

**Draft Visitor Experience & Management Masterplan for Glendalough and  
Wicklow Mountains National Park, Co. Wicklow**

**Natura Impact Statement**



**CONSULTATION STAGE REPORT**

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## **Draft Visitor Experience & Management Masterplan for Glendalough and Wicklow Mountains National Park, Co. Wicklow**

### **Natura Impact Statement**

#### **1. INTRODUCTION**

##### **1.1 Background**

This report has been prepared by Faith Wilson (an independent ecological consultant) on behalf of Fáilte Ireland, The National Tourism Development Authority. This report forms the Natura Impact Statement for the Draft *Visitor Experience & Management Masterplan for Glendalough and Wicklow Mountains National Park*.

The Draft *Visitor Experience & Management Masterplan for Glendalough and Wicklow Mountains National Park* has been compiled by a multi-disciplinary team, led by Consarc Design Group, on behalf of the commissioning authorities, Fáilte Ireland in partnership with National Parks and Wildlife Service (NPWS), the Office of Public Works (OPW), the National Monuments Service (NMS), Wicklow County Council (WCC) and Coillte. For the purposes of Appropriate Assessment Fáilte Ireland is the competent authority.

However Regulation 42 A (15) of the European Communities (Birds and Natural Habitats) Regulations 2011 to 2021 (Inserted by Regulation 7 of S.I. 293 of 2021) states:

‘(15) Notwithstanding any other provision of these Regulations, the Minister shall undertake or adopt a plan or project, only after having received the determination of the Ecological Assessment Unit that the plan or project shall not adversely affect the integrity of a European site.’

Therefore if it is determined that NPWS will be adopting the plan, then Regulation 42 A (15) will apply and NPWS will have to also make a determination on the plan.

The Draft *Visitor Experience & Management Masterplan for Glendalough and Wicklow Mountains National Park* is a non-statutory, medium range plan (up to ten years) intended to provide a phased roadmap for the visitor experience within the setting of Glendalough and the Wicklow Mountains National Park, whilst protecting the heritage of the area, built and natural. It includes establishment of key objectives to support local communities, against which future projects will be assessed. It is intended that the Draft *Visitor Experience & Management Masterplan for Glendalough and Wicklow Mountains National Park* will set

a framework for future development consents of relevant individual projects.

The preparation of the Draft *Visitor Experience & Management Masterplan for Glendalough and Wicklow Mountains National Park* (hereafter referred as the VEMMP) has been developed with regard to Article 6 of the *Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora* (as amended) (hereafter referred to as the Habitats Directive).

## 1.2 Requirement for Appropriate Assessment

### 1.2.1 Legislative Background

The aim of the European Habitats Directive (Council Directive 92/43/EEC on the conservation of wild habitats and of wild fauna and flora) is to create a network of protected wildlife sites across Europe, which are to be maintained at a favourable conservation status<sup>1</sup>. Each member state must designate their most important natural areas as Special Areas of Conservation (SAC). The Directive specifies the scientific criteria on the basis of which SAC sites must be selected and very strictly curtails the grounds that can be used as justification for damaging a site. The network of sites is referred to as NATURA 2000 and includes SACs (Special Areas of Conservation) for protected habitats and species and SPAs (Special Protection Areas) for birds, which are designated under the European Birds Directive (Council Directive 79/409/EEC as amended by Directive 2009/147/EC).

It is a requirement of the Habitats Directive ((92/43/EEC) that the competent consent authority, which in this case is Fáilte Ireland, must ensure that any plan or proposal, which is likely to have a significant effect on an SAC or SPA, is authorised only to the extent that the authority is satisfied it will not adversely affect the integrity of the area and that an appropriate assessment of the implications of the plan for the conservation status of the site is undertaken.

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

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<sup>1</sup> The conservation status of a **habitat** can be taken as "favourable" when its natural range and area it covers within that range is stable or increasing and the ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future.

The conservation status of a species can be taken as "favourable" when population dynamics data on the species concerned indicate that it is maintaining itself on a long term basis as a viable component of its natural habitats, the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future and there is and will continue to be a sufficiently large habitat to maintain its populations on a long-term basis. Article 1 (i) of the Habitats Directive 92/43/EEC.

Article 6 of the Habitats Directive provides a strict assessment procedure for any plan or project not directly connected with or necessary to the management of a designated European site but which has the potential to have implications for the site in view of the site's conservation objectives.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

*Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.*

Article 6(4) states:

*If, in spite of a negative assessment of the implications for the [Natura 2000] 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 a social or economic nature, Member States 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.*

In Ireland, the requirements of Article 6(3) and (4) of the Habitats Directive have been broadly transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011), which has been amended by:

- European Union (Birds and Natural Habitats) (Sea-fisheries) Regulations 2013 (S.I. No. 290 of 2013)
- European Communities (Birds and Natural Habitats) (Amendment) Regulations 2013 (S.I. No. 499 of 2013)
- European Communities (Birds and Natural Habitats) (Amendment) Regulations 2015 (S.I. No. 355 of 2015)
- Planning and Development, Heritage and Broadcasting (Amendment) Act 2021 (Act No. 11 of 2021)
- European Union (Birds and Natural Habitats) (Amendment) Regulations 2021 (S.I. No. 293 of 2021)

This report has taken into consideration the relevant requirements of the Planning and Development Act, 2000 (as amended by the Planning and Development Act 2010).

References to Natura 2000 sites throughout this report are to be taken as referring to European sites as defined in the above Planning Act.

### 1.2.2 Screening for Appropriate Assessment

A report for Screening for Appropriate Assessment was completed in July 2022. That report followed the stage by stage approach for Appropriate Assessment as outlined below:

**Stage 1. Screening** – the process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant;

**Stage 2. Appropriate Assessment** – the consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts;

**Stage 3. Assessment of Alternative Solutions** – the process, which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site;

**Stage 4. Assessment where no alternative solutions exist and where adverse impacts remain** – an assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

The outcome of that Stage 1 Screening for Appropriate Assessment report was that the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* should be subject to Stage 2 AA. Seventeen Natura 2000 sites were identified that could be potentially either directly or indirectly impacted by the proposals within the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* and that mitigation would be required for same.

### **1.2.3 AA and SEA**

The Appropriate Assessment and Strategic Environmental Assessment (SEA) for the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* have been conducted in parallel, however the focus of the AA is on the impacts that the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* may have on Natura 2000 sites. The results of the AA and the research conducted for it feed into the SEA and aids the SEA process in the appraisal of potential alternatives, in relation to Natura 2000 sites.

### **1.3 The Draft VEMMP for Glendalough and Wicklow Mountains National Park**

The Draft *VEMMP for Glendalough and Wicklow Mountains National Park* is a multi-layered, medium term strategic draft plan aimed at the sustainable development and management of tourism in the National Park and wider County Wicklow commensurate with the environmental capacity of the area.

The Draft *VEMMP for Glendalough and Wicklow Mountains National Park* is a non-statutory plan and is informed by the statutory plans for the area, including the Wicklow County Development Plan and the Laragh – Glendalough Tourism and Settlement Plan, 2016-2022 (now incorporated into the Draft Wicklow County Development Plan, 2022-2028).

The Draft *VEMMP for Glendalough and Wicklow Mountains National Park* aims to minimise regional and seasonal congestion of visitors, whilst having regard to the capacity of the National Park, including Glendalough, to accommodate additional tourists and visitors.

In particular, the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* is designed to mitigate pressures on the environment by encouraging tourists to visit outside seasonal peaks and to visit areas outside of the main attractions in County Wicklow, especially Glendalough. The plan aims to improve the visitor experience, manage visitor better and ensure sustainable tourism development.

The Draft *VEMMP for Glendalough and Wicklow Mountains National Park* has identified areas for improvement and put forward a rationale for such improvement, has addressed wayfinding from key access routes and via public transport and sets out proposals to generate a sense of arrival in the Wicklow Mountains National Park and Glendalough.



## 1.4 Guidance

This Natura Impact Statement has been prepared with regard to the following guidance documents where relevant:

- *Office of the Planning Regulator Practice Note PN01 - Appropriate Assessment Screening for Development Management (OPR, 2021).*
- *Assessment of plans and projects in relation to Natura 2000 sites – Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC 2021/C 437/01. (Commission notice C/2021/6913. Dated 28.10.2021).*
- *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 (European Commission Environment Directorate General, 2001)*
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC (Commission Notice C(2018) 7621 final, Brussels, 21.11.2018)*
- *Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC (EC Environment Directorate General, 2000)*
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities Circular NPW 1/10 & PSSP 2/10*
- *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities. (Department of Environment, Heritage and Local Government, 2010 revision)*
- *Guidelines for Good Practice, Appropriate Assessment of Plans under Article 6(3) Habitats Directive (International Workshop on Assessment of Plans under the Habitats Directive, 2011)*
- *Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC. Clarification of the Concepts of Alternative Solutions, Imperative Reasons of Over-riding Public Interest, Compensatory Measures, Overall Coherence. Opinion of the European Commission (European Commission, January 2007) and*
- *Communication from the Commission on the precautionary principle. European Commission (2000).*

Irish guidance on AA does not provide detailed guidance on how to assess policies and objectives within a plan. Guidance from Scotland (David Tyldesley and Associates, 2015), which outlines a relevant assessment process for policies and objectives has been drawn upon for the preparation of this report.

## 1.5 Methodology and Data Sources

### Desktop Research

This report was based on an initial desk-top study drawing on information sources which included the following:

- Bing maps aerial photography and mapping (accessed on 1<sup>st</sup> July 2022).
- Online data available on Natura 2000 sites as held by the National Parks and Wildlife Service (NPWS) from [www.npws.ie](http://www.npws.ie) (accessed on 1<sup>st</sup> July 2022)
- Online database of rare, threatened and protected species on publicly accessible biodiversity datasets (<https://maps.biodiversityireland.ie/>) (accessed on 1<sup>st</sup> July 2022).
- Information on the River Basin District and catchments from [www.wfdireland.ie](http://www.wfdireland.ie) and <https://www.catchments.ie/> (accessed on 1<sup>st</sup> July 2022).
- NPWS (2013). The Status of Protected EU Habitats and Species in Ireland. Overview Volume 1. Unpublished Report, National Parks & Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland. Editor: Deirdre Lynn.
- NPWS (2013). The Status of EU Protected Habitats and Species in Ireland. Habitat Assessments Volume 2. Version 1.1. Unpublished Report, National Parks & Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.
- NPWS (2013). The Status of EU Protected Habitats and Species in Ireland. Species Assessments Volume 3. Version 1.0. Unpublished Report, National Parks & Wildlife Services. Department of Arts, Heritage and the Gaeltacht, Dublin, Ireland.
- NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill.
- NPWS (2019). The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments. Unpublished NPWS report. Edited by: Deirdre Lynn and Fionnuala O'Neill.
- NPWS (2013). Ireland's Summary Report for the period 2008 - 2012 under Article 12 of the Birds Directive.

- [https://cdr.eionet.europa.eu/Converters/run\\_conversion?file=/ie/eu/art12/envuvesya/IE\\_birds\\_reports-14328-144944.xml&conv=343&source=remote#A082\\_B](https://cdr.eionet.europa.eu/Converters/run_conversion?file=/ie/eu/art12/envuvesya/IE_birds_reports-14328-144944.xml&conv=343&source=remote#A082_B)
- BirdWatch Ireland, Bird Atlas 2007 - 2011, National Biodiversity Data Centre, Ireland (accessed 1<sup>st</sup> July 2022).
- BirdWatch Ireland, The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972. National Biodiversity Data Centre, Ireland (accessed 1<sup>st</sup> July 2022).
- BirdWatch Ireland, The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991, National Biodiversity Data Centre, Ireland (accessed 1<sup>st</sup> July 2022).
- NPWS on-line data for Natura 2000 sites.
- Ordnance Survey of Ireland mapping and aerial photography.
- Geological, Hydrological and Soils data available from the Geological Survey of Ireland (GSI).

### **Field Surveys**

Detailed field surveys were conducted over many months between 2020, 2021 and 2022. The results of these surveys informed the development of the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* ensuring that nature conservation and its protection was at the heart of the plan.

### **Consideration of In Combination and Cumulative Impacts**

The following plans and projects were reviewed and considered for in-combination effects:

- Draft Wicklow County Development Plan, 2022-2028
- Laragh - Glendalough Tourism and Settlement Plan, 2016-2022
- Draft River Basin Management Plan for Ireland 2022-2027
- Management Plan for Wicklow Mountains National Park, 2005-2009
- NPWS Conservation Management Plans
- The National Biodiversity Action Plan, 2017-2021
- County Wicklow Biodiversity Action Plan, 2010-2015
- County Wicklow Heritage Plan, 2017-2022

The in combination effects of other proposed recreational walking and cycling trails within the county as detailed in Section 11.3 of the Wicklow County Development Plan, 2022-2028 were also considered in the assessment.

Section 11.3 of the Wicklow County Development Plan, 2022-2028 sets out a number of policy objectives for tourism and recreation in the County as follows;

CPO 11.37: To protect and enhance existing and support the development of new, walking cycling routes / trails 12, including facilities ancillary to trails (such as sign posting and car parks) and the development of linkages between trails in Wicklow and adjoining counties. In particular, to encourage and facilitate:

- On-road cycling routes across the Wicklow Mountains (in particular across the Sally Gap) and along coastal routes.
- The development of a new trail from Bray Head, via the Sugarloaf Mountains, joining up with The Wicklow Way.
- Trails in West Wicklow.
- The development of a lakeshore walk around the Vartry reservoir.
- The development of a walking route along the disused Great Southern and Western Railway line (Naas to Tullow branch) through Dunlavin and Baltinglass subject to consultation and agreement with landowners.
- The development of a coastal route from Bray to Arklow as well as links between this potential route and the coast road.
- The Wicklow Way and St. Kevin's Way (as permissive waymarked routes).
- The Wicklow to Glendalough "pilgrim walk" incorporating ancient wells.
- Mountains to the Sea' amenity route incorporating Glendalough, Laragh, Annamoe, Roundwood, Newtownmountkennedy and Kilcoole-Newcastle.
- The development of an amenity and active travel route between the Bray Harbour area northwards to the Dun Laoghaire Rathdown administrative area to provide for future connection to the proposed Woodbrook DART station.

## 1.6 Consultation

The main statutory bodies that have been an integral part of the Plan development process have been the National Parks and Wildlife Service, the National Monuments Service, the Office of Public Works, Coillte and Fáilte Ireland. Within Wicklow County Council there has been significant staff input including the Heritage Officer, Community and Rural Recreation Officers, Roads and Transport staff and the Chief Executive. Presentations have been made to the elected Council and to many individual councillors. Many local, community and environmental bodies have been involved including the Wicklow Uplands Council, the Laragh and Glendalough community group, and private landowners.

The following National Parks and Wildlife Service staff were consulted as part of the plan development process:

- Regional Manager
- Divisional Ecologist
- District Conservation Officer
- Conservation Rangers

## 2. APPROPRIATE ASSESSMENT

### 2.1 The Receiving Environment of Wicklow Mountains National Park

Wicklow Mountains National Park was established by Government decision in 1991, with an initial core area of over 3,700 ha and administered by the National Parks and Wildlife Service. It is Ireland's largest National Park and has expanded to nearly 22,000ha, stretching from Glenasmole in the Dublin Mountains southwards to the slopes of Lugnaquilla. The area was heavily glaciated and many of the Glens were carved by glaciers to create the distinctive u-shaped valleys of Glendalough, Glenmalure, Glenmacnass and Glencree.

The Wicklow Mountains National Park is an IUCN Category II National Park. These are areas that are defined as *"large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities"*.<sup>2</sup>

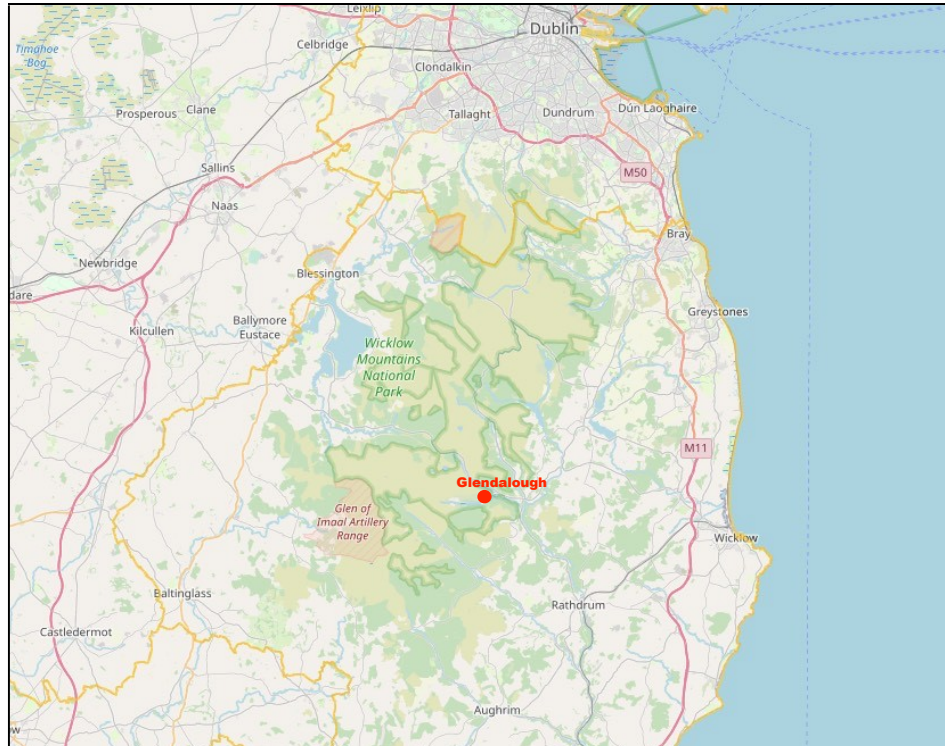
Most of the National Park is designated as a Special Area of Conservation (SAC) and Special Protection Area (SPA) under the EU Habitats and Birds Directives, and it contains a range of archaeological, architectural, ecclesiastical and mining heritage sites. There are multiple access points to the National Park from the west, north, east and south and it is close to the largest city in the state, Dublin.

The National Park is managed in accordance with international criteria set down by the World Conservation Union (IUCN) and is included in the United Nations List of National Parks and Equivalent Reserves.

The popularity of the National Park and, in particular of Glendalough, poses significant challenges in respect of access, parking, congestion, orientation, interpretation and provision of both commercial facilities and amenities. There are currently approximately 1.5 million visitors per annum to the National Park, but almost half of these visits are concentrated on Glendalough, with 735,000 visitors per annum, of which approximately 80,000 attend the Glendalough Visitor Centre (numbers are reducing year by year). As the population of the State continues to grow, it is anticipated that pressures on the National Park are likely to intensify in future years.

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<sup>2</sup> IUCN: International Union for Conservation of Nature



**Figure 1. The location of Wicklow Mountains National Park within Counties Wicklow and Dublin (EPA Maps).**

### **Habitats and Species within WMNP**

As indicated by the name, the Wicklow Mountains National Park contains a diverse range of upland habitats and species. Some of these are what are known as the Qualifying Interests of the Special Area of Conservation (SAC) and Special Protection Area (SPA) whilst others are of conservation interest nationally or are species protected under the Wildlife Acts or Flora Protection Order 2022.

Member states across the European Union must conduct monitoring of the habitats listed under Annex I and species listed under Annex II of the EU Habitats Directive and bird species listed under Annex I of the EU Birds Directive within their jurisdiction. This information on the national condition of each habitat/species is presented in a report prepared under Article 17 of the EU Habitats Directive on a six year basis.

The Overall Conservation Status Assessment for each habitat or species is listed as either:

- Favourable
- Unfavourable inadequate (change in management or policy is required to return the habitat to favourable status but there is no danger of extinction in the foreseeable future)

- Unfavourable bad (serious danger of becoming extinct, at least regionally)

There is also an 'Unknown' class which can be used where there is insufficient information available to allow an assessment.

The habitats and species within Wicklow Mountains National Park have not been subject to any recent specific monitoring or habitat condition assessment (see **Section 2.6**).

However the condition of upland habitats at a national level have been assessed in the last three reporting rounds as being generally in unfavourable condition as can be seen summarised in **Table 2.1** below.

A summary of the ecological requirements for each Annex I habitat, Annex II species and other species of conservation interest associated with the Wicklow Mountains National Park and their current national conservation status (NWPS 2019) is presented below.

