

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

Natura Impact Statement



FINAL REPORT

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

The *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 *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 *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 *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).

This report has been completed for Fáilte Ireland by Faith Wilson BSc CEnv MCIEEM. Faith is a highly experienced and qualified ecologist, with over twenty five years of experience in ecological and environmental surveys and consultancy, across a wide range of sectors. Faith is a Chartered Environmentalist (CEnv) and a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

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.

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 impacting on a site. The network of sites is referred to as the NATURA 2000 network 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 authority must ensure that a proposal, which is likely to have a significant effect on an SAC or SPA, is authorised only where the competent authority is satisfied it will not adversely affect the integrity of the European site and that an appropriate assessment of the implications of the development 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)".

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 European site but is likely to have a significant effect on the site in view of the site's conservation objectives. The proposed public realm improvements are not directly connected with or necessary for the management of any European Site.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to have a significant effect on the European 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. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

In Ireland, the requirements of Article 6(3) and (4) of the Habitats Directive have been transposed into Irish law by Part XAB of the Planning and Development Act 2000 (as amended) (the "**2000 Act**") and by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) (as amended) (the "**2011 Regulations**").

In relation to AA Screening, Section 177U(1) of the 2000 Act provides that *"A screening for appropriate assessment of a draft Land use plan or application for consent for proposed development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site."*

Section 177U(5) of the 2000 Act goes on to provide that *"The competent authority shall determine that an appropriate assessment of a draft Land use plan or a proposed development, as the case may be, is not required if it can be excluded, on the basis of objective information, that the draft Land use plan or proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site."*

Similarly, Regulation 42 of the 2011 Regulations provides as follows:-

"42. (1) A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site."

- (2) *A public authority shall carry out a screening for Appropriate Assessment under paragraph (1) before consent for a plan or project is given, or a decision to undertake or adopt a plan or project is taken.*

...

- (7) *The public authority shall determine that an Appropriate Assessment of a plan or project is not required where the plan or project is not directly connected with or necessary to the management of the site as a European Site and if it can be excluded on the basis of objective scientific information following screening under this Regulation, that the plan or project, individually or in combination with other plans or projects, will have a significant effect on a European site."*

1.2.2 Screening for Appropriate Assessment

A report for Screening for Appropriate Assessment was completed for the plan 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 European 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 European 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 European 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 *VEMMP for Glendalough and Wicklow Mountains National Park* should be subject to Stage 2 AA. Seventeen European sites were identified that could be potentially either directly or indirectly impacted by the proposals within the *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 *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 VEMMP for Glendalough and Wicklow Mountains National Park may have on European 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 the European sites.

1.3 The VEMMP for Glendalough and Wicklow Mountains National Park

The 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 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 Wicklow County Development Plan, 2022-2028).

The 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 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 visitors better and ensure sustainable tourism development.

The 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 28th June 2023).
- Online data available on European (Natura 2000) sites as held by the National Parks and Wildlife Service (NPWS) from www.npws.ie (accessed on 28th June 2023)
- Online database of rare, threatened and protected species on publicly accessible biodiversity datasets (<https://maps.biodiversityireland.ie/>) (accessed on 28th June 2023).

- Information on the River Basin District and catchments from www.wfdireland.ie and <https://www.catchments.ie/> (accessed on 28th June 2023).
- 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
- BirdWatch Ireland, Bird Atlas 2007 - 2011, National Biodiversity Data Centre, Ireland (accessed 28th June 2023).
- BirdWatch Ireland, The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972. National Biodiversity Data Centre, Ireland (accessed 28th June 2023).
- BirdWatch Ireland, The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991, National Biodiversity Data Centre, Ireland (accessed 28th June 2023).
- NPWS on-line data for European 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 *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:

- Wicklow County Development Plan, 2022-2028
- Laragh - Glendalough Tourism and Settlement Plan, 2016-2022

- 3rd cycle 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
- Ireland's 4th National Biodiversity Action Plan 2023 – 2027 (draft)
- County Wicklow Biodiversity Action Plan, 2010-2015
- County Wicklow Heritage Plan, 2017-2022
- County Wicklow Outdoor Recreation Strategy, 2020-2025

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

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

2. APPROPRIATE ASSESSMENT

2.1 Receiving Environment

For the purposes of Appropriate Assessment this NIS has examined potential impacts on Wicklow Mountains National Park and other European sites within Counties Wicklow, Dublin and Wexford as these are potentially impacted by the VEMMP for Glendalough and Wicklow Mountains National Park.

There are 26 European sites which are potentially impacted by the VEMMP for Glendalough and Wicklow Mountains National Park. These are individually described in **Table 2.1** and illustrated in **Figure 1** below.

