserina),* Meadowsweet *(Filipendula ulmaria)* and Meadow Thistle *(Cirsium dissectum).* The slacks are notably rich in rushes and sedges. Of particular interest is the presence of Sharp Rush (*Juncus acutus),* a scarce species in eastern Ireland and one that is indicative of a saline influence.

The site is also notable for the presence, at the back of the dunes, of areas of decalcified dune heath, a rare habitat in Ireland and one that is also listed with priority status on the EU Habitats Directive. Heath species present include Ling (*Calluna vulgaris*), Bell Heath (*Erica cinerea)* and Gorse (*Ulex europaeus*).

Buckroney Fen lies west of Mizen Head. It is backed to the west by a dense swamp of Common Reed (*Phragmites australis*). The fen is dominated by Tussock Sedge (*Carex paniculata*), with Water Mint, Purple Loosestrife (*Lythrum salicaria*), Marsh Pennywort (*Hydrocotyle vulgaris*), Greater Bird's-foot-trefoil (*Lotus uliginosus*), Water Horsetail (*Equisetum fluviatile*), small sedges (*Carex* spp.) and other flowering plants. An extensive stand of *Juncus subnodulosus* is of note. Throughout this area the rare Marsh Fern (*Thelypteris palustris*) is frequent. There are also extensive areas of Rusty Willow (*Salix cinerea* subsp. *oleifolia*) scrub.

This site contains two rare plant species protected under the Flora (Protection) Order, 1999: Wild Asparagus (*Asparagus officinalis* subsp. *prostratus*), in its most northerly Irish station, and Meadow Saxifrage (*Saxifraga granulata*). Other rare species which occur within the site include Green-flowered Helleborine (*Epipactis phyllanthes*), Bird's-foot (*Ornithopus perpusillus*) and Spring Vetch (*Vicia lathyroides*). All of these are Red Data Book species. The rare sedge hybrid, *Carex riparia* x *C. vesicaria* (*Carex* x *csomadensis*) is only known from Mizen Head.

The invertebrate fauna of Buckroney fen has been investigated and some notable species have been recorded, including the beetle *Eurynebria complanata* and the following flies: *Machimus cowini, Anasimyia lunulata, Parhelophilus consimilis* and *Lejogaster splendia*.

Little Tern, a species listed on Annex I of the EU Birds Directive, has bred or attempted to breed at Buckroney strand in recent years. In 1992 between 7 and 10 pairs were present and in 1993 up to 8 pairs. Teal are regular in winter (119), as are Curlew (46), Lapwing (515) and Snipe (87). All figures are average peaks for 1994/95 - 1995/96.

The dune systems and beaches are subject to high amenity usage from day-trippers and several areas around the site have been developed as caravan parks, car parks and golf courses. The marginal areas of the fen have been reclaimed, especially at the south end, though these areas still flood in winter and attract waterfowl.

This site is important as an extensive sand dune/fen system with well developed plant communities. Several coastal habitats listed on the EU Habitats Directive, including two priority habitats - fixed dune and decalcified dune heath - are present. The area contains two legally protected plants, as well as a number of other rare or scarce plant species. The site provides habitat for some rare species of invertebrate and for the vulnerable Little Tern. A rich flora and fauna has persisted on this site despite extensive amenity use and adjacent farming. However, future land use practices will need to be managed to ensure the continued survival of this unique mosaic of coastal habitats.

16.10.2001

SITE SYNOPSIS

SITE NAME: CARRIGGOWER BOG

SITE CODE: 000716

Carriggower Bog is situated on Calary plateau at the eastern edge of the Wicklow Mountains,. The site is an area of wet bog and poor fen, flanked by the Vartry River on the south-western side.

This site is a candidate SAC selected for transition mire, a habitat listed on Annex I of the EU Habitats Directive.

The bog was exploited for peat extraction until 100 years ago and the peat cuttings are now flooded. The remaining bog vegetation is characterised by bog moss hummocks. Several species of *Sphagnum* are found including *Sphagnum recurvum*. On top of the hummocks Heather (*Calluna vulgaris*) and Cross-leaved Heath (*Erica tetralix*) are dominant. Between the hummocks, in the wet areas, Bog Asphodel (*Narthecium ossifragum*), Bogbean (*Menyanthes trifoliata*) and Common Cottongrass (*Eriophorum angustifolium*) are common, while Purple Moor-grass (*Molinia caerulea*) is locally abundant.

Birch (*Betula pubescens*) and Willow (*Salix* spp.) dominate an area of scrub at the centre of the site.

Very wet areas of transition mire occur on the south-western side of the site. The whole area is quaking and is characterised by a mosaic of sedges, grasses and rushes. Bottle Sedge (*Carex rostrata*) is the most abundant sedge, but others include White Sedge (*Carex curta*), Star Sedge (*Carex echinata*) and Carnation Sedge (*Carex panicea*). Purple Moor-grass and Sharp-flowered Rush (*Juncus acutiflorus*) are also present.

Towards the northern side of the site there are rock outcrops of quartzite which form low knolls. This area is partly covered by heath vegetation, dominated by Gorse (*Ulex europaeus*), Bell Heather (*Erica cinerea*) and Heather, all of which are growing over a grassy sward grazed by sheep. The main grasses are Sweet Vernal-grass (*Anthoxanthum odoratum*), Yorkshire-fog (*Holcus lanatus*), Creeping Soft-grass (*Holcus mollis*) and Bent Grass (*Agrostis* spp.)

The mosaic of transition bog habitats supports a wide range of poor fen/bogland invertebrates, including a suite of wetland species of international importance (most of the Order Diptera).

Carriggower Bog is a notable site for wintering Snipe (117 – mean winter count 1996/97 to 2000/01) and Jack Snipe (16 – mean winter count 1996/97 to 2000/01). These numbers are probably of national importance and the site has consistently held

the highest national count for Jack Snipe in recent years. The very wet bog is prime habitat for both these species.

This site is of conservation importance because it shows a good transition between fen and bog vegetation (with the fen being rapidly colonised by characteristic bog species). The area holds a rich and varied flora and it provides a habitat for some rare invertebrates; Carrigower Bog is the last remaining site in Wicklow from which some of these remaining invertebrates are recorded.

18.06.2003

SITE SYNOPSIS

SITE NAME: COMERAGH MOUNTAINS

SITE CODE: 001952

The Comeragh Mountains are situated approximately 11 km south-west of Carrick-on-Suir. They consist of a plateau of Old Red Sandstone whose edges have been deeply scarred by recent glaciation. Corries and deep valleys are cut into the eastern and western sides leaving a central ridge whose width is reduced to 270 m at its narrowest point. The rocks, which are horizontally-bedded, stand out as a series of terraces around these corries, which often house small mountain lakes such as Coumshingaun, the Sgilloge Loughs, the Coum Iarthar Loughs and Crotty's Lough.

The central plateau is at an altitude of about 700 m and supports areas of blanket bog. The peat is up to 2 m deep in places and is rich in Cottongrass (*Eriophorum angustifolium* and *E. vaginatum*), Deergrass (*Scirpus cespitosus*), Heather (*Calluna vulgaris*), Crowberry (Empetrum nigrum) and mosses (*Sphagnum* spp., *Polytrichum* spp.). North of Coummahon, the blanket bog has suffered from erosion, in many places down to the underlying bedrock. Eroding channels, hummocks and flats of loose peat are also present.

Heath vegetation grows on the well-drained rock debris of slopes and moraines, but also secondarily on eroded areas. Typical species include Heather, Bell Heather (*Erica cinerea*), Bilberry (*Vaccinium myrtillus*), Tormentil (*Potentilla erecta*), Fescues (*Festuca* spp.) and Bents (*Agrostis* spp.). On the northern and eastern sides of the site Bracken (*Pteridium aquilinum*) is abundant, with some colonisation by Common Gorse (*Ulex europaeus*), Holly (*Ilex aquifolium*) and Rowan (*Sorbus aucuparia*).

The cliff flora contains many mountain species, including several for which this is their only station in Waterford. St. Patrick's-cabbage (*Saxifraga spathularis*) grows at Coumshingaun where there are also records for such plants as Mossy Saxifrage (*Saxifraga hypnoides*), Dwarf Willow (Salix herbacea), Cowberry (*Vaccinium vitis-idaea*), Roseroot (*Rhodiola rosea*) and the ferns, *Hymenophyllum wilsonii* and *Cystopteris fragilis*.

Coumshingaun Lough, which is located on the eastern slope, is an excellent example of an ultra-oligotrophic lake. Unlike most corrie lakes the water is exceptionally clear. It contains a stonewort, *Nitella flexilis* and also Bog Pondweed (*Potamogeton polygonifolius*) but only down to the relatively shallow depth of 5 m. Shining sicklemoss (*Drepanocladus vernicosus*), a species listed on Annex II off the EU Habitats Directive, has been recorded at Sgilloge Loughs.

Peregrine, a species listed on Annex I of the EU Birds Directive, breeds within the site, as does Raven. Hen Harrier, also listed on this annex, is found on the site as is Irish Hare, a Red Data Book species. Arctic Char has been recorded from the

Comeragh Lakes, though not since 1930. This species is listed in the Red Data Book as threatened in Ireland.

The integrity of the remaining areas of blanket bog and the general habitat diversity of the site are under threat from landuse pressures such as grazing, burning, afforestation and leisure activities.

This large site has a diverse range of habitats, including blanket bog, heath, upland grassland, scree, exposed rock, lakes and streams. The blanket bog represents the south-eastern extremity of its range in Ireland. There are many corries, most of which have associated oligotrophic lakes.

10.12.2001

SITE SYNOPSIS

SITE NAME : CULLAHILL MOUNTAIN

SITE CODE : 000831

This site lies on a western outlier of the Castlecomer plateau, 6 km north-east of Johnstown, where the underlying limestone has been exposed relatively recently by erosion of the higher shales. The rock is in the form of an escarpment with a steep side facing the central plain (and the Cork-Dublin road) and more gradual slopes to the south-east where the shale soon appears.

The vegetation of most of the site comprises a herb-rich grassland over limestone, in which no one species predominates. The coexistence of about 5 grass species, 2 sedges and 20 broad-leaved herbs is one of the most interesting features of the vegetation and it allows a rich insect fauna to maintain itself. Grasses found include Quaking-grass (*Briza media*), Crested Dog's-tail (*Cynosurus cristatus*), Sheep's-fescue (*Festuca ovina*), Downy Oat-grass (*Avenula pubescens*) and Yellow Oat-grass (*Trisetum flavescens*). Amongst these grasses Mouse-ear Hawkweed (*Hieracium pilosella*), Wild Thyme (*Thymus praecox*), Bird's-foot-trefoil (*Lotus corniculatus*), Lady's Bedstraw (*Galium verum*), Carline Thistle (*Carlina vulgaris*), Mountain Everlasting (*Antennaria dioica*), Purging Flax (*Linum catharticum*) and Eyebright (*Euphrasia* sp.) grow, while a number of smaller annual species are associated with rock outcrops. The orchid flora of the grassland is notably rich, with Twayblade (*Listera ovata*), Frog Orchid (*Coeloglossum viride*), Bee Orchid (*Ophrys apifera*), Early-purple Orchid (*Orchis mascula*) and Green-winged Orchid (*Orchis morio*) occurring.

Green-winged Orchid is a rare species that is legally protected under the Flora Protection Order (1987) and the site is particularly notable for the abundance of this species (some 350 individuals were recently recorded from the site).

On its west side, the site extends downslope to some Ash (*Fraxinus excelsior*)/Hazel (*Corylus avellana*) woodland which is regenerating well and spreading on the hill. Some of the trees grow out of moss-covered rocks and though the ground flora is as yet fairly sparse most of the expected species occur somewhere within the wood. Woodland on limestone is quite rare in the Midlands and is distinct from adjacent Hazel stands on shale, such as at Spahill.

The importance of the site lies in the presence of the large population of Green-winged Orchid in grassland referable to a type listed, with priority status, on Annex I of the EU Habitats Directive.

5.2.1997

SITE SYNOPSIS

SITE NAME: DEPUTY'S PASS NATURE RESERVE

SITE CODE: 000717

Deputy's Pass woodland is located on the northern spur of the Deputy's Pass near Glenealy, Co. Wicklow. It was designated a Nature Reserve in 1982.

The predominant vegetation community on the site is Sessile Oak (*Quercus petraea*) woodland referable to the Blechno-Quercetum petraeae association, a habitat that is listed on the EU Habitats Directive. The Oak is of coppice origin, 70-80 years old, and forms a nearly closed canopy. Other tree species present are Rowan (*Sorbus aucuparia*), Holly (*Ilex aquifolium*), and Downy Birch (*Betula pubescens*), occurring mainly at the edges. In some areas Beech (*Fagus sylvatica*) also occurs. The understorey is formed of Oak saplings, Holly and Hazel (*Corylus avellana*), while the vegetation of the floor of the wood is dominated by Great Wood-rush (*Luzula sylvatica*), Bilberry (*Vaccinium myrtillus*), Hard Fern (*Blechnum spicant*), and Bramble (*Rubus fruticosus* agg.). Heather (*Calluna vulgaris*) and Bracken (*Pteridium aquilinum*) are abundant in some areas. In some parts, Bluebells (*Hyacinthoides non-scripta*), Male Fern (*Dryopteris filix-mas*), Hay-scented Buckler Fern (*D. aemula*), Wood Sanicle (*Sanicula europea*) and Wood-sorrel (*Oxalis acetosella*) occur commonly.

The regeneration of native trees and the good ground cover indicate an absence of grazing; there are no sheep in the site and deer very seldom occur.

Less than 10% of the site is occupied by conifers: 20-30 years old plantations of Douglas Fir, Sitka Spruce, Norway Spruce, European Larch and Scots Pine. Once mature these small stands will be removed, to allow native species to naturally replace them.

The site supports breeding populations of the Smooth Newt (*Triturus vulgaris*) and the Common Frog (*Rana temporaria*), two amphibians protected by the 1976 Wildlife Act.

Deputy's Pass is managed as a Nature Reserve and is part of an internationally important series of Oak woods in County Wicklow (Glendalough, Clara Vale, Ballinacor, amongst others), which are almost certainly natural in origin and which retain much of their original character and species composition.

9.12.1999

SITE SYNOPSIS

SITE NAME: GALMOY FEN

SITE CODE: 001858

Galmoy Fen is situated 7 km north of Johnstown in Co. Kilkenny, close to the boundary with Co. Laois. It comprises a cutover raised bog that has become flooded with base-rich groundwater and that now supports alkaline fen vegetation. It lies in a depression and is underlain by Carboniferous limestone.

This site is a candidate SAC selected for alkaline fen, a habitat listed on Annex I of the E.U. Habitats Directive.

The central part of the site comprises an area of cutover raised bog with numerous peat-cuttings, resulting in a mosaic of dry peat banks and wet peaty pools. The peat banks support typical bog species, e.g. Ling Heather (*Calluna vulgaris*), Gorse (*Ulex europaeus*) and Purple Moor-grass (*Molinia caerulea*), while the pools, which have become flooded with base-rich groundwater, support alkaline fen vegetation with such species as Black Bog-rush (*Schoenus nigricans*), Great Fen-sedge (*Cladium mariscus*) and Bog Mosses (*Sphagnum* spp.), amongst others. A large area of alkaline fen vegetation surrounds the central part of the site; this area has a number of large pools that support calcicole species.

Other habitats present on the site include Gorse scrub, wet grassland, improved grassland, dry calcareous grassland with such species as Fairy Flax (*Linum catharticum*), Wild Thyme (*Thymus praecox*) and Mountain Everlasting (*Antennaria dioica*), and a small area planted with Sitka Spruce (*Picea sitchensis*). A stream brings water to the site on its north-east side.

The site supports a rich assemblage of invertebrates associated with fen and bog habitats. Irish Hare and Common Frog, both Red Data Book species, also occur.

Parts of the site are grazed by cattle and the whole area is used for shooting.

Galmoy Fen is of considerable conservation significance as it comprises a good quality example of alkaline fen, a habitat that is listed on Annex I of the E.U. Habitats Directive.

18.06.2003

SITE SYNOPSIS

SITE NAME: GLEN OF THE DOWNS

SITE CODE: 000719

This site is a semi-natural Oak wood situated within an impressive glacial overflow channel. It is located on the Dublin-Wexford road about 7 km south of Bray, Co. Wicklow. The underlying rock is mostly quartzite and it outcrops in a few places. The soil is a sandy loam, Brown Earth to Brown Podzolic, and is very dry over much of the site. Most of the site has been a Nature Reserve since 1980.

Much of the site comprises Sessile Oak (*Quercus petraea*) woodland referable to the Blechno-Quercetum petraeae association. Sessile Oak is especially dominant on the mid to upper slopes. The quality of the Oak-dominated areas is variable - the association is well developed and especially pure on the western side, while in some places it occurs as coppice scrub. The shrub layer is sparse but Holly (*Ilex aquilinum*) is locally common. On the ground, Great Wood-rush (*Luzula sylvatica*) forms a dense carpet over much of the area, with other species such as Bilberry (*Vaccinium myrtillus*), Heather (*Calluna vulgaris*) and Wood Sage (*Teucrium scorodonia*) occurring occasionally. Brambles (*Rubus fruticosus* agg.) and ferns such as Soft Shield-fern (*Polystichum setiferum*) are abundant in places, especially on the south-western slopes.

The site includes some areas of mixed woodland, in which Beech (*Fagus sylvatica*), Sycamore (*Acer pseudoplatanus*), Scot's Pine (*Pinus sylvestris*) and other exotics occur. Bryophytes are notably scarce within the valley and may reflect the dryness of the site, however, some rare species have been recorded.

A narrow band of alluvium associated with a small stream occurs on the valley floor. There, the woodland is dominated by Ash (*Fraxinus excelsior*) and Hazel (*Corylus avellana*), with a species-rich herb layer that includes Ramsons (*Allium ursinum*), Dog Violet (*Viola riviniana*) and Bluebells (*Hyacinthoides non-scripta*).

A breeding bird census carried out in 1990 recorded a total of 21 species holding territory. Wren, Robin, Blue Tit, Chaffinch and Great Tit were the most abundant species. Blackcap and Jay also breed, and the rare Wood Warbler has been recorded. Grey Wagtail breeds along the stream.