### **Habitats**

#### **3110 Oligotrophic Isoetid Lake Habitat**

Ireland is a European stronghold for this soft-water, nutrient-poor lake habitat. This habitat is frequent in catchments where peatland overlies acid bedrock (notably granite and old red sandstone). It is best developed on more gentle slopes along sheltered shorelines. The oligotrophic isoetid lake habitat is also found in upland lakes, such as corries.

It requires oligotrophic or Water Framework Directive High status, but is under significant pressure from eutrophication, and from drainage and other damage to peatland. Damage to peatland can result in hydrological changes in lakes, increased organic matter, water colour and turbidity, changes in sediment characteristics, acidification and enrichment. It is recognised that ensuring the long-term future of this lake habitat requires action to address peatland damage at a catchment scale, as well as to reduce nutrient and other pollution. The Overall Status is assessed as **Bad** with a stable trend.



**Table 2.1. The National Condition of Upland Habitats under Article 17 of the EU Habitats Directive as reported in 2007, 2013 and 2019. There have been no improvements in the condition of these habitats over the last twenty years and all remain in unfavourable condition.**

Habitat	Area			Structure & Functions			Future Prospects			Overall Status		
	2007	2013	2019	2007	2013	2019	2007	2013	2019	2007	2013	2019
3110 Oligotrophic Isoetid Lake Habitat	F	F	F	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B
3130 Mixed Najas Flexilis Lake Habitat	F	F	F	U - B	U - I	U - I	U - B	U - I	U - I	U - B	U - I	U - I
3160 Acid Oligotrophic Lake Habitat	F	F	F	U - B	U - I	U - I	U - B	U - I	U - I	U - B	U - I	U - I
3260 Vegetation Of Flowing Waters	F	F	F	U - B	U - I	U - I	U - B	U - I	U - I	U - B	U - I	U - I
4010 Wet heath	U	U - I	U - I	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B
4030 Dry heath	F	U - I	U - I	c	U - B	U - B	U - I	U - B	U - B	U - I	U - B	U - B
4060 Alpine and Boreal heath	U - I	F	U - I	U - I	U - B	U - B	U - I	U - B	U - B	U - I	U - B	U - B
6130 Calaminarian Grassland	F	U - I	U - I	F	F	U - B	U - I	U - I	U - I	U - I	U - I	U - I
6230 Nardus grasslands*	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B
7130 Blanket bogs (* if active bog),	U - B	U - B	U - I	U - I	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B
8110 Siliceous screes	U - I	F	F	U - I	U - I	U - I	U - I	U - I	U - I	U - I	U - I	U - I
8210 Calcareous rocky slopes	U - I	F	F	U - I	U - I	U - I	U - I	U - I	U - I	U - I	U - I	U - I
8220 Siliceous rocky slopes	U - I	F	F	U - I	U - I	U - I	U - I	U - I	U - I	U - I	U - I	U - I
91A0 Old Oak Woodland	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B	U - B

U	Unknown
F	Favourable
U - I	Unfavourable - Inadequate
U - B	Unfavourable - Bad

### **3130 Mixed *Najas flexilis* Lake Habitat**

Mixed *Najas flexilis* lake habitat occurs in lakes with very clear, circum-neutral, low-nutrient waters in catchments of mixed geology. Base-rich influences come from basalt, limestone, marble, sedimentary deposits or calcareous coastal sand, and peatland is often widespread in the catchments. The Annex II macrophyte *Najas flexilis* is a character species. Owing to its rare species and relatively high species richness, mixed *Najas flexilis* lake habitat is of high conservation value.

Ireland is a European stronghold for the habitat and for *Najas flexilis*. The habitat is widespread particularly along the western fringe. It is under significant pressure from drainage, agriculture, peat extraction, forestry and wastewaters. The Overall Status is assessed as **Inadequate**, unchanged since the 2013 assessment. Based on improved knowledge through dedicated survey during the reporting cycle, the trend is assessed as deteriorating.

### **3160 Acid Oligotrophic Lake Habitat**

Natural dystrophic lakes and ponds habitat, or acid oligotrophic lake habitat, is mainly found in small lakes and pools in a mosaic with Atlantic and upland blanket bog and wet heath.

On-going damage to peatland results in hydrological changes in lakes and ponds with the habitat, as well as increased sedimentation, colour, turbidity, organic material and ammonia. Fertilisation of forests can contribute to enrichment of the habitat. The Overall Status of the habitat is **Inadequate**, unchanged since the 2013 assessment.

### **3260 Vegetation Of Flowing Waters**

This habitat has a broad definition, covering upland, flashy, oligotrophic, bryophyte- and algal-dominated rivers, to tidal reaches dominated by higher plants.

The main problems for river habitats in Ireland are damage through hydrological and morphological change, eutrophication and other water pollution. The EPA continues to highlight the decline in high quality rivers. While not all variants of the river habitat require low nutrient conditions, this trend is a significant concern. Agriculture and municipal and industrial discharges are the most significant sources of nutrient and organic pollution. The Overall Status of the habitat is **Inadequate** and deteriorating, unchanged since the 2013 assessment.

#### **4010 Wet Heath**

Wet heath is a highly variable peatland habitat that is intermediate in many regards between dry heath and blanket bog, generally occurring on gently sloping, poorly draining ground on shallow or intermediate peat depths (typically less than 50cm deep).

Area losses have continued into the current reporting period due to new forestry, paths, tracks and land clearance. Overgrazing, burning, wind farm development and erosion continue to be issues for this habitat. Nitrogen deposition from agricultural activities that generate air pollution has recently been recognised as negatively impacting this habitat. Furthermore, climate change is acknowledged to be a potential future threat to wet heath, as it is expected to cause rises in temperature and decreases in precipitation. As a result the Overall Status is assessed as **Bad** and deteriorating. The change in trend since 2013 is attributed to a genuine decline in the habitat overall, in particular an increase in area with unfavourable Structure and functions.

#### **4030 Dry heath**

Dry heath comprises vegetation dominated by ericaceous dwarf shrubs and usually occurs on well-drained, nutrient-poor and acidic mineral soils or shallow peats (typically <50cm deep) on sloping ground.

A number of significant pressures were recorded for this habitat in the current reporting period, particularly overgrazing by sheep and burning for agriculture. Both cause habitat degradation and loss through erosion. Afforestation and wind farms are also recognised as problems for Dry heath. The Overall Status of Dry heath is assessed as **Bad** and the trend is stable. This assessment is unchanged since 2013.

#### **4060 Alpine and Boreal heath**

Alpine and Boreal heath consists of two distinct subtypes in Ireland. The upland subtype occurs on the exposed summits and upper slopes of mountains on acidic substrate. It typically occurs from around 350-400m upwards, but can occur at lower altitudes in more exposed locations.

Sheep grazing is widespread in uplands where this habitat occurs and is a problem for the habitat where grazing levels are high. Hill walking is often concentrated on the summits and ridges where this habitat is found, and can cause erosion and damage to the habitat. Agricultural activities that cause air pollution and consequently nitrogen deposition are also considered to cause significant impacts. Climate change is recognised as a potential future threat to the habitat in the future, particularly in the

context of rising temperatures and decreases in precipitation. Considering these on-going pressures and threats, the Overall Status is assessed as **Bad**, unchanged since the 2013 assessment. The improving trend is based on the assumption that the reduced grazing brought about by the Commonage Framework Plans continues to have a positive effect on this habitat.

### **6130 Calaminarian Grassland**

Calaminarian grassland vegetation is characterised by the presence of metallophyte plants, i.e. plants that can tolerate high levels of heavy metals. In Ireland, this habitat is restricted to artificial habitats on spoil heaps in the vicinity of old mine workings. Of particular note is a suite of rare bryophyte species which are tolerant of heavy metal-rich conditions and are restricted to ground with high concentrations of copper, lead and zinc.

Pressures are associated with abiotic natural processes (leaching of metals) and succession, as well as impacts from recreational activities (walking/hiking). Calaminarian grassland vegetation in Ireland only occurs on artificial soils created from past mining activities, but leaching out of metals will result in a decline in soil toxicity, which in turn will lead to natural succession to a different vegetation community. The Overall Status is assessed as **Inadequate** with a declining trend. The change in trend since 2013 is due to improved knowledge, and decline is considered to have been on-going since before the last assessment.

### **6230 *Nardus* grasslands\***

Species-rich *Nardus* grasslands are restricted to siliceous substrates in upland areas (montane and sub-montane zone), usually near the upper limit of enclosed farmland. It has probably always been a rare habitat within Irish uplands and it relies on extensive grazing, usually by sheep, to maintain the habitat over almost all of its range. *Nardus* grasslands often occur in a mosaic with heath. Mineral flushing is usually required to create a habitat that supports a more species-rich community.

The Overall Status is assessed as **Bad** due to on-going pressures such as bracken encroachment and succession. The trend is stable, and may represent a genuine improvement since the 2013 report however there was limited monitoring undertaken.

### **7130 Blanket bogs (\* if active bog)**

Blanket bogs occur in areas of consistently high rainfall (>1,250mm and >225 rain days per annum) where the ground surface is waterlogged for

much of the time, resulting in the development of deep peats. The habitat is widespread along the western seaboard and on uplands, but absent from lowlands in the midlands and east. It may be broadly divided into upland and lowland types. The peat is typically more than 50cm deep, c. 1-2m in uplands but up to 8m in lowlands. Blanket bog generally occurs on flat or gently sloping terrain but can occur on steeper ground in the wettest districts.

The main pressures on blanket bogs are overgrazing, burning, afforestation, peat extraction, and agricultural activities causing nitrogen deposition. Erosion, drainage and wind farm construction are other issues of concern. As a result the Overall Status is assessed as **Bad** and deteriorating, unchanged since the 2013 report.

### **8110 Siliceous screes**

Siliceous scree habitat consists of accumulations of siliceous rock fragments on slopes below upland cliffs or on exposed / frost-shattered mountain summits or ridges. While there is no strict lower altitudinal threshold, this habitat is interpreted as referring to examples of scree occurring in a broadly upland landscape context. Rock sizes may vary from large blocks ('talus') that can be very stable to smaller fragments that may be highly mobile. Areas of loose rock on summits or plateaux exposed by peat erosion and areas akin to fell-field are not included, nor are screes beneath vegetation that indicates other habitats (e.g. dry heath, scrub). While the presence of arctic-alpine species on siliceous scree indicates high-quality examples of the habitat, they are not deemed an essential component.

The Overall Status is Inadequate, as in the 2013 assessment, but the trend has changed. Structure and functions were assessed as improving in the previous reporting period due to destocking associated with the Commonage Framework Plans; however, as overgrazing, undergrazing and succession were recorded as medium-importance pressures in this reporting period, and Structure and functions were again assessed as **Inadequate**, the trend is considered to be stable rather than improving. This change is due to improved knowledge and the habitat is considered to have been stable since before the last assessment.

### **8210 Calcareous rocky slopes**

Calcareous rocky slopes habitat consists of vertical or near-vertical exposures of calcareous bedrock with cracks, fissures and overhangs that support chasmophytic vegetation (i.e. vegetation in crevices). It may also occur on wet siliceous cliffs where there is some base enrichment in the

water or where such rock has been metamorphosed. While there is no strict altitudinal threshold, this habitat is limited to examples of chasmophytic vegetation in a broadly upland landscape context. Areas of heath, grassland or tall herb communities on rock faces or ledges are not considered part of the habitat.

The Overall Status is assessed as **Inadequate** with a stable trend due to pressures associated with overgrazing and the non-native invasive species New Zealand willowherb (*Epilobium brunnescens*). This is unchanged since the previous assessment in 2013.

### **8220 Siliceous rocky slopes**

Siliceous rocky slope habitat consists of vertical or near-vertical exposures of siliceous bedrock with clefts, crevices, fissures, and overhangs that support chasmophytic vegetation (i.e. vegetation in crevices). While there is no strict lower altitudinal threshold, this habitat is interpreted as referring to examples of chasmophytic vegetation occurring in a broadly upland landscape context. Areas of heath, grassland or tall herb communities growing on rock faces or ledges are not included in this habitat and while the presence of arctic-alpine species indicates high-quality examples of the habitat, they are not an essential component of the habitat.

The Overall Status is assessed as **Inadequate** with a stable trend due to pressures associated with the non-native invasive species New Zealand willowherb (*Epilobium brunnescens*). There have been no significant changes since 2013.

### **91A0 Old Oak Woodland**

Old oak woodland generally occurs on podzolised soils in upland, southern and western regions, but also occurs on localised, non-waterlogged acid soils elsewhere. In areas with high rainfall a western oceanic subtype occurs that is rich in bryophytes, lichens and filmy ferns. A drier, comparatively species-poor subtype occurs on less rocky terrain. A third, more base-rich subtype is also found, differing from the previous two in the greater diversity of tree and herb species.

Historical habitat loss has occurred and still continues, although at a very low level. However, the greatest on-going pressures on these woods come from invasive non-native species such as *Rhododendron ponticum*, cherry laurel (*Prunus laurocerasus*) and beech (*Fagus sylvatica*), and overgrazing by deer. These impacts severely reduce tree regeneration, which is essential for the long-term viability of woodlands. Measures such as the Native

Woodland Scheme are expected to have a positive long-term effect but are as yet insufficient to outweigh the pressures, as development of Annex-quality woodland takes decades. These pressures, in conjunction with the continued fragmentation of remaining stands, lead to an Overall Status of **Bad** with a deteriorating trend. The change in trend from improving in 2013 is due to the availability of more accurate data, particularly in relation to recent habitat loss, and decline is considered to have been on-going since before the last assessment.

## **Birds**

### **Peregrine falcon (*Falco peregrinus*)**

This species traditionally nest in a number of locations in the Glendalough Valley and breed on mountain cliffs above corrie lakes elsewhere within the uplands. They are listed under Annex I of the EU Birds Directive and are currently a green listed species on the Birds of Conservation Concern in Ireland 4: 2020–2026 list. Peregrine populations are still recovering from devastating declines in the 1960s linked to DDT, a pesticide, which caused thin eggshells and breeding failure. They are vulnerable to human disturbance at their nesting sites.

### **Merlin (*Falco columbarius*)**

This is Ireland's smallest bird of prey and they have been recorded from the Coronation Plantation in the Wicklow Mountains since 1837. They are listed under Annex I of the EU Birds Directive and are currently an amber listed species on the Birds of Conservation Concern in Ireland 4: 2020–2026 list. They are very vulnerable to human disturbance and rely on upland birds such as meadow pipit and skylark and moths for their prey (Fernández-Bellon & Lusby (2011)).

### **Goosander (*Mergus merganser*)**

This is a rare breeding bird species, which breeds only in Counties Wicklow and Donegal. Birds breed on the Avonmore River where they use both natural sites and artificial nesting boxes, and are also recorded from the Aughrim River and in Glendalough. They move up and downstream along watercourses within the catchment. They are typically disturbed off the lakes in the Glendalough Valley by visitors but can be seen there early in the morning.

### **Kingfisher (*Alcedo atthis*)**

This Annex I species is found on watercourses within the Glendalough Valley and throughout the National Park and County.

### **Red Grouse (*Lagopus lagopus hibernicus*)**

The heathland habitats of the Wicklow uplands are a stronghold for the threatened Red Grouse, which is a red listed species on the Birds of Conservation Concern in Ireland 4: 2020–2026 list. This species requires long old heather for cover and nesting as well as young heather on which to feed. The national Red Grouse Survey took place between 2006 – 2008 and included WMNP. Powerscourt Paddock was identified as being one of the few sites in Ireland where heather management for grouse was being implemented<sup>3</sup> and indicative estimates of the population of Red Grouse within the Wicklow Mountains SPA is extracted below in **Table 1** from that survey.

**Table 1. Figures given below are crude estimates of the populations of Red Grouse in some protected areas of blanket bog throughout the country. These figures were derived using calculated suitability factors for each region (which are not site specific), the mean density of birds (adjusted using the correction factor\*) and the total area of each SAC / SPA. (The Wicklow figures were thought to be an underestimate).**

Area	Designation	Region	Suitability Factor	Each Region Mean Males ± CL's	Total Males ± CL's	Population Estimate (correction factor*) ± CL's
Wicklow Mts.	SAC/SPA	E & S	0.27	1.22 0.96-1.49	45.5 36-55.7	96.4 76.4-113.3

### **Mammals**

#### **1355 Otter (*Lutra lutra*)**

Ireland continues to remain a stronghold for the European otter (*Lutra lutra*). Four national surveys have been conducted to date. The first in 1980/81 found signs of otters throughout the country, at 88% of sites surveyed. There was some suggestion of declines in the survey results of 1990/91 and 2004/05 but the most recent survey (2010) indicated recovery to 1980 levels. The most recent distribution data show that the otter continues to be widespread throughout Ireland in a wide variety of habitat types.

<sup>3</sup> Cummins, S., Bleasdale, A., Douglas, C., Newton, S., O'Halloran, J. & Wilson, H.J. (2010) The status of Red Grouse in Ireland and the effects of land use, habitat and habitat quality on their distribution. Irish Wildlife Manuals, No. 50. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.



Otters have two basic requirements: aquatic prey and safe refuges where they can rest. In Ireland, otter populations are found along rivers, lakes and coasts, where fish and other prey are abundant, and where the bank-side habitat offers plenty of cover. The otter is an opportunistic predator with a broad and varied diet. In coastal areas fish, crabs and molluscs are known to be eaten. In freshwater areas a variety of fish from sticklebacks to salmon and eels will be taken, while crayfish and frogs can be important locally or seasonally.

The main threats to the otter include pollution, particularly organic pollution resulting in fish kills; and accidental deaths (road traffic and fishing gear). Although recent studies on territory overlaps and animal movements suggest that refinements to the population estimation formula are needed, the otter population (estimated at between 7,000 and 10,000 breeding females) is considered to be increasing and none of the threats or pressures identified is considered likely to impact significantly on the species. The Overall Status of otter is therefore considered to be **Favourable**, unchanged since the previous reporting period.

#### **Pine Marten (*Martes martes*)**

This red listed species have been expanding their range and distribution since the 1980s following legal protection and an increase in forest cover. They require woodland habitat to provide cover, foraging and breeding sites and remain one of our rarest terrestrial mammals.

#### **Red squirrel (*Sciurus vulgaris*)**

This legally protected species can be found in all woodland habitats and have been increasing in recent years following predation of grey squirrels by recovering populations of pine martens.

#### **Bats**

Bats are sensitive to lighting and other anthropogenic influences. Ten species of bats have been recorded within the Wicklow Mountains National Park and the Glendalough Valley. These include:

- Common Pipistrelle (*Pipistrellus pipistrellus*)
- Soprano Pipistrelle (*Pipistrellus pygmaeus*)
- Nathusius' Pipistrelle (*Pipistrellus nathusii*)
- Brown Long-Eared Bat (*Plecotus auritus*)
- Leisler's Bat (*Nyctalus leisleri*)
- Whiskered Bat (*Myotis mystacinus*)
- Natterer's Bat (*Myotis nattereri*)
- Daubenton's Bat (*Myotis daubentonii*)
- Brandt's Bat (*Myotis brandtii*)

- Greater Horseshoe Bat (*Rhinolophus ferrumequinum*)

### **Other Mammals**

Other terrestrial mammals which are legally protected and known from the Wicklow Mountains National Park and the Glendalough Valley include:

- Hedgehog (*Erinaceus europaeus*)
- Pygmy Shrew (*Sorex minutus*)
- Irish / Mountain Hare (*Lepus timidus hibernicus*)
- Irish Stoat (*Mustela erminea hibernica*)
- Badger (*Meles meles*)
- Red Deer (*Cervus elaphus*)
- Sika Deer (*Cervus nippon*)
- Fallow deer (*Dama dama*)

### **Amphibians and Reptiles**

The legally protected Common Frog (*Rana temporaria*), Smooth newt (*Lissotriton vulgaris*) and Lizard (*Zootoca vivipara*) are found in the Glendalough Valley and the wider Wicklow Mountains National Park.

### **Vascular Plants**

There are a number of rare, scarce, threatened and legally protected plant species recorded in Wicklow Mountains National Park, which are listed in the Irish Red Data Book - Vascular Plants, under the Irish Red List for Vascular Plants and/or are legally protected under the Flora (Protection) Order 2022. They include:

#### **Lanceolate Spleenwort (*Asplenium obovatum*)**

This is a small fern which grows on banks and walls and is historically known from two sites in County Wicklow including the Glendalough Valley but has not been recently recorded. This species is legally protected under the Flora (Protection) Order 2022.