A summary of the habitats and species for which each site is designated (the qualifying interests) has been prepared using the supporting information available on the NPWS website.

Information on Wicklow Mountains National Park, the habitats and species of European and National Conservation found within it, and the condition of upland habitats in the Wicklow and Dublin Mountains are presented in **Appendix 1**.

Table 2.1. Identified European sites within the likely zone of impact of the VEMMP for Glendalough and Wicklow Mountains National Park.

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest and Conservation Objectives	Screened in (Y/N)
000713	Ballyman Glen SAC	East, Wicklow lowlands	To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected: <ul style="list-style-type: none"> • (7220) Petrifying springs with tufa formation (Cratoneurion) • (7230) Alkaline fens 	Y
000714	Bray Head SAC	East, Wicklow coast	To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected: <ul style="list-style-type: none"> • (1230) Vegetated sea cliffs of the Atlantic and Baltic coasts • (4030) European dry heaths 	Y
000729	Buckroney-Brittis Dunes And Fen SAC	East, Wicklow coast	To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected: <ul style="list-style-type: none"> • Annual vegetation of drift lines [1210] • Perennial vegetation of stony banks [1220] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] • Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2150] • Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) [2170] • Humid dune slacks [2190] • Alkaline fens [7230] 	Y
000714	Carrigower Bog SAC	East, Wicklow uplands	To maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected: <ul style="list-style-type: none"> • Transition mires and quaking bogs [7140] 	N

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest and Conservation Objectives	Screened in (Y/N)
000717	Deputy's Pass Nature Reserve SAC	East, Wicklow lowlands	To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected: <ul style="list-style-type: none"> • (91A0) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles 	Y
000719	Glen Of The Downs SAC	East, Wicklow lowlands	To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected: <ul style="list-style-type: none"> • (91A0) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles 	Y
001209	Glenasmole Valley SAC	North, Foothills of Dublin Mountains	To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected: <ul style="list-style-type: none"> • (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco Brometalia</i>) (*important orchid sites) • (6410) <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) • (7220) Petrifying springs with tufa formation (<i>Cratoneurion</i>) 	Y
001757	Holdenstown Bog SAC	South west, Wicklow lowlands	To maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected: <ul style="list-style-type: none"> • Transition mires and quaking bogs [7140] 	N
001742	Kilpatrick Sandhills SAC	South East, Wicklow/Wexford Coast	To maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected: <ul style="list-style-type: none"> • Annual vegetation of drift lines [1210] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] • Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2150] 	Y
000725	Knocksink Wood SAC	East, Wicklow lowlands	To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected: <ul style="list-style-type: none"> • (7220) Petrifying springs with tufa formation (<i>Cratoneurion</i>) • (910E0) Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) 	Y

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest and Conservation Objectives	Screened in (Y/N)
001766	Magherabeg Dunes SAC	East, Wicklow lowlands	To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected: <ul style="list-style-type: none"> • Annual vegetation of drift lines [1210] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] • Petrifying springs with tufa formation (Cratoneurion) [7220] 	Y
004063	Poulaphouca Reservoir SPA	West, Foothills of Wicklow Mountains	To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: <ul style="list-style-type: none"> • Greylag Goose (<i>Anser anser</i>) • Lesser Black-backed Gull (<i>Larus fuscus</i>) 	Y

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest and Conservation Objectives	Screened in (Y/N)
000781	Slaney River Valley SAC	Rises Within WMNP	<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"> • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260] • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] • 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] • <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] • <i>Petromyzon marinus</i> (Sea Lamprey) [1095] • <i>Lampetra planeri</i> (Brook Lamprey) [1096] • <i>Lampetra fluviatilis</i> (River Lamprey) [1099] • <i>Alosa fallax fallax</i> (Twaite Shad) [1103] • <i>Salmo salar</i> (Salmon) [1106] • <i>Lutra lutra</i> (Otter) [1355] • <i>Phoca vitulina</i> (Harbour Seal) [1365] 	Y
002249	The Murrough Wetlands SAC	East, Wicklow lowlands	<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"> • (1210) Annual vegetation of drift lines • (1220) Perennial vegetation of stony banks • (1330) Atlantic salt meadows (<i>Glauco Puccinellietalia maritima</i>) • (1410) Mediterranean salt meadows (<i>Juncetalia maritimi</i>) • (7210) * Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davalliana</i> • (7230) Alkaline fens 	Y