The site is notable for the presence of the rare bryophytes, *Cephaloziella turneri*, *Pterigynandrum filiforme* and *Plagiothecium curvifolium*, the last named in its only Irish site, as well as for several rare or scarce Myxomycete fungi, namely *Echinostelium colliculosum*, *Licea marginata, L. perexigua*, *Perichaena vermicularis*, *Comatricha ellae* (only known Irish site), *Diderma chondrioderma* and *Didymium crustaceum*.

Glen of the Downs is also notable for some rare invertebrates, including *Mycetobia obscura* (Diptera) which is found in only one other locality in Britain and Ireland. The glacial overflow channel is the largest example of such a feature in the country.

Although exploited heavily in the past, this woodland is well developed, rich in species and one of high conservation significance. The site supports Oak woodland of a type that is listed on Annex II of the EU Habitats Directive.

1.2.1999

SITE SYNOPSIS

SITE NAME: GLENDINE WOOD

SITE CODE: 002324

Glendine Wood lies 3-4 km north-east of Dungarvan, Co. Waterford and consists of a steep-sided, narrow ravine cut through a low ridge of Old Red Sandstone by the Glendine River. Woodland covers the valley sides and the land to the east and west of the mouth of the ravine. The site is selected as a candidate SAC.

The vegetation of the ravine is of Ash (*Fraxinus excelsior*)/Hazel (*Corylus avellana*) woodland with scattered Wych Elm (*Ulmus glabra*) and a little Sycamore (*Acer pseudoplatanus*). The field layer is rich and varied with ferns forming a distinctive feature, and includes such species as Male-fern (*Dryopteris filix-mas*), Ivy (*Hedera helix*), Honeysuckle (*Lonicera periclymenum*), Wood-sorrel (*Oxalis acetosella*), Wood Speedwell (*Veronica montana*), Enchanter's-nightshade (*Circaea lutetiana*), Wavy Bitter-cress (*Cardamine flexuosa*), Wood Avens (*Geum urbanum*), Meadowsweet (*Filipendula ulmaria*), Herb-Robert (*Geranium robertianum*), Great Wood-rush (*Luzula sylvatica*), Golden-saxifrage (*Chrysosplenium oppositifolium*), Hart's-tongue (*Phyllitis scolopendrium*), Soft Shield-fern (*Polystichum setiferum*), Bramble (*Rubus fruticosus*), Holly (*Ilex aquifolium*), Remote Sedge (*Carex remota*), False Brome (*Brachypodium sylvaticum*), amongst others. The bryophyte flora is species-rich and luxuriant. Above the ravine the woodland is dominated by dense stands of the introduced Cherry Laurel (*Prunus laurocerasus*). The adjacent woodland is of mixed Oak (*Quercus* sp.) and Ash with some conifers.

The woodland supports a population of badgers, a Red Data Book species. Dipper, a bird associated with clean, fast-flowing rivers, also occurs within the site.

To safeguard the site it is important that any adjacent or upstream developments do not interfere with the site or its hydrology.

20.6.2003

SITE SYNOPSIS

SITE NAME: HELVICK HEAD

SITE CODE: 000665

Helvick Head is situated on the southern side of Dungarvan Harbour in Co. Waterford. It forms the eastern extremity of a broad Old Red Sandstone ridge which extends as far west as Cork City and is the most northern of the (Hercynian) parallel folds in the rocks of the south-west of Ireland. The beds of rock dip quite steeply at this point so that the cliffs, which rise to about 60 m, are formed of a series of semi-vertical ribs with small gullies between them, especially at the eastern end. The site extends from Helvick Head south-westward to include Muggort's Bay and comprises sea cliffs, cliff top vegetation and an area of marine waters off Helvick Head.

The site is a candidate SAC selected for dry heath and vegetated sea cliffs, both habitats that are listed on Annex I of the E.U. Habitats Directive.

The cliff top supports coastal heath of a type characteristic of shallow soils on acid rocks. Autumn Gorse (*Ulex gallii*), Bell Heather (*Erica cinerea*) and Ling (*Calluna vulgaris*) form the main dominants. Associated species include Wood Sage (*Teucrium scorodonia*), Sheep's-bit (*Jasione montana*), Devil's-bit Scabious (*Succisa pratensis*), Slender St. John's-wort (*Hypericum pulchrum*), Mouse-ear Hawkweed (*Hieracium pilosella*), Heath Bedstraw (*Galium saxatile*), English Stonecrop (*Sedum anglicum*), Common Dog-violet (*Viola riviniana*), Goldenrod (*Solidago virgaurea*), Burnet Rose (*Rosa pimpinellifolia*) and a variety of bryophyte and lichen species. Common grass species are Common Bent (*Agrostis capillaris*) and Sweet Vernal-grass (*Anthoxanthum odoratum*). The presence of Wild Madder (*Rubia peregrina*) is indicative of the southern location of the site. Where heath has returned to formerly-reclaimed fields, Common Gorse (*Ulex europaeus*), Bracken (*Pteridium aquilinum*) and Brambles (*Rubus fruticosus*) occur more commonly. Coastal grassland with Red Fescue (*Festuca rubra*), Creeping Bent (*Agrostis stolonifera*), Yarrow (*Achillea millifolium*), Buck's-horn Plantain (*Plantago coronopus*), Daisy (*Bellis perennis*), Sea Mayweed (*Tripleurospermum maritimum*), Common Sorrel (*Rumex acetosa*), Wild Carrot (*Daucus carota*), Thrift (*Armeria maritima*), Kidney Vetch (*Anthyllis vulneraria*), amongst others also occurs in places on the cliff top, where heath has not developed.

Sea cliffs are particularly well developed at the eastern end of the site and are well vegetated with Thrift, Ivy (*Hedera helix*), Common Scurveygrass (*Cochlearia officinalis*), Sea Campion (*Silene maritima*), Rock Sea-spurrey (*Spergularia rupicola*), Buck's-horn Plantain, lichens, and a variety of other species.

Helvick Head has important breeding seabird populations. A census in 1999 recorded the following: Fulmar 42 pairs, Shag 6 pairs, Herring Gull 44 pairs, Great Black-backed Gull 2 pairs, Kittiwake 934 pairs, Guillemot 990 individuals and Razorbill 41 individuals. In April 1998, 10 individual Black Guillemots were recorded. The

population of Kittiwakes is of National Importance. The site also supports Chough, a species listed on Annex I of the E.U. Birds Directive. The low heath vegetation on the cliff tops provides good foraging habitat for Chough and in 1992 one definite breeding pair was recorded, as well as three flock birds. Another Annex I species, Peregrine, also occurs at the site. Raven breed on the cliffs and there is a cliff-nesting colony of House Martins. Other species which breed within the site include Rock Pipit and Stonechat. The seabird colony at Helvick Head has been monitored at intervals since the Operation Seafarer project in 1969/70. In addition, more detailed population studies have been carried out on the Kittiwake colony.

Helvick Head is a site of considerable conservation, including as it does, good examples of coastal dry heath and vegetated sea cliffs, both habitats that are listed on Annex I of the E.U. Habitats Directive. It is also of high ornithological importance, with one seabird species having a population of national importance. The presence of breeding Chough and Peregrine is also of note.

SITE SYNOPSIS

SITENAME: HOLDENSTOWN BOG

SITECODE: 001757

Holdenstown bog is situated about 3 km south-east of Baltinglass, Co. Wicklow. It is a small raised bog surrounded by transition mire which has developed in a kettle hole.

Holdenstown Bog is a candidate SAC selected for transition mire, a habitat listed on Annex I of the E.U. Habitats Directive.

The whole bog is very wet and the surface has a hummock-hollow topography. The hummocks are dominated by Heather (*Calluna vulgaris*), while the hollows have a range of bog mosses (*Sphagnum* spp.). In addition, there is a good diversity of sedges (*Carex* spp.), including the scarce Bog Sedge (*Carex limosa*), the only locality for this species in county Wicklow. Other plants typical of the bog include Cranberry (*Vaccinium oxycoccos*) and Bogbean (*Menyanthes trifoliata*).

The margins of the bog support wet scrub vegetation in which Alder (*Alnus glutinosa*) and Willow (*Salix cinerea* subsp. *oleifolia*) are prevalent. The rest of the bog perimeter is rich in sedges (*Carex nigra*, *C. otrubae*, *C. hirta*), rushes *(Juncus articulatus*, *J. subnodulosus*), as well as a range of wetland herbaceous plants such as Water Mint (*Mentha aquatica*), Marsh-marigold (*Caltha palustris*) and Water Horsetail (Equisetum fluviatile).

Holdenstown Bog is of conservation importance as an intact example of transition mire, a habitat listed on Annex I of the E.U. Habitats Directive, and for a range of plant species typical of incipient raised bog development.

26.11.2002

SITE SYNOPSIS

SITE NAME: HUGGINSTOWN FEN

SITE CODE: 000404

Hugginstown Fen is situated approximately 4 km south-west of Ballyhale, Co. Kilkenny. The site consists of a relatively large, isolated area of swamp and floating fen developed in a small valley in hilly country. It is underlain by limestone glacial till overlying and surrounded by acid Old Red Sandstone. The catchment is relatively small and iron-rich springs are an important source of water for the wetland.

The site is a candidate Special Area of Conservation selected for alkaline fen, a habitat listed on Annex I of the E.U. Habitats Directive. The northern third of the fen is dominated by Common Reed (*Phragmites australis*) swamps with some small areas of open water near springs. The remainder of the site consists of species-rich fen, partly developed on mats of floating vegetation, dominated by a tall herb community in which Meadowsweet (*Filipendula ulmaria*), Wild Angelica (*Angelica sylvestris*), Water Horsetail (*Equisetum fluviatile*), Bulrush (*Typha latifolia*), Water Mint (*Mentha aquatica*) and Lesser Tussock-sedge (*Carex diandra*) are common. Other species present include Nodding Bur-marigold (*Bidens cernua*), Marsh St. John's-wort (*Hypericum elodes*), Black Bog-rush (*Schoenus nigricans*) and Tubular Water-dropwort (*Oenanthe fistulosa*).

Species-rich Rush/Purple Moor-grass (Junco-Molinion) grassland occurs in drained areas at the southern and northern end and around the margins at the peat-mineral interface. Small clumps of Willow (*Salix* sp.) occur occasionally on the fen margin. An interesting feature of this area is that the water flows overground initially then disappears abruptly underneath the floating fen vegetation.

Two uncommon insect species recorded from Hugginstown Fen are Scarce Emerald Damselfly (*Lestes dryas*) and the Hoverfly *Parhelophis consimilis*. The Common Frog, a Red Data Book species, is frequent at the site.

Although this site has been damaged to some extent by drainage, especially in the southern part, it contains an important example of an alkaline fen, a habitat listed on Annex I of the E.U. Habitats Directive and remains one of the most interesting and diverse fen sites in Ireland.

13.06.2003

SITE SYNOPSIS

SITE NAME: KNOCKSINK WOOD

SITE CODE: 000725

Knocksink Wood is situated in the valley of the Glencullen River north-west of Enniskerry. The fast-flowing Glencullen River winds its way over granite boulders along the valley floor. The steep sides of the valley are mostly covered with calcareous drift.

Some of the slopes are dominated by Sessile Oak (*Quercus petraea*) with a sparse shrub layer of Holly (*Ilex aquilinum*) and Hazel (*Corylus avellana*), while on the ground there is a carpet of Great Wood-rush (*Luzula sylvatica*). Other areas are characterised by mixed woodland, with Oak, Ash (*Fraxinus excelsior*), Beech (*Fagus sylvatica*), Sycamore (*Acer pseudoplatanus*) and the occasional conifer occurring. The ground flora includes Ivy (*Hedera helix*) and Brambles (*Rubus fruticosus* agg.), and often luxuriant ferns, such as Hart's Tongue (*Phyllitis scolopendrium*), Soft Shield-fern (*Polystichium setiferum*), and mosses. Lichens occur abundantly on some trees.

A notable feature of the slopes are the frequent and extensive springs and seepage areas within the woodland. These petrifying springs are listed as a priority habitat on Annex I of the EU Habitats Directive. Associated with the springs and the river are stands of wet alluvial forest, also a habitat listed with priority status on Annex I of the EU Habitats Directive. The wet woodland is dominated by Ash and Alder (*Alnus* spp.) and is assigned to the group *Carici remotae-Fraxinetum*. Other species which occur include Willow (*Salix* spp.), Birch (*Betula pubescens*) and Hazel. Islands in the river and open gravelly areas provide further habitat diversity.

A number of scarce or rare plants occur within the site including Blue Fleabane (*Erigeron acer*), Ivy-leaved Bellflower (*Wahlenbergia hederacea*) and Yellow Archangel (*Lamiastrum galeobdolon*).

This site has one of the most diverse woodland invertebrate faunas in Ireland, incorporating wet woodland organisms threatened internationally within the EU. Vertebrates noted in the vicinity, either by tracks, sett or sight, include Red Squirrel, Badger, Rabbit and Deer. The woodland supports large populations of birds, including many common passerines (Robin, Blackbird, Song Thrush, Wren, Chaffinch) and crows, such as Rook, Hooded Crow, Magpie, Jackdaw and Raven. A Buzzard has been noted in the area and Dipper are occasionally seen in the river.

The importance of this site lies in the diversity of woodland habitats which occur. The presence of rare or threatened plants and invertebrates adds to the interest. Much of this site has been designated a Statutory Nature Reserve and there is presently an educational centre within the site.
7.8.2003

SITE SYNOPSIS

SITE NAME : LOWER RIVER SUIR

SITE CODE : 002137

This site consists of the freshwater stretches of the River Suir immediately south of Thurles, the tidal stretches as far as the confluence with the Barrow/Nore immediately east of Cheekpoint in Co. Waterford and many tributaries including the Clodiagh in Co. Waterford, the Lingaun, Anner, Nier, Tar, Aherlow, Multeen and Clodiagh in Co. Tipperary. The Suir and its tributaries flows through the counties of Tipperary, Kilkenny and Waterford. Upstream of Waterford city, the swinging meanders of the Suir criss-cross the Devonian sandstone rim of hard rocks no less than three times as they leave the limestone-floored downfold below Carrick In the vicinity of Carrick-on-Suir the river follows the limestone floor of the Carrick Syncline. Upstream of Clonmel the river and its tributaries traverse Upper Palaeozoic Rocks, mainly the Lower Carboniferous Visean and Tournaisian. The freshwater stretches of the Clodiagh River in Co. Waterford traverse Silurian rocks, through narrow bands of Old Red Sandstone and Lower Avonian Shales before reaching the carboniferous limestone close to its confluence with the Suir. The Aherlow River flows through a Carboniferous limestone valley, with outcrops of Old Red Sandstone forming the Galtee Mountains to the south and the Slievenamuck range to the north. Glacial deposits of sands and gravels are common along the valley bottom, flanking the present-day river course.

The site is a candidate SAC selected for the presence of the priority habitats on Annex I of the E.U. Habitats Directive - alluvial wet woodlands and Yew Wood. The site is also selected as a candidate SAC for floating river vegetation, Atlantic salt meadows, Mediterranean salt meadows, old oak woodlands and eutrophic tall herbs, all habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive - Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Crayfish, Twaite Shad, Atlantic Salmon and Otter.

Alluvial wet woodland is declining habitat in Europe as a result of drainage and reclamation. The best examples of this type of woodland in the site are found on the islands just below Carrick-on-Suir and at Fiddown Island. Species occurring here include Almond Willow (*Salix triandra*), White Willow (*S. alba*), Grey Willow (*S. cinerea*), Osier (*S. viminalis*), with Iris (*Iris pseudacorus*), Hemlock Water-dropwort (*Oenanthe crocata*), Angelica (*Angelica sylvestris*), Pendulus Sedge (*Carex pendula*), Meadowsweet (*Filipendula ulmaria*) and Valerian (*Valeriana officinalis*). The terrain is littered with dead trunks and branches and intersected with small channels which carry small streams to the river. The bryophyte and lichen floras appear to be rich and require further investigation. A small plot is currently being coppiced and managed by National Parks and Wildlife. In the drier areas the wet woodland species merge with other tree and shrub species including Ash (*Fraxinus excelsior*), Hazel (*Corylus avellana*), Hawthorn (*Crataegus monogyna*) and Blackthorn (*Prunus spinosa*). This adds further to the ecological interest of this site.

Eutrophic tall herb vegetation occurs in association with the various areas of alluvial forest and elsewhere where the flood-plain of the river is intact. Characteristic species of the habitat include Meadowsweet (*Filipendula ulmaria*), Purple Loosestrife (*Lythrum salicaria*), Marsh Ragwort (*Senecio aquaticus*), Ground Ivy (*Glechoma hederacea*) and Hedge Bindweed (*Calystegia sepium*).

Old oak woodlands are also of importance at the site. The best examples are seen in Portlaw Wood which lies on both sides of the Clodiagh River. On the south-facing side the stand is more open and the Oaks (mainly *Quercus robur)* are well grown and spreading. Ivy (*Hedera helix*) and Bramble (*Rubus fruticosus*) are common on the ground, indicating relatively high light conditions. Oak regeneration is dense, varying in age from 0-40 years and Holly (*Ilex aquifolium*) is fairly common but mostly quite young. Across the valley, by contrast, the trees are much more closely spaced and though taller are poorly grown on average. There are no clearings; large Oaks extend to the boundary wall. In the darker conditions, Ivy is much rarer and Holly much more frequent, forming a closed canopy in places. Oak regeneration is uncommon since there are as yet few natural clearings. The shallowness of the soil on the north-facing slope probably contributes to the poor tree growth there. The acid nature of the substrate has induced a "mountain" type Oakwood community to develop. There is an extensive species list present throughout including an abundance of mosses, liverworts and lichens. The rare lichen *Lobaria pulmonaria,* an indicator of ancient woodlands, is found.

Inchinsquillib Wood consists of three small separate sloping blocks of woodland in a valley cut by the young Multeen River and its tributaries through acidic Old Red Sandstone, and Silurian rocks. Two blocks, both with an eastern aspect, located to the north of the road, are predominantly of Sessile oak (*Quercus petraea*) and Hazel, with Downy Birch (*Betula pubescens*), Ash and Holly. The ground flora is quite mixed with for example Wood sedge (*Carex sylvatica*), Bluebell (*Hyacinthoides non-scriptus*), Primrose (*Primula vulgaris*), Wood-sorrel (*Oxalis acetosella*), Pignut (*Conopodium majus*) and Hard fern (*Blechnum spicant*). The base poor nature of the underlying rock is, to some extent masked by the overlying drift. The third block, to the south of the road, and with a northern aspect, is a similar although less mature mixture of Sessile Oak, Birch and Holly, the influence of the drift is more marked, with the occurrence of Wood anemone (*Anemone nemorosa*) amongst the ground flora.