#### **Parsley Fern (*Cryptogramma crispa*)**

This fern was historically known from two sites in the Wicklow Uplands but has not been recently recorded. This species is legally protected under the Flora (Protection) Order 2022.

**Small White Orchid (*Pseudorchis albida*)**

This is an orchid species of upland pastures and heaths but has not been recently recorded from Wicklow. This species is legally protected under the Flora (Protection) Order 2022.

**Bog Orchid (*Hammarbya paludosa*)**

This diminutive orchid grows in wet flushes and bogs, on tufts of *Sphagnum* moss. This species is legally protected under the Flora (Protection) Order 2022.

**Alpine Lady's Mantle (*Alchemilla alpina*)**

This alpine species is found on mountain cliffs in Wicklow and Kerry. This species is legally protected under the Flora (Protection) Order 2022.

**Marsh Clubmoss (*Lycopodiella inundata*)**

This extremely rare clubmoss was historically known from the Glendalough Valley but has not been seen in over a century. This species is legally protected under the Flora (Protection) Order 2022.

**Narrow-leaved Helleborine (*Cephalanthera longifolia*)**

This extremely rare orchid was historically known from the Avonmore Valley but has not been recently recorded. This species is legally protected under the Flora (Protection) Order 2022.

**Greater Broomrape (*Orobanche rapum-genistae*)**

This is a rare species that parasitizes the roots of Gorse and Broom and is known from the Avonmore River system.

**Alpine Saw Wort (*Saussurea alpina*)**

This is an alpine species that grows on mountain ledges and cliffs above 300m and is recorded from Wicklow Mountains National Park.

**Water Quality**

The Water Framework Directive: 2000/60/EC is a key initiative aimed at improving water quality throughout the EU. It applies to rivers, lakes, groundwater, estuaries and coastal waters. The Directive requires an integrated approach to managing water quality on a river basin basis with the aim of maintaining improving and restoring water quality to achieve 'Good Status' of all surface, ground, estuarine and coastal waters.

Under the provisions of the Water Framework Directive, monitoring is carried out of rivers, lakes, groundwater and transitional and coastal waters under the auspices of the Environmental Protection Agency (*Ireland's National Water Framework Directive Monitoring Programme 2019–2021*).

The Wicklow Mountains National Park falls into two hydrometric areas equivalent to the respective Water Framework Directive river catchments – (*Ovoca-Vartry* to the east and the *Liffey and Dublin Bay* to the west). Also of note is the *Slaney and Wexford Harbour* hydrometric area/catchment immediately to the south-west of the National Park. Under the WFD classification, surface water status is categorised in a range descending in quality from *high, good, moderate, poor, bad*.

In the National Park and environs, the majority of river water bodies in the *Ovoca-Vartry* catchments are *good*. In Glendalough, the Glenealo / Glendasan River is classed as *moderate*. Water courses to the west, in the Liffey catchment, tend to be *moderate* for the most part and in the Glen of Imaal to the south-west, just outside the boundary of the National Park, in the upper reaches of the Slaney the majority are *high*.

The status of lake waterbodies varies so that of the larger lakes in the eastern *Ovoca-Vartry* catchment the Lower Lough Bray is *good*, Lough Tay and Lough Dan are *moderate*, and Upper Glendalough is *high*.

In the Liffey catchment, to the west of the National Park, the reservoir at Poulaphouca is classed as *good*.

Groundwater status throughout the National Park and environs is *good* with the exception of the old mining areas to the west of Glendalough and in Glenmalure, these areas have *poor* status.

## 2.2 Aims of the Draft VEMMP for Glendalough and Wicklow Mountains National Park

The Draft *VEMMP for Glendalough and Wicklow Mountains National Park* sets out three main aims:

- Aim 1: Enhance the natural, built and cultural heritage
- Aim 2: Disperse the benefits and impacts of tourism
- Aim 3: Improve the visitor experience

The aims of the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* are further detailed below.

### ***Aim 1 - Enhance the natural, built and cultural heritage***

In the course of the development process for the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* it was clear that the receiving habitats and species of the Wicklow Mountains National Park are under significant pressure and in poor conservation status.

During the consultation process it was established that the public are very aware of issues around the quality of the landscape and environment, including biodiversity, 'rewilding', replacement of coniferous plantations with native woodlands, control of the deer population etc.

Objectives and actions of the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* to address these concerns include:

#### Objectives

- Create a central baseline record of research and knowledge on natural and built heritage
- Quantify the impacts of visitors and tourism
- Provide capital support for enhancement
- Set targets for improvement of bio-diversity
- Review the myriad of protection designations and how they are working in practice

#### Actions

- Commission research to cover gaps in knowledge
- Pursue World Heritage Status for Glendalough
- Erosion Repair project for upland trails
- Support bog rewetting and native woodland enhancement projects on public and private land
- Visitor interpretation and education programme

## ***Aim 2 - Disperse the benefits and impacts of tourism***

Visitor activity in Wicklow is dominated by day trips from Dublin bringing little into the local economy. Also, the impacts are unevenly distributed, especially around Glendalough and Laragh, where peak time congestion mars the visitor experience and has negative impacts on the local community. The Draft *VEMMP for Glendalough and Wicklow Mountains National Park* proposes a *Dispersal Strategy* for the active management of the visitor experience, with a number of objectives and actions:

### Objectives

- Increase numbers of visitors staying in Wicklow for multi-day experiences
- Actively disperse visitors more evenly throughout the County
- Pro-active visitor management to avoid congestion and enhance experience

### Actions

- 'One stop shop' - website for visitor information - including Publicising/Marketing/Social media messaging.
- Co-ordinated signage
- Transport offers
- Pricing mechanisms in car parks
- Traffic management
- Recreational Masterplan built around dispersal strategy - Discovery Walks - new trails spread around the County
- Develop mechanisms to co-ordinate visitor management
- Walker drop-off shuttle bus service

## ***Aim 3: Improve the visitor experience***

This aim is focussed on the capital investment in visitor infrastructure as a means to enhance the visitor experience and to support the Dispersal Strategy and the enhancement of the receiving landscape:

### Objectives

- Understanding the markets and tailoring facilities accordingly
- Improving the quality of the visitor facilities in the Glendalough valley
- Developing the varied experiences to encourage the multi-day stays
- Active visitor management to enhance the experience

- Improved interpretation and learning about the receiving landscapes

#### Actions

- Qualitative visitor surveys to inform future visitor services
- New visitor arrival Hub in Laragh with supporting car parks and infrastructure - 'Arrival'
- Improved and re-purposed Visitor Centre incorporating natural and monastic heritage - 'Learning'
- New Visitor services at Upper Lake with re-landscaping the car park
- Appropriate development of upland car parks and connecting shuttle buses
- Co-ordinated visitor information signage across Wicklow

## 2.3 Specific Proposals

### **Glendalough Valley Plan**

Within the Draft VEMMP for Glendalough and Wicklow Mountains National Park it is intended to introduce a phased strategy which combines new car parking within the village of Laragh, and a new all ability visitor trail up the Glendalough valley. This strategy not only alleviates pressures of traffic and footfall, but which also provides for a richer experience within the valley, allowing visitors to experience the full gamut of natural and built heritage within the historic valley. These proposals are presented on **Figures 2 to 5** and described below.

### **Phased Proposals within the Glendalough Valley**

The proposals are phased and intended to be introduced incrementally, allowing works to be tailored to developing demands and pressures. They involve the enhancement of the monastic site and its landscape setting, fusing together the built and natural heritage values and facilitating visitors to understand the powerful relationship with the natural environment that attracted St Kevin and generations of his followers to the valley in the first place.

The Plan **does not** contain any comment on or proposals for the detailed conservation and management of the habitats and species which form the qualifying interests of the Natura 2000 sites and of other nature conservation interests such as rare plants, fauna, invertebrates and other wildlife within the Glendalough Valley and the wider WMNP as that is the responsibility of the National Parks and Wildlife Service.

The broad scope of the proposals are summarised as follows:-

### **Phase 1**

- An enhanced version of the current situation with the temporary overflow car park provision in Laragh made permanent, a new off road walking and cycling trail between Laragh and Glendalough and the existing Visitor Centre expanded to include the interpretation of the natural environment.
- Seasonal restrictions for private cars on the road between the Glendalough Hotel and the Upper Lake car park with a VMS (variable messaging system) to guide traffic.
- A pilot scheme for a shuttle bus between the Laragh car park and the Visitor Centre is taking place over the summer months of 2022.

### **Phase 2**

- Increasing seasonal restrictions on private car access to the Upper Lake car park and the Visitor Centre car park with a shuttle bus to supplement walking and cycling options, with development of larger and permanent car parks and visitor facilities in Laragh.

### **Phase 3**

- Ongoing development of arrival facilities in Laragh as demand merits with the aim of enhancing the overall visitor experience, reducing traffic and pollution in and around the monastic site and lakes and encouraging longer visitor stays.
- Residents and hotel guest traffic to Glendalough remain as existing.
- Taken collectively, these proposals are designed to significantly reduce the impact of car access and parking on the monuments, drawing back the commercial activities from the monastic enclosure, increasing the site wide interpretation and preparing the way for future site surveys, research, excavations and interpretations of the wider monastic city and setting.
- The exact alignment of the new walking and cycling trail from Laragh to Glendalough is not determined at this stage but will be subject to detailed ecological and archaeological surveys as required and negotiations for land purchase with landowners. The purchase of land to facilitate the development of the trail and the establishment of a natural wildlife corridor along the Glendasan River and restoration and establishment of woodland habitats adjoining same would contribute to the conservation objectives of the Natura 2000 sites and the WMNP.



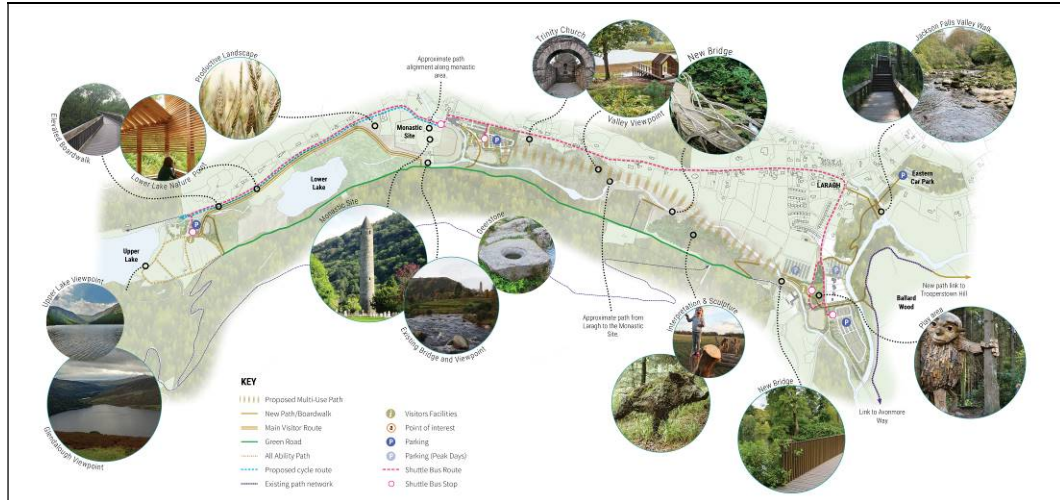


Figure 2. Glendalough Valley Plan.



Figure 3. Car parking and visitor facilities at Laragh.



**Figure 4. Car parking and visitor facilities at OPW site.**



**Figure 5. Car parking and visitor facilities at the Upper Lake Carpark.**

### **Improving the sustainability of existing sites**

The Draft *VEMMP for Glendalough and Wicklow Mountains National Park* has identified four sites, which stand out as providing an iconic outdoor recreation visitor experience in the Wicklow uplands within the existing provision of walking and cycling facilities in the County as shown on **Figure 6**.

These are:

- Great Sugar Loaf Mountain
- Djouce Mountain
- Spinc and Glenealo Valley
- Lough Brays

It is anticipated that these high value/high volume sites will continue to attract visitors in the future and consequently, appropriately managing these sites now is key to their future sustainability. Priority management at each is based on the principle of protecting the site, rather than making it easier or safer for people to use these sites. At each site issues which need addressing include problems of recreational induced erosion and issues regarding car parking capacity and other essential visitor services, such as toilet provision. Within the context of this study, the current path degradation at these sites was considered together with a short review of the current management techniques already employed, where relevant.

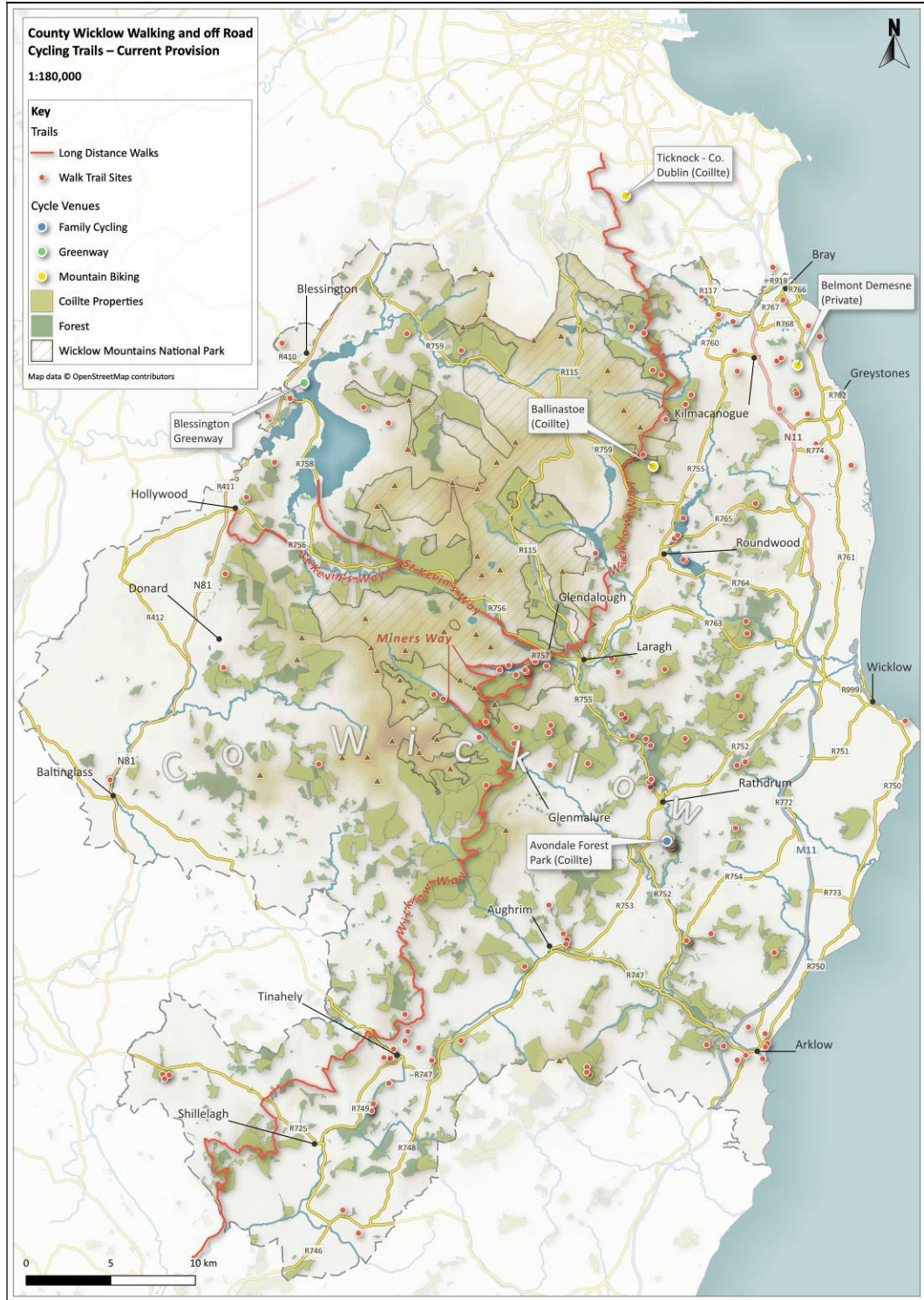


Figure 6. Existing walking and cycling facilities in the County.

### **Proposed Discovery Walks**

There are currently over 500km of waymarked walking trails in Wicklow. Above all others, the Spinc Trail in Glendalough stands out as *the* iconic tick box experience for recreational visitors to Wicklow and is believed to be by far the single most popular route of its kind in the entire county. While the trail itself is now largely sustainable thanks to an ongoing programme of path upgrade, walkers contribute to congestion on the valley floor and in its car parks.

The Draft *VEMMP for Glendalough and Wicklow Mountains National Park* proposes that by effectively dispersing these visitors elsewhere this will help alleviate the pressure in Glendalough while spreading the economic benefits to other areas of the county.

Through consultation, 19 sites were identified for consideration and each was then reviewed on the ground. Of these, 7 sites are recommended for immediate inclusion as Discovery Walks as shown on **Figure 7** below, and a further 2 proposed subject to landowner agreement as follows:

1. Maulin
2. Clara Vale Jubilee Route
3. Table Track, Glenmalure
4. Little Sugar Loaf
5. Lackan Mass Path, Lugnagun
6. Ballinaclesh Cushbawn Mountain
7. Ballinafunshogue Loop

Subject to landowner agreement –

8. Trooperstown Hill
9. Croaghanmoira

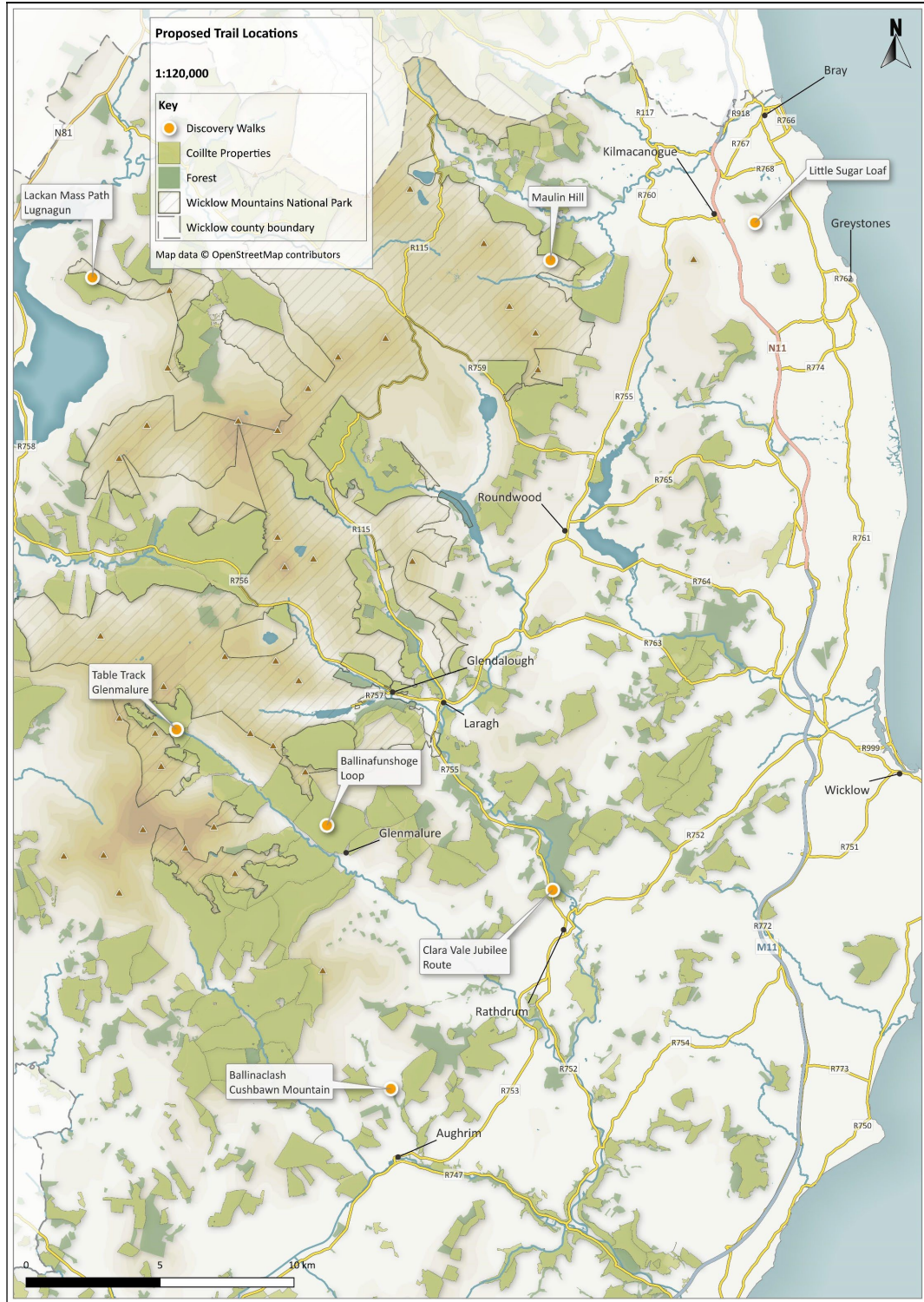


Figure 7. Proposed Discovery Walks.