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest and Conservation Objectives	Screened in (Y/N)
004186	The Murrough SPA	East, Wicklow lowlands	To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: <ul style="list-style-type: none"> • Red-throated Diver (<i>Gavia stellata</i>) • Greylag Goose (<i>Anser anser</i>) • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) • Wigeon (<i>Anas penelope</i>) • Teal (<i>Anas crecca</i>) • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) • Herring Gull (<i>Larus argentatus</i>) • Little Tern (<i>Sterna albifrons</i>) • Wetlands & Waterbirds 	Y
000733	Vale Of Clara (Rathdrum Wood) SAC	East, Wicklow lowlands	To maintain or restore the favourable conservation condition of the Annex I habitat for which the SAC has been selected: <ul style="list-style-type: none"> • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles [91A0] 	Y
004127	Wicklow Head SPA	East, Wicklow coast	To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: <ul style="list-style-type: none"> • Kittiwake (<i>Rissa tridactyla</i>) [A188] 	Y

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest and Conservation Objectives	Screened in (Y/N)
002122	Wicklow Mountains SAC	Within WMNP	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"> • (3130) Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoeto-Nanojuncetea • (3160) Natural dystrophic lakes and ponds, • (4010) Northern Atlantic wet heaths with <i>Erica tetralix</i>, • (4030) European dry heaths, • (4060) Alpine and Boreal heaths, • (6230) Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas, • (7130) Blanket bog (*active only), • (8110) Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>), • (8210) Calcareous rocky slopes with chasmophytic vegetation, • (8220) Siliceous rocky slopes with chasmophytic vegetation, • (9990) Blanket bog (not active), • (1355) Otter (<i>Lutra lutra</i>). 	Y
004040	Wicklow Mountains SPA	Within WMNP	To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: <ul style="list-style-type: none"> • Peregrine falcon (<i>Falco peregrinus</i>), • Merlin (<i>Falco columbarius</i>) 	Y
002274	Wicklow Reef SAC	East, Wicklow coast - offshore	To maintain the favourable conservation condition of the Annex I habitats for which the SAC has been selected: <ul style="list-style-type: none"> • Reefs [1170] 	N
003000	Rockabill to Dalkey Islands SAC	Hydrologically connected to the WMNP by the River Liffey	To maintain the favourable conservation condition of the Annex I habitat and the Annex II species for which the SAC has been selected: <ul style="list-style-type: none"> • (1170) Reefs • (1351) Harbour Porpoise (<i>Phocoena phocoena</i>) 	N

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest and Conservation Objectives	Screened in (Y/N)
000210	South Dublin Bay SAC	Hydrologically connected to the WMNP by the River Liffey	To maintain or restore the favourable conservation condition of the Annex I habitat(s) for which the SAC has been selected: <ul style="list-style-type: none"> • (1140) Mudflats and sandflats not covered by seawater at low tide 	
004024	South Dublin Bay and River Tolka Estuary SPA	Hydrologically connected to the WMNP by the River Liffey	To maintain the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA: <ul style="list-style-type: none"> • Brent goose (<i>Branta bernicla hrota</i>), • Sandwich Tern (<i>Sterna sandvicensis</i>), • Roseate Tern (<i>Sterna dougallii</i>), • Common Tern (<i>Sterna hirundo</i>), • Arctic Tern (<i>Sterna paradisaea</i>), • Oystercatcher (<i>Haematopus ostralegus</i>), • Ringed Plover (<i>Charadrius hiaticula</i>), • Knot (<i>Calidris canuta</i>), • Sanderling (<i>Calidris alba</i>), • Dunlin (<i>Calidris alpina</i>), • Bar-tailed Godwit (<i>Limosa lapponica</i>). <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>	N

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest and Conservation Objectives	Screened in (Y/N)
000206	North Dublin Bay SAC	Hydrologically connected to the WMNP by the River Liffey	<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"> • Mudflats and sandflats not covered by seawater at low tide [1140] • Annual vegetation of drift lines [1210] • <i>Salicornia</i> and other annuals colonizing mud and sand [1310] • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes") [2120] • *Fixed coastal dunes with herbaceous vegetation ("grey dunes") [2130] • Humid dune slacks [2190] • <i>Petalophyllum ralfsii</i> (Petalwort) [1395] 	N