Floating river vegetation is evident in the freshwater stretches of the River Suir and along many of its tributaries. Typical species found include Canadian Pondweed (*Elodea canadensis*), Milfoil (*Myriophyllum* spp.), Fennel Pondweed (*Potamogeton pectinatus*), Curled Pondweed (*P. crispus*), Perfoliate Pondweed (*P. perfoliatus*), Pond Water-crowfoot (*Ranunculus peltatus*), other Crowfoots (*Ranunculus* spp.) and the moss *Fontinalis antipyretica.* At a couple of locations along the river, Opposite-leaved Pondweed (*Groenlandia densa*) occurs. This species is protected under the Flora (Protection) Order, 1999.

The Aherlow River is fast-flowing and mostly follows a natural unmodified river channel. Submerged vegetation includes the aquatic moss *Fontinalis antipyretica* and Stream Water-crowfoot (*Ranunculus pencillatus*), while shallow areas support species such as Reed Canary-grass (*Phalaris arundinacea*), Brooklime (*Veronica beccabunga*) and Water

Mint (*Mentha aquatica*). The river bank is fringed in places with Alder (*Alnus glutinosa*) and Willows (*Salix* spp.).

The Multeen River is fast flowing, mostly gravel-bottomed and appears to follow a natural unmodified river channel. Water Crowfoots occur in abundance and the aquatic moss *Fontinalis antipyretica* is also common. In sheltered shallows, species such as Water-cress (*Rorippa nasturtium-aquaticum*) and Water-starworts (*Callitriche* spp.) occur. The river channel is fringed for most of its length with Alder, Willow and a narrow strip of marshy vegetation.

Salt meadows occur below Waterford City in old meadows where the embankment is absent, or has been breached, and along the tidal stretches of some of the in-flowing rivers below Little Island. There are very narrow, non-continuous bands of this habitat along both banks. More extensive areas are also seen along the south bank at Ballynakill, the east side of Little Island, and in three large salt meadows between Ballynakill and Cheekpoint. The Atlantic and Mediterranean sub types are generally intermixed. The species list is extensive and includes Red Fescue (*Festuca rubra*), Oraches (*Atriplex* spp.), Sea Aster (*Aster tripolium*), Sea Couch Grass (*Elymus pycnanthus*), frequent Sea Milkwort (*Glaux maritima*), occasional Wild Celery (*Apium graveolens*), Parsley Water-dropwort (*Oenanthe lachenalii*), English Scurvygrass (*Cochlearia anglica*) and Sea Arrowgrass (*Triglochin maritima*). These species are more representative of the Atlantic sub-type of the habitat. Common Cord-grass (*Spartina anglica*), is rather frequent along the main channel edge and up the internal channels. The legally protected (Flora (Protection) Order, 1999) Meadow Barley (*Hordeum secalinum*) grows at the landward transition of the saltmarsh. Sea Rush (*Juncus maritimus*), an indicator of the Mediterranean salt meadows, also occurs.

Other habitats at the site include wet and dry grassland, marsh, reed swamp, improved grassland, coniferous plantations, deciduous woodland, scrub, tidal river, stony shore and mudflats. The most dominant habitat adjoining the river is improved grassland, although there are wet fields with species such as Yellow Flag (*Iris pseudacorus*), Meadow Sweet (*Filipendula ulmaria*), Rushes (*Juncus* spp.), Meadow Buttercup (*Ranunculus acris*) and Cuckoo Flower (*Cardamine pratensis*).

Cabragh marshes, just below Thurles, lie in a low-lying tributary valley into which the main river floods in winter. Here there is an extensive area of Common Reed (*Phragmites australis*) with associated marshland and peaty fen. The transition between vegetation types is often well displayed. A number of wetland plants of interest occur, in particular the Narrow-leaved Bulrush (*Typha angustifolia*), Bottle Sedge (*Carex rostrata*) and Blunt-flowered Rush (*Juncus subnodulosus*). The marsh is naturally eutrophic but it has also the nutritional legacy of the former sugar factory which discharged into it through a number of holding lagoons, now removed. Production is high which is seen in the size of such species as Celery-leaved Buttercup (*Ranunculus sceleratus*) as well as in the reeds themselves.

Throughout the Lower River Suir site are small areas of woodland other than those described above. These tend to be a mixture of native and non-native species, although there are some areas of semi-natural wet woodland with species such as Ash and Willow. Cahir Park Woodlands is a narrow tract of mixed deciduous woodland lying on the flat-lying floodplain of the River Suir. This estate woodland was planted over one hundred

years ago and it contains a large component of exotic tree species. However, due to original planting and natural regeneration there is now a good mix of native and exotic species. About 5km north west of Cashel, Ardmayle pond is a long, possibly artificial water body running parallel to the River Suir. It is partly shaded by planted Lime (*Tilia* hybrids), Sycamore (*Acer pseudoplatanus*) and the native Alder. Growing beneath the trees are shade tolerant species such as Remote sedge (*Carex remota*).

The site is of particular conservation interest for the presence of a number of Annex II animal species, including Freshwater Pearl Mussel (*Margaritifera margaritifera* and *M. m. durrovensis*), Freshwater Crayfish (*Austropotamobius pallipes*), Salmon (*Salmo salar*), Twaite Shad (*Alosa fallax fallax*), three species of Lampreys - Sea Lamprey (*Petromyzon marinus*), Brook Lamprey (*Lampetra planeri*) and River Lamprey (*Lampetra fluviatilis*) and Otter (*Lutra lutra*). This is one of only three known spawning grounds in the country for Twaite Shad.

The site also supports populations of several other animal species. Those which are listed in the Irish Red Data Book include Daubenton's Bat (*Myotis daubentoni*), Nattererer's Bat (*M. nattereri*), Pipistrelle (*Pipistrellus pipistrellus*), Pine Marten (*Martes martes*), Badger (*Meles meles*), the Irish Hare (*Lepus timidus hibernicus*), Smelt (*Osmerus eperlanus*) and the Frog (*Rana temporaria*). Breeding stocks of Carp are found in Kilsheelan Lake. This is one of only two lakes in the country which is known to have supported breeding Carp. Carp require unusually high summer water temperatures to breed in Ireland and the site may therefore support interesting invertebrate populations.

Parts of the site have also been identified as of ornithological importance for a number of Annex I (EU Birds Directive) bird species, including Greenland White-fronted Goose (10), Golden Plover (1490), Whooper Swan (7) and Kingfisher. Figures given in brackets are the average maximum counts from 4 count areas within the site for the three winters between 1994 and 1997. Wintering populations of migratory birds use the site. Flocks are seen in Coolfinn Marsh and also along the reedbeds and saltmarsh areas of the Suir. Coolfinn supports nationally important numbers of Greylag Geese on a regular basis. Numbers between 600 and 700 are recorded. Other species occurring include Mallard (21), Teal (159), Wigeon (26), Tufted Duck (60), Pintail (4), Pochard (2), Little Grebe (2), Black-tailed Godwit (20), Oystercatcher (16), Lapwing (993), Dunlin (101), Curlew (195), Redshank (28), Greenshank (4) and Green Sandpiper (1). Nationally important numbers of Lapwing (2750) were recorded at Faithlegg in the winter of 1996/97. In Cabragh marshes there is abundant food for surface feeding wildfowl which total at 1,000 or so in winter. Widgeon, Teal and Mallard are numerous and the latter has a large breeding population - with up to 400 in summer. In addition, less frequent species like Shoveler and Pintail occur and there are records for both Whooper and Bewick's swans. Kingfisher, a species that is listed on Annex I of the EU Birds Directive, occurs along some of the many tributaries throughout the site.

Landuse at the site consists mainly of agricultural activities including grazing, silage production, fertilising and land reclamation. The grassland is intensively managed and the rivers are therefore vulnerable to pollution from run-off of fertilisers and slurry. Arable crops are also grown. Fishing is a main tourist attraction on stretches of the Suir and some of its tributaries and there are a number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. Both commercial and leisure fishing takes place on the rivers. The Aherlow River is a designated Salmonid

Water under the EU Freshwater Fish Directive. Other recreational activities such as boating, golfing and walking are also popular. Several industrial developments, which discharge into the river, border the site including three dairy related operations and a tannery.

The Lower River Suir contains excellent examples of a number of Annex I habitats, including the priority habitat Alluvial Forest. The site also supports populations of several Annex II animal species and a number of Red Data Book animal species. The presence of two legally protected plants (Flora (Protection) Order, 1999) and the ornithological importance of the river adds further to the ecological interest of this site.

6.10.2006

SITE SYNOPSIS

SITE NAME: MAGHERABEG DUNES

SITE CODE: 001766

This sand dune system is situated at Ardmore Point, about 5 km south of Wicklow Head. The Three Mile Water River enters the sea through the dunes. The site is fairly intact, though some areas are being naturally eroded by wind and sea, in particular at the southern end, where bedrock has been exposed.

The dunes are largely dominated by Marram (*Ammophila arenaria*). The dunes are backed by drift banks which support Bracken (*Pteridium aquilinum*) and scrub, including some Gorse (*Ulex europaeus*); the scrub is particularly dense along the river. Other species occurring on these drift backs include Hemp-agrimony (*Eupatorium cannabinum*), Yellow-wort (*Blackstonia perfoliata*) and the scarce, Wood Vetch (*Vicia sylvatica*). The drift banks extend to Ardmore Point, which forms the northern boundary of the site. The site includes several sand dune types that are listed on Annex II of the EU Habitats Directive: embryonic dunes, marram dunes, fixed dunes and decalcified dune heath. Two other habitats which are listed on this annex also occur on the site: petrifying springs and driftlines.

The Three Mile Water River, which flows through the dunes provides habitat for wetland species, in particular, sedges, including Bladder Sedge (*Carex vesicaria*), Fox Sedge (*C. otrubae*) and Grey Sedge (*C. divulsa*). The very rare hybrid sedge, *Carex* x *grossii* (*C. hirta* x *C. vesicaria*) has also been recorded. Common Reed (*Phragmites australis*) is also found along the river.

The site is of importance in that it is a fine example of a dune system which is fairly intact and which has a well-developed flora. The lack of easy public access to this site has undoubtedly been responsible in preventing damage and erosion from amenity activities. The presence of wetland vegetation on the site is of additional interest.

17.1.1997

Synopsis section from BES (11/4/00)

Despite its small size, the dune system shows most of the developmental stages of dunes, with embryonic dunes, white dunes, grey fixed dunes and decalcified fixed dunes all represented. The embryo dunes occur mainly in the northern sector, in association with a good example of driftline vegetation. Species present include Sea Couch (*Elymus farctus),* Marram (*Ammophila arenaria*) and Sea Sandwort (*Honkenya peploides*). A narrow band of shifting marram dunes then occur, these been largely washed away by erosion in the southern sector. Stable fixed dunes are well represented, with such species as Red Fescue (*Festuca rubra*), Rest Harrow (Ononis repens), Bird's-foot Trefoil (*Lotus corniculatus*), Sand Pansy (*Viola tricolor*), Thyme (*Thymus praecox*) and Clover (*Trifolium repens*). Burnet Rose (*Rosa pimpinellifolia*) is present on the older fixed dunes. The fixed duens merge with dune heath, with species such as Gorse (*Ulex europaeus)* and Bracken (*Pteridium aquilinum*) present. The dune systwem is backed by drift banks, which are well covered by deciduous woodland and scrub.

Along the low cliffs at Ardmore Point there occurs a line of petryfying springs with tufa formations and a range of specialised moss species.

SITE SYNOPSIS

SITE NAME : SPAHILL AND CLOMANTAGH HILL

SITE CODE : 000849

Spahill and the adjacent hills form part of an escarpment which links the Slieve Ardagh Hills with the Castlecomer Plateau. The hills are of limestone overlain by shales and/or sandstones so the surface geology is variable, with each rock type maintaining a very different type of vegetation. This particular site is mostly limestone, exposed as small ledges or as flat sheets when it is weathered into the pavement pattern so well known from the Burren.

The hills are low and rounded. They rise relatively steeply from the Central Plain and drop south-eastwards more gently. Their surface is grassy in appearance but the soil is shallow especially on the upper parts and the rock breaks through frequently. The vegetation is dominated by Crested Dog's-tail (*Cynosurus cristatus*), Perennial Rye-grass (*Lolium perenne*) and Creeping Bent (*Agrostis stolonifera*), with Smooth Meadow-grass (*Poa pratensis*) and Yellow Oat-grass (*Trisetum flavescens*) occurring near outcrops. The community is species-rich with such plants as Wild Thyme (*Thymus praecox*), Mouse-ear Hawkweed (*Hieracium pilosella*), Quaking Grass (*Briza media*), Burnet Saxifrage (*Pimpinella minor*) and sedges (*Carex caryophyllea* and *C. flacca*) scattered through it. Locally there is much Eyebright (*Euphrasia* sp.), Purging Flax (*Linum catharticum*) and Oxeye Daisy (*Leucanthemum vulgare*).

The Rare and legally protected (Flora Protection Order, 1987), Green-winged Orchid (*Orchis morio*) grows sparingly through this community. Two other orchid species, Frog Orchid (*Coeloglossum viride*) and Common Spotted-orchid (*Dactylorhiza cf. fuchsii*) are also recorded from the site. A few larger cliffs occur on the south side of Clomantagh where Polypody (*Polypodium australe*) is common, along with Hairy Rock-cress (*Arabis hirsuta*).

A rather different heathy grassland is found on particularly thin soils on the eastern slope of Spahill. Here Devil's-bit Scabious (*Succisa pratensis*) turns the ground purple in summer, growing with Slender St. John's-wort (*Hypericum pulchrum*), Bitter-vetch (*Lathyrus montanus*), Yellow-rattle (*Rhinanthus minor*) and a little Heather (*Calluna vulgaris*).

The ground in Clomantagh is largely similar to Spahill except that near the top there are outliers of the overlying sandstone which appear as low, lumpy rocks quite different in shape to the limestone. The difference is accentuated by the vegetation which includes more Heather as well at Heath Bedstraw (*Galium saxatile*), Bilberry (*Vaccinium myrtillus*), Purple Moor-grass (*Molinia caerulea*), Wavy Hair-grass (*Deschampsia flexuosa*), Tufted Hair-grass (*D. cespitosa*) and the mosses *Polytrichum juniperinum, Plagiothecium undulatum* and *Dicranum scoparium*.

The final habitat in this diverse site is a woodland on the north-western slope. The trees are Hazel (*Corylus avellana*) and Birch (*Betula pubescens*) and there is a good range of herb species on the ground. Wood-rushes (*Luzula sylvestris* and *L. pilosa*) are frequent, with Wood-sorrel (*Oxalis acetosella*), Greater Stitchwort (*Stellaria holostea*) and ferns (*Dryopteris dilatata* and *D. affinis*) also found. In seepage areas Golden Saxifrage (*Chrysosplenium oppositifolium*), Bugle (*Ajuga reptans*) and Remote Sedge (*Carex remota*) are characteristic and there is a little Water Avens (*Geum rivale*), Woodruff (*Galium odoratum*) and Tufted Hair-grass at the base of the slope.

All in all, the site contains a variety of natural grassland communities that are rare in Ireland because of agricultural intensification. Taken with Cullahill Mountain to the north-east it forms a unit of high ecological interest. The presence of a population of Green-winged Orchid in grassland referable to a type listed, with priority status, on Annex I of the EU Habitats Directive is notable.

5.2.1997

SITE SYNOPSIS

SITE NAME: NIER VALLEY WOODLANDS

SITE CODE: 000668

This site comprises an area of mixed semi-natural deciduous forest lying on the flanks of the Nier Valley, 3 km east of Ballymacarbry in Co. Waterford. It consists of several separate tracts of woodland which were once joined up but have now been fragmented by afforestation and housing developments. One large tract occupies the flanks along the north side of the Nier Valley extending up the Glennanore River. The second large area extends over 3 km along the southern banks of the River Nier. A third area is situated just south of the river to the east of Ballymacarbry Bridge.

The site is a candidate SAC selected for old Oak woodland, a habitat listed on Annex I of the E.U. Habitats Directive.

These woodlands form the largest tract of deciduous woodland in this area and support an excellent diversity of flora and fauna. They contain a good variety of native trees, including Birch (*Betula* spp.) and Oak (*Quercus* spp.) with some Holly (*Ilex aquifolium*), Hazel (*Corylus avellana*), Rowan (*Sorbus aucuparia*) and some introduced conifer species. There is also a good transition of vegetation from Hazel-dominated scrub at the valley base to relatively pure Oak woodland near the summit.

There is little natural regeneration of tree growth in this woodland as a result of fairly intensive grazing by livestock and deer, and the ground flora is limited. However, species such as Bilberry (*Vaccinium myrtillus*), Great Wood-rush (*Luzula sylvatica*), Wood Sage (*Teucrium scorodonia*) and Wood-sorrel (*Oxalis acetosella*) occur commonly. The occurrence of Irish Spurge (*Euphorbia hyberna*), a species of local occurrence in Ireland, is of note. The bryophyte flora is well developed and many of the mature trees are rich in epiphytes. The rare Myxomycete fungus, *Licea minim*, has also been recorded from these woodlands. Areas of heath, wet grassland and dry grassland also occur within the site.

Two Red Data Book vertebrates - Badger (*Meles meles*) and Natterer's Bat (*Myotis nattereri*) - are present in the woodlands. Other animal species recorded from the site include Fallow Deer (*Dama dama*), Red Squirrel (*Sciurus vulgaris*), Stoat (*Mustela erminea*), Long-Eared Owl, Woodcock and Pheasant.

Threats to the woodland on the site include clear-felling, invasion by Rhododendron (*Rhododendron ponticum*), livestock grazing and further housing and other developments. This site is of considerable conservation importance because of the presence of old Oak woodland. It is of additional ecological and educational interest as it contains areas that show the stages of development from open heath to mature Oak woodland.

11.1.2010

SITE SYNOPSIS

SITE NAME : THE LOUGHANS

SITE CODE : 000407

The Loughans is a turlough situated in flat land about 3km east of Urlingford, below the Slieve Ardagh Hills, in County Kilkenny. The basin is slightly undulating, with banks and hummocks of glacial drift around which the water rises. It has a level floor for the most part, but swallowholes and subsidence hollows are present. The turlough floods regularly, despite some drainage. In summer, it retains a permanent central pond and there are several subsidiary wet hollows at the eastern end.