### **Recreational Trail Masterplan for Wicklow**

The Draft *VEMMP for Glendalough and Wicklow Mountains National Park* sets out a Recreational Trail Masterplan for Wicklow, as shown on **Figure 8** below, which consists of the:

- Signature upland sites which are under pressure and require intervention
- Discovery Walks
- Sustainable walking routes serviced by the proposed shuttle bus service

The proposed shuttle bus service recommended in the Recreational Trail Masterplan within the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* is shown on **Figure 9**.

### **Car Park Upgrades**

The existing parking provisions for walkers in County Wicklow show some significant deficiencies, including lack of capacity at peak times, relatively high rates of criminality and an absence of sanitary facilities. The *Draft VEMMP*, in the *Draft Recreational Trails Masterplan*, sets out recommendations for improvements to the parking facilities at nine locations:

- Great Sugar Loaf
- Djouce
- Lough Brays/Glencree
- Lough Dan/Old Bridge
- Glenmalure
- Shay Elliot
- Seskin
- Glenmacnass Waterfall Car Park
- Glendasan Valley Lead Mines (near Laragh)

The Recreational Trail Masterplan within the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* recommends improvements to the provision of car parking (mostly through the reconfiguration of the layout of car parking) and the provision of other facilities such as the provision of a picnic area, wayfinding, and solar powered composting toilets to several of the existing car parks as shown on **Figure 10**.

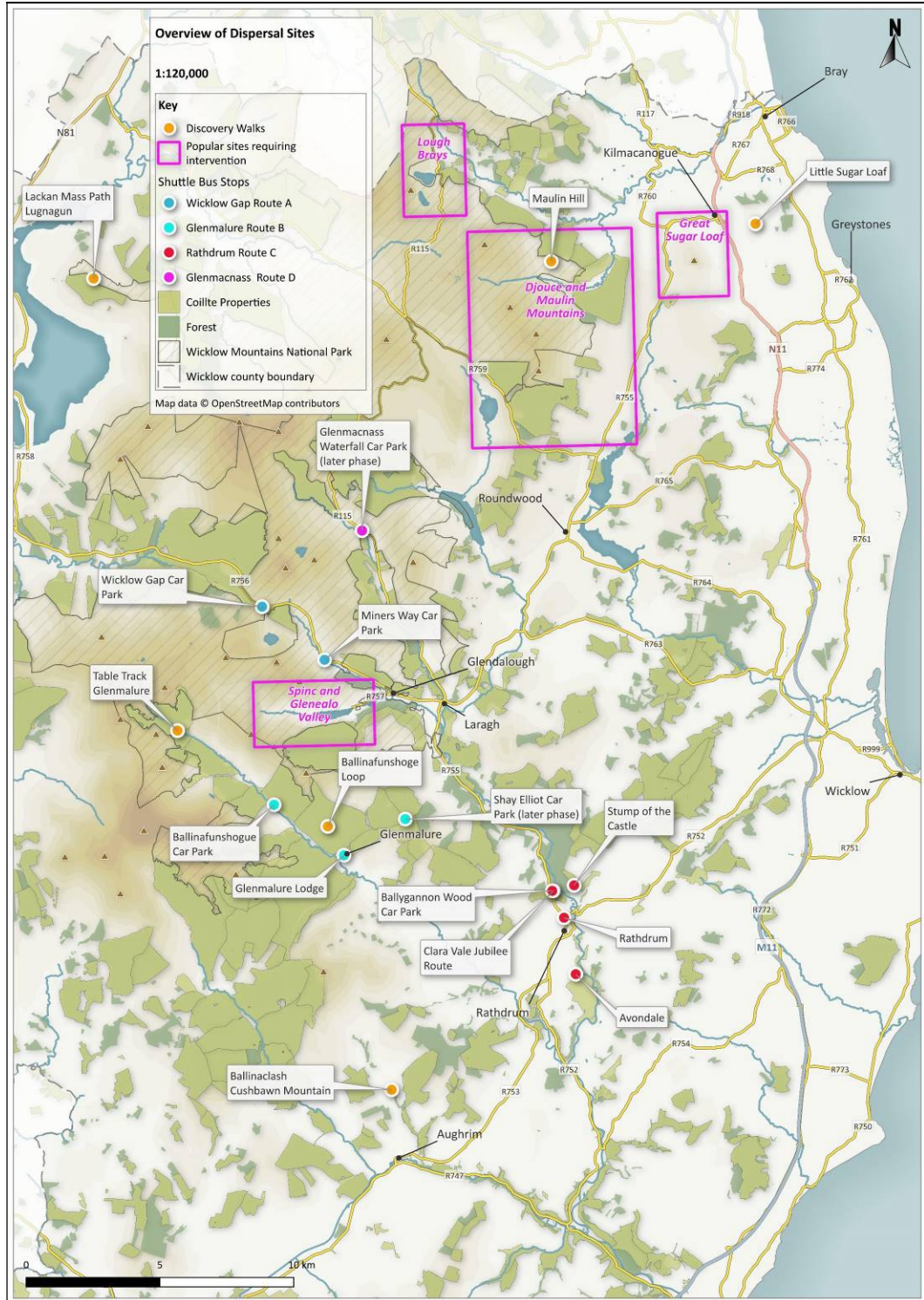


Figure 8. Recreational Trail Masterplan for Wicklow.



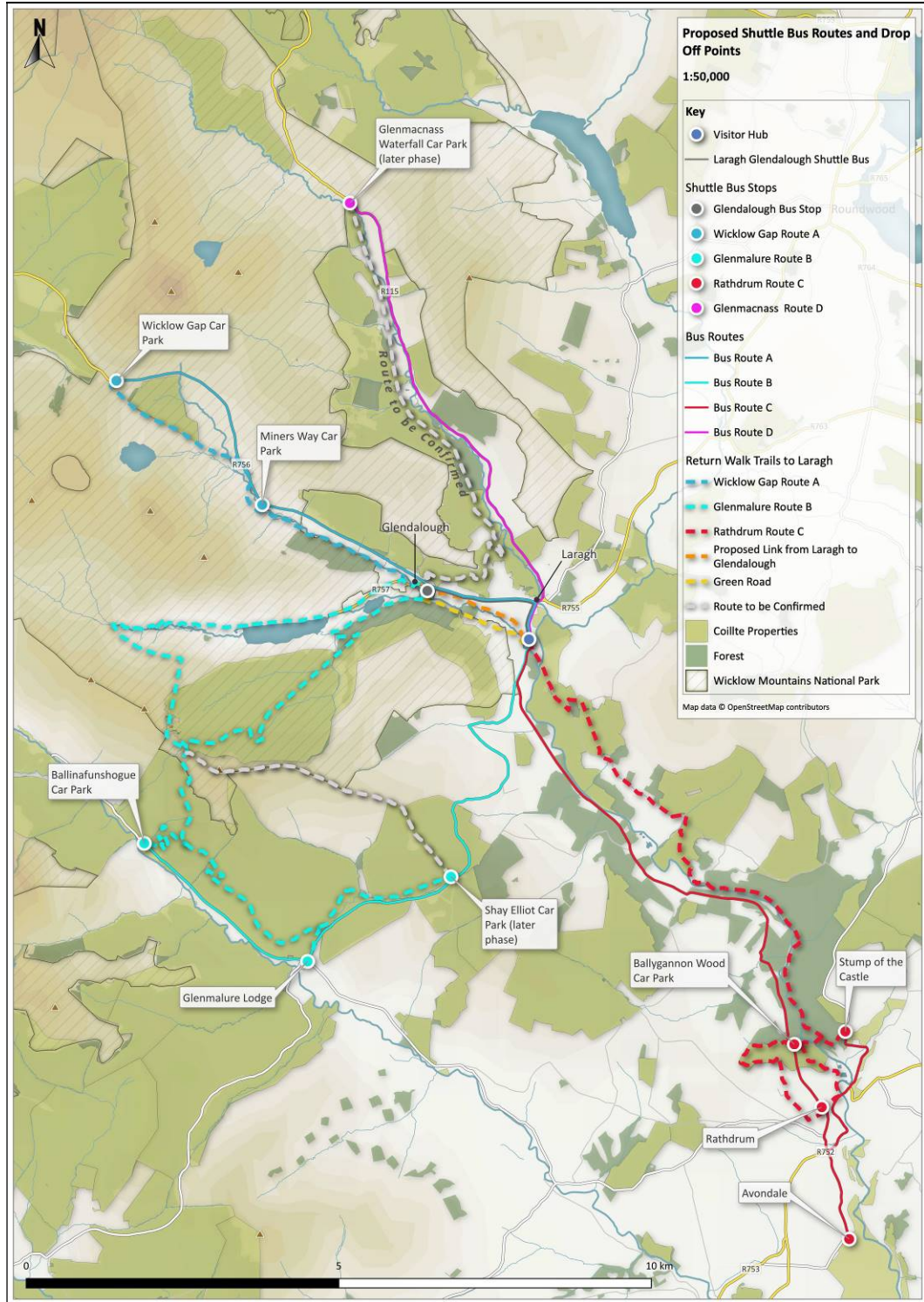


Figure 9. Proposed shuttle bus route, bus stops and drop off points.



Figure 10. Car Park Provision and proposed upgrades to existing car parks.

## **2.4 Identification of Natura 2000 Sites potentially affected by the Draft VEMMP for Glendalough and Wicklow Mountains National Park**

In line with the guidance documents set out in **Section 1.5** a review of all Natura 2000 sites that could be potentially affected by the Draft VEMMP for Glendalough and Wicklow Mountains National Park was made using the NPWS online map viewer.

These included any Natura 2000 sites within or adjacent to the Wicklow Mountains National Park and any Natura 2000 sites within the likely zone of impact of the Draft VEMMP for Glendalough and Wicklow Mountains National Park which includes other Natura 2000 sites within County Wicklow (potentially impacted by the wider County Wicklow Tourism Dispersal Strategy) or in adjacent counties including those downstream. These are summarised in **Table 2.4.1** below and their locations shown on **Figure 11**.

There are a number of other Natura 2000 sites, which are relatively remote from the Wicklow Mountains National Park, but which have a hydrological connection to the Wicklow Mountains National Park.

These include the Natura 2000 sites at the mouth of the Liffey - South Dublin Bay SAC (000210), North Dublin Bay SAC (000206), North Bull Island SPA 004006 and South Dublin Bay and River Tolka Estuary SPA (004024), as well as those at the mouth of the Slaney River - the Wexford Harbour and Slobs SPA (004076). These sites were excluded from further examination on account of distance but are included in **Table 2.4.1** below for completeness.

In addition to the identified Natura 2000 sites consideration was also given to relevant species listed under Annexes I and II of the Birds and Habitats Directives respectively - namely Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Twaite Shad, Atlantic Salmon, Otter, Peregrine Falcon, Merlin, Wintering Waterbirds and Little Tern as well as other species of conservation interest listed under Annex IV of the EU Directive such as bats, frogs and other species protected under the Wildlife Acts.

**Table 2.4.1. Natura 2000 sites within the likely zone of impact of the Draft VEMMP for Glendalough and Wicklow Mountains National Park.**

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest	General Conservation Objectives
000713	Ballyman Glen SAC	East, Wicklow lowlands	<ul style="list-style-type: none"> <li>• (7220) Petrifying springs with tufa formation (Cratoneurion)</li> <li>• (7230) Alkaline fens</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• (7220) Petrifying springs with tufa formation (Cratoneurion)</li> <li>• (7230) Alkaline fens</li> </ul>
000714	Bray Head SAC	East, Wicklow coast	<ul style="list-style-type: none"> <li>• (1230) Vegetated sea cliffs of the Atlantic and Baltic coasts</li> <li>• (4030) European dry heaths</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• (1230) Vegetated sea cliffs of the Atlantic and Baltic coasts</li> <li>• (4030) European dry heaths</li> </ul>
000729	Buckroney-Brittis Dunes And Fen SAC	East, Wicklow coast	<ul style="list-style-type: none"> <li>• Annual vegetation of drift lines [1210]</li> <li>• Perennial vegetation of stony banks [1220]</li> <li>• Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</li> <li>• Embryonic shifting dunes [2110]</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</li> <li>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</li> <li>• Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2150]</li> <li>• Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) [2170]</li> <li>• Humid dune slacks [2190]</li> </ul>	<ul style="list-style-type: none"> <li>• Annual vegetation of drift lines [1210]</li> <li>• Perennial vegetation of stony banks [1220]</li> <li>• Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</li> <li>• Embryonic shifting dunes [2110]</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</li> <li>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</li> <li>• Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2150]</li> <li>• Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) [2170]</li> <li>• Humid dune slacks [2190]</li> </ul>

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest	General Conservation Objectives
			<ul style="list-style-type: none"> <li>• Alkaline fens [7230]</li> </ul>	<ul style="list-style-type: none"> <li>• Alkaline fens [7230]</li> </ul>
000714	Carrigower Bog SAC	East, Wicklow uplands	<ul style="list-style-type: none"> <li>• Transition mires and quaking bogs [7140]</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• Transition mires and quaking bogs [7140]</li> </ul>
000717	Deputy's Pass Nature Reserve SAC	East, Wicklow lowlands	<ul style="list-style-type: none"> <li>• (91A0) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• (91A0) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles</li> </ul>
000719	Glen Of The Downs SAC	East, Wicklow lowlands	<ul style="list-style-type: none"> <li>• (91A0) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected:</p> <p>(91A0) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles</p>
001209	Glenasmole Valley SAC	North, Foothills of Dublin Mountains	<ul style="list-style-type: none"> <li>• (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) (*important orchid sites)</li> <li>• (6410) <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)</li> <li>• (7220) Petrifying springs with tufa formation (<i>Cratoneurion</i>)</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) (*important orchid sites)</li> <li>• (6410) <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)</li> <li>• (7220) Petrifying springs with tufa formation (<i>Cratoneurion</i>)</li> </ul>
001757	Holdenstown Bog SAC	South west, Wicklow lowlands	<ul style="list-style-type: none"> <li>• Transition mires and quaking bogs [7140]</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• Transition mires and quaking bogs [7140]</li> </ul>

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest	General Conservation Objectives
001742	Kilpatrick Sandhills SAC	South East, Wicklow/Wexford Coast	<ul style="list-style-type: none"> <li>• Annual vegetation of drift lines [1210]</li> <li>• Embryonic shifting dunes [2110]</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</li> <li>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</li> <li>• Atlantic decalcified fixed dunes (Calluno-Ulicetea) [2150]</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• Annual vegetation of drift lines [1210]</li> <li>• Embryonic shifting dunes [2110]</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</li> <li>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</li> <li>• Atlantic decalcified fixed dunes (Calluno-Ulicetea) [2150]</li> </ul>
000725	Knocksink Wood SAC	East, Wicklow lowlands	<ul style="list-style-type: none"> <li>• (7220) Petrifying springs with tufa formation (Cratoneurion)</li> <li>• (910E0) Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• (7220) Petrifying springs with tufa formation (Cratoneurion)</li> <li>• (910E0) Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)</li> </ul>
001766	Magherabeg Dunes SAC	East, Wicklow lowlands	<ul style="list-style-type: none"> <li>• Annual vegetation of drift lines [1210]</li> <li>• Embryonic shifting dunes [2110]</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</li> <li>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</li> <li>• Petrifying springs with tufa formation (Cratoneurion) [7220]</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• Annual vegetation of drift lines [1210]</li> <li>• Embryonic shifting dunes [2110]</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</li> <li>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</li> <li>• Petrifying springs with tufa formation</li> </ul>

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest	General Conservation Objectives
				(Cratoneurion) [7220]
004063	Poulaphouca Reservoir SPA	West, Foothills of Wicklow Mountains	<ul style="list-style-type: none"> <li>• Greylag Goose (<i>Anser anser</i>)</li> <li>• Lesser Black-backed Gull (<i>Larus fuscus</i>)</li> </ul>	<p>To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> <li>• Greylag Goose (<i>Anser anser</i>)</li> <li>• Lesser Black-backed Gull (<i>Larus fuscus</i>)</li> </ul>
000781	Slaney River Valley SAC	Rises Within WMNP	<ul style="list-style-type: none"> <li>• Estuaries [1130]</li> <li>• Mudflats and sandflats not covered by seawater at low tide [1140]</li> <li>• Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]</li> <li>• Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</li> <li>• Water courses of plain to montane levels with the <i>Ranunculum fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260]</li> <li>• Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]</li> <li>• Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]</li> <li>• <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]</li> <li>• <i>Petromyzon marinus</i> (Sea Lamprey) [1095]</li> <li>• <i>Lampetra planeri</i> (Brook Lamprey) [1096]</li> <li>• <i>Lampetra fluviatilis</i> (River Lamprey) [1099]</li> <li>• <i>Alosa fallax fallax</i> (Twaité Shad) [1103]</li> <li>• <i>Salmo salar</i> (Salmon) [1106]</li> <li>• <i>Lutra lutra</i> (Otter) [1355]</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitats for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• Estuaries [1130]</li> <li>• Mudflats and sandflats not covered by seawater at low tide [1140]</li> <li>• Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]</li> <li>• Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</li> <li>• Water courses of plain to montane levels with the <i>Ranunculum fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260]</li> <li>• Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]</li> <li>• Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]</li> <li>• <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]</li> <li>• <i>Petromyzon marinus</i> (Sea Lamprey) [1095]</li> <li>• <i>Lampetra planeri</i> (Brook Lamprey) [1096]</li> <li>• <i>Lampetra fluviatilis</i> (River Lamprey) [1099]</li> </ul>

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest	General Conservation Objectives
			<ul style="list-style-type: none"> <li>• <i>Phoca vitulina</i> (Harbour Seal) [1365]</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Alosa fallax fallax</i> (Twaiite Shad) [1103]</li> <li>• <i>Salmo salar</i> (Salmon) [1106]</li> <li>• <i>Lutra lutra</i> (Otter) [1355]</li> <li>• <i>Phoca vitulina</i> (Harbour Seal) [1365]</li> </ul>
002249	The Murrough Wetlands SAC	East, Wicklow lowlands	<ul style="list-style-type: none"> <li>• (1210) Annual vegetation of drift lines</li> <li>• (1220) Perennial vegetation of stony banks</li> <li>• (1330) Atlantic salt meadows (<i>Glauco Puccinellietalia maritimae</i>)</li> <li>• (1410) Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</li> <li>• (7210) * Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion <i>davallianae</i></li> <li>• (7230) Alkaline fens</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• (1210) Annual vegetation of drift lines</li> <li>• (1220) Perennial vegetation of stony banks</li> <li>• (1330) Atlantic salt meadows (<i>Glauco Puccinellietalia maritimae</i>)</li> <li>• (1410) Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</li> <li>• (7210) * Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion <i>davallianae</i></li> <li>• (7230) Alkaline fens</li> </ul>
004186	The Murrough SPA	East, Wicklow lowlands	<ul style="list-style-type: none"> <li>• Red-throated Diver (<i>Gavia stellata</i>)</li> <li>• Greylag Goose (<i>Anser anser</i>)</li> <li>• Light-bellied Brent Goose (<i>Branta bernicla hrota</i>)</li> <li>• Wigeon (<i>Anas penelope</i>)</li> <li>• Teal (<i>Anas crecca</i>)</li> <li>• Black-headed Gull (<i>Chroicocephalus ridibundus</i>)</li> <li>• Herring Gull (<i>Larus argentatus</i>)</li> <li>• Little Tern (<i>Sterna albifrons</i>)</li> <li>• Wetlands &amp; Waterbirds</li> </ul>	<p>To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> <li>• Red-throated Diver (<i>Gavia stellata</i>)</li> <li>• Greylag Goose (<i>Anser anser</i>)</li> <li>• Light-bellied Brent Goose (<i>Branta bernicla hrota</i>)</li> <li>• Wigeon (<i>Anas penelope</i>)</li> <li>• Teal (<i>Anas crecca</i>)</li> <li>• Black-headed Gull (<i>Chroicocephalus ridibundus</i>)</li> <li>• Herring Gull (<i>Larus argentatus</i>)</li> <li>• Little Tern (<i>Sterna albifrons</i>)</li> <li>• Wetlands &amp; Waterbirds</li> </ul>
000733	Vale Of Clara	East, Wicklow	<ul style="list-style-type: none"> <li>• Old sessile oak woods with <i>Ilex</i> and</li> </ul>	To maintain or restore the favourable conservation



Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest	General Conservation Objectives
	(Rathdrum Wood) SAC	lowlands	<i>Blechnum</i> in British Isles [91A0]	condition of the Annex I habitat for which the SAC has been selected: <ul style="list-style-type: none"> <li>• Old sessile oak woods with Ilex and <i>Blechnum</i> in British Isles [91A0]</li> </ul>
004127	Wicklow Head SPA	East, Wicklow coast	<ul style="list-style-type: none"> <li>• Kittiwake (<i>Rissa tridactyla</i>) [A188]</li> </ul>	To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: <ul style="list-style-type: none"> <li>• Kittiwake (<i>Rissa tridactyla</i>) [A188]</li> </ul>
002122	Wicklow Mountains SAC	Within WMNP	<ul style="list-style-type: none"> <li>• (3130) Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoeto-Nanojuncetea</li> <li>• (3160) Natural dystrophic lakes and ponds,</li> <li>• (4010) Northern Atlantic wet heaths with <i>Erica tetralix</i>,</li> <li>• (4030) European dry heaths,</li> <li>• (4060) Alpine and Boreal heaths,</li> <li>• (6230) Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas,</li> <li>• (7130) Blanket bog (*active only),</li> <li>• (8110) Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>),</li> <li>• (8210) Calcareous rocky slopes with chasmophytic vegetation,</li> <li>• (8220) Siliceous rocky slopes with chasmophytic vegetation,</li> <li>• (9990) Blanket bog (not active),</li> <li>• (1355) Otter (<i>Lutra lutra</i>).</li> </ul>	To maintain the favourable conservation condition of the Annex I habitats and Annex II species for which the SAC has been selected: <ul style="list-style-type: none"> <li>• (3130) Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoeto-Nanojuncetea</li> <li>• (3160) Natural dystrophic lakes and ponds,</li> <li>• (4010) Northern Atlantic wet heaths with <i>Erica tetralix</i>,</li> <li>• (4030) European dry heaths,</li> <li>• (4060) Alpine and Boreal heaths,</li> <li>• (6230) Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas,</li> <li>• (7130) Blanket bog (*active only),</li> <li>• (8110) Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>),</li> <li>• (8210) Calcareous rocky slopes with chasmophytic vegetation,</li> <li>• (8220) Siliceous rocky slopes with chasmophytic vegetation,</li> </ul>

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest	General Conservation Objectives
				<ul style="list-style-type: none"> <li>• (9990) Blanket bog (not active).</li> </ul>
004040	Wicklow Mountains SPA	Within WMNP	<ul style="list-style-type: none"> <li>• Peregrine falcon (<i>Falco peregrinus</i>),</li> <li>• Merlin (<i>Falco columbarius</i>)</li> </ul>	<p>To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> <li>• Peregrine falcon (<i>Falco peregrinus</i>),</li> <li>• Merlin (<i>Falco columbarius</i>)</li> </ul>
002274	Wicklow Reef SAC	East, Wicklow coast - offshore	<ul style="list-style-type: none"> <li>• Reefs [1170]</li> </ul>	<p>To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• Reefs [1170]</li> </ul>
003000	Rockabill to Dalkey Islands SAC	Hydrologically connected to the WMNP by the River Liffey	<ul style="list-style-type: none"> <li>• (1170) Reefs</li> <li>• (1351) Harbour Porpoise (<i>Phocoena phocoena</i>)</li> </ul>	<p>To maintain the favourable conservation condition of the Annex I habitat and the Annex II species for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• (1170) Reefs</li> <li>• (1351) Harbour Porpoise (<i>Phocoena phocoena</i>)</li> </ul>
000210	South Dublin Bay SAC	Hydrologically connected to the WMNP by the River Liffey	<ul style="list-style-type: none"> <li>• (1140) Mudflats and sandflats not covered by seawater at low tide</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• (1140) Mudflats and sandflats not covered by seawater at low tide</li> </ul>
004024	South Dublin Bay and River Tolka Estuary SPA	Hydrologically connected to the WMNP by the River Liffey	<ul style="list-style-type: none"> <li>• Brent goose (<i>Branta bernicla hrota</i>),</li> <li>• Sandwich Tern (<i>Sterna sandvicensis</i>),</li> <li>• Roseate Tern (<i>Sterna dougallii</i>),</li> <li>• Common Tern (<i>Sterna hirundo</i>),</li> <li>• Arctic Tern (<i>Sterna paradisaea</i>),</li> <li>• Oystercatcher (<i>Haematopus ostralegus</i>),</li> <li>• Ringed Plover (<i>Charadrius hiaticula</i>),</li> <li>• Knot (<i>Calidris canuta</i>),</li> <li>• Sanderling (<i>Calidris alba</i>),</li> </ul>	<p>To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> <li>• Brent goose (<i>Branta bernicla hrota</i>),</li> <li>• Sandwich Tern (<i>Sterna sandvicensis</i>),</li> <li>• Roseate Tern (<i>Sterna dougallii</i>),</li> <li>• Common Tern (<i>Sterna hirundo</i>),</li> <li>• Arctic Tern (<i>Sterna paradisaea</i>),</li> <li>• Oystercatcher (<i>Haematopus ostralegus</i>),</li> </ul>

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest	General Conservation Objectives
			<ul style="list-style-type: none"> <li>• Dunlin (<i>Calidris alpina</i>),</li> <li>• Bar-tailed Godwit (<i>Limosa lapponica</i>).</li> </ul>	<ul style="list-style-type: none"> <li>• Ringed Plover (<i>Charadrius hiaticula</i>),</li> <li>• Knot (<i>Calidris canuta</i>),</li> <li>• Sanderling (<i>Calidris alba</i>),</li> <li>• Dunlin (<i>Calidris alpina</i>),</li> <li>• Bar-tailed Godwit (<i>Limosa lapponica</i>).</li> </ul> <p>To maintain the favourable conservation condition of wetland habitat in South Dublin and the River Tolka Estuary SPA as a resource for the regularly occurring migratory waterbirds that use it.</p>
000206	North Dublin Bay SAC	Hydrologically connected to the WMNP by the River Liffey	<ul style="list-style-type: none"> <li>• Mudflats and sandflats not covered by seawater at low tide [1140]</li> <li>• Annual vegetation of drift lines [1210]</li> <li>• <i>Salicornia</i> and other annuals colonizing mud and sand [1310]</li> <li>• Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]</li> <li>• Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</li> <li>• Embryonic shifting dunes [2110]</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes") [2120]</li> <li>• *Fixed coastal dunes with herbaceous vegetation ("grey dunes") [2130]</li> <li>• Humid dune slacks [2190]</li> <li>• <i>Petalophyllum ralfsii</i> (Petalwort) [1395]</li> </ul>	<p>To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:</p> <ul style="list-style-type: none"> <li>• Mudflats and sandflats not covered by seawater at low tide [1140]</li> <li>• Annual vegetation of drift lines [1210]</li> <li>• <i>Salicornia</i> and other annuals colonizing mud and sand [1310]</li> <li>• Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]</li> <li>• Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</li> <li>• Embryonic shifting dunes [2110]</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes") [2120]</li> <li>• *Fixed coastal dunes with herbaceous vegetation ("grey dunes") [2130]</li> <li>• Humid dune slacks [2190]</li> </ul>

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest	General Conservation Objectives
				<ul style="list-style-type: none"> <li>• <i>Petalophyllum ralfsii</i> (Petalwort) [1395]</li> </ul>
004006	North Bull Island SPA	Hydrologically connected to the WMNP by the River Liffey	<ul style="list-style-type: none"> <li>• Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] [wintering]</li> <li>• Shelduck (<i>Tadorna tadorna</i>) [A048] [wintering]</li> <li>• Teal (<i>Anas crecca</i>) [A052] [wintering]</li> <li>• Pintail (<i>Anas acuta</i>) [A054] [wintering]</li> <li>• Shoveler (<i>Anas clypeata</i>) [A056] [wintering]</li> <li>• Oystercatcher (<i>Haematopus ostralegus</i>) [A130] [wintering]</li> <li>• Golden Plover (<i>Pluvialis apricaria</i>) [A140] [wintering]</li> <li>• Grey Plover (<i>Pluvialis squatarola</i>) [A141][wintering]</li> <li>• Knot (<i>Calidris canutus</i>) [A143] [wintering]</li> <li>• Sanderling (<i>Calidris alba</i>) [A144] [wintering]</li> <li>• Dunlin (<i>Calidris alpina</i>) [A149] [wintering]</li> <li>• Black-tailed Godwit (<i>Limosa limosa</i>) [A156] [wintering]</li> <li>• Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] [wintering]</li> <li>• Curlew (<i>Numenius arquata</i>) [A160] [wintering]</li> <li>• Redshank (<i>Tringa totanus</i>) [A162] [wintering]</li> <li>• Turnstone (<i>Arenaria interpres</i>) [A169] [wintering]</li> <li>• Black-headed Gull (<i>Croicocephalus ridibundus</i>) [A179] [wintering]</li> </ul>	<p>To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> <li>• Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] [wintering]</li> <li>• Shelduck (<i>Tadorna tadorna</i>) [A048] [wintering]</li> <li>• Teal (<i>Anas crecca</i>) [A052] [wintering]</li> <li>• Pintail (<i>Anas acuta</i>) [A054] [wintering]</li> <li>• Shoveler (<i>Anas clypeata</i>) [A056] [wintering]</li> <li>• Oystercatcher (<i>Haematopus ostralegus</i>) [A130] [wintering]</li> <li>• Golden Plover (<i>Pluvialis apricaria</i>) [A140] [wintering]</li> <li>• Grey Plover (<i>Pluvialis squatarola</i>) [A141][wintering]</li> <li>• Knot (<i>Calidris canutus</i>) [A143] [wintering]</li> <li>• Sanderling (<i>Calidris alba</i>) [A144] [wintering]</li> <li>• Dunlin (<i>Calidris alpina</i>) [A149] [wintering]</li> <li>• Black-tailed Godwit (<i>Limosa limosa</i>) [A156] [wintering]</li> <li>• Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] [wintering]</li> <li>• Curlew (<i>Numenius arquata</i>) [A160] [wintering]</li> <li>• Redshank (<i>Tringa totanus</i>) [A162] [wintering]</li> <li>• Turnstone (<i>Arenaria interpres</i>) [A169] [wintering]</li> <li>• Black-headed Gull (<i>Croicocephalus ridibundus</i>) [A179] [wintering]</li> <li>• Wetlands &amp; Waterbirds [A999]</li> </ul>

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest	General Conservation Objectives
			<ul style="list-style-type: none"> <li>• Wetlands &amp; Waterbirds [A999]</li> </ul>	
004076	Wexford Harbour and Slob SPA	Hydrologically connected to the WMNP by the River Slaney	<ul style="list-style-type: none"> <li>• Little Grebe (<i>Tachybaptus ruficollis</i>) [A004]</li> <li>• Great Crested Grebe (<i>Podiceps cristatus</i>) [A005]</li> <li>• Cormorant (<i>Phalacrocorax carbo</i>) [A017]</li> <li>• Grey Heron (<i>Ardea cinerea</i>) [A028]</li> <li>• Bewick's Swan (<i>Cygnus columbianus bewickii</i>) [A037]</li> <li>• Whooper Swan (<i>Cygnus cygnus</i>) [A038]</li> <li>• Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]</li> <li>• Shelduck (<i>Tadorna tadorna</i>) [A048]</li> <li>• Wigeon (<i>Anas penelope</i>) [A050]</li> <li>• Teal (<i>Anas crecca</i>) [A052]</li> <li>• Mallard (<i>Anas platyrhynchos</i>) [A053]</li> <li>• Pintail (<i>Anas acuta</i>) [A054]</li> <li>• Scaup (<i>Aythya marila</i>) [A062]</li> <li>• Goldeneye (<i>Bucephala clangula</i>) [A067]</li> <li>• Red-breasted Merganser (<i>Mergus serrator</i>) [A069]</li> <li>• Hen Harrier (<i>Circus cyaneus</i>) [A082]</li> <li>• Coot (<i>Fulica atra</i>) [A125]</li> <li>• Oystercatcher (<i>Haematopus ostralegus</i>) [A130]</li> <li>• Golden Plover (<i>Pluvialis apricaria</i>) [A140]</li> <li>• Grey Plover (<i>Pluvialis squatarola</i>) [A141]</li> <li>• Lapwing (<i>Vanellus vanellus</i>) [A142]</li> <li>• Knot (<i>Calidris canutus</i>) [A143]</li> <li>• Sanderling (<i>Calidris alba</i>) [A144]</li> <li>• Dunlin (<i>Calidris alpina</i>) [A149]</li> </ul>	<p>To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA:</p> <ul style="list-style-type: none"> <li>• Little Grebe (<i>Tachybaptus ruficollis</i>) [A004]</li> <li>• Great Crested Grebe (<i>Podiceps cristatus</i>) [A005]</li> <li>• Cormorant (<i>Phalacrocorax carbo</i>) [A017]</li> <li>• Grey Heron (<i>Ardea cinerea</i>) [A028]</li> <li>• Bewick's Swan (<i>Cygnus columbianus bewickii</i>) [A037]</li> <li>• Whooper Swan (<i>Cygnus cygnus</i>) [A038]</li> <li>• Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046]</li> <li>• Shelduck (<i>Tadorna tadorna</i>) [A048]</li> <li>• Wigeon (<i>Anas penelope</i>) [A050]</li> <li>• Teal (<i>Anas crecca</i>) [A052]</li> <li>• Mallard (<i>Anas platyrhynchos</i>) [A053]</li> <li>• Pintail (<i>Anas acuta</i>) [A054]</li> <li>• Scaup (<i>Aythya marila</i>) [A062]</li> <li>• Goldeneye (<i>Bucephala clangula</i>) [A067]</li> <li>• Red-breasted Merganser (<i>Mergus serrator</i>) [A069]</li> <li>• Hen Harrier (<i>Circus cyaneus</i>) [A082]</li> <li>• Coot (<i>Fulica atra</i>) [A125]</li> <li>• Oystercatcher (<i>Haematopus ostralegus</i>) [A130]</li> <li>• Golden Plover (<i>Pluvialis apricaria</i>) [A140]</li> <li>• Grey Plover (<i>Pluvialis squatarola</i>) [A141]</li> <li>• Lapwing (<i>Vanellus vanellus</i>) [A142]</li> <li>• Knot (<i>Calidris canutus</i>) [A143]</li> <li>• Sanderling (<i>Calidris alba</i>) [A144]</li> </ul>

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest	General Conservation Objectives
			<ul style="list-style-type: none"> <li>• Black-tailed Godwit (<i>Limosa limosa</i>) [A156]</li> <li>• Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</li> <li>• Curlew (<i>Numenius arquata</i>) [A160]</li> <li>• Redshank (<i>Tringa totanus</i>) [A162]</li> <li>• Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]</li> <li>• Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183]</li> <li>• Little Tern (<i>Sterna albifrons</i>) [A195]</li> <li>• Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]</li> <li>• Wetland and Waterbirds [A999]</li> </ul>	<ul style="list-style-type: none"> <li>• Dunlin (<i>Calidris alpina</i>) [A149]</li> <li>• Black-tailed Godwit (<i>Limosa limosa</i>) [A156]</li> <li>• Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157]</li> <li>• Curlew (<i>Numenius arquata</i>) [A160]</li> <li>• Redshank (<i>Tringa totanus</i>) [A162]</li> <li>• Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179]</li> <li>• Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183]</li> <li>• Little Tern (<i>Sterna albifrons</i>) [A195]</li> <li>• Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]</li> <li>• Wetland and Waterbirds [A999]</li> </ul>

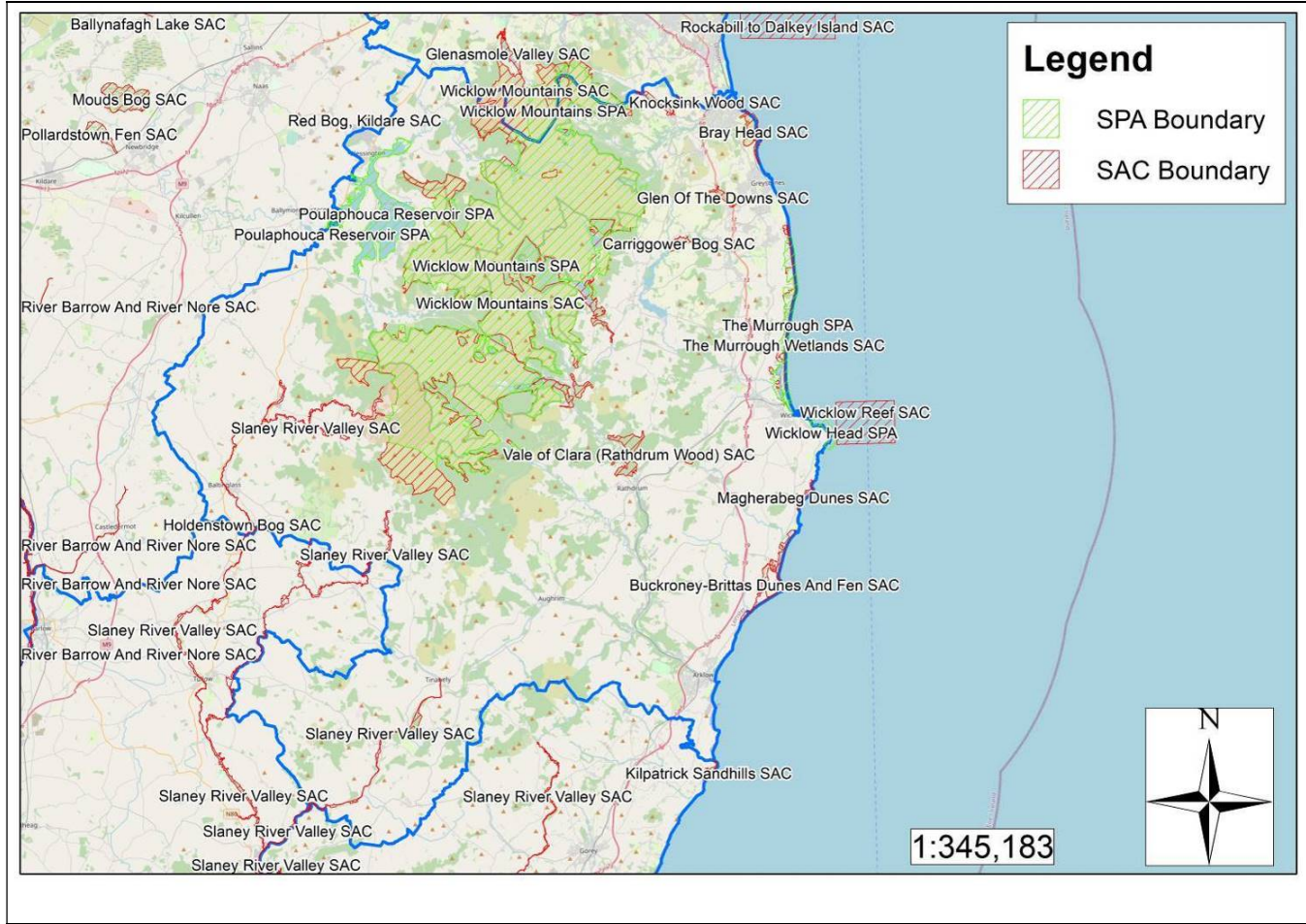


Figure 11. Natura 2000 sites within the likely zone of impact of the Draft VEMMP for Glendalough and Wicklow Mountains National Park.

## 2.5 Identification of Potential Impacts

A wide number of potential impacts, both direct and indirect on the qualifying species or habitats of the various Natura 2000 sites within the zone of influence of the Draft *VEMMP for Glendalough and Wicklow Mountains National Park*, detailed in **Table 2.4.1** above have been identified.