Around the central pond there are plant species typical of fluctuating water levels, and Amphibious Bistort (*Polygonum amphibium*) is common. Standing water is colonised by Broad-leaved Pondweed (*Potamogeton natans*), Water-crowfoot species (*Ranunculus aquatilis* and *R. trichophyllus*) and Unbranched Bur-reed (*Sparganium emersum*). Some ponds have a floating scraw of vegetation formed by Floating Sweet-grass (*Glyceria fluitans*), Speedwells (*Veronica scutellata* and *V. catenata*) and Lesser Spearwort (*Ranunculus flammula*).

About half of the basin is semi-reclaimed pasture dominated by Perennial Rye-grass (*Lolium perenne*), with other agricultural grasses such as Crested Dog's-tail (*Cynosurus cristatus*), and White Clover (*Trifolium repens*). Elsewhere, there is a more natural turlough vegetation, rich in small Sedges (*Carex nigra*, *C. disticha* and *C. hirta*), and Grasses such as Tufted Hair-grass (*Deschampsia cespitosa*) and Purple Moor-grass (*Molinia caerulea*). Wetland grasses such as Creeping Bent (*Agrostis stolonifera*) and Marsh Foxtail (*Alopecurus geniculatus*) are found in places, with a notable abundance of Creeping Cinquefoil (*Potentilla reptans*). To the north, there is a gradation into drier, lime-rich grassland where another recognisable and characteristic grassland community occurs, adding habitat diversity to the site.

Several rare and scarce plant species occur at The Loughans. Green-winged Orchid (*Orchis morio*) occurs on the limestone grassland: this species is listed under The Flora Protection Order (1987). Two other species listed in The Irish Red Data Book, Marsh Helleborine (*Epipactis palustris*) and Northern Yellow-cress (*Rorippa islandica*), occur here. A number of local rarities have also been recorded, including Red Goosefoot (*Chenopodium rubrum*), Common Meadow-rue (*Thalictrum flavum*) and Zigzag Clover (*Trifolium medium*).

The Loughans is the only large turlough in the south-east of the country, and the highest anywhere in Ireland. It has limited physical variation but, for its size, a fairly diverse vegetation, including open water, ditches, extensive damp areas and a good transition to the high quality lime rich grassland areas.

28.1.1997

SITE SYNOPSIS

SITE NAME: THE MURROUGH WETLANDS

SITE CODE: 002249

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

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

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

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

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

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

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

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

A wide range of freshwater and brackish marsh habitats occur within the site. These vary from reed-marsh dominated by reeds and Rushes (*Juncus* spp.), to those of Sedges (*Carex* spp.) with other areas supporting a mixture of Sedges and Yellow Iris (*Iris pseudacorus*) also occurring. A wide variety of grasses and herbs are also found. These include Meadowsweet (*Filipendula ulmaria*), Silverweed and Common Spike-rush (*Eleocharis palustris*). The scarce, Marsh Pea (*Lathyrus palustris*) occurs in one area. The marshes merge into wet grassland in many areas. Where grazing pressure is low, a herb-rich sward occurs with species such as Ragged Robin (*Lychnis flos-cuculi*), Cuckoo Flower (*Cardamine pratensis*), Meadowsweet and Spotted Orchid (*Dactylorhiza maculata*) occurring. Sedges are abundant in the wetter areas. Where drains have been cut, there are many other species such as Greater Spearwort (*Ranunculus lingua*), Bogbean (*Menyanthes trifoliata*) and the scarce Reed Sweet-grass (*Glyceria maxima*).

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

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

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

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

18.1.2000

SITE SYNOPSIS

SITE NAME: THOMASTOWN QUARRY

SITE CODE: 002252

Thomastown Quarry is situated along the R700 road about 1 km north of Thomastown, Co. Kilkenny. It comprises a disused limestone quarry in which an excellent diversity of calcareous habitat types has developed.

The site is a candidate SAC selected for petrifying springs, a habitat listed on Annex I of the E.U. Habitats Directive.

Bare rock accounts for a significant area of the site, occurring both on cliff faces and the quarry floor. These rocky surfaces are well covered with lichens and mosses, and, particularly where there is shallow soil, also have species such as Biting Stonecrop (*Sedum acre*), White Stonecrop (*Sedum album*), Rue-leaved Saxifrage (*Saxifraga tridactylites*), Fairy Flax (*Linum catharticum*), Yellow Wort (*Blackstonia perfoliata*) and Blue Fleabane (*Erigeron acre*), the latter species being listed in the Irish Red Data Book. Ferns are frequent, with Rustyback fern (*Ceterach officinarum*) and Maidenhair Spleenwort (*Asplenium trichomanes*) amongst others. Where deeper calcareous soils occur on the dry rocky surfaces, species such as Red Fescue (*Festuca rubra*), Quaking Grass (*Briza media*), Lady's Bedstraw (*Galium verum*), Carline Thistle (*Carlina vulgaris*), Rest Harrow (*Ononis repens*), Blue Flax (*Linum bienne*) and Pyramidal Orchid (*Anacamptis pyramidalis*) are found.

Seepage lines or springs are a feature of the site and of particular importance is the presence of petrifying springs with tufa formations. This rare habitat is rich in bryophytes, most notably *Palustriella commutata var.commutata,* and *Cratoneuron filicinum.* Other species include *Calliergon giganteum, Campylium stellatum, Bryum pseudotriquetrum, Drepanocladus revolvens, Hylocomum splendens* and *Aneura pinguis*.

Alkaline fen vegetation has developed over some of the seepage areas and also around the various ponds that occur on the quarry floor. The fen vegetation is quite species rich and includes Jointed Rush (*Juncus articulatus),* Toad Rush *(J. bufonius),* Common Spike-rush *(Eleocharis palustris*), various sedges *(Carex panicea, C. lepidocarpa),* Red Rattle *(Pedicularis palustris*), Brooklime *(Veronica beccabunga),* Marsh Orchid *(Dactylorhiza incarnata)* and Fleabane (*Pulicaria dysenterica*). Bryophytes are frequent in the fen habitat. Wetland plants such as Water Plantain (*Alisma plantago-aquatica*), Bulrush (*Typha latifolia*), Water Horsetail *(Equisetum fluviatile)* and Common Cottongrass (*Eriophorum angustifolium*) occur at the margins of the ponds.

The ponds support populations of the Common Frog and Common Newt, both legally protected species. A limited survey of the aquatic invertebrates recorded the presence

of two rare species for Ireland, the Coleopteran *Haliplus variegatus* and the Corixid *Hesperocorixa moesta.*

Despite its small size, this site has an excellent diversity of calcareous habitats, including petrifying springs, a habitat with priority status on Annex I of the E.U. Habitats Directive.

26.11.2002

SITE SYNOPSIS

SITE NAME : TRAMORE DUNES AND BACKSTRAND

SITE CODE : 000671

This composite coastal site lies at the head of Tramore Bay, east of Tramore, County Waterford. The Tramore dunes (Burrow) are the result of a classic inshore process - the growth of a spit of shingle and sand across a shallow bay. Behind the spit lies the Back Strand which dries out at low tide and is connected to the open sea by narrows at Rinneshark. The Burrow has a narrow neck and expands eastwards. Longshore drift is from the west so any loose material accumulates at the tip, which is hooked, and on the opposing spit at Bass Point.

The dunes here are well-developed and contain several habitats listed on Annex I of the EU Habitats Directive, including the priority habitat fixed dune. There are high ridges and valleys, old stabilised surfaces and new foredunes at shore level. Consequently all the major vegetation types are found from the strand flora, through mobile embryonic and marram dunes to stable fixed dunes, with saltmarsh on the northern fringe and slacks at Bass Point.

The flora of the fixed dunes is not as species-rich as at other systems, due mainly to the absence of grazing. This has led to the development of a tall, rank dune grassland and in places the development of dune scrub. Nevertheless, most of the characteristic dune species of the south-east are found, including Marram (*Ammophila arenaria)*, which is dominant over much of the system, Wild Thyme (*Thymus praecox),* Common Bird's-foot-trefoil (*Lotus corniculatus*), Lady's Bedstraw *(Galium verum),* Rest Harrow *(Ononis repens),* Fairy Flax *(Linum catharticum)* and Red Fescue *(Festuca rubra).* The moss *Tortula ruraliformis,* which is characteristic of fixed dune areas, is common in the dune turf. In some areas there is a shrubby community, with Wild Privet (*Ligustrum vulgare)* and Dewberry *(Rubus caesius*) being dominant. Bee Orchid (*Ophrys apifera*), a Red Data Book species, has been recorded recently from the fixed dune grassland, while there are isolated patches of Wild Asparagus (*Asparagus officinalis* ssp. *prostratus),* a species protected under the Flora (Protection) Order 1999.

Salt marsh, another habitat on Annex I of the EU Habitats Directive, is well developed and fairly extensive in the sheltered inner part of the site. It is the lagoon type of salt marsh, which is the rarest type in Ireland. The communities found are characteristic of both Atlantic and Mediterranean salt marshes. The main species include Thrift (*Armeria maritima),* Common Saltmarsh-grass *(Puccinellia maritima),* Sea Lavender *(Limonium humile),* Sea Plantain *(Plantago maritima),* Sea Aster *(Aster trifolium),* Sea Puslane *(Halimione portulacoides*) and Sea Rush (*Juncus maritimus).* The scarce Hard-grass (*Parapholis strigosa*) occurs and a feature of this salt marsh is the presence of Golden Samphire (*Inula crithmoides)*, a species rarely found on salt marshes in Ireland. Glasswort (*Salicornia* spp.) and other annuals such as Sea Blite

(*Suaeda maritima*) occur in channels and pans and also onto the mudflats. Cord-grass (*Spartina anglica*) is frequent on parts of the salt marshes and on the mudflats.

The intertidal mud flats and sand flats are another important habitat listed on Annex I of the EU Habitats Directive. The macrofauna is well developed, with Lugworm (A*renicola marina),* Furrow Shell (*Scrobicularia plana*), Ragworm *(Hediste diversicolor)* and Cockle *(Cerastoderma edule)* being common, and with large patches of Mussel (*Mytilus edulis)* and Periwinkles (*Littorina littorea)* also present. A feature of this habitat is the presence of Eelgrass (*Zostera noltii* and *Z. angustifolia*).

Several rare plants have been recorded from Tramore. It is the only site in the country where the Red Data Book plant Sea Knotgrass (*Polygonum maritimum*) has grown, though it is sporadic in appearance. Other Red Data Book species which have been reported include Lesser Centaury (*Centaurium pulchellum*) and Cottonweed (*Otanthus maritimus*), both of which are listed on the Flora (Protection) Order, 1999, Sharp-leaved Fluellen (*Kickxia elatine*), Sea-kale (*Crambe maritima*) and Spring Vetch (*Vicia lathyroides*).

The Back Strand is a area of great importance for waterfowl on the south coast and is a designated SPA. The following figures are the average counts obtained during three seasons between 1994/95 and 1996/97. Brent Geese (482) occur in numbers which are of international significance. Six further species occur in nationally important numbers: Golden Plover (3,100), Grey Plover (261), Dunlin (1,970), Sanderling (53), Black-tailed Godwit (271) and Bar-tailed Godwit (405). Both Golden Plover and Bar-tailed Godwit are listed on Annex I of the EU Birds Directive.

The main threat to the stability of the dune habitats is from recreational pressures, with heavy usage of the site due to its proximity to Tramore. Already some large blow-outs and areas of bare sand are present. Driftline and shingle vegetation is also under pressure from heavy usage of the beach area. The intertidal and saltmarsh habitats are not under significant threat though possible seepage from the landfill site is a potential threat.

Tramore is of major ecological importance for the range of good quality coastal habitats which occur, including fixed dunes, which are listed as a priority habitat on Annex I of the European Habitats Directive. The site has a remarkably rich flora, featuring a number of rare and protected species, and the intertidal area is important for wintering waterfowl.

SITE SYNOPSIS

SITE NAME: VALE OF CLARA (RATHDRUM WOOD)

SITE CODE: 000733

The Vale of Clara woodland, situated mostly on the east side of the Avonmore River, immediately north of Rathdrum, between 107 and 244 m above sea level, forms an integral part of one of the most scenic valleys in Wicklow. This wood is a remnant of the once extensive forests of east Wicklow, which may have occupied this site since the end of the last Ice Age. Unfortunately, the hardwoods have been replaced or underplanted with conifers since the 1940s, but now that most of the site is within the Vale of Clara Nature Reserve the future of the existing hardwoods is secure.

The woods are a mosaic of relatively pure Oak wood, mixed woodland and commercial plantations, growing on an acidic orange-brown, sandy loam over a schist bedrock. A distinct mor humus, often several centimetres thick, overlies the mineral soil.

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. The understorey is mostly of Holly (*Ilex aquifolium*), Hazel (*Corylus avellana*) and Rowan (*Sorbus aucuparia*). The ground flora includes Great Wood-rush (*Luzula sylvatica*), Bilberry (*Vaccinum myrtillus*), Ivy (*Hedera helix*), Honeysuckle (*Lonicera periclymenum*), Wood-sorrel *(Oxalis acetosella*) and Violets (*Viola* spp.).

The areas of mixed woodland contain a variety of underplanted conifers, as well as Beech (*Fagus sylvatica*) and other introduced deciduous species. The planted conifer compartments are of a wide range of conifer species. An area of wet woodland is well developed near Ballyhad Bridge. The Avonmore River, which flows through the site, creates further habitat diversity.

Narrow-leaved Helleborine (*Cephalanthera longifolia*), a rare plant species which is listed in the Irish Red Data Book has been recorded from the locality, as has the scarce, Ivy-leaved Bellflower (*Wahlenbergia hederacea*). Several rare species of Myxomycete fungus have also been recorded from the site, namely *Cribraria rufa*, *Diderma floriforme*, *Stemonitis smithii* (only known Irish site) and *Trichia verrucosa* (in its only known Republic of Ireland site).

The woodland bird community includes the Jay, Long-eared Owl, Treecreeper, Woodcock and Blackcap. The Wood Warbler and Crossbill have also been recorded, while the Dipper and Grey Wagtail occur on the Avonmore River.

The Holly Blue (*Celastrina argiolus*) butterfly has been seen within the woods.

This site is a good example of what remains of the once extensive forests of east Wicklow, and is representative of the relatively dry, acid Oak woods of eastern Ireland. The woodlands are of considerable conservation significance as they conform to a type listed on Annex I of the EU Habitats Directive. The historical record of landuse within the woods adds to the interest of the site.

1.2.1999

SITE SYNOPSIS

SITE NAME: WICKLOW MOUNTAINS

SITE CODE: 002122

This site is a complex of upland areas in Counties Wicklow and Dublin, flanked by Blessington Reservoir to the west and Vartry Reservoir in the east, Cruagh Mt. in the north and Lybagh Mt. in the south. Most of the site is over 300m, with much ground over 600m and the highest peak of Lugnaquilla at 925m.

The Wicklow Uplands comprise a core of granites flanked by Ordovician schists, mudstones and volcanics. The form of the Wicklow Glens is due to glacial erosion.

The Wicklow Mountains are drained by several major rivers including the Dargle, Liffey, Dodder, Slaney and Avonmore. The river water in the mountain areas is often peaty, especially during floods.

The topography is typical of a mountain chain, showing the effects of more than one cycle of erosion. The massive granite has weathered characteristically into broad domes. Most of the western part of the site consists of an elevated moorland, covered by peat. The surrounding schists have assumed more diverse outlines, forming prominent peaks and rocky foothills with deep glens. The dominant topographical features are the products of glaciation. High corrie lakes, deep valleys and moraines are common features of this area.

The substrate over much of the area is peat, usually less than 2m deep. Poor mineral soil covers the slopes and rock outcrops are frequent

The vegetation over most of the site is a mosaic of heath, blanket bog and upland grassland (mostly on peaty soil, though some on mineral soil), with stands of dense Bracken (*Pteridium aquilinum*) and small woodlands mainly along the rivers. Mountain loughs and corrie lakes are scattered throughout the site. The site supports many habitats that are listed on Annex I of the E.U. Habitats Directive.

The two dominant vegetation communities in the area are heath and blanket bog. Heath vegetation, with both wet and dry heath well represented, occurs in association with blanket bog, upland acid grassland and rocky habitats. The wet heath is characterised by species such as Ling (*Calluna vulgaris*), Cross-leaved Heath (*Erica tetralix*), Cottongrasses (*Eriophorum* spp.), Tormentil (*Potentilla erecta*), Mat-grass (*Nardus stricta*), Bent grasses (*Agrostis* spp.) and bog mosses (*Sphagnum* spp.). In places the wet heath occurs in conjunction with flush communities and streamside vegetation, and here species such as Heath Rush (*Juncus squarrosus*) and *Carex* spp. are found. Dry heath at this site is confined to shallow peaty soils on steep slopes where drainage is better and particularly in sheltered conditions. It is characterised by species such as Ling, Gorse (*Ulex* spp.), Bell Heather (*Erica cinerea*), Bilberry (*Vaccinium myrtillus*), Purple Moor-grass (*Molinia caerulea*) and lichens (*Cladonia*

spp.). In places the heath grades into upland grassland on mineral soil, some examples of which correspond to the E.U. Habitats Directive Annex I priority habitat species-rich *Nardus* grassland.

Blanket bog is usually dominated by Cottongrasses, Ling and bog mosses (*Sphagnum* spp.). On steeper slopes there is some flushing and here Purple Moor-grass, Heath Rush, and certain *Sphagnum* species become more common. The Liffey Head blanket bog is among the best of its kind in eastern Ireland, with deep peat formations and an extensive system of dystrophic pools developed among the hummocks and hollows on the bog surface. The vegetation is largely dominated by Ling and Cross-leaved Heath, with Cottongrasses (*Eriophorum vaginatum* and *E. angustifolium*), Deergrass (*Scirpus cespitosus*) and Bog Asphodel (*Narthecium ossifragum*). In drier areas, Bilberry and Cowberry (*Vaccinium vitis-idaea*) are common, while the scarce Bog Rosemary (*Andromeda polifolia*) is also found. Blanket bog occurs over extensive areas of deeper peat on the plateau and also on gentle slopes at high altitudes. Peat erosion is frequent on the peaks - this may be a natural process, but is likely to be accelerated by activities such as grazing.

Due to the underlying rock strata, the water of the rivers and streams tends towards acidity. The water is generally oligotrophic and free from enrichment. The lakes within the area range from the high altitude lakes of Lough Firrib and Three Lakes, to the lower pater-noster lakes of Glendalough, Lough Tay and Lough Dan. Spectacular corrie lakes (such as Loughs Bray (Upper and Lower), Ouler, Cleevaun, Arts, Kellys and Nahanagan) exhibit fine sequences of moraine stages. The deep lakes are characteristically species poor, but hold some interesting plants including an unusual form of Quillwort (*Isoetes lacustris* var. *morei*), a Stonewort (*Nitella* sp.) and Floating Bur-reed (*Sparganium angustifolium*). The Red Data Book fish species Arctic Char has been recorded from Lough Dan, but this population may now have died out.

Alpine vegetation occurs on some of the mountain tops, notably in the Lugnaquilla area, and also on exposed cliffs and scree slopes elsewhere in the site. Here alpine heath vegetation is represented with species such as Crowberry (*Empetrum nigrum*), Cowberry, Dwarf Willow (*Salix herbacea*), the grey-green moss *Racomitrium lanuginosum* and scarce species such as Mountain Clubmoss (*Diphasiastrum alpinum*), Firmoss (*Huperzia selago*), and Starry Saxifrage (*Saxifraga stellaris*). Some rare arctic-alpine species have been recorded, including Alpine Lady's-mantle (*Alchemilla alpina*) and Alpine Saw-wort (*Saussurea alpina*).

Small areas of old oakwood (Blechno-Quercetum petraeae type) occur on the slopes of Glendalough and Glenmalure, near L. Tay and L. Dan, with native Sessile Oak (*Quercus petraea*) 100-120 years old. On wetter areas, wet broadleaved semi-natural woodlands occur, which are dominated by Downy Birch (*Betula pubescens*). Mixed woodland with non-native tree species also occurs.

The site supports a range of rare plant species, which are listed in the Irish Red Data Book: Parsley Fern (*Cryptogramma crispa*), Marsh Clubmoss (*Lycopodiella inundata*), Greater Broom-rape (*Orobanche rapum-genistae*), Alpine Lady's-mantle, Alpine Saw-wort, Lanceolate Spleenwort (*Asplenium billotii*), Small White Orchid (*Pseudorchis albida*) and Bog Orchid (*Hammarbya paludosa*). The latter three

species are legally protected under the Flora (Protection) Order, 1999. The rare Myxomycete fungus, *Echinostelium colliculosum,* has been recorded from the Military Road.

Mammals and birds which occur are typical of the uplands. Deer are abundant, mainly hybrids between Red and Sika Deer. Other mammals include Hare, Badger and Otter, the latter being a species listed on Annex II of the E.U. Habitats Directive. Pine Marten has recently been confirmed as occurring within the site. Among the birds, Meadow Pipit, Skylark, Raven and Red Grouse are resident throughout the site. Wheatear, Whinchat and the scarce Ring Ouzel are summer visitors. Wood Warbler and Redstarts are rare breeding species of the woodlands. Dipper and Grey Wagtail are typical riparian species. Merlin and Peregrine Falcon, both Annex I species of the EU Birds Directive, breed within the site. Recently, Goosander has become established as a breeding species.

Large areas of the site are owned by NPWS, and managed for nature conservation based on traditional landuses for the uplands. The most common landuse is traditional sheep grazing. Other land uses include turf-cutting, mostly hand-cutting but some machine-cutting occurs. These activities are largely confined to the Military Road, where there is easy access. Large areas which had been previously hand-cut and are now abandoned, are regenerating. In the last 40 years, forestry has become an important landuse in the uplands, and has affected both the wildlife and the hydrology of the area. Amenity use is very high, with Dublin city close to the site.

Wicklow Mountains is important as a complex, extensive upland site. It shows great diversity from a geomorphological and a topographical point of view. The vegetation provides examples of the typical upland habitats with heath, blanket bog and upland grassland covering large, relatively undisturbed areas. In all ten habitats listed on Annex I of the EU Habitats Directive are found within the site. Several rare, protected plant and animal species occur.

SITE SYNOPSIS

SITE NAME: BLACKWATER CALLOWS SPA

SITE CODE: 004094

The Blackwater Callows SPA comprises the stretch of the River Blackwater that runs in a west to east direction between Fermoy and Lismore in Counties Cork and Waterford, a distance of almost 25 km. The site includes the river channel and strips of seasonally-flooded grassland within the flood plain. Sandstone ridges, which run parallel to the river, confine the area of flooding to a relatively narrow corridor.

The river channel has a well-developed aquatic plant community, which includes such species as Pond Water-crowfoot (*Ranunculus peltatus*), Canadian Pondweed (*Elodea canadensis*) and a variety of pondweeds (*Potamogeton* spp.), water-milfoils (*Myriophyllum* spp.) and water-starworts (*Callitriche* spp.).

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Whooper Swan, Wigeon, Teal and Black-tailed Godwit. The E.U. Birds Directive pays particular attention to wetlands and, as these form part of this SPA, the site and its associated waterbirds are of special conservation interest for Wetland & Waterbirds.

The site is of high ornithological interest on account of its wintering waterfowl populations. Whooper Swan occurs in numbers of international importance (212) - all figures are mean peaks for the five winters 1995/96 to 1999/2000. Bewick's Swan were regularly recorded at the site up to the mid-1990s; however, in the winters of 1997/98 and 1998/99 only four and two individuals respectively were recorded, and the species is no longer considered to be a regular visitor. This decline is in line with a national decrease and a marked contraction in range. The site supports nationally important populations of Wigeon (2,313), Teal (898) and Black-tailed Godwit (251). Other wintering species that occur include Mallard (398) Shoveler (26), Lapwing (191), Curlew (457) and Black-headed Gull (311).

Little Egret uses the site throughout the year as there is a nearby breeding colony downstream. The river system provides an important feeding area for these birds.

The Blackwater Callows SPA is of importance for its populations of wintering waterfowl, including an internationally important population of Whooper Swan and nationally important populations of Wigeon, Teal and Black-tailed Godwit. The presence of Whooper Swan, as well as Little Egret, is of particular note as these species are listed on Annex I of the E.U. Birds Directive.

29.9.2010

SITE SYNOPSIS

SITE NAME: BLACKWATER ESTUARY SPA

SITE CODE: 004028

The Blackwater Estuary SPA is a moderately-sized, sheltered south-facing estuary, which extends from Youghal New Bridge to the Ferry Point peninsula, close to where the river enters the sea. It comprises a section of the main channel of the River Blackwater. At low tide, intertidal flats are exposed on both sides of the channel. On the eastern side the intertidal channel is included as far as Kinsalebeg and Moord Cross Roads is included, while on the west side the site includes part of the estuary of the Tourig River as far as Rincrew Bridge.

The intertidal sediments are mostly muds or sandy muds reflecting the sheltered conditions of the estuary. Green algae (*Enteromorpha* spp. and *Ulva lactuca*) are frequent on the mudflats during summer, and Bladder Wrack (*Fucus vesiculosus*) occurs on the upper more stony shorelines. The sediments have a macrofauna typical of muddy sands, with polychaete worms such as Lugworm (*Arenicola marina*), Ragworm (*Hediste diversicolor*) and the marine bristle worm *Nephtys hombergii* being common. Bivalves are also well represented, especially Peppery Furrow-shell (*Scrobicularia plana*), but also Sand Gaper (*Mya arenaria*), Baltic Tellin (*Macoma balthica*) and Common Cockle (*Cerastoderma edule*). Among the brown seaweed on the shoreline, the Shore Crab (*Carcinus maenus*) and the Rough Periwinkle (*Littorina saxatilis*) are found. Salt marshes fringe the estuarine channels, especially in the sheltered creeks.

The Blackwater Estuary is of high ornithological importance for wintering waterfowl, providing good quality feeding areas for an excellent diversity of waterfowl species. At high tide, the birds roost along the shoreline and salt marsh fringe, especially in the Kinsalebeg area. Some birds may leave the site to roost in fields above the shoreline. The site supports an internationally important population of Black-tailed Godwit (934), and has a further eight species with nationally important populations (all figures are average peaks for the five winters 1995/96 to 1999/2000): Shelduck (151), Wigeon (1,232), Golden Plover (2,947), Lapwing (3,988), Dunlin (2,016), Curlew (1,194), Redshank (634) and Greenshank (30). A population of Bar-tailed Godwit (172) is very close to the threshold for national importance.

Other species which occur in significant numbers include Grey Heron (27), Teal (527), Mallard (148), Oystercatcher (508), Grey Plover (53), Knot (50) and Turnstone (56). The site also supports Brent Goose (19), Red-breasted Merganser (8), Shoveler (23), Ringed Plover (29) and Cormorant (60). The site is also notable for supporting large concentrations of gulls in autumn and winter, including Black-headed Gull (549), Common Gull (253), Lesser Black-backed Gull (602), Great Black-backed Gull (227) and Herring Gull (86).

Little Egret uses the site regularly during the year as there is a breeding colony upstream. The estuary provides an important feeding area for these birds (15, with a maximum of 26).

The Blackwater Estuary SPA is an internationally important wetland site on account of the population of Black-tailed Godwit it supports. It is also of high importance in a national context, with eight species having populations which exceed the thresholds for national importance. The occurrence of Little Egret, Golden Plover and Bar-tailed Godwit is of particular note as these species are listed on Annex I of the E.U. Birds Directive. The site has been well-studied, with detailed monthly counts extending back to 1974.

SITE SYNOPSIS

SITE NAME: DUNGARVAN HARBOUR SPA

SITE CODE: 004032

In landscape terms Dungarvan Harbour lies at the eastern end of the River Blackwater valley, though this river now turns south at Cappoquin, vacating its more obvious (and former) course. The Colligan River, running south from the Comeragh Mountains, enters the bay by Dungarvan itself. The River Brickey flows from the west while the Glendine River flows into the harbour from the north. The absence of a large river means that the bay is essentially a marine habitat though it dries out at low tide to give extensive mud and sand flats. The inner bay is extremely sheltered, the linear Cunnigar spit (which almost closes the bay on the east) adding to the effect of hills in the south and south-west.

The rock type of most of the area is limestone though this is only exposed on flat rocks at Ballynacourty. Elsewhere saltmarsh, glacial drift and sand form the shore with a narrow stony beach in places. The most natural saltmarsh occurs at Kilminnin on the north shore and west of the Cunnigar on the south. In several places the saltmarshes, having been reclaimed for a period, have been flooded again and are reverting to their natural vegetation. There is an abundance of Sea Rush (*Juncus maritimus*) in such places often mixed with grasses, with Reed (*Phragmites australis*) or Sea Club-rush (*Scirpus maritimus*) in drains. Sometimes this community gradually blends with a freshwater marsh including Tufted Hair Grass (*Deschampsia cespitosa*), Soft rush (*Juncus effusus*), Brown Sedge (*Carex disticha*) and Fleabane (*Pulicaria dysenterica*). Eelgrass (*Zostera* sp.) has been recorded in the area.

A major part of the ecological importance of the bay is the wintering birdlife which is present in large numbers. Surveys in the winters l984/85 - 1986/87 and from 1994/95 onwards showed that Brent Goose (616 in 1995), Black-tailed Godwit (l329 [952 in 1996]) and Bar-tailed Godwit (1593 in 1996) occurred in numbers of international importance, while thirteen other species were nationally important. These are Shelduck (l72l [995 in 1995]), Wigeon (l0l5), Red-breasted Merganser (50), Grey Plover (359), Golden Plover (6100 in 1996), Lapwing (3775 in 1996), Knot (996 in 1996), Sanderling (83), Dunlin (6100 in 1996), Redshank (930 [910 in 1996]) and Turnstone (254). A further ten species were found in numbers of regional or local importance emphasising that Dungarvan supports a greater diversity of species than any other site on the south coast except for Wexford Harbour.

The sand flats to the east of the Cunnigar support an extensive oyster farming operation. There is concern that displacement of waterfowl and disturbance may be a problem in the shellfish farming area.

Dungarvan Harbour SPA is of major conservation significance for the large numbers of many species of waterfowl that use it. The site regularly holds over 20,000 waterfowl and this qualifies the site as of International Importance. Two species that occur in important numbers are listed on Annex I of the E.U. Birds Directive, i.e. Bar-tailed Godwit and Golden Plover.

4.4.2004

SITE SYNOPSIS

SITE NAME: HELVICK HEAD TO BALLYQUIN SPA

SITE CODE: 004192

Helvick Head to Ballyquin SPA is a linear site situated on the south-west coast of Co. Waterford. It includes the sea cliffs and land adjacent to the cliff edge (inland for 300 m) between Helvick Head in the east and Ballyquin townland in the south-west. The high water mark forms the seaward boundary, except around Helvick Head where the adjacent sea area to a distance of 500 m from the cliff base is included to provide areas for foraging and socialising activities for breeding seabirds. Helvick Head forms the eastern extremity of a broad Old Red Sandstone ridge which extends as far west as Cork City and is the most northern of the (Hercynian) parallel folds in the rocks of the south-west of Ireland. The site is underlain by a variety of sedimentary rock types of various ages, predominantly Devonian sandstones, mudstones, conglomerates and siltstones, but also Carboniferous sandstones on the north side of Helvick Head and shales, siltstones, sandstones and tuffs of Ordovician age about Muggort's Bay. The beds of rock dip quite steeply at Helvick Head so that the cliffs, which rise to about 60 m, are formed of a series of semi-vertical ribs with small gullies between them, especially at the eastern end. Further west the cliffs have broader bands of rock and correspondingly few nesting ledges for seabirds.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Chough, Peregrine, Cormorant, Herring Gull and Kittiwake.

The cliff top supports coastal heath of a type characteristic of shallow soils on acid rocks. Autumn Gorse (*Ulex gallii*), Bell Heather (*Erica cinerea*) and Ling (*Calluna vulgaris*) form the main dominants. Associated species include Wood Sage (*Teucrium scorodonia*), Sheep's-bit (*Jasione montana*), Devil's-bit Scabious (*Succisa pratensis*), Slender St. John's-wort (*Hypericum pulchrum*), Mouse-ear Hawkweed (*Hieracium pilosella*), Heath Bedstraw (*Galium saxatile*), English Stonecrop (*Sedum anglicum*), Common Dog-violet (*Viola riviniana*), Goldenrod (*Solidago virgaurea*), Burnet Rose (*Rosa pimpinellifolia*) and a variety of bryophyte and lichen species. Common grass species are Common Bent (*Agrostis capillaris*) and Sweet Vernal-grass (*Anthoxanthum odoratum*). The presence of Wild Madder (*Rubia peregrina*) is indicative of the southern location of the site. Where heath has returned to formerly-reclaimed fields, Common Gorse (*Ulex europaeus*), Bracken (*Pteridium aquilinum*) and Brambles (*Rubus fruticosus*) occur more commonly. Coastal grassland with Red Fescue (*Festuca rubra*), Creeping Bent (*Agrostis stolonifera*), Yarrow (*Achillea millifolium*), Buck's-horn Plantain (*Plantago coronopus*), Daisy (*Bellis perennis*), Sea Mayweed (*Tripleurospermum maritimum*), Common Sorrel (*Rumex acetosa*), Wild Carrot (*Daucus carota*), Thrift (*Armeria maritima*), Kidney Vetch (*Anthyllis vulneraria*), amongst others also occurs in places on the cliff top, where heath has not developed.

Sea cliffs are particularly well developed at the eastern end of the site and are well vegetated with Thrift, Ivy (*Hedera helix*), Common Scurveygrass (*Cochlearia officinalis*), Sea Campion (*Silene maritima*), Rock Sea-spurrey (*Spergularia rupicola*), Buck's-horn Plantain, lichens, and a variety of other species.

The site supports an important population of breeding Chough, a Red Data Book species that is listed on Annex I of the E.U. Birds Directive; 11 breeding pairs were recorded from the site in the 1992 survey and the same number in the 2002/03 survey. The low heath and agricultural farmland on the cliff tops provides good foraging habitat for this species. The site is also of importance for its Peregrine population (5 pairs in 2002); this species is listed on Annex I of the E.U. Birds Directive.

In addition, the site has important breeding seabird populations, centered around Helvick Head. Nationally important population of Cormorant (65 pairs), Herring Gull (117 pairs) and Kittiwake (1,037 pairs) occur, as well as smaller populations of other breeding seabirds: Razorbill (28 pairs), Fulmar (135 pairs), Shag (6 pairs), Guillemot (664 pairs), Great Black-backed Gull (8 pairs) and Black Guillemot (10 individuals) – all seabird data from 1999. Raven breed on the cliffs and there is a cliff-nesting colony of House Martins. Other species which breed within the site include Rock Pipit and Stonechat. The seabird colony at Helvick Head has been monitored at intervals since the Operation Seafarer project in 1969/70. In addition, more detailed population studies have been carried out on the Kittiwake colony.

The Helvick Head to Ballyquin SPA is an important site for Chough and Peregrine, both species that are listed on Annex I of the E.U. Birds Directive. It also supports a range of breeding seabirds, including populations of Cormorant, Herring Gull and Kittiwake of national importance.

13.11.2006

SITE SYNOPSIS

SITE NAME: MID-WATERFORD COAST SPA

SITE CODE: 004193

The Mid-Waterford Coast SPA encompasses the areas of high coast and sea cliffs in Co. Waterford between Newtown Cove to the east and Ballyvoyle to the west. The site includes the sea cliffs and the land adjacent to the cliff edge (inland for 300 m). The high water mark forms the seaward boundary. The site is underlain by Devonian sandstones, siltstones, mudstones and conglomerates as well as a variety of volcanic rocks of Ordovician age.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Chough, Peregrine, Cormorant and Herring Gull.

Sea cliffs are the predominant habitat of the site; these occur along its length and are generally well-vegetated by a suite of typical sea cliff species. Above the cliffs areas of heath, improved grassland, unimproved wet and dry grassland, and woodland occur.

The site supports an important population of breeding Chough, a Red Data Book species that is listed on Annex I of the E.U. Birds Directive; 24 breeding pairs were recorded from the site in the 1992 survey and 21 in the 2002/03 survey. In addition, five flocks totalling 59 birds were noted in the 1992 survey and a flock of 24 birds in the 2002/03 survey. Along this coast flocks occur between Annestown and Stradbally.

Landuse at the site is predominantly grazing by stock, but some arable farming is also carried out. The grazing regime, which results in a tight vegetation sward, is beneficial to Chough. Areas of semi-natural habitats occur in many places adjacent to the breeding cliffs, interspersed between other areas of relatively intensive grass production. The habitats present are quite robust, and there are few noticeable activities negatively impacting on the Chough population. However, changes in landuse, particularly a reduction in grazing levels, could pose a threat to the species. One other potential threat is the residue left in livestock dung due to the application of broad-spectrum anti-parasitic drugs.