The Stage 1 Screening process initially identified twenty Natura 2000 sites within the zone of influence for the plan. These were as follows:

- 000713 Ballyman Glen SAC
- 000714 Bray Head SAC
- 000729 Buckroney-Brittis Dunes And Fen SAC
- 000714 Carrigower Bog SAC
- 000717 Deputy's Pass Nature Reserve SAC
- 000719 Glen Of The Downs SAC
- 001209 Glenasmole Valley SAC
- 001757 Holdenstown Bog SAC
- 001742 Kilpatrick Sandhills SAC
- 000725 Knocksink Wood SAC
- 001766 Magherabeg Dunes SAC
- 004063 Poulaphouca Reservoir SPA
- 000781 Slaney River Valley SAC
- 002249 The Murrough Wetlands SAC
- 004186 The Murrough SPA
- 000733 Vale Of Clara (Rathdrum Wood) SAC
- 004127 Wicklow Head SPA
- 002122 Wicklow Mountains SAC
- 004040 Wicklow Mountains SPA
- 002274 Wicklow Reef SAC

Three of these sites (000714 Carrigower Bog SAC, 001757 Holdenstown Bog SAC and 002274 Wicklow Reef SAC) will not be impacted by any of the proposals within the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* and they were excluded from further assessment.

However the remaining seventeen Natura 2000 sites are potentially either directly or indirectly impacted by the proposals within the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* or were considered under cumulative/in-combination effects and mitigation will be required for same. These are shown in **Table 2.5.1** below.

Impacts are characterised as follows:

- **Direct and Indirect Impacts** - An impact can be caused either as a direct or as an indirect consequence of a Plan/Project.



- **Magnitude** - Magnitude measures the size of an impact, which is described as high, medium, low, very low or negligible.
- **Extent** - The area over which the impact occurs - this should be predicted in a quantified manner.
- **Duration** - The time for which the effect is expected to last prior to recovery or replacement of the resource or feature.
  - Temporary: Up to 1 Year;
  - Short Term: The effects would take 1-7 years to be mitigated;
  - Medium Term: The effects would take 7-15 years to be mitigated;
  - Long Term: The effects would take 15-60 years to be mitigated; and
  - Permanent: The effects would take 60+ years to be mitigated.
- **Likelihood** - The probability of the effect occurring taking into account all available information.
  - Certain/Near Certain: >95% chance of occurring as predicted;
  - Probable: 50-95% chance as occurring as predicted;
  - Unlikely: 5-50% chance as occurring as predicted; and
  - Extremely Unlikely: <5% chance as occurring as predicted.
- **Ecologically Significant Impact** - An impact (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographic area.
- **Integrity of a Site** - The coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.

**Table 2.5.1. The qualifying interests of the Natura 2000 sites and potential in combination effects of the proposals in the Draft VEMMP for Glendalough and Wicklow Mountains National Park.**

Site Code	Site Name and Designation	Qualifying Interest	Potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact	Screened in (Y/N)
000713	Ballyman Glen SAC	<ul style="list-style-type: none"> <li>• (7220) Petrifying springs with tufa formation (Cratoneurion)</li> <li>• (7230) Alkaline fens</li> </ul>	Yes - this site is under increasing pressure from recreational use with associated trampling, camping, fires, etc.	Y
000714	Bray Head SAC	<ul style="list-style-type: none"> <li>• (1230) Vegetated sea cliffs of the Atlantic and Baltic coasts</li> <li>• (4030) European dry heaths</li> </ul>	Yes - this site is under increasing pressure from recreational use with associated trampling, camping, fires, etc. Upgrades to the cliff walk are required following rock falls and landslips.	Y
000729	Buckroneys-Brittis Dunes And Fen SAC	<ul style="list-style-type: none"> <li>• Annual vegetation of drift lines [1210]</li> <li>• Perennial vegetation of stony banks [1220]</li> <li>• Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</li> <li>• Embryonic shifting dunes [2110]</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</li> <li>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</li> <li>• Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2150]</li> <li>• Dunes with <i>Salix repens ssp. argentea</i> (<i>Salicion arenariae</i>) [2170]</li> <li>• Humid dune slacks [2190]</li> <li>• Alkaline fens [7230]</li> </ul>	Yes - this site is under increasing pressure from recreational use with associated trampling, camping, fires, etc.	Y
000714	Carrigower Bog SAC	<ul style="list-style-type: none"> <li>• Transition mires and quaking bogs [7140]</li> </ul>	None this site is not hydrologically connected to the WMNP lands and no impacts on this site are envisaged.	N
000717	Deputy's Pass Nature Reserve SAC	<ul style="list-style-type: none"> <li>• (91A0) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles</li> </ul>	Yes - this site is under increasing pressure from recreational use with associated disturbance.	Y

Site Code	Site Name and Designation	Qualifying Interest	Potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact	Screened in (Y/N)
000719	Glen Of The Downs SAC	<ul style="list-style-type: none"> <li>• (91A0) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles</li> </ul>	Yes - this site is under increasing pressure from recreational use with associated trampling, disturbance, fires, etc.	Y
001209	Glenasmole Valley SAC	<ul style="list-style-type: none"> <li>• (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) (*important orchid sites)</li> <li>• (6410) <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>)</li> <li>• (7220) Petrifying springs with tufa formation (<i>Cratoneurion</i>)</li> </ul>	Yes - this site is under increasing pressure from recreational use with associated trampling, camping, fires, etc.	Y
001757	Holdenstown Bog SAC	<ul style="list-style-type: none"> <li>• Transition mires and quaking bogs [7140]</li> </ul>	None this site is not hydrologically connected to the WMNP lands and no impacts on this site are envisaged.	N
001742	Kilpatrick Sandhills SAC	<ul style="list-style-type: none"> <li>• Annual vegetation of drift lines [1210]</li> <li>• Embryonic shifting dunes [2110]</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</li> <li>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</li> <li>• Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2150]</li> </ul>	Yes - this site is under increasing pressure from recreational use with associated trampling, camping, fires, etc.	Y
000725	Knocksink Wood SAC	<ul style="list-style-type: none"> <li>• (7220) Petrifying springs with tufa formation (<i>Cratoneurion</i>)</li> <li>• (910E0) Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)</li> </ul>	Yes - this site is under increasing pressure from recreational use with associated trampling, camping, fires, etc.	Y
001766	Magherabeg Dunes SAC	<ul style="list-style-type: none"> <li>• Annual vegetation of drift lines [1210]</li> <li>• Embryonic shifting dunes [2110]</li> <li>• Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120]</li> <li>• Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]</li> <li>• Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220]</li> </ul>	Yes - this site is under increasing pressure from recreational use.	Y

Site Code	Site Name and Designation	Qualifying Interest	Potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact	Screened in (Y/N)
004063	Poulaphouca Reservoir SPA	<ul style="list-style-type: none"> <li>• Greylag Goose (<i>Anser anser</i>)</li> <li>• Lesser Black-backed Gull (<i>Larus fuscus</i>)</li> </ul>	Yes – this site is under increasing pressure from recreational use.	Y
000781	Slaney River Valley SAC	<ul style="list-style-type: none"> <li>• Estuaries [1130]</li> <li>• Mudflats and sandflats not covered by seawater at low tide [1140]</li> <li>• Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]</li> <li>• Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</li> <li>• Water courses of plain to montane levels with the <i>Ranuncion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260]</li> <li>• Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]</li> <li>• Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]</li> <li>• <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029]</li> <li>• <i>Petromyzon marinus</i> (Sea Lamprey) [1095]</li> <li>• <i>Lampetra planeri</i> (Brook Lamprey) [1096]</li> <li>• <i>Lampetra fluviatilis</i> (River Lamprey) [1099]</li> <li>• <i>Alosa fallax fallax</i> (Twaite Shad) [1103]</li> <li>• <i>Salmo salar</i> (Salmon) [1106]</li> <li>• <i>Lutra lutra</i> (Otter) [1355]</li> <li>• <i>Phoca vitulina</i> (Harbour Seal) [1365]</li> </ul>	Yes – the headwater streams of this site rise within WMNP.	Y
002249	The Murrough Wetlands SAC	<ul style="list-style-type: none"> <li>• (1210) Annual vegetation of drift lines</li> <li>• (1220) Perennial vegetation of stony banks</li> <li>• (1330) Atlantic salt meadows (<i>Glauco Puccinellietalia maritima</i>)</li> <li>• (1410) Mediterranean salt meadows (<i>Juncetalia maritimi</i>)</li> <li>• (7210) * Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davalliana</i></li> <li>• (7230) Alkaline fens</li> </ul>	Yes – this site is under increasing pressure from recreational use with associated trampling, camping, fires, etc. and a proposal for a coastal greenway.	Y

Site Code	Site Name and Designation	Qualifying Interest	Potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact	Screened in (Y/N)
004186	The Murrough SPA	<ul style="list-style-type: none"> <li>• Red-throated Diver (<i>Gavia stellata</i>)</li> <li>• Greylag Goose (<i>Anser anser</i>)</li> <li>• Light-bellied Brent Goose (<i>Branta bernicla hrota</i>)</li> <li>• Wigeon (<i>Anas penelope</i>)</li> <li>• Teal (<i>Anas crecca</i>)</li> <li>• Black-headed Gull (<i>Chroicocephalus ridibundus</i>)</li> <li>• Herring Gull (<i>Larus argentatus</i>)</li> <li>• Little Tern (<i>Sterna albifrons</i>)</li> <li>• Wetlands &amp; Waterbirds</li> </ul>	Yes – this site is under increasing pressure from recreational use with associated trampling, camping, fires, etc. and a proposal for a coastal greenway.	Y
000733	Vale Of Clara (Rathdrum Wood) SAC	<ul style="list-style-type: none"> <li>• Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles [91A0]</li> </ul>	Yes – this site is under increasing pressure from recreational use with associated disturbance, trampling, camping, fires, etc.	Y
004127	Wicklow Head SPA	<ul style="list-style-type: none"> <li>• Kittiwake (<i>Rissa tridactyla</i>) [A188]</li> </ul>	Yes – this site is under increasing pressure from recreational use.	Y
002122	Wicklow Mountains SAC	<ul style="list-style-type: none"> <li>• (3130) Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoeto-Nanojuncetea</li> <li>• (3160) Natural dystrophic lakes and ponds,</li> <li>• (4010) Northern Atlantic wet heaths with <i>Erica tetralix</i>,</li> <li>• (4030) European dry heaths,</li> <li>• (4060) Alpine and Boreal heaths,</li> <li>• (6230) Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas,</li> <li>• (7130) Blanket bog (*active only),</li> <li>• (8110) Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>),</li> <li>• (8210) Calcareous rocky slopes with chasmophytic vegetation,</li> <li>• (8220) Siliceous rocky slopes with chasmophytic vegetation,</li> </ul>	Yes – this site is under increasing pressure from recreational use with associated trampling, camping, fires, etc. and disturbance to fauna.	Y

Site Code	Site Name and Designation	Qualifying Interest	Potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact	Screened in (Y/N)
		<ul style="list-style-type: none"> <li>• (9990) Blanket bog (not active),</li> <li>• (1355) Otter (<i>Lutra lutra</i>).</li> </ul>		
004040	Wicklow Mountains SPA	<ul style="list-style-type: none"> <li>• Peregrine falcon (<i>Falco peregrinus</i>),</li> <li>• Merlin (<i>Falco columbarius</i>)</li> </ul>	Yes - this site is under increasing pressure from recreational use with associated trampling, camping, fires, etc. and disturbance to birdlife.	Y
002274	Wicklow Reef SAC	<ul style="list-style-type: none"> <li>• Reefs [1170]</li> </ul>	This offshore site is unlikely to be impacted by any of the proposals within the Draft VEMMP.	N

The Draft VEMMP for Glendalough and Wicklow Mountains National Park sits within a hierarchy of other statutory documents which set out public policy for infrastructure, sustainable development, land use planning, recreation, environmental protection and environmental management, which have been subject to their own environmental assessment processes, as relevant.

The Draft VEMMP for Glendalough and Wicklow Mountains National Park must comply with these statutory documents and their higher-level strategic actions and the proposals within it are set out to guide the lower-level aims, objectives and actions.

The potential likely effects arising from the various proposals and measures set out within the Draft VEMMP for Glendalough and Wicklow Mountains National Park are identified in terms of their potential impacts, including whether they are direct and indirect, temporary and permanent, construction and operational effects, isolated and cumulative impacts.

These impacts were all assessed at Screening Stage in the absence of any mitigation measures and the sites were screened in or out as shown on **Table 2.5.1** above.

Tyldesley (2015) outlines a relevant assessment process for policies and objectives. These categories define criteria for either a Potential Adverse Effect or No Adverse Effect from implementation of the Objectives and Actions of the Proposed Plan (see **Table 2.5.2** below) and have been applied during the assessment process.

**Table 2.5.2 Categories for examination of effects of Actions/Objectives.**

Category	Criteria for Proposed Plan Action/Objective	Potential for Adverse Effect
<b>1</b>	<b>General Policy Statements</b>	<b>No Effect</b>
1	General statement of policy which sets out a strategic aspiration for the plan making body or a general criteria based policy which expresses the tests or expectations of the plan making body can be screened out because they are unlikely to have a significant effect on a site	
<b>2</b>	<b>No likely significant effects on any Natura 2000 site</b>	<b>No Effect</b>
2a	Elements of the plan intended to protect the natural environment, including biodiversity, or to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a Natura 2000 site;	
2b	Elements of the plan which will not themselves lead to development or other change, e.g. because they relate to design or other qualitative criteria	

Category	Criteria for Proposed Plan Action/Objective	Potential for Adverse Effect
	for development or other kinds of change;	
2c	Elements of the plan which make provision for change but which could have no conceivable effect on a Natura 2000 site, because there is no link or pathway between them and the QIs/SCIs, or any effect would be a positive effect, or would not otherwise undermine the conservation objectives for the site;	
2d	Elements of the plan which make provision for change but which could have no significant effect on a Natura 2000 site (and there is a minor effect), because any potential effects would be insignificant, being so restricted or remote from the site that they would not undermine the conservation objectives for the site;	
2e	Elements of the plan for which effects on any particular Natura 2000 site cannot be identified, because the policy is too general, for example, it is not possible to identify where, when or how the policy may be implemented, or where effects may occur, or which sites, if any, may be affected. These aspects of the plan may also be very similar to or the same as those screened out under screening step 1, relating to general policy statements.	
<b>3</b>	<b>Adverse effects on site integrity cannot be ruled out</b>	<b>Potential Adverse Effect</b>
3	Elements of the Proposed Plan with potential to result in an adverse effect on the integrity of a particular Natura 2000 site and therefore require further assessment. This category includes: <ul style="list-style-type: none"> <li>▪ Elements of the Proposed Plan identified as having potential for adverse effects, either alone or in-combination, and directly or indirectly; and</li> <li>▪ Elements of the Proposed Plan where adverse effects cannot be ruled out</li> </ul>	

### Source » Pathway » Receptor Chains

A number of potential source » pathway » receptor chains, which could impact on the conservation objectives within the zone of influence of the plan, were identified. These can occur during both the construction and operational stages of the plan.

Any projects/developments arising from the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* will themselves have to be designed and comply, as relevant, with various legislation, Policy Objectives, plans and programmes (including requirements for lower-tier Appropriate Assessment, Environmental Impact Assessment and other licencing requirements as appropriate) that form part of the statutory decision-making and consent-granting framework.

The following general potential impacts were assessed for elements of the plan at either construction or operational stage and mitigation would be required for same.

### Construction Stage



The following general potential impacts were identified with regard to the conservation objectives of the Natura 2000 sites of any projects/developments within the plan at the construction stage:

- Direct loss of habitats due to construction activities including:
  - Construction development/ enhancement works (e.g. trails, new buildings and car parking) within the footprint of the works
  - Construction of any access routes/ routes and/or compound locations
- Run-off and water quality impacts during the construction phase including:
  - Construction development/ enhancement works (e.g. trails, new buildings) within the footprint of the works (i.e. Plan Area)
  - Accidental release or spillage of hydrocarbons during construction of new builds and enhancement works
  - Release of suspended solids from materials during new builds and enhancement works
  - Increased suspended sediment in run-off from construction and enhancement works
- Disturbance to species during the construction phase (noise, workers, and traffic).

### **Operational Stage**

The following general potential impacts were identified with regard to the conservation objectives of the Natura 2000 sites at the operational stage of the Draft Plan:

- Unregulated access by visitors within the Wicklow Mountains National Park and other Natura 2000 sites from visitors walking off trail or away from prescribed pathways.
- Trampling and disturbance of Annex I habitats and vegetation within the Wicklow Mountains National Park and other Natura 2000 sites arising from increased visitors and walkers.
- Potential trampling and disturbance to habitats which support species of vascular plants or bryophytes legally protected under the Flora (Protection) Order 2022 within the Wicklow Mountains National Park and other Natura 2000 sites arising from increased visitors and walkers.

- Potential disturbance to nesting and wintering Annex I Birds Directive species and Annex II Habitats Directive faunal species and rare and scarce faunal species within the Wicklow Mountains National Park and other Natura 2000 sites arising from existing and increased visitors and walkers. Anthropogenic activities have the potential to cause visual and physical disturbance or displacement to birds within Wicklow Mountains National Park and other Natura 2000 sites and the wider countryside. Birds may be physically disturbed either by noise, the visual presence or physical presence of visitors and dogs; habitat conservation/building works being undertaken within WMNP; the presence of increased vehicles in the valley, helicopters associated with habitat repair works or mountain rescue situations, drones used by the public; and increased sound above existing background levels that such activities may lead to.
- Potential disturbance from increased visitors, walkers and dogs can result in physiological and behavioural responses which can affect the demographic characteristics of local bird and faunal populations (Showler *et al.* (2010)). Disturbance events can;
  - interrupt feeding and foraging activities which can result in loss of energy;
  - result in impaired breeding;
  - create unrest through a requirement for increased vigilance;
  - disrupt birds incubation/faunal rearing of young;
  - result in increased nest failures of bird species due to predation;
  - result in nest abandonment;
  - result in temporary or permanent avoidance of areas (i.e. displacement).
- Any conservation works proposed for the cultural heritage structures could result in the loss of bat roosting habitat or bird breeding habitat, e.g. through repointing works or works on to stabilise walls preventing species from roosting or nesting within them.
- Water quality issues arising from the existing population and increased visitor numbers in Wicklow Mountains National Park and other Natura 2000 sites with pressure on existing wastewater infrastructure, increased runoff of hydro-carbons and other pollutants from increased traffic in the uplands impacting on aquatic species such as Sea Lamprey, River

Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Twaité Shad, Atlantic Salmon and Otter.

- Potential for changes in local ground flora arising from the use of non-local stone in track upgrades and works to existing and reconfigured car parks.
- Potential for introduction of non-native species to protected sites.
- Potential for unintentional burning of vegetation within the uplands and coastal sites.
- Increased carbon impact, arising from high levels of car-based access to the uplands and elsewhere in the county.

Trampling and disturbance of vegetation can result in loss of habitat, increased erosion, damage to protected and rare botanical plant species, and reduction of the favourable conservation status of the habitat.

Local breeding populations of peregrine falcon and merlin (as well as other rare breeding species such as whinchat, red grouse, great spotted woodpecker) within protected areas and the wider landscape could be disturbed as a result of increased human activity in the area, which could also impact on hunting areas for these birds of prey and their prey (meadow pipits and skylark).

Species associated with watercourses within the county including Otter, Goosander, Dipper and Kingfisher could also be disturbed during both foraging, roosting, lying up and at breeding sites as a result of increased human activity in the area.

There is a potential for hydrocarbons and other water pollutants to enter local watercourses and the wider environment as a result of accidental spills from vehicles utilising car parks and roads in upland areas.

The introduction of new surface material to car parks in the uplands could potentially alter the local vegetation should non local rock material be used with a different pH to the surrounding geology. Such material, unless suitably screened, could also introduce non-native and invasive species to the area.

Undue care of campfires, discarded cigarettes, etc. from increased visitor numbers pose a potential wildfire risk to vegetation in the uplands.

The impact of climate change on the habitats and species of WMNP is of increasing concern. The natural heritage of WMNP is particularly affected by climate change with increasing intense rainfall events, peatland erosion, landslide and peat slide risk in the upland mountain environments. The requirements for remedial works arising from such incidences to visitor infrastructure within WMNP also result in increasing pressures on protected habitats and species.