The site supports an important Peregrine population (7 pairs in 2002); this species is listed on Annex I of the E.U. Birds Directive. The site also holds nationally important populations of Cormorant (79 pairs) and Herring Gull (147 pairs), as well as smaller populations of other breeding seabirds: Fulmar (246 pairs), Shag (14 pairs), Guillemot (27 pairs), Razorbill (4 pairs) and Black Guillemot (15 individuals) – all seabird data from 1999-2000.

The Mid-Waterford Coast SPA is an important site for Chough and Peregrine, both species that are listed on Annex I of the E.U. Birds Directive. It also supports a range of breeding seabirds, including populations of Cormorant and Herring Gull of national importance.

SITE SYNOPSIS

SITE NAME: POULAPHOUCA RESERVOIR SPA

SITE CODE: 004063

Poulaphouca Reservoir SPA, located in the western foothills of the Wicklow Mountains, was created in 1944 by damming of the River Liffey for the purpose of generating electricity from hydropower. The reservoir covers an area of approximately 20 square kilometres and is the largest inland water body in the mid-east and south-east regions. The reservoir receives water from two main sources, the River Liffey at the northern end, and the Kings River at the southern end. The exit is into the River Liffey gorge at the western end. Underlying the reservoir are sands and gravels deposited during the last glaciation. The shores of the lake are mostly sandy. When water levels are low the exposed lake muds are colonised by an ephemeral flora of annual plant species. Wet grassland areas occur in sheltered bays around the lake but especially in the northern part. Reed Canary-grass (*Phalaris arundinacea*) is the main grass species present, but other plant species characteristic of wet grasslands occur, including Creeping Bent (*Agrostis stolonifera*), Meadowsweet (*Filipendula ulmaria*), Yellow Iris (*Iris pseudacorus*) and Water Mint (*Mentha aquatica*). Sedges (*Carex* spp.) are locally common, while Rusty Willow (*Salix cinerea* subsp. *oleifolia*) scrub is often found associated with the wet grassland. In some places the water washes against grassy banks which are generally less than a metre high, and in a few places there are steep sand and clay cliffs, up to 15 m high - these are remnants of the old River Liffey channel. In many places the banks are actively eroding, and a strip of conifers has been planted around much of the perimeter of the reservoir in an attempt to stabilize the banks.

Poulaphouca Reservoir is of international importance for its Greylag Goose population, which is one of the largest in the country. The site provides the main roost for the birds, with feeding occurring mostly on improved grassland outside of the site. An average peak of 1,058 individuals occurred during the five seasons 1995/96 to 1999/00. A range of other waterfowl species occur in relatively low numbers, including Whooper Swan (34), Wigeon (262), Teal (136), Mallard (283), Goldeneye (36), Cormorant (16), Great Crested Grebe (11), Curlew (118) and Mute Swan (17). The site is also used by Grey Heron (12).

The reservoir attracts roosting gulls during winter, most notably a large population of Lesser Black-backed Gull (1,116), which in Ireland is rare in winter away from the south coast. Black-headed Gull (1,245) and Common Gull (229) also occur.

Breeding birds at the site include Great Crested Grebe (several pairs), which is localised in its distribution in eastern Ireland, as well as Snipe and Lapwing.

The principal interest of the site is the Greylag Goose population, which is of international importance. A range of other wildfowl species also occurs, including

Whooper Swan, a species that is listed on Annex I of the E.U. Birds Directive. The site is also notable as a winter roost for gulls, especially Lesser Black-backed Gull.

2.3.2005

SITE SYNOPSIS

SITE NAME: THE MURROUGH SPA

SITE CODE: 004186

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

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

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

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

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

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

Short-eared Owl is recorded here during the winter. Little Egret has bred locally in recent years and this site is a main feeding area, with several birds present regularly. While formerly a rare bird in Ireland, Little Egret is now well-established with most birds occurring in the south-east and south (Counties Wexford, Waterford and Cork). The Murrough is presently at the edge of the species' range. This site is one of the few sites in Ireland where Reed Warbler breeds regularly. It is considered that 1-4 pairs bred each year during the 1980s and early 1990s, with a minimum of 6 birds in song in 1993. An absence of records since 1996 may be due to under-recording. For some years in the 1980s, Bearded Tit bred - this is the only known site in the country where breeding of this rare species has been proven; there have, however, been no subsequent records. Kingfisher regularly uses the site. Sandwich Tern are recorded from the site during the autumn.

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

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

20.8.2007

SITE SYNOPSIS

SITE NAME : TRAMORE BACK STRAND SPA

SITE CODE : 004027

This site lies a little east of Tramore town in County Waterford. It comprises a medium sized estuary sheltered from the open sea by a long, shingle spit, with high dunes. The area of the SPA, known as the Back Strand, empties almost completely at low tide. It is connected to the outer bay and sea by narrows at Rinneshark.

The intertidal mud flats and sand flats are an important habitat and are listed on Annex I of the E.U. Habitats Directive. The macrofauna is well developed, with Lugworm (*Arenicola marina*), Furrow Shell (*Scrobicularia plana*), Ragworm (*Hediste diversicolor*) and Common Cockle (*Cerastoderma edule*) being common, and with large patches of Common Mussel (*Mytilus edulis*) and Edible Periwinkles (*Littorina littoralis*) also present. A feature of this habitat is the presence of Eelgrass (*Zostera noltii* and *Z. angustifolia*), an important food item for herbivorous wildfowl.

Salt marsh, another habitat on Annex I of the E.U. Habitats Directive, is well developed and fairly extensive in the sheltered inner part of the site. It is the lagoon type of salt marsh, the rarest type in Ireland. The communities found are characteristic of both Atlantic and Mediterranean salt marshes. The main species include Thrift (*Armeria maritima*), Common Saltmarsh-grass (*Puccinellia maritima*), Lax-flowered Sea-lavender (*Limonium humile*), Sea Plantain (*Plantago maritima*), Sea Aster (*Aster tripolium*), Sea-purslane (*Halimione portulacoides*) and Sea Rush (*Juncus maritimus*). The scarce Hard-grass (*Parapholis strigosa*) occurs and a feature of this salt marsh is the presence of Golden-samphire (*Inula crithmoides*), a species rarely found on salt marshes in Ireland. Glasswort (*Salicornia* spp.) and other annuals such as Annual Sea Blite (*Suaeda maritima*) occur in channels and pans and also on the mudflats. Common Cord-grass (*Spartina anglica*) is frequent on parts of the salt marshes and on the mudflats.

The Back Strand is an important site for wintering waterfowl, providing both feeding and roosting areas. Counts are available for the 1970s and 1980s and for the 5 winters 1995/96 to 1999/00 (figures given are average peaks for the 90s). Of particular importance is that the site supports an Internationally Important population of Brent Geese (393). A further seven species occur in Nationally Important numbers: Golden Plover (2,924), Grey Plover (299), Lapwing (3,308), Dunlin (1,723), Sanderling (46), Black-tailed Godwit (289) and Bar-tailed Godwit (367). A range of other species also occur in significant numbers, including Wigeon (77), Teal (135), Red-breasted Merganser (18), Oystercatcher (347), Ringed Plover (55), Knot (75), Snipe (83), Curlew (620), Redshank (223), Greenshank (12) and Turnstone (24). In recent times Little Egret has become a regular visitor, with an average peak of six for the period.

The regular occurrence of Little Egret, Golden Plover and Bar-tailed Godwit is of particular note as these are listed on Annex I of the E.U. Birds Directive.

A potential threat to the intertidal habitat is seepage of leachate from a landfill site adjacent to the estuary.

Tramore Back Strand SPA is of high ornithological importance for wintering waterfowl, with one species having a population of International Importance and a further seven species having populations of National Importance. In addition, three of the species are listed on Annex I of the E.U. Birds Directive i.e. Golden Plover, Bar-tailed Godwit and Little Egret.

SITE SYNOPSIS

SITE NAME: WICKLOW MOUNTAINS SPA

SITE CODE: 004040

This is an extensive upland site, comprising a substantial part of the Wicklow Mountains. Most of the site is in Co. Wicklow, but a small area lies in Co. Dublin. 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 being over 600 m; the highest peak is Lugnaquillia (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 predominant habitats present are blanket bog, heaths and upland grassland.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for the following species: Merlin and Peregrine.

A series of surveys of the Wicklow Mountains SPA indicates that up to 9 pairs of Merlin breed within the site in any one year. Traditionally a ground-nesting species, Merlin in the Wicklow Mountains are usually found nesting in old crows nests in conifer plantations. The open peatlands provide excellent foraging habitat for Merlin with small birds such as Meadow Pipit being their main prey. The cliffs and crags within the site also provide ideal breeding locations for Peregrine (20 pairs in 2002). Other birds of the open peatlands and scree slopes that have been recorded within the site include Ring Ouzel and Red Grouse.

The Wicklow Mountains SPA is of high ornithological importance as it supports nationally important populations of Merlin and Peregrine, both species that are listed on Annex I of the E.U. Birds Directive.

13.10.2010

Part 3

Addendum 1 to Appropriate Assessment Screening Determination Report Prepared by WYG Ireland

WYG Ireland
part of the WYG group

Wexford County Council

Appropriate Assessment Screening of the Variation No. 1 of the County Wexford Development Plan 2007-2013

Addendum

Date: October 2011

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Contents

1 Variation No. 1

The Planning and Development (Amendment) Act 2010 requires planning authorities to include Core Strategies in their development plans. The purpose of a Core Strategy is to articulate a medium to long term quantitatively based strategy for the spatial development of an area.

The Core Strategy is required to include details of a 'settlement hierarchy' for the area and provide population projections for settlements and rural areas in the hierarchy. These projections must be derived from the population targets set down by the parent Regional Planning Guidelines (RPGs).

The Core Strategy is also required to provide details to show that rural areas and objectives relating to retail development are in accordance with Section 28 Guidelines of the Minister and that the Housing Strategy is in accordance with the National Spatial Strategy (NSS) and RPGs.

The Strategy will present a medium to long term evidenced based strategy for the spatial development of County Wexford. In accordance with the requirements of the Planning and Development (Amendment) Act 2010, it shall show that the development objectives in the Plan are consistent, as far as practicable, with national and regional development objectives set out in the National Spatial Strategy (NSS) and Regional Planning Guidelines (RPGs).

The Strategy will:

- set out the vision for the County and the strategic aims to deliver this vision;

- provide details on how the Plan and the Housing Strategy conforms to the objectives of the NSS and RPGs; set out the Settlement Strategy and Settlement Hierarchy for the County;
- allocate population growth target to the towns, villages and the rural areas in the hierarchy. The population allocations will be based on the targets set out in the RPGs;
- provide details of the national and regional road network and the inter-urban and commuter rail routes in the County;
- provide details to show that the retail development objectives in the Plan have regard to the Government's Retail Development Guidelines; and
- provide details on rural areas in accordance with the Government's 'Sustainable Rural Housing Guidelines'.

The Strategy is supported by the strategic Transportation Strategy in Chapter 3, the Economic Development Strategy in Chapter 4, the Housing Strategy in Chapter 5 and the Retail Strategy in Appendix A of the Development Plan.

The Core Strategy vision for the County is "*To build on the strengths of the county by facilitating sustainable development through the provision of high quality employment opportunities and residential development supported by quality urban and rural environments with physical and social infrastructure to support communities throughout the County"*.

The strategic aims for achieving this vision include:

- Developing sustainable and vibrant communities and providing attractive places to live and work;

- Broadening and strengthening the economic base of the county by encouraging the sustainable growth of employment, enterprise and economic activity, and in particular facilitate innovation and enterprise in indigenous industries;
- Integrating land use planning with transportation planning so as to facilitate improved public transport provision and reduce the distance that people need to travel to work, schools, services and recreational facilities;
- Develop the County's transport system so as to contribute towards an accessible Region with efficient and fully integrated transport systems;
- Protecting and enhancing the County's rural assets and recognising the housing, employment, social and recreational needs of those in rural areas;
- Facilitating the provision of housing in a range of appropriate locations to meet the needs of the county's population, with particular emphasis on facilitating access to housing to suit different household and tenure needs;
- Developing the tourism potential of the county in a balanced and sustainable manner; and
- Protecting, conserving and enhancing the County's built, natural and cultural heritage.

A complete review of the County Wexford Development Plan 2007-2013 has commenced. The next Plan for the County, which will be operational for the period 2013-2019, will include a new Core Strategy together with a new Housing Strategy and Retail Strategy. The review will incorporate all Section 28 Guidelines that have been enacted by the Minister since the adoption of the current Plan. The review of the Plan will also be subject to the requirements of the Strategic Environmental Assessment under the EU SEA Directive, Appropriate Assessment under the EU Habitats Directive and Water Framework Directive.

In July 2011, an Appropriate Assessment Screening assessment was carried out on the Core Strategy policies and objectives and also subsequent proposed amendments to the text in Chapters 1, 3, 4, 6, 7 and 8 of the current 2007 Development Plan in terms of impacts on Natura 2000 sites.

The Screening Report for the Appropriate Assessment of Variation No. 1 to the County Development Plan 2007-2013 was carried out in accordance with the Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC as published by the European Commission.

Many developments that may result from implementation of a Core Strategy, could lead to a number of impacts depending on where development is sited, the scale of development and types and quantities of emissions. However, the polices and provisions of this Core Strategy and subsequent amendment to text in the current Plan, have been devised to anticipate and avoid development that would be likely to significantly and adversely affect the integrity of any Natura 2000 sites.

All developments permitted on foot of the Variation shall be required to conform to National and European regulations and legislation for the prevention of environmental effects which would adversely impact on the integrity and conservation objectives of Natura 2000 sites. This along with the one of the County's strategic aims for achieving the County Vision "*Protecting, conserving and enhancing the County's built, natural and cultural heritage*" and the natural heritage policies and objectives contained in the 2007 County Development Plan will ensure that no development will be permitted that will significantly adversely impact on Natura 2000 sites.

Therefore, in accordance with the Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, it was concluded that Variation No. 1 to the

County Development Plan did not require any further assessment to demonstrate compliance with the Directive.

The AA Report of the Variation No. 1 to the County Development Plan 2007-2013 was completed in July 2011. This Report along with Variation No. 1 and the SEA Screening Report went on public display on 20th July 2011 to 16th August 2011. Written observations and submissions regarding Variation No. 1, the associated SEA Screening Report and AA Screening Report were invited from members of the public and other interested parties during this statutory time period.

This document forms an **Addendum** to the **Appropriate Assessment Screening (AA) Report of the Variation No. 1 to the County Development Plan 2007-2013**. Reference should be made to the Appropriate Assessment Screening Report (July, 2011) when reading this document.

2 Proposed Material Alterations

2.1 Introduction

All responses/submissions received following the public display of Variation No. 1, SEA Screening Report and AA Screening Report were assessed and responses to these submissions where incorporated into a Manager's Report**.** During this process, a number of proposed Material Alterations to Variation No. 1 were made. These alterations are detailed below:

1. Add Objective CS1 & CS2 below to Section 2.3.3

Policy CS1
The Council shall support an integrated transportation strategy which recognises the relative strategic roles of the National, Regional and Local road network together with the public rail and bus network. The Councils will ensure that landuse and transport planning are integrated to maximise sustainable travel patterns.
Objective CS1
The Council shall prepare a Transport Plan for the County.

2. Add the following line In Section 2.3.3 at the end of paragraph 2:

'The Regional Planning Guidelines for the South East Region 2010-2022 also identify the N30 as a Main Access Route'.

3. Add footnote to 'Smaller Villages' Table 2.3

Table 2.3 Allocation of Population Growth to the Settlement Hierarchy

Settlement Type	Name	Projected Population			
		2010	2013	2016	2022
Hub	Wexford Town	21000	22250	23500	26700
Rest of County		125139	128852	132565	139383
Larger Towns	Enniscorthy	10507	10819	11131	11703
	New Ross	8318	8565	8812	9264
	Gorey	7925	8160	8395	8827
District Towns	Bunclody	1701	1752	1802	1895
	Castlebridge	1789	1842	1895	1993
	Rosslare Harbour & Kilrane	1623	1705	1803	2000
	Courtown	5015	5164	5313	5586
Smaller Villages[1]		17316	17829	18343	19287

[1] The population allocation for Smaller Villages relates to the settlements listed in the Strategic Growth Areas and Local Growth Areas and also the smaller villages in the County which are not listed.

Rural Areas		70945	73016	75071	78828

4. Amend Table 2.4 as follows (to amalgamate and rename the formerly named District Growth Areas, Local Growth Areas and Village Growth Areas)

Table 2.4 County Wexford Settlement Strategy

Settlement Type	Settlement	
Hub	Wexford Town	
Larger Towns	Enniscorthy New Ross Gorey	
District Towns	Bunclody Castlebridge Rosslare Harbour Courtown	
Strategic Growth Areas	Ferns Ballycullane Clonroche Camolin	Bridgetown Wellingtonbridge Campile

Local Growth Areas	Fethard Coolgreany Kilmuckridge Craanford Rosslare Bree Duncormick Oilgate	Kilmore Quay Taghmon Carrick on Bannow Arthurstown Duncannon Curracloe,
Rural Areas	Areas under Strong Urban Influence Stronger Rural Areas Structurally Weak Areas	

5. Add Policy CS3 and CS4 to Section 2.4.2

Policy CS3
The population allocations contained in Table 2.3 shall form the framework for the Core Strategies to be prepared for the Town Development Plans and Local Area Plans in the County.

Policy CS4
The Council shall review and amend as appropriate existing Local Area Plans within one year of the adoption of the Core Strategy to ensure compliance with the objectives of the Core Strategy.

6. Replace Section 2.5.5 to 2.5.7 with:

2.5.5 Local Growth Areas

'Local Growth Areas' cover a range of settlement types. The larger of these settlements are listed in Table 2.4 above. They also include a number of smaller settlements, too numerous to list, but which provide important local service functions such as shops, churches, community and sporting facilities and pubs. The functions of these settlements vary with some providing a wide range of services such as churches, post offices and small supermarkets. Others provide a lower range of services but perform an important function for the population of the immediate hinterland providing opportunities for social interaction and limited retail services. These settlements also provide an alternative location to the open countryside for persons seeking a rural lifestyle. The strategy recognises that vibrant communities living in these settlements have a major role in sustaining the rural population and economy.

Developments must have regard to the respective Village Design Statement. In accordance with the guidelines "Sustainable Residential Development in Urban Areas" (DEHLG, 2008), the scale and density of new residential schemes for development must be in proportion to the pattern and grain of the existing village.

7. Amend Section 2.6.5 Occupancy (to reflect renamed settlements)

All planning permissions granted for single houses on unzoned land in the areas identified as "Areas Under Strong Urban Pressure" and "Stronger Rural Areas", with the exception of development in the District Towns, Strategic Growth Areas and Local Growth Area settlements referred to in Table 2.4 and Section 2.5.5, shall be subject to an occupancy condition, pursuant to Section 47 of the Planning and Development Act 2000, as

amended. The period of occupancy will be limited to a period of five years from the date of first occupation.

8. Add the following statement to the Strategic Environmental Assessment: Screening Determination Report and the SEA Section (Page 2) of the text of the Variation after the reference to the Directive and the Guidelines.

'The following documents have been taken into account in the preparation of the Variation No 1: Departmental Circular PSSP 6/2011 European Communities (Environmental Assessment of Certain Plans and Programmes) (Amendment) Regulations 2011, (S.I. No. 200 of 2011), amending the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. No. 435 of 2004), and Planning and Development (Strategic Environmental Assessment) (Amendment) Regulations 2011, (S.I. No. 201 of 2011), amending the Planning and Development (Strategic Environment Assessment) Regulations 2004 (S.I. No. 436 of 2004)'.

3 Screening Assessment

This Appropriate Assessment Screening process will determine whether the proposed Material Alterations to Variation No. 1 to the County Development Plan 2007-2013 are likely to have a significant effect on the conservation objectives and the integrity of Natura 2000 sites within the Plan boundary and also within 15km of the Plan boundary. This buffer zone was chosen as a precautionary measure to ensure that all affected Natura 2000 sites are included in this Screening process.

The Screening Process will identify the likely impacts of the proposed Material Alterations either alone or in combination with other plans and projects and will consider whether these impacts are likely to be significant.

Ultimately, this process determines whether or not an Appropriate Assessment and the production of a Natura Impact Report is required *i.e.* whether the proposed Material Alterations to Variation No. 1 are likely to negatively affect the conservation objectives of Natura 2000 sites.

3.1 Management of the Site

For a Plan to be 'directly connected with or necessary to the management of the site', the 'management' component must refer to management measures that are for conservation purposes, and the 'directly' element refers to measures that are solely conceived for the conservation management of a site.

The proposed Material Alterations to Variation No. 1 to the County Development Plan 2007-2013 are part of a spatial planning framework for County Wexford and are not directly connected to the management of any Natura 2000 sites.

3.2 Natura 2000 Sites in and within 15 km of the Plan Area

The European Communities (Habitats) Directive 1992, established a network of sites throughout Europe, which are of international importance. It is comprised of Special Protection Areas (SPA) and Special Areas of Conservation (SAC) which together are known as Natura 2000 sites. Special Protection Areas aim to protect birds and this designation originates from the Birds Directive 1979. There are 9 SPA's and 16 SAC's in the Plan Area. Please refer to the **Appropriate Assessment Screening (AA) Report (July 2011)** for details on the qualifying interests and conservation objectives of the Natura 2000 sites.

3.3 Assessment Criteria

This section assesses the likelihood of potential impacts from the proposed Material Alterations to Variation No. 1 of the 2007 County Development Plan on the Natura 2000 sites.

In practice and as outlined in the EU 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*", and the national guidance document '*Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities*', impacts that could potentially occur through the implementation of the proposed Material Alterations, can be categorised under a number of headings:

- Loss/Reduction of habitat area – *e.g.* as a result of transport infrastructure *etc.;*
- Disturbance to key species – *e.g.* as a result of increased public access to protected sites and increased recreational pressure;
- Habitat or species fragmentation – *e.g.* through urbanisation;
- Reduction in species density – *e.g.* transport infrastructure, land intensification *etc.;*

- Changes in key indicators of conservation value such as decrease in water quality and quantity *e.g.* through inadequate wastewater treatment, runoff of pollutants during construction and operational phases of development.

This Screening Assessment has been completed taking cognisance of the existing development plan's policies, objectives and provisions for the protection of the environment and sites protected under European legislation.

Current Plan Natural Heritage Policies
Policy NH1
The Council shall support the conservation of the abundance and diversity of habitats characteristic of County Wexford and their dependent plant and animal communities and will facilitate and co-operate with national agencies, local and community groups in their protection.
Objectives NH1
Prohibit development which would damage or threaten the integrity of sites of international or national importance, designated for their habitat/wildlife or geological/geomorphological importance including the proposed Natural Heritage Areas, candidate Special Areas of Conservation, Special Protection Areas and Statutory Nature Reserves.
Objective NH2
To encourage and assist individuals, environmental organisations and community groups in the conservation of nature.

As with the polices and provisions of Variation No. 1 and subsequent amendment to text of the current Plan, these proposed Material Alterations have been devised to anticipate and avoid development that would be likely to significantly and adversely affect the integrity of any Natura 2000 sites.

It is also worth noting that any such developments permitted on foot of Variation No. 1 and the proposed Material Alterations shall be required to conform to National and European regulations and legislation for the prevention of environmental effects which would adversely impact on the integrity and conservation objectives of Natura 2000 sites[2].

3.3.1 Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 sites.

As mentioned in the Appropriate Assessment Screening Report of Variation No. 1, any development that may result from the implementation of a Core Strategy, such as the construction of housing, roads, rail, water and wastewater infrastructure, gas, electricity and telecommunications infrastructure, could lead to a number of impacts depending on where the development is sited, the scale of development and types and quantities of emissions. These impacts could include the loss/reduction of habitat area and disturbance to key species in a SAC/SPA or lead to changes in key indicators of conservation, such as deterioration in water quality, for example. However, polices and objectives of the Core Strategy and subsequent amendment to the text of the current 2007 Plan, were devised to anticipate and avoid development that would be likely to significantly and adversely affect the integrity of any Natura 2000 sites.

[2] Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

The development which may arise from proposed Material Alterations CS1 and CS2 (*e.g,* upgrading of road, rail and bus networks) could lead to a number of impacts depending on where the development is sited, the scale of development and types and quantities of emissions. These impacts could include the loss/reduction of habitat area and disturbance to key species in a SAC/SPA or lead to changes in key indicators of conservation.

Any upgrades or improvements to road, bus or rail infrastructure arising from an integrated Transportation Strategy and Transport Plan will be required to adhere to Objective NH1[3] of the 2007 Plan and would be subject to an appropriate project level environmental assessment and Habitats Directive assessment, as appropriate.

Any such developments permitted on foot of the proposed Material Alterations to Variation No. 1 shall be required to conform to National and European regulations and legislation for the prevention of environmental effects which would adversely impact on the integrity and conservation objectives of Natura 2000 sites[4].

[3] Objective NH1 of the current plan "*Prohibit development which would damage or threaten the integrity of sites of international or national importance, designated for their habitat/wildlife or geological/geomorphological importance including the proposed Natural Heritage Areas, candidate Special Areas of Conservation, Special Protection Areas and Statutory Nature Reserves*"

[4] Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

3.3.2 Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 sites by virtue of:

Size and scale

Where it is considered that potential developments arising from the proposed Material Alterations (*i.e.* CS1 and CS2; road, rail improvements, *etc*) may impact upon sensitive or designated sites, because of their proximity or scale, an Appropriate Assessment screening and Environmental Assessment (*e.g.* EIA, EIR) will be sought, where deemed necessary.

No projects, which would give rise to significant adverse direct, indirect or secondary impacts on the integrity of the Natura 2000 sites, arising from the size or scale of the project, shall be permitted on the basis of the proposed Material Alterations to Variation No. 1 (either individually or in combination with other plans or projects) [5].

Land take

No projects giving rise to significant adverse direct, indirect or secondary impacts on the integrity of the Natura 2000 sites having regard to their conservation objectives, arising from land take shall be permitted on the basis of the proposed Material Alterations to Variation No. 1 to the County Development Plan (either individually or in combination with other plans or projects) [5].

[5] Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

The delivery of infrastructure relating to the proposed Material Alterations (*e.g.* transport infrastructure) shall be subject to a Habitats Directive Assessment (HDA) in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC).

It should be noted that there is no zoning in the County Development Plan 2007-2013 and therefore there is no land being rezoned/dezoned/phased or reserved. Changes to zoning will be under the individual Town Plans and Local Area Plans.

Distance from the Natura 2000 site or key feature of the site

As noted above, there is no zoning in the County Development Plan 2007-2013 and therefore there is no land being rezoned/dezoned/phased or reserved. Changes to zoning will be under the individual Town Plans and Local Area Plans.

No projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, having regard to their conservation objectives, arising from their location, shall be permitted on the basis of the proposed Material Alterations to Variation No. 1 to the County Development Plan (either alone or in combination with other plans or projects) [6].

Resource requirements (water abstraction *etc.*)

No projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, arising from their resource requirements (*e.g.* water abstraction) will be facilitated or shall be permitted on the basis of the proposed Material

[6] Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

Alterations No. 1 to the County Development Plan (either alone or in combination with other plans or projects) [7].

Emissions and waste (disposal to land, water or air)

No projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, arising from emissions and waste are facilitated or shall be permitted on the basis of the proposed Material Alterations to Variation No. 1 to the County Development Plan (either alone or in combination with other plans or projects)[7].

Transportation requirements

The delivery of infrastructure relating to the proposed Material Alterations (*e.g.* transport infrastructure) shall be subject to a Habitats Directive Assessment (HDA) in line with the Habitats Directive and the South East Regional Planning Guidelines.

Excavation requirements;

No projects giving rise to significant adverse direct, indirect or secondary impacts on the integrity of the Natura 2000 sites, having regard to their conservation objectives, arising from excavation requirements shall be permitted on the basis of the proposed Material Alterations (either individually or in combination with other plans or projects)[7].

[7] Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

Duration of Construction, operation, decommissioning, *etc*

The proposed Material Alterations are part of an Interim Core Strategy as agreed with the Department of Environment. A complete review of the County Wexford Development Plan 2007-2013 has commenced. The next Plan for the County, which will be operational for the period 2013-2019, will include a new Core Strategy together with a new Housing Strategy and Retail Strategy. The review will incorporate all Section 28 Guidelines that have been enacted by the Minister since the adoption of the current Plan. The review of the Plan will also be subject to the requirements of the Strategic Environmental Assessment under the EU SEA Directive, Appropriate Assessment under the EU Habitats Directive and Water Framework Directive.

3.3.3 Describe any likely changes to the site arising as a result of:

Reduction of habitat area

The proposed Material Alterations to Variation No.1 do not propose any additional land take within Natura 2000 sites [8].

Any projects resulting from the proposed Material Alterations shall be subject to a Habitats Directive Assessment (HDA) in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC, where required.

Disturbance to key species & habitat or species fragmentation

Wexford County Council shall take appropriate steps to avoid disturbances of key species and habitat or species fragmentation within designated sites in order to comply with the

[8] Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

policies and objectives set out in **Chapter 9** of the County Development Plan 2007 and in accordance with the Core Strategy Vision to "*protect, conserving and enhancing the County Build, natural and cultural heritage*".

Reduction in species density

Wexford County Council shall take appropriate steps to avoid reduction in species density within designated sites in accordance with the policies and objectives set out in **Chapter 9** of the County Development Plan 2007.

Changes in key indicators of conservation value (water quality *etc.*)

Wexford County Council shall take appropriate steps to avoid changes in key indicators of conservation value in accordance with the policies and objectives set out in **Chapter 9** of the County Development Plan.

Climate change

No projects giving rise to significant adverse changes in climatological conditions affecting the Natura 2000 sites shall be permitted on the basis of the proposed Material Alterations (either individually or in combination with other plans or projects) [9].

It is considered that, taken together with the existing policies and objectives in the current County Development Plan 2007, the proposed Material Alterations will not affect the integrity or conservation objectives of any Natura 2000 sites. Therefore, no changes on Natura 2000 sites are likely.

[9] Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

3.3.4 Describe any likely impacts on the Natura 2000 site as a whole in terms of:

Interference with the key relationship that define the structure of the site

The proposed Material Alterations will not impact on the relationships that define the structure of Natura 2000 sites.

Interference with key relationships that define the function of the site

The proposed Material Alterations will not impact on the relationships that define the function of Natura 2000 sites.

3.3.5 Provide Indicators of significance as a result of the identification of effects set out above in terms of;

Loss, fragmentation, disruption, disturbance & change to key elements of the site (*e.g.* water quality *etc.*).

Wexford County Council shall take appropriate steps to avoid the deterioration of designated sites (through habitat/species loss, fragmentation, disturbance *etc.*) in accordance with the policies and objectives set out in **Chapter 9** of the County Development Plan 2007 and by complying with the strategic aims for achieving the "*Vision for County Wexford*" *e.g.* "*protecting, conserving and enhancing the County Build, natural and cultural heritage*".

Any projects resulting from the proposed Material Alterations shall be subject to a Habitats Directive Assessment (HDA) in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC), where required.

As mentioned in **Section 3.3.4** above, it is considered that, taken together with the existing policies and objectives in the current County Development Plan 2007, the

proposed Material Alterations will not affect the integrity or conservation objectives of any Natura 2000 sites. Therefore no changes on Natura 2000 sites are likely.

3.3.6 Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.

Not applicable.

3.4 Finding of No Significant Effects Report Matrix

Name of project or plan:

Wexford County Development Plan 2007-2013 Variation No. 1 Proposed Material Alterations

Name and location of Natura 2000 sites:

See **Section 4** of the **Appropriate Assessment Screening (AA) Report of Variation No. 1 to the County Development Plan 2007-2013** for the for Natura 2000 sites within plan boundary and those within 15km of plan boundary.

Description of the project or plan:

See **Section 2** for the proposed Material Alterations to Variation No. 1 to the County Development Plan 2007-2013.

Are the proposed Material Alterations necessary to management of Natura 2000 Sites?

The proposed Material Alterations are not directly connected with or necessary to the management of the Natura 2000 sites in the County but rather the future planning and sustainable development of the County.

Are there other projects or plans that together with the project or plan being assessed could affect the sites (provide details)?

The Variation and associated proposed Material Alterations will form part of the County Development Plan 2007 which sets the framework for the sustainable development of the County.

The National Spatial Strategy 2002-2020, the National Development Plan 2007-2013, Regional Planning Guidelines for the South East Region 2010 - 2022 and the Wexford County Development Plan 2007-2013 itself set the planning framework for the Core Strategy Variation and proposed Material Alterations of the Wexford County Development Plan 2007-2013. The effects of the higher level Plans are considered insofar as they inform the Development Plan.

Subsidiary plans and projects will be subject to separate assessment procedures in accordance with all applicable Directives and Regulations.

A complete review of the County Wexford Development Plan 2007-2013 has commenced. The next Plan for the County, which will be operational for the period 2013-2019, will include a new Core Strategy together with a new Housing Strategy and Retail Strategy. The review will incorporate all Section 28 Guidelines that have been enacted by the Minister since the adoption of the current Plan. The review of the Plan will also be subject to the requirements of the Strategic Environmental Assessment under the EU SEA

Directive, Appropriate Assessment under the EU Habitats Directive and Water Framework Directive.

The assessment of significance of effects

Describe how the project of plan (alone or in combination) is likely to affect the Natura 2000 site:

The development which may arise from the proposed Material Alterations CS1 and CS2 (*e.g.* upgrading of road, rail and bus networks) could lead to a number of impacts depending on where the development is sited, the scale of development and types and quantities of emissions. These impacts could include the loss/reduction of habitat area and disturbance to key species in a SAC/SPA or lead to changes in key indicators of conservation.

Any upgrades or improvements to road, bus or rail infrastructure arising from an integrated Transportation Strategy and Transport Plan will be required to adhere to Objective NH1[10] of the 2007 Plan and would be subject to an appropriate project level environmental assessment and Habitats Directive assessment, as appropriate.

Any such developments permitted on foot of the proposed Material Alterations to Variation No. 1 shall be required to conform to National and European regulations and legislation for the prevention of environmental effects which would adversely impact on the integrity and conservation objectives of Natura 2000 sites.

[10] Objective NH1 of the current plan "*Prohibit development which would damage or threaten the integrity of sites of international or national importance, designated for their habitat/wildlife or geological/geomorphological importance including the proposed Natural Heritage Areas, candidate Special Areas of Conservation, Special Protection Areas and Statutory Nature Reserves*"

Explain why these effects are not considered significant:

Any developments permitted on foot of the proposed Material Alterations shall be required to conform with National and European regulations and legislation for the prevention of environmental effects which would adversely impact on the integrity and conservation objectives of Natura 2000 sites. This along with the County's natural heritage policies will ensure that no development will be permitted that will significantly adversely impact on Natura 2000 sites.

List of agencies consulted:

As part of the SEA Screening, the following statutory bodies were consulted.

- Environmental Protection Agency (EPA)
- Department of Environment, Community and Local Government (DoECLG)
    - Copy also sent to Department of Arts, Heritage & the Gaeltacht, having regard to the recent transfer of Heritage and NPWS Section from former Department of Environment, Heritage and Local Government.
- Department of Communications, Energy and Natural Resources (DCENR)

Regard was taken of submissions received during the preparation of the SEA screening assessment and the submissions received during the statutory consultation process on Variation No. 1, the SEA Screening Report and the AA Screening Report.

Data collection to carry out the assessment

Who carried out this assessment?

WYG Environmental & Planning Ireland Ltd.

Sources of data

Existing records and information published by the NPWS and EPA.

Level of assessment completed

A desktop study was completed utilising existing information from the relevant state authorities.

Where the full results of the assessment can be accessed and viewed?

A copy of the Appropriate Assessment Screening Report, along with the proposed Material Alterations and Strategic Environmental Assessment Screening Report may be viewed on the Council's website www.wexford.ie and at the following locations from Wednesday 19 October 2011 to Tuesday 15 November 2011.

The above documents may also be viewed at the following locations:

Location	**Opening Hours**
Planning Department, Wexford County Council, County Hall, Carricklawn, Wexford.	Monday to Friday 9.30am to 4.30pm
Wexford Borough Council, Municipal Offices, Crescent Quay, Wexford.	Monday to Friday 9.00am to 5.00pm (closed 1pm-2pm)
Enniscorthy Area Office, Old Dublin Road, Enniscorthy.	Monday to Friday 9.00am to 5.00pm (closed 1pm-2pm)
Enniscorthy Town Council, Market Square, Enniscorthy.	Monday to Friday 9.00am to 5.00pm (closed 1pm-2pm)
New Ross Town Council, The Tholsel, New Ross.	Monday to Friday 9.00am to 5.00pm (closed 1pm-2pm)

Gorey Civic Offices,
Civic Square,
Gorey.