Other climate change related impacts include changes in phenology (timing of natural events, such as flowering) and changes in the functioning of ecosystems resulting in disturbance in breeding patterns of species and growing seasons of plants.

## **2.6 Scientific Knowledge Required to Implement the Plan**

This assessment has been made based on consultation with NPWS, best expert judgement and knowledge of the Natura 2000 sites in question as no detailed conservation status assessment has been conducted for the majority of the upland habitats within the Wicklow Mountains National Park and there is no current management plan in place for the Wicklow Mountains National Park.

Unlike other upland SACs the Wicklow Mountains SAC has not been surveyed as part of the National Upland Habitat Survey. A study funded by the Heritage Council in 2008 examined the montane flora of the county and identified the poor condition of many of the upland habitats at that time (Wilson & Curtis (2008)).

In relation to scientific data on the condition of upland habitats some commonage sites have been the subject of recent surveys as part of the SUAS EIP project between 2018 and 2022 and the National Parks and Wildlife Service maintain a record of uncontrolled illegal wildfires in the uplands – some of these have arisen from visitors (BBQs, campfires, etc.) however the majority of these are associated with traditional upland grazing practices where the mountain side is burnt to rejuvenate heather growth for forage for sheep.

In recent years there has been some work by NPWS to restore the hydrology of the Liffey Head Bog in particular through drain blocking and in 2022 trial measures to begin the restoration of eroding blanket bog and to establish vegetation on areas of eroding bare peat have begun on a collaborative basis between WMNP and the SUAS EIP.

Various trial measures for management of dry heath habitat within WMNP has also been completed by the SUAS EIP in collaboration with WMNP. There has also been removal of exotic self-seeded conifers from areas of upland blanket bog by NPWS as funds allow.

There have also been no recent surveys or monitoring of the rare vascular plant populations within the National Park since they were first surveyed in 2007 (Curtis & Wilson (2008)).

The most recent survey work in relation to visitor impacts from hillwalkers in the Wicklow Uplands was completed in 2021 for the Wicklow Uplands Council (York, 2021). The survey included assessments of 50 paths or routes across the Wicklow Mountains, which were divided into a total of 350 sections and amounted to approximately 167km. This study completed a trail condition assessment and detailed the trial repairs that would be recommended to ameliorate same. This survey estimated that at least 4000 days of labour would be required to reduce the current impact of recreation on the surveyed paths, as well as an ongoing commitment to maintenance.

The York (2021) study also noted that the recent trend for particular routes, views, lakes and mountain summits to become 'victims' of promotion through social media is almost impossible to influence and can change rapidly, and the consequences for habitats and species is difficult to manage.

In relation to our coastal habitats these are subject to monitoring by NPWS with all the sand dune habitats in Wicklow monitored during the 2004 - 2006 survey (Ryle, *et al.* (2007)) when a baseline was established. During the 2011 - 2012 sand dune monitoring survey only the Buckroney-Brittias Dunes and Fen SAC 000729 was assessed (Delaney *et al.* (2013)).

The habitat condition of the saltmarsh habitats in the County at The Murrough SAC 002249 and Buckroney-Brittias Dunes and Fen SAC 000729 were first assessed in 2009 (Mc Corry & Ryle (2009)) and more recently in 2017 (Brophy *et al.* (2019)).

The next round of coastal habitat monitoring, which includes both saltmarsh and sand dune habitats within County Wicklow is currently underway however detailed studies on visitor impacts on these sites is not the focus of such monitoring assessments. The impacts of visitors in protected coastal sites in relation to footfall, trampling, disturbance, camping, fires, littering, etc. is not currently quantified or assessed.

Woodlands within the WMNP and other SACs within the County were the subject of detailed surveys as part of the National Native Woodland Survey, which was completed between 2005 and 2008 (Perrin *et al.* (2008)). The objective of these surveys was to classify and monitor the woodland habitats present in each site and did not include any information on visitor pressures. There has been no detailed habitat condition assessments of the woodlands within the Natura 2000 sites since then but a woodland management plan has been developed for St. Saviours Wood, the Coronation Plantation (Wilson *et al.* (2009)) and the Glendalough and Derrybawn Woods (Wilson & Purser (2010)) within the WMNP.

Other woodland sites, which are in private ownership or are owned by Coillte which are within the WMNP or a Natura 2000 site, have entered into the Native Woodland Scheme or Neighbourwood Scheme administered by the Forest Service. The SUAS EIP project has completed some tree planting along upland watercourses as proposed by Purser & Wilson (2009) and the reestablishment of native woodlands in the uplands has also commenced in Luggala Estate.

One of the main threats to our native woodlands within the county is from browsing deer which prevent regeneration of our native woodlands. The current population levels of deer in Wicklow are considered unsustainable resulting in economic and ecological damage and reduced sporting value. For this reason, deer require management and this is best achieved through collaboration between land owners / managers, hunters and the relevant authorities. A Wicklow Deer Management Strategy (Purser, Carden & Wilson (2010)) was prepared and set out an approach for collaborative deer management plans across the County. For many visitors to the WMNP and other Natura 2000 woodland sites within the county deer are one of the few mammal species that visitors get to see within the landscape and public perceptions of deer and the requirement for deer culling are difficult to manage. Education in relation to their ecological impacts and management (and that of feral goats within WMNP) is required. The impacts of visitors in protected woodland sites in relation to footfall, trampling, disturbance. etc. is not currently quantified or assessed.

Birds within WMNP are surveyed by NPWS staff. Peregrine Falcon populations are monitored across the county. The most recent published study reports on this monitoring by NPWS staff between 2008 and 2012 (Burke *et al.* 2015) and indicates the population was both stable and self-sustaining during that period. The study also notes that the presence of ravens affect whether or not a breeding attempt is made and further research into peregrine and raven interactions and the possible role of human disturbance, is recommended.

Red Grouse populations within the WMNP were surveyed between 2006 - 2006 (Cummins *et al.* (2010)) and again in 2022.

Hen Harrier has been lost as a breeding species from the Wicklow Mountains. Hen Harrier were surveyed in WMNP in 2014 (Ruddock *et al.* (2016)) but although sightings of both male and female birds were recorded during this study there was no evidence of breeding. The most frequent pressures on hen harriers identified in this study both numerically and proportionally include paths, tracks, cycling tracks; and non-paved forest roads all of which increase human disturbance to the birds. The study concluded that in several parts of the east coast; including the Wicklow and Dublin Mountains, that despite apparently suitable habitat observers reported high levels of pressures in the breeding season including military activity, recreational activity and recreational shooting activity (i.e. clay pigeon and/or range practice). These pressures were recorded extensively by observers across these mountain ranges which may make much of the area unsuitable, despite suitable habitat, and result in the small number of observed sightings.

The study reports that 'management of anthropogenic factors in these areas, and given the extent of apparently optimal habitat conditions in many parts of this eastern range, could possibly result in an increased population'. WMNP staff did not have sufficient staff available to assist in the National Hen Harrier survey in 2022.

Little Terns have nested on the shingle beach at Kilcoole for over 100 years. The Kilcoole Little Tern Protection Scheme is a joint project between BirdWatch Ireland and NPWS, which has been ongoing for the last 34 years. The nesting terns usually occupy a small strip of shingle beach at "the Breaches", midway between Kilcoole and Newcastle railway stations. Special measures need to be implemented to prevent human disturbance and trampling on the very well camouflaged tern nests, including erecting mesh fencing around the colony to keep out people and dogs, as well as electric fencing to keep out foxes, and other mammals, at night. As a result of this work the Little Tern colony at Kilcoole has grown from less than 20 nesting pairs in the 1980's, to 216 pairs in 2021.

Kingfisher and Dipper were recently surveyed on the River Avonmore in a study commissioned by the Wicklow heritage Officer and built on a previous study of Dippers in the county completed at a selection of sites in 2012 (Copland (2012)).

The first National Otter survey, which was conducted by The Irish Wildlife Trust (Chapman & Chapman (1982)) generally focused on

lowland sites within the county. This was updated in 1991 by Lunnon & Reynolds (1991) and again in 2004/2005 by Bailey & Rochford (2006), focusing on the same locations, with the most recent survey being completed in 2010/2012 by Reid *et al.* (2013). Studies of Otter completed for Loch Lomond and The Trossachs National Park (McCafferty (2005)) identified that road mortality posed the greatest threat to otters in the park and noted that the longer term effects of disturbance on breeding females and young are not well understood. The study noted that improvements in the status of otters within the park could be achieved by prevention of road mortalities, protection of breeding sites, habitat management for reed beds and riparian vegetation and long term monitoring of water quality and prey biomass.

The disturbance impacts of recreational users along our watercourses on species such as Kingfisher, Dipper, Goosander and Otter is not currently quantified or assessed.



## **2.7 Proposed Mitigation Measures for the Draft VEMMP for Glendalough and Wicklow Mountains National Park**

The project team worked with the plan partners and stakeholders to consider and develop practical measures that will be used to mitigate any potential or actual negative impacts resulting from proposals within the Draft VEMMP for Glendalough and Wicklow Mountains National Park.

It is important that such measures were developed and integrated into the design of the Draft VEMMP for Glendalough and Wicklow Mountains National Park in order that they are achievable as part of the implementation of the plan. These measures will also influence and direct the manner in which projects resulting from the plan are developed and executed.

Set out below in **Section 2.7.1** are recommended mitigation measures that will be implemented as part of this plan. They are measures that are achievable and directly linked to the strategic objectives and actions coming from the plan. Following this in **Section 2.7.2** are some detailed suggested mitigation that should be considered at project level but are beyond the scope of this NIS.

### **2.7.1 Plan Level Mitigation**

#### **2.7.1.1 Demonstration of Compliance with Consent Process**

In order to be realised, all projects included in the Plan will have to comply, as relevant, with various legislation, policies, Strategy's and programmes (including requirements for lower-tier Appropriate Assessment, Ecological or Environmental Impact Assessment, other licencing requirements as appropriate and the policies within the Wicklow County Development Plan) that form the statutory decision-making and consent-granting framework, of which the Plan is not part and does not contribute towards.

#### **2.7.1.2 Assessing and Monitoring Visitor Interactions**

Monitoring visitor behaviour, movement and interaction with the natural environment is a fundamental tool which enables site managers and owners to identify existing and recognise potential environmental impacts resulting from visitors. It aids them in developing robust interventions and management plans where required, including the protection and enhancement of Natura 2000 sites.

In order to be able to achieve this at a plan level the outputs and learnings of Fáilte Ireland's Wild Atlantic Way Environmental

Programme 2015-2019 and its more recent National Environmental monitoring Programme 2021-2025 have been consulted. The aim of both of these programmes is to monitor a range of typical tourism sites in order that the results and recommendation for mitigation can be taken and applied to other similar sites.

On the Wild Atlantic Way (WAW) Fáilte Ireland, guided by relevant stakeholders developed an Operational Programme Monitoring Programme, which conducts research into the impacts of tourism on the receiving environment. These are Fáilte Irelands Wild Atlantic Way Environmental Programme 2015-2019 and its more recent National Environmental monitoring Programme 2021-2025. The 2015 - 2019 programme covered 57 sites and monitored the activities and effects of over 20,000 visitors to the WAW discovery points. The research characterised visitor movements at each site while examining the ecological features and sensitives present. A detailed assessment of the site facilities and management actions on site was also undertaken. From this data, impacts to ecological features were quantified in a systematic way and management recommendations were made. The National Environmental Monitoring Programme 2021-2025 is examining 19 different types of sites typifying visitor behaviour, interaction with environment and where relevant making recommendations for improvement and enhancement - the intention is that such data and learnings can be applied to other similar type sites.

A programme of monitoring in terms of mitigation at the project level for monitoring visitor impact within WMNP will be implemented. Such a programme is particularly required for the proposed dispersal strategy within the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* at implementation stage. This dispersal strategy aims to mitigate pressures on the environment within WMNP. This will be achieved by encouraging tourists to visit outside the seasonal peaks and to visit other areas outside of the main attractions in County Wicklow, thereby reducing pressure on Glendalough. However this strategy has the potential to increase existing pressures on the other Natura 2000 sites identified in **Table 2.4.1** all of which have experienced increased visitor numbers and recreational pressures during the Covid 19 pandemic.

Monitoring of ground nesting birds and other species, which are sensitive to disturbance, will be undertaken at the Discovery Walks, prior to their upgrade and promotion to provide a baseline from which visitor impacts can be assessed. Visitor counters will be provided as part of the development of the proposed Discovery Walks, to provide numeric baseline information from which the impacts of increasing visitor numbers can be monitored. Many of these visitors to the County arise from the home grown domestic tourism market and also

from the adjoining urban populations of the Greater Dublin Area. Any promotion of these areas as visitor attractions must consider the potential impacts of visitors at project level when the plan is being implemented.

### **2.7.1.3 Improved Signage, Interpretation and Educational Material for Visitors**

There is currently a lack of signage and information for the visitor to the WMNP and the other Natura 2000 sites across the county. Members of the public and international visitors are often unaware that they are visiting a site which is protected for nature conservation, why it is protected (habitats and species present) and what actions they should take to reduce the impacts of their visit.

The provision of signage and other information such as online resources and the development of a 'One stop shop' and the visitor orientation facility within the Glendalough Valley will improve this situation within the National Park. The integration of the education centre with the other visitor facilities in the Glendalough Valley will also assist in achieving this.

Signage at the public access points to the WMNP and the designated Natura 2000 sites identified in **Table 2.4.1** is required.

The promotion of the 'Leave No Trace' ethos is recommended.

Education of how visitors can mind the natural environment include measures such as sticking to designated trails, keeping dogs on a lead, safe disposal of pet waste and litter, avoiding the use of disposable barbeques or campfires which can result in wildfires, not picking or collecting flowers and other vegetation, foraging activities and other actions.

### **2.7.1.4 Monitoring of Trail Condition and Repairs**

The York (2021) survey has identified existing trails within WMNP, which are currently over carrying capacity, with resultant loss of Annex I habitats arising from trampling and visitor impacts.

The completion of upgrades and track repairs to these trails is required. Any proposed repairs or upgrades to existing trails will be informed by a detailed habitat and species assessment, which would allow the re-routing of trails away from environmentally sensitive areas.

Further trail condition surveys of areas within the WMNP which have been identified as part of this Plan, which were not assessed, should be completed.

The Draft *VEMMP for Glendalough and Wicklow Mountains National Park* contains an objective to establish and fund a Footpath Repair and Maintenance Team with a dedicated team recruited, trained and deployed on a long term basis within the County.

To conclude recommendations resulting from studies and plans such a York (2021) study and the County Wicklow Outdoor Recreation Strategy 2020 - 2025 should be implemented at project stage.

#### **2.7.1.5 Funding for Projects arising from the Draft *VEMMP for Glendalough and Wicklow Mountains National Park***

In order to achieve funding (including promotion) for land use or infrastructural development or land use activities arising from the plan stakeholders will be required to demonstrate compliance with measures relating to sustainable development, environmental protection and environmental management.

Examples of these measures (from the Wild Atlantic Way project) are contained within the following Fáilte Ireland published documents:

- Wild Atlantic Way Operational Programme Appendix 5 “Site Maintenance Guidelines” and other relevant measures from the Fáilte Ireland visitor and habitat management guidelines series (and any subsequent replacements); and
- Wild Atlantic Way Operational Programme Appendix 6 “Environmental Management for Local Authorities and Others” (and any subsequent replacements).

#### **2.7.1.6 Keeping the Wild ‘Wild’**

Any projects arising from the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* will be required to demonstrate compliance with measures relating to sustainable development, environmental protection and environmental management contained within the Fáilte Ireland ‘Visitor Management Guidelines for the Wild Atlantic Way’ (and any subsequent replacements).

These guidelines intend:

- To make the visitor experience even better – while protecting the natural assets throughout the entire extent of the Wild Atlantic Way,
- To promote a very simple goal that every future decision for every policy, plan, project and action along the Wild Atlantic Way should

always keep the experience Wild or make the experience 'More Wild',

- To resolve two opposites - increasing benefit while reducing risk - to allow tourism to grow and to thrive, while also making sure that the reason for visiting - wildness - also grows and thrives, and
- To provide practical help and guidance to parties involved in visitor management both at strategic and site level.

#### **2.7.1.7 Environmental Damage Resolution**

Action-based responses are essential at site-specific level in response to instances of perceived or actual environmental damage. Fáilte Ireland's Environmental Damage Resolution procedure provides for a consistent approach in responding to such issues. This procedure should be considered, as relevant, in the implementation of this Plan.

#### **2.7.1.8 Environmentally Responsible Tourism Promotion & Campaigning**

Environmental considerations need to be integrated into promotional processes and environmentally responsible tourism campaigns associated with this Plan. Fáilte Ireland is in the process of developing an approach to awareness, guidance and support in integrating such considerations. The intention will be that such an approach can be considered and applied by all relevant tourism promotion bodies

## 2.7.2 Examples of Project Related Mitigation Measures

### 2.7.2.1 Projects must ensure Biodiversity Gain for WMNP/Natura 2000 sites

It is an underlying principle for each of the aims or objectives in the plan that that any projects arising from the plan result in a net biodiversity gain for the Wicklow Mountains National Park or other Natura 2000 sites either through works to restore or repair damaged habitats, avoid disturbance to species or result in the creation and restoration of habitats such as those proposed for within the Glendalough Valley.

Proposals for the Upper Lake Carpark include a reduction of car parking spaces, hard surfaces and built infrastructure resulting in a net gain of land for the creation and restoration of natural habitats.

Similarly the proposed development of the all ability trail from Laragh within the Glendalough Valley will also require a significant land purchase to allow its development including lands to be made available for the restoration of ecological function and habitat connectivity along the Glenealo River. These actions also contribute to the development of nature based solutions for the management of water, improved water quality, reduction of flood risk, and to contribute towards mitigation of climate change impacts.

### 2.7.2.2 Water Quality & Flooding

Any project arising from the Draft *VEMMP* which undergoes AA will adhere to the standard best practice guidelines for working near water and implement best practice mitigation measures to reduce pollution, silt and sediments during the construction stage. Nature based SuDS measures will be implemented in any new developments and upgrades to car parking areas to ensure the protection of water quality.

Standard documents in relation to same include:

- CIRIA (Murnane *et al.* 2006). Control of water pollution from linear construction projects. Site guide.
- IFI (undated). A Guide to the Protection of Watercourses through the use of Buffer Zones, Sustainable Drainage Systems, Instream Rehabilitation, Climate / Flood Risk and Recreational Planning (\*including one-off developments).
- IFI (2016). Guidelines on protection of fisheries during construction works in and adjacent to waters - Guidance for consultants and contractors.
- SEPA (2017). Works and maintenance in or near water. GPP 5.

- DHLGH (2022). Nature-based Solutions to the Management of Rainwater and Surface Water Runoff in Urban Areas – Best Practice Interim Guidance Document.

At detailed project design stage, mitigation will include pollution prevention and suitable controls during construction (e.g., silt fencing before and during construction).

### **2.7.2.3 Ecological Assessments and Mitigation for Projects Arising from the Plan**

The ecological assessments required for many of the plan objectives at project level will require further data in the form of additional detailed surveys, ecological assessments and monitoring. These will be informed by the detailed design proposals developed for each project as they are finalised and go through the consent process.

Substantial field-based ecological assessments will be required in order to inform project design and complete a project level assessment of potential impacts upon the habitats and species which form the Qualifying Interests of the identified Natura 2000 sites. The following are typical examples of the standards of ecological assessment and mitigation that will be required for projects resulting from the implementation of this plan.