Monday to Friday 9.00a.m to 5.00p.m (closed 1pm-2pm)

The proposed Material Alterations and the associated environmental determinations reports may also be viewed at all public libraries in the County. For details of opening hours please see www.wexford.ie.

4 Conclusion

This Appropriate Assessment Screening of the Material Alteration to Variation No. 1 of the County Development Plan 2007-2013 (Addendum to the Appropriate Assessment Screening of Variation No. 1), has been carried out in accordance with the Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC as published by the European Commission.

All developments permitted on foot of the proposed Material Alterations shall be required to conform to National and European regulations and legislation for the prevention of environmental effects which would adversely impact on the integrity and conservation objectives of Natura 2000 sites. This along with the one of the County's strategic aims for achieving the County Vision "*Protecting, conserving and enhancing the County's built, natural and cultural heritage*" and the natural heritage policies and objectives contained in the 2007 County Development Plan will ensure that no development will be permitted that will significantly adversely impact on Natura 2000 sites [11].

Therefore, in accordance with the Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, it is concluded that the proposed Material Alterations to Variation No. 1 of the County Development Plan do not require any further assessment to demonstrate compliance with the Directive.

[11] Except as provided for in Article 6(4) of the Habitats Directive, viz. there must be:
(a) No alternative solution available;
(b) Imperative reasons for overriding public interest, including those of a social and economic nature; and,
(c) Adequate compensatory measures to ensure that the overall coherence of Natura 2000 is protected.

Part 4

Addendum 2 to Appropriate Assessment Screening Determination Report Prepared by WYG Ireland

WYG Ireland
part of the WYG group

Wexford County Council

Appropriate Assessment Screening of the Variation No. 1 of the County Wexford Development Plan 2007-2013

Addendum 2

Date: December 2011

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Contents

1 Variation No. 1

The Planning and Development (Amendment) Act 2010 requires planning authorities to include Core Strategies in their development plans. The purpose of a Core Strategy is to articulate a medium to long term quantitatively based strategy for the spatial development of an area.

The Core Strategy is required to include details of a 'settlement hierarchy' for the area and provide population projections for settlements and rural areas in the hierarchy. These projections must be derived from the population targets set down by the parent Regional Planning Guidelines (RPGs).

The Core Strategy is also required to provide details to show that rural areas and objectives relating to retail development are in accordance with Section 28 Guidelines of the Minister and that the Housing Strategy is in accordance with the National Spatial Strategy (NSS) and RPGs.

The Strategy will present a medium to long term evidenced based strategy for the spatial development of County Wexford. In accordance with the requirements of the Planning and Development (Amendment) Act 2010, it shall show that the development objectives in the Plan are consistent, as far as practicable, with national and regional development objectives set out in the National Spatial Strategy (NSS) and Regional Planning Guidelines (RPGs).

The Strategy will:

- set out the vision for the County and the strategic aims to deliver this vision;

- provide details on how the Plan and the Housing Strategy conforms to the objectives of the NSS and RPGs; set out the Settlement Strategy and Settlement Hierarchy for the County;
- allocate population growth target to the towns, villages and the rural areas in the hierarchy. The population allocations will be based on the targets set out in the RPGs;
- provide details of the national and regional road network and the inter-urban and commuter rail routes in the County;
- provide details to show that the retail development objectives in the Plan have regard to the Government's Retail Development Guidelines; and
- provide details on rural areas in accordance with the Government's 'Sustainable Rural Housing Guidelines'.

The Strategy is supported by the strategic Transportation Strategy in Chapter 3, the Economic Development Strategy in Chapter 4, the Housing Strategy in Chapter 5 and the Retail Strategy in Appendix A of the Development Plan.

The Core Strategy vision for the County is "*To build on the strengths of the county by facilitating sustainable development through the provision of high quality employment opportunities and residential development supported by quality urban and rural environments with physical and social infrastructure to support communities throughout the County"*.

The strategic aims for achieving this vision include:

- Developing sustainable and vibrant communities and providing attractive places to live and work;

- Broadening and strengthening the economic base of the county by encouraging the sustainable growth of employment, enterprise and economic activity, and in particular facilitate innovation and enterprise in indigenous industries;
- Integrating land use planning with transportation planning so as to facilitate improved public transport provision and reduce the distance that people need to travel to work, schools, services and recreational facilities;
- Develop the County's transport system so as to contribute towards an accessible Region with efficient and fully integrated transport systems;
- Protecting and enhancing the County's rural assets and recognising the housing, employment, social and recreational needs of those in rural areas;
- Facilitating the provision of housing in a range of appropriate locations to meet the needs of the county's population, with particular emphasis on facilitating access to housing to suit different household and tenure needs;
- Developing the tourism potential of the county in a balanced and sustainable manner; and
- Protecting, conserving and enhancing the County's built, natural and cultural heritage.

A complete review of the County Wexford Development Plan 2007-2013 has commenced. The next Plan for the County, which will be operational for the period 2013-2019, will include a new Core Strategy together with a new Housing Strategy and Retail Strategy. The review will incorporate all Section 28 Guidelines that have been enacted by the Minister since the adoption of the current Plan. The review of the Plan will also be subject to the requirements of the Strategic Environmental Assessment under the EU SEA Directive, Appropriate Assessment under the EU Habitats Directive and Water Framework Directive.

2 Appropriate Assessment Screening

In July 2011, an Appropriate Assessment Screening assessment was carried out on the Core Strategy policies and objectives and also subsequent proposed amendments to the text in Chapters 1, 3, 4, 6, 7 and 8 of the current 2007 Development Plan in terms of impacts on Natura 2000 sites.

The Screening Report for the Appropriate Assessment of Variation No. 1 to the County Development Plan 2007-2013 was carried out in accordance with the Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC as published by the European Commission.

Many developments that may result from implementation of a Core Strategy, could lead to a number of impacts depending on where development is sited, the scale of development and types and quantities of emissions. However, the polices and provisions of this Core Strategy and subsequent amendment to text in the current Plan, have been devised to anticipate and avoid development that would be likely to significantly and adversely affect the integrity of any Natura 2000 sites.

All developments permitted on foot of the Variation shall be required to conform to National and European regulations and legislation for the prevention of environmental effects which would adversely impact on the integrity and conservation objectives of Natura 2000 sites. This along with the one of the County's strategic aims for achieving the County Vision "*Protecting, conserving and enhancing the County's built, natural and cultural heritage*" and the natural heritage policies and objectives contained in the 2007 County Development Plan will ensure that no development will be permitted that will significantly adversely impact on Natura 2000 sites.

Therefore, in accordance with the Methodological guidance on the provision of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, it was concluded that Variation No. 1 to the County Development Plan did not require any further assessment to demonstrate compliance with the Directive.

The AA Report of the Variation No. 1 to the County Development Plan 2007-2013 was completed in July 2011. This Report along with Variation No. 1 and the SEA Screening Report went on public display on 20th July 2011 to 16th August 2011. Written observations and submissions regarding Variation No. 1, the associated SEA Screening Report and AA Screening Report were invited from members of the public and other interested parties during this statutory time period.

3 Addendum 1 to the Appropriate Assessment Screening Report

All responses/submissions received following the public display of Variation No. 1, SEA Screening Report and AA Screening Report were assessed and responses to these submissions where incorporated into a Manager's Report**.** During this process, a number of proposed Material Alterations to Variation No. 1 were made and an Addendum to the Appropriate Assessment Screening (AA) Report of the Variation No. 1 to the County Development Plan 2007-2013 was prepared in October 2011 which determined that the proposed Material Alterations to Variation No. 1 to the County Development Plan 2007-2013 were not likely to have a significant effect on the conservation objectives and the integrity of Natura 2000 sites within the Plan boundary and also within 15km of the Plan boundary.

4 Addendum 2 to the Appropriate Assessment Screening Report

4.1 Background

In October 2011, Wexford County Council proposed a number of Material Alterations to Proposed Variation No. 1. A copy of the proposed Material Alterations and the determinations in relation to Strategic Environmental Assessment and an Appropriate Assessment Addendum were on display from Wednesday 19 October 2011 to Tuesday 15 November 2011.

During this time period one submission, which related to the Appropriate Assessment Screening Report Addendum, was received from the Development Applications Unit, Department of Arts, Heritage and the Gaeltacht.

The nature conservation recommendation of the Department of Arts, Heritage and the Gaeltacht is detailed below:

"The Department are in agreement with the conclusion of the Appropriate Assessment (AA) screening. However, we are concerned that parts of it are not adequately explained. In particular the repeated use of the paragraph *"No projects giving rise to significant adverse direct, indirect or secondary impacts on the integrity of the Natura 2000 sites having regard to their conservation objectives, arising from …… shall be permitted on the basis of the proposed material alterations to Variation No. 1 to the County Development Plan (either individually or in combination with other plans or projects*)". This paragraph needs some explanation as to how such projects shall not be permitted. We would suggest that it should refer back to an objective in the County Development Plan".

This Addendum shows where the Departments comments have been taking on board in the Appropriate Assessment Screening Document and Addendum 1. This Document should be read in conjunction with the Appropriate Assessment Screening Report (July, 2011) and Appropriate Assessment Screening Report Addendum 1 (October 2011).

4.2 Addendum 2

We outline below where the Departments recommendations have now been taken on board and how the relevant sections of the July and October Reports are amended by this Addendum.

Appropriate Assessment Screening Report (July, 2011)

We outline below the amendments to text which relate to the Appropriate Assessment Screening Report which have been made based on the submission received from the Department of Arts, Heritage and the Gaeltacht.

Pg 55, Section 4.5.2

Size and scale

In line with Objective NH1 of the 2007 Plan, no projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, having regard to their conservation objectives, arising from their proximity, size or scale, shall be permitted on the basis of the Proposed Variation to the County Development Plan (either alone or in combination with other plans or projects)[2]. The delivery of infrastructure relating to this Core Strategy (*e.g.* rail, water treatment works, waste water treatment works etc) shall be subject to a Habitats Directive Assessment (HDA) in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC). This will ensure that that any works arising from the implementation of this Proposed Variation

will not significantly impact on the integrity and conservation objectives of Natura 2000 sites.

Pg 55, Section 4.5.2

Landtake

In line with Objective NH1 of the 2007 Plan, the delivery of infrastructure relating to this Core Strategy (*e.g.* rail, water treatment works, waste water treatment works etc) shall be subject to a Habitats Directive Assessment (HDA) in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC). This will ensure that that any works arising from the implementation of this Proposed Variation will not significantly impact on the integrity and conservation objectives of Natura 2000 sites.

It should be noted that there is no zoning in the County Development Plan 2007-2013 and therefore there is no land being rezoned/dezoned/phased or reserved. Changes to zoning will be under the individual Town Plans and Local Area Plans produced under the new County Development Plan.

Pg 56, Section 4.5.2

Distance from the Natura 2000 site or key feature of the site

As noted above, there is no zoning in the County Development Plan 2007-2013 and therefore there is no land being rezoned/dezoned/phased or reserved. Changes to zoning will be under the individual Town Plans and Local Area Plans produced under the new County Development Plan.

In line with Objective NH1 of the 2007 Plan, no projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, having

regard to their conservation objectives, arising from their location, shall be permitted on the basis of the Proposed Variation to the County Development Plan (either alone or in combination with other plans or projects)[2]. The delivery of infrastructure relating to this Core Strategy (*e.g.* rail, water treatment works, waste water treatment works *etc*) shall be subject to a Habitats Directive Assessment (HDA) in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC). This will ensure that that any works arising from the implementation of this Proposed Variation will not significantly impact on the integrity and conservation objectives of Natura 2000 sites.

Pg 56, Section 4.5.2

Resource requirements (water abstraction *etc.*)

The Core Strategy details the proposed amendment to Chapter 6 Infrastructure Energy and Waste of the 2007 County Development Plan. Chapter 6.2 relates to an update on the Water Services Investment Programme. All projects relating to resource requirements in this Proposed Variation (*e.g.* water abstractions relating to water supply schemes for example) will be subject to an Appropriate Assessment Screening (and Appropriate Assessment, if deemed required) and relevant Environmental Assessments. This will ensure that that any works arising from the implementation of this Proposed Variation will not significantly impact on the integrity and conservation objectives of Natura 2000 sites.

Hence, with the implementation of Objective NH1 of the 2007 Plan along with all environmental protection policies contained within that Plan, no projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, arising from their resource requirements (*e.g.* water abstraction) will be facilitated or shall be permitted on the basis of the Proposed Variation to the County Development Plan (either alone or in combination with other plans or projects)[2].

Pg 57, Section 4.5.2

Emissions and waste (disposal to land, water or air)

The proposed amendment to text in Chapter 6 of 2007 Plan is an update on the Waste Water Capital Investment Programme. Upgrades to sewerage schemes will strengthen the protection of receiving waters.

Objective NH1 of the current plan "*Prohibit development which would damage or threaten the integrity of sites of international or national importance, designated for their habitat/wildlife or geological/geomorphological importance including the proposed Natural Heritage Areas, candidate Special Areas of Conservation, Special Protection Areas and Statutory Nature Reserves*" will ensure that no projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, arising from emissions and waste are facilitated or shall be permitted on the basis of the Proposed Variation to the County Development Plan (either alone or in combination with other plans or projects)[2].

Pg 58, Section 4.5.2

Excavation requirements

In line with Objective NH1 of the current plan, no projects giving rise to significant adverse direct, indirect or secondary impacts on the integrity of the Natura 2000 sites, having regard to their conservation objectives, arising from excavation requirements shall be permitted on the basis of this Plan (either individually or in combination with other plans or projects)[2].

Pg 60, Section 4.5.2

Climate change

The implementation of Objective NH1 of the current Plan will ensure that no projects giving rise to significant adverse changes in climatological conditions affecting the Natura 2000 sites shall be permitted on the basis of the provisions of this Plan (either individually or in combination with other plans or projects)[2].

Addendum 1 of Appropriate Assessment Screening Report (Oct, 2011)

We outline below the amendments to text in the Appropriate Assessment Screening Report Addendum 1 which have been made based on the submission received from the Department of Arts, Heritage and the Gaeltacht.

Pg 20, Section 3.3.2

Size and scale

Where it is considered that potential developments arising from the Material Alterations to Variation No. 1 (*i.e.* CS1 and CS2; road, rail improvements, *etc*) may impact upon sensitive or designated sites, because of their proximity or scale, an Appropriate Assessment screening and Environmental Assessment (*e.g*. EIA, EIR) will be sought, where deemed necessary.

In line with Objective NH1 of the 2007 Plan, no projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, having regard to their conservation objectives, arising from their proximity, size or scale, shall be permitted on the basis of the Material Alterations to Variation No. 1 (either alone or in combination with other plans or projects)[5].

As noted above, the delivery of infrastructure arising from the Material Alterations to Variation No. 1 shall be subject to a Habitats Directive Assessment (HDA) in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC). This will ensure that that any works arising from the implementation of the Material Alterations to Variation No. 1 will not significantly impact on the integrity and conservation objectives of Natura 2000 sites.

Pg 20, Section 3.3.2

Landtake

In line with Objective NH1 of the 2007 Plan, the delivery of infrastructure relating to relating to the Material Alterations (*e.g.* transport infrastructure) shall be subject to a Habitats Directive Assessment (HDA) in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC). This will ensure that that any works arising from the implementation of the Material Alterations will not significantly impact on the integrity and conservation objectives of Natura 2000 sites.

It should be noted that there is no zoning in the County Development Plan 2007-2013 and therefore there is no land being rezoned/dezoned/phased or reserved. Changes to zoning will be under the individual Town Plans and Local Area Plans produced under the new County Development Plan.

Pg 21, Section 3.3.2

Distance from the Natura 2000 site or key feature of the site

As noted above, there is no zoning in the County Development Plan 2007-2013 and therefore there is no land being rezoned/dezoned/phased or reserved. Changes to zoning

will be under the individual Town Plans and Local Area Plans produced under the new County Development Plan.

In line with Objective NH1 of the 2007 Plan, no projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, having regard to their conservation objectives, arising from their location, shall be permitted on the basis of the Material Alterations to Variation No. 1 to the County Development Plan (either alone or in combination with other plans or projects)[6]. The delivery of infrastructure relating to the Material Alterations (*e.g.* transport infrastructure) shall be subject to a Habitats Directive Assessment (HDA) in accordance with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC). This will ensure that that any works arising from the implementation of the Material Alterations to Variation No. 1 will not significantly impact on the integrity and conservation objectives of Natura 2000 sites.

Pg 22, Section 3.3.2

Resource requirements (water abstraction *etc.*)

With the proper implementation of Objective NH1 of the 2007 Plan along with all environmental protection policies contained within that Plan, no projects giving rise to significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, arising from their resource requirements (*e.g.* water abstraction) will be facilitated or shall be permitted on the basis of the Material Alterations to Variation No. 1 to the County Development Plan (either alone or in combination with other plans or projects)[7].

Pg 22, Section 3.3.2

Emissions and waste (disposal to land, water or air)

With the proper implementation of Objective NH1 of the 2007 Plan along with all environmental protection policies contained within that Plan, no projects giving rise to

significant adverse direct, indirect or secondary impacts upon the integrity of any Natura 2000 sites, arising from emission or waste will be facilitated or shall be permitted on the basis of the Material Alterations to Variation No. 1 to the County Development Plan (either alone or in combination with other plans or projects)[7].

Pg 22, Section 3.3.2

Excavation requirements

In line with Objective NH1 of the current plan, no projects giving rise to significant adverse direct, indirect or secondary impacts on the integrity of the Natura 2000 sites, having regard to their conservation objectives, arising from excavation requirements shall be permitted on the basis of this Plan (either individually or in combination with other plans or projects)[7].

Pg 24, Section 3.3.2

Climate Change

The implementation of Objective NH1 of the current Plan will ensure that no projects giving rise to significant adverse changes in climatological conditions affecting the Natura 2000 sites shall be permitted on the basis of the provisions of this Plan (either individually or in combination with other plans or projects)[9]. It is considered that, taken together with the existing policies and objectives in the current County Development Plan 2007, the Material Alterations will not affect the integrity or conservation objectives of any Natura 2000 sites. Therefore, no changes on Natura 2000 sites are likely.