**Note that the following are not mitigation to be implemented at this Plan stage but at Project stage. Many of these ecological assessments should be completed in the project area in advance of detailed design. The results of these surveys can then inform the project design and ensure that avoidance of ecological impact is the mitigation measure that is applied in the first instance.**

These ecological assessments will, as a minimum include:

- Detailed habitat surveys and habitat mapping of any project areas (these would include; proposed works areas, site compounds, trail upgrades, locations of new car parks, buildings, bridges, etc.);
- Searches for rare, scarce and threatened vascular plant or bryophyte species within the environs of any project areas;
- Searches for invasive species within the environs of any project areas;
- Breeding bird surveys within the environs of project areas - these would include specialised surveys for species such as red grouse, breeding upland waders, vantage point watches and nest observations for birds of prey such as peregrine falcon and merlin, surveys including the incorporation of dawn/dusk

elements for crepuscular species such as breeding snipe, nocturnal surveys for owls;

- For sensitive nesting species the identification of appropriate 'breeding bird buffer zones' for areas such as at the Lough Brays should be developed based on field observations, literature review and best practice species survey methods;
- The compilation and review of any ongoing impact monitoring undertaken by NPWS staff within Wicklow Mountains National Park and other relevant Natura 2000 sites;
- Mammal surveys for any project areas and all existing, upgrade, and proposed trails to assess the potential for impacts upon QI species such as otter and to assess the potential for disturbance and habitat loss (particularly due to anticipated higher visitor numbers);
- Water quality assessments to determine existing water quality in watercourses, lakes and coastal habitats;
- A wildlife disturbance study (particularly focussed on birds, but including other sensitive species such as otter, red squirrel, red grouse, pine marten, etc.) to assess the impact of recreational disturbance arising from upgrades to trails on fauna and any influence this might have on their behaviour.

This assessment for the Draft *VEMMP* has identified the need for detailed surveys and monitoring to be included within the assessment of any detailed projects proposed within the WMNP or other Natura 2000 sites in the county (or which could impact on same). These surveys will inform the design process of these projects and identify the ecological constraints to be considered in their development.

Any projects arising from the Draft *VEMMP* will also require their own detailed surveys, monitoring and mitigation to avoid and reduce potential disturbance to protected species. Project level mitigation must include the siting of developments (infrastructure, trails etc.) and the timing of works to avoid disturbance of key species which form part of the qualifying interests of any Natura 2000 site but also other specialist species associated with WMNP or designated sites as outlined in **Section 2.1**.

This would include for instance, avoiding the clearance of vegetation during the bird breeding season (from March to August inclusive), or as appropriate for the target species that is potentially affected (e.g., avoiding any in stream works to reduce impacts on aquatic species such as Salmon)).

Appropriate landscaping design at project stage would be required for example to screen and buffer areas of importance for fauna such as the



Glenmalure, Glendasan and Glenealo Rivers, which act as important wildlife corridors in the landscape. Fencing to curtail visitor movements and dog activity in sensitive areas may also be required or to divert wildlife movements away from existing road infrastructure. Any project which arises from the Draft VEMMP that 'screens in' for Appropriate Assessment will also consider information from the wildlife disturbance studies and the visitor impact assessment surveys.

#### **2.7.2.4 Ecological Clerk of Works**

An Ecological Clerk of Works will be retained to advise on and monitor projects at the Construction Stage.

#### **2.7.2.5 Post Construction Monitoring**

Monitoring of impacts will be completed post construction to determine if the mitigation measures implemented are successful or if additional measures need to be taken.

These could include for example the closure of trails during the breeding bird season near sensitive nesting sites if visitor pressures are causing disturbance, water management on trails, etc.

## 2.8 Predicted impacts of the Draft VEMMP

Although there are some gaps in scientific knowledge in relation to the habitats and species, which form the qualifying interests of the Natura 2000 sites identified it is considered that the scientific knowledge that informed the development of the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* and contained within this Natura Impact Statement is robust and sufficient for the purposes of this Draft NIS for the Draft Plan.

It is considered that, in the absence of mitigation, the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* has the potential to restrict the ability of those Natura 2000 sites which have been identified to achieve their Conservation Objectives.

Not implementing some of the proposals within the plan (i.e. a do nothing approach) would also restrict the ability of those Natura 2000 sites to achieve their Conservation Objectives as they are currently suffering from visitor impacts (amongst others). In the absence of a Plan, there is likely to be a continuing increase in visitor numbers – consistent with the development of tourism over many decades and the increasing populations of nearby counties and of Dublin City.

The largest increases in visitors would be most likely to occur during the peak tourist season; however the travel restrictions implemented as part of the national response to the global Covid 19 pandemic gave a clear vision of the pressures arising from a domestic population on Natura 2000 sites within Wicklow. This resulted in a concentration of domestic visitors at the most popular and well known locations within the County (including those Natura 2000 sites identified in this report) with increasing negative environmental effects on these sites and on various infrastructures such as parking and the road network in particular locations/at particular times. The development of the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* was cognisant of these pressures and impacts and seeks to address same.

Within the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* there are specific objectives such as those set out in **Section 2.3**. Some of these objectives are more akin to a 'Project' than a 'Plan' and will be required to comply, as relevant, with various legislation, policies, plans and programmes (including requirements for lower-tier Appropriate Assessment, Environmental Impact Assessment and other licencing requirements as appropriate) that form part of the statutory decision-making and consent granting framework, of which the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* is not part and does not contribute towards.

In developing such objectives within the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* it is important to note that funding for projects resulting from this plan will only be released by relevant funders where it can be fully demonstrated that mitigation measures have been considered and enacted at project level.

In order to achieve funding (including promotion) for land use or infrastructural development or land use activities from the plan partners, stakeholders will be required to demonstrate compliance with measures relating to sustainable development, environmental protection and environmental management, including the production of Visitor management strategies (where required) or a Construction Environmental Management Plan (CEMP) and further relevant guidance documents as listed above.

Overall the Draft *VEMMP* contains an overarching number of objectives and actions which set out to improve our understanding of, protect and enhance the natural environment within WMNP and further afield within the county.

Some of these objectives do not contain enough detail at present as they are at plan stage and will require further detailed assessment at project stage as presented below in **Table 2.9.1**.

**Table 2.9.1. Predicted impacts of the Aims and Objectives of the Draft VEMMP and requirement for further assessment.**

<b>Aim/Objective</b>	<b>Management Objective</b>	<b>Discussion</b>	<b>Category of Effect (Tyldesley, 2015)</b>	<b>Further Appropriate Assessment Required</b>
<i>Aim 1 - Enhance the natural, built and cultural heritage</i>				
<b>Objectives</b>				
	Create a central baseline record of research and knowledge on natural and built heritage	This Objective will have a beneficial effect on the QIs of the identified Natura 2000 sites.	2a	No
	Quantify the impacts of visitors and tourism	This Objective will have a beneficial effect in terms of informing visitor impacts and pressures on the QIs of the identified Natura 2000 sites.	2b	No
	Provide capital support for enhancement	This Objective will have a beneficial effect in terms of providing funding for the restoration of damaged habitats or impacts on species.  However it could also lead to increased visitor numbers if funding is only made available for infrastructure for visitors with ongoing impacts on the QIs of the identified Natura 2000 sites.	2a and 3	Yes
	Set targets for improvement of bio-diversity	This Objective will have a beneficial effect on the QIs of the identified Natura 2000 sites.	2a	No

Aim/Objective	Management Objective	Discussion	Category of Effect (Tyldesley, 2015)	Further Appropriate Assessment Required
	Review the myriad of protection designations and how they are working in practice	This Objective will have a beneficial effect on the QIs of the identified Natura 2000 sites.	2a	No
<b>Actions</b>				
	Commission research to cover gaps in knowledge	This Action will have a beneficial effect in terms of improving knowledge on the QIs of the identified Natura 2000 sites.	2a	No
	Pursue World Heritage Status for Glendalough	This Action could increase visitor numbers to WMNP and the County with adverse impacts on the Natura 2000 sites as World Heritage Site Status will attract more visitors. Therefore, it will require further assessment and monitoring of visitor numbers and impacts.	3	Yes
	Erosion Repair project for upland trails	While this Action has the potential to reduce the impacts of trail erosion within Natura 2000 sites, it is not detailed how this will be implemented. Therefore, it will require further assessment at project stage.	2a	Yes

<b>Aim/Objective</b>	<b>Management Objective</b>	<b>Discussion</b>	<b>Category of Effect (Tyldesley, 2015)</b>	<b>Further Appropriate Assessment Required</b>
	Support bog rewetting and native woodland enhancement projects on public and private land	While this Action has the potential to restore habitats within Natura 2000 sites, it is not detailed how this will be implemented. Therefore, it will require further assessment at project stage.	2a	Yes
	Visitor interpretation and education programme	This Action will have a beneficial effect in terms of improving visitor knowledge on the sensitivities and QIs of the identified Natura 2000 sites and improve visitor behaviour.	2b	No
<b>Aim 2 - Disperse the benefits and impacts of tourism</b>				
<b>Objectives</b>				
	Increase numbers of visitors staying in Wicklow for multi-day experiences	This Objective has the potential to increase visitor numbers in general in the County. Therefore, it will require further assessment.	3	Yes

Aim/Objective	Management Objective	Discussion	Category of Effect (Tyldesley, 2015)	Further Appropriate Assessment Required
	Actively disperse visitors more evenly throughout the County	This Objective has the potential to further increase visitor numbers and pressures on Natura 2000 sites outside the WMNP which are already in poor ecological condition. The proposed monitoring and habitat condition surveys will inform what mitigation measures are required at these sites at project level. These proposals will then be subject to further assessment.	3	Yes
	Pro-active visitor management to avoid congestion and enhance experience	This Objective has the potential to impact on QIs within Natura 2000 sites as it entails the development of additional car parking and visitor infrastructure. Therefore, it will require further assessment.	3	Yes
<b>Actions</b>				
	'One stop shop' - website for visitor information - including publicising/Marketing/Social media messaging	This Action will have a beneficial effect in terms of improving visitor knowledge on the sensitivities and QIs of the identified Natura 2000 sites and improve visitor behaviour.	2b	No
	Co-ordinated signage	This Action is unlikely to have a significant effect on a Natura 2000 site.	1	No
	Transport offers	This Action is unlikely to have a significant effect on a Natura 2000 site.	1	No

Aim/Objective	Management Objective	Discussion	Category of Effect (Tyldesley, 2015)	Further Appropriate Assessment Required
	Pricing mechanisms in car parks	This Action is unlikely to have a significant effect on a Natura 2000 site.	1	No
	Traffic management	This Action is unlikely to have a significant effect on a Natura 2000 site.	1	No
	Recreational Masterplan built around dispersal strategy - Discovery Walks - new trails spread around the County	While this Action has the potential to disperse visitor around the county and to restore damaged habitats along trails within Natura 2000 sites, it is not detailed how this will be funded or implemented on the ground. Therefore, it will require further assessment at project stage.	2a, 3	Yes
	Develop mechanisms to co-ordinate visitor management	This Action is unlikely to have a significant effect on a Natura 2000 site.	1	No



<b>Aim/Objective</b>	<b>Management Objective</b>	<b>Discussion</b>	<b>Category of Effect (Tyldesley, 2015)</b>	<b>Further Appropriate Assessment Required</b>
	Walker drop-off shuttle bus service	While this Action has the potential to disperse visitors away from the Glendalough Valley to elsewhere within the WMNP increased usage of trails elsewhere in WMNP could result in damage to habitats and disturbance to species within the Natura 2000 site if the existing trails are not upgraded in advance of same. Detailed design for same and an assessment of the impacts of these works will be required. Therefore, it will require further assessment at project stage.	3	Yes
<b>Aim 3: Improve the visitor experience</b>				
<b>Objectives</b>				
	Understanding the markets and tailoring facilities accordingly	This Action is unlikely to have a significant effect on a Natura 2000 site.	1	No
	Improving the quality of the visitor facilities in the Glendalough valley	This Action could result in damage to habitats and disturbance to species within the Natura 2000 site. Therefore, it will require further assessment at project stage.	3	Yes
	Developing the varied experiences to encourage the multi-day stays	This Action is unlikely to have a significant effect on a Natura 2000 site.	1	No

<b>Aim/Objective</b>	<b>Management Objective</b>	<b>Discussion</b>	<b>Category of Effect (Tyldesley, 2015)</b>	<b>Further Appropriate Assessment Required</b>
	Active visitor management to enhance the experience	This Action is unlikely to have a significant effect on a Natura 2000 site.	1	No
	Improved interpretation and learning about the receiving landscapes	This Objective will have a beneficial effect in terms of improving visitor knowledge on the sensitivities and QIs of the identified Natura 2000 sites and improve visitor behaviour.	2b	No
<b>Actions</b>				
	Qualitative visitor surveys to inform future visitor services	This Action will have a beneficial effect in terms of informing visitor impacts and pressures on the QIs of the identified Natura 2000 sites.	2b	No
	New visitor arrival Hub in Laragh with supporting car parks and infrastructure - 'Arrival'	This Action will have a beneficial effect in terms of improving visitor knowledge on the sensitivities and QIs of the identified Natura 2000 sites and improve visitor behaviour. It is not detailed at plan stage how this will be implemented on the ground and will require detailed design and the development of visitor infrastructure. Therefore, it will require further assessment at project stage.	3	Yes

Aim/Objective	Management Objective	Discussion	Category of Effect (Tyldesley, 2015)	Further Appropriate Assessment Required
	Improved and re-purposed Visitor Centre incorporating natural and monastic heritage - 'Learning'	This Action will have a beneficial effect in terms of improving visitor knowledge on the sensitivities and QIs of the identified Natura 2000 sites and improve visitor behaviour. It is not detailed at plan stage how this will be implemented on the ground and will require detailed design and the development of visitor infrastructure. Therefore, it will require further assessment at project stage.	3	Yes
	New Visitor services at Upper Lake with re-landscaping the car park	This Action will restore natural habitats at the Upper Lake Car Park and reduce car parking in this area. It is not detailed at plan stage how this will be implemented on the ground and will require detailed design and the development of visitor infrastructure. Therefore, it will require further assessment at project stage.	3	Yes

Aim/Objective	Management Objective	Discussion	Category of Effect (Tyldesley, 2015)	Further Appropriate Assessment Required
	Appropriate development of upland car parks and connecting shuttle buses	While this Action has the potential to disperse visitors away from the Glendalough Valley to elsewhere within the WMNP increased usage of trails elsewhere in WMNP could result in damage to habitats and disturbance to species within the Natura 2000 site if the existing trails are not upgraded in advance of same. Detailed design for same and an assessment of the impacts of these works will be required. Therefore, it will require further assessment at project stage.	3	Yes
	Co-ordinated visitor information signage across Wicklow	This is a general Action that is unlikely to have a significant effect on a Natura 2000 site and has the potential to increase visitor awareness of nature conservation designations and sensitives.	2a	No
<i>Specific Proposals</i>				

Aim/Objective	Management Objective	Discussion	Category of Effect (Tyldesley, 2015)	Further Appropriate Assessment Required
	Glendalough Valley Plan	This is a complex Proposal, which involves, amongst other things, the development of an all ability trail from Laragh to Glendalough through the valley. It is not detailed at plan stage how this will be implemented on the ground. Therefore, it will require further assessment at project stage.	3	Yes
	Improving the sustainability of existing popular sites	This Proposal has the potential to disperse visitors from the Glendalough Valley and to restore damaged habitats along trails at the existing popular sites. Detailed design for same and an assessment of the impacts of these works will be required. Therefore, it will require further assessment at project stage.	3	Yes
	Proposed Discovery Walks	This Proposal has the potential to disperse visitors from the Glendalough Valley and to restore damaged habitats along the proposed Discovery Walks. The detailed design for these measures will require further assessment at project stage.	3	Yes

Aim/Objective	Management Objective	Discussion	Category of Effect (Tyldesley, 2015)	Further Appropriate Assessment Required
	Recreational Trail Masterplan for Wicklow	<p>This Proposal has the potential to disperse visitors from the Glendalough Valley and to restore damaged habitats along trails within the WMNP. The detailed design for these measures will require further assessment at project stage. Recommendations for improvements to the parking facilities at nine locations:</p> <ul style="list-style-type: none"> <li>• Great Sugar Loaf</li> <li>• Djouce</li> <li>• Lough Brays/Glencree</li> <li>• Lough Dan/Old Bridge</li> <li>• Glenmalure</li> <li>• Shay Elliot</li> <li>• Seskin</li> <li>• Glenmacnass Waterfall Car Park</li> <li>• Glendasan Valley Lead Mines (near Laragh)</li> </ul> <p>will require detailed design for these facilities and further assessment at project stage</p>	3	Yes

## 2.9 Cumulative/In-combination Effects

The following plans and projects were reviewed and considered for in-combination effects:

- Draft Wicklow County Development Plan, 2022-2028
- Laragh – Glendalough Tourism and Settlement Plan, 2016-2022
- Draft River Basin Management Plan for Ireland 2022-2027
- Management Plan for Wicklow Mountains National Park, 2005-2009
- NPWS Conservation Management Plans
- The National Biodiversity Action Plan, 2017-2021
- County Wicklow Biodiversity Action Plan, 2010-2015
- County Wicklow Heritage Plan, 2017-2022

The Appropriate Assessment prepared for the Draft Wicklow County Development Plan, 2022-2028 reviewed the potential for disturbance impacts on the QIs of designated Natura 2000 sites and stated the following:

‘Disturbance effects are caused by any activity that has potential to alter the movement patterns/distribution of species. Disturbance effects can relate to direct disturbance through human activity/movement or noise pollution. This is particularly relevant in relation to tourism and recreation in general, from the perspective that many of the tourism destinations or attractions in the area are in or adjacent to European Sites. In this regard, Policy Objectives such as CPO11.131<sup>4</sup>, CPO 11.432<sup>5</sup>, CPO 11.477<sup>6</sup>, CPO 11.488<sup>7</sup> and CPO

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<sup>4</sup> To promote, encourage and facilitate the development of the tourism and recreation sectors in a sustainable manner.

<sup>5</sup> To only permit the development of a tourism or recreational facility in a rural area in cases where the product or activity is dependent on its location in a rural situation and where it can be demonstrated that the proposed development does not adversely affect the character, environmental quality and amenity of the rural area or the vitality of any settlement and the provision of infrastructure therein. The natural resource / tourist product / tourist attraction that is essential to the activity shall be located at the site or in close proximity to the site, of the proposed development. The need to locate in a particular area must be balanced against the environmental impact of the development and benefits to the local community.

<sup>6</sup> Where relevant, the Council and those receiving permission for development under the plan, shall seek to manage any increase in visitor numbers and/or any change in visitor behaviour in order to avoid significant environmental effects, including loss of habitat and disturbance. Management measures may include ensuring that new projects and activities are a suitable distance from ecological sensitivities; visitor/habitat management plans will be required for proposed projects as relevant and appropriate.

<sup>7</sup> Ensure the potential environmental effects of a likely increase in tourists/tourism-related traffic volumes in particular locations/along particular routes shall be considered and mitigated as appropriate. Such a consideration should include potential impacts on existing infrastructure (including drinking water, wastewater, waste and transport) resulting from tourism proposals.

11.499<sup>8</sup> ensure that the integrity of European Sites and sensitive areas that contribute to the site, are protected’.

## 2.10 Conclusion and Recommendations

A Stage 1 AA Screening and Stage 2 AA of the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* has been completed. The implementation of certain elements within the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* has the potential to result in effects to the integrity of any Natura 2000 Sites, if unmitigated.

Any identified risks to the safeguarding and integrity of the qualifying interests, special conservation interests and conservation objectives of the Natura 2000 sites have been addressed by the inclusion of mitigation measures that will prioritise the avoidance of effects in the first place and mitigate effects where these cannot be avoided.

In addition, all lower-level plans and projects arising through the implementation of the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* will themselves be subject to AA/screening for AA when further details of design and location are known.

In-combination effects from interactions with other plans and projects were considered in the assessment and the mitigation measures incorporated into the Draft *VEMMP for Glendalough and Wicklow Mountains National Park*, are seen to be robust to ensure there will be no significant effects as a result of the implementation of the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* either alone or in combination with other plans/projects.

Having incorporated mitigation measures, it is concluded that the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* is not foreseen to give rise to any adverse effects on the integrity of Natura 2000 Sites, alone or in combination with other plans or projects. This evaluation is made in view of the conservation objectives of the habitats or species, for which these sites have been designated. The AA process is ongoing and will inform and be concluded at the adoption of the Plan.

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<sup>8</sup> Where projects for new tourism projects identified in this chapter are not already provided for by existing plans / programmes or are not already permitted, then the feasibility of progressing these projects shall be examined, taking into account planning need, environmental sensitivities as identified in the SEA Environmental Report and the objectives of the plan relating to sustainable development.



In conclusion, the Actions and Objectives that the Draft *VEMMP for Glendalough and Wicklow Mountains National Park* has outlined will not have an adverse effect on Wicklow Mountains SAC and Wicklow Mountains SPA or the wider Natura 2000 network of sites.

The plan sets out a clear strategy for managing visitors across the county in a sustainable way and outlines the studies and funding that are required for same.

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