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest and Conservation Objectives	Screened in (Y/N)
004006	North Bull Island SPA	Hydrologically connected to the WMNP by the River Liffey	<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"> • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] [wintering] • Shelduck (<i>Tadorna tadorna</i>) [A048] [wintering] • Teal (<i>Anas crecca</i>) [A052] [wintering] • Pintail (<i>Anas acuta</i>) [A054] [wintering] • Shoveler (<i>Anas clypeata</i>) [A056] [wintering] • Oystercatcher (<i>Haematopus ostralegus</i>) [A130] [wintering] • Golden Plover (<i>Pluvialis apricaria</i>) [A140] [wintering] • Grey Plover (<i>Pluvialis squatarola</i>) [A141][wintering] • Knot (<i>Calidris canutus</i>) [A143] [wintering] • Sanderling (<i>Calidris alba</i>) [A144] [wintering] • Dunlin (<i>Calidris alpina</i>) [A149] [wintering] • Black-tailed Godwit (<i>Limosa limosa</i>) [A156] [wintering] • Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] [wintering] • Curlew (<i>Numenius arquata</i>) [A160] [wintering] • Redshank (<i>Tringa totanus</i>) [A162] [wintering] • Turnstone (<i>Arenaria interpres</i>) [A169] [wintering] • Black-headed Gull (<i>Croicocephalus ridibundus</i>) [A179] [wintering] • Wetlands & Waterbirds [A999] 	N
004076	Wexford Harbour and Slobs SPA	Hydrologically connected to the WMNP by the River Slaney	<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"> • Little Grebe (<i>Tachybaptus ruficollis</i>) [A004] • Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] • Cormorant (<i>Phalacrocorax carbo</i>) [A017] • Grey Heron (<i>Ardea cinerea</i>) [A028] • Bewick's Swan (<i>Cygnus columbianus bewickii</i>) [A037] • Whooper Swan (<i>Cygnus cygnus</i>) [A038] • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] • Shelduck (<i>Tadorna tadorna</i>) [A048] 	N

Site Code	Site Name and Designation	Location relative to WMNP	Qualifying Interest and Conservation Objectives	Screened in (Y/N)
			<ul style="list-style-type: none"> • Wigeon (<i>Anas penelope</i>) [A050] • Teal (<i>Anas crecca</i>) [A052] • Mallard (<i>Anas platyrhynchos</i>) [A053] • Pintail (<i>Anas acuta</i>) [A054] • Scaup (<i>Aythya marila</i>) [A062] • Goldeneye (<i>Bucephala clangula</i>) [A067] • Red-breasted Merganser (<i>Mergus serrator</i>) [A069] • Hen Harrier (<i>Circus cyaneus</i>) [A082] • Coot (<i>Fulica atra</i>) [A125] • Oystercatcher (<i>Haematopus ostralegus</i>) [A130] • Golden Plover (<i>Pluvialis apricaria</i>) [A140] • Grey Plover (<i>Pluvialis squatarola</i>) [A141] • Lapwing (<i>Vanellus vanellus</i>) [A142] • Knot (<i>Calidris canutus</i>) [A143] • Sanderling (<i>Calidris alba</i>) [A144] • Dunlin (<i>Calidris alpina</i>) [A149] • Black-tailed Godwit (<i>Limosa limosa</i>) [A156] • Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] • Curlew (<i>Numenius arquata</i>) [A160] • Redshank (<i>Tringa totanus</i>) [A162] • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] • Lesser Black-backed Gull (<i>Larus fuscus</i>) [A183] • Little Tern (<i>Sterna albifrons</i>) [A195] • Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] • Wetland and Waterbirds [A999] 	

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

The Visitor Experience and Management Masterplan (VEMMP) for Wicklow Mountains National Park is a seven to ten year plan. It is designed to provide a phased roadmap to protect and enhance the setting of Glendalough and the Wicklow Mountains National Park, and to establish key sustainability objectives against which future projects will be assessed. All proposals set out in the plan as outlined below will be subject to a series of ecological requirements in order to receive funding and support – these are presented in **Table 2.6.1 in Appendix D2** of the masterplan.

The plan includes a section on Sustainable Tourism, which included detailed Guiding Principles for Sustainable and Responsible Tourism that the VEMMP would implement and also a section on Environmental Protection both of which further reduce the impacts of the plan.

The *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 *VEMMP for Glendalough and Wicklow Mountains National Park* are further detailed below.

2.2.1 Aim 1 - Enhance the natural, built and cultural heritage

In the course of the development process for the *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 *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 biodiversity
- 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

2.2.2 *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 *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

- Actively disperse visitors more evenly throughout the County
- Pro-active visitor management to avoid congestion and enhance experience
- Increase multi-day stays centred around a variety of experiences within the County

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

2.2.3 *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 - 'Discovery'
- Appropriate development of upland car parks and connecting shuttle buses
- Co-ordinated visitor information signage across Wicklow

2.3 Specific Proposals

Note that all proposals set out in the plan as outlined below will be subject to a series of ecological requirements in order to receive funding and support – these are presented in **Table 2.6.1** in **Appendix D2** of the masterplan.

2.3.1 Glendalough Valley Plan

Within the *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 European 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 took 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 European sites and the WMNP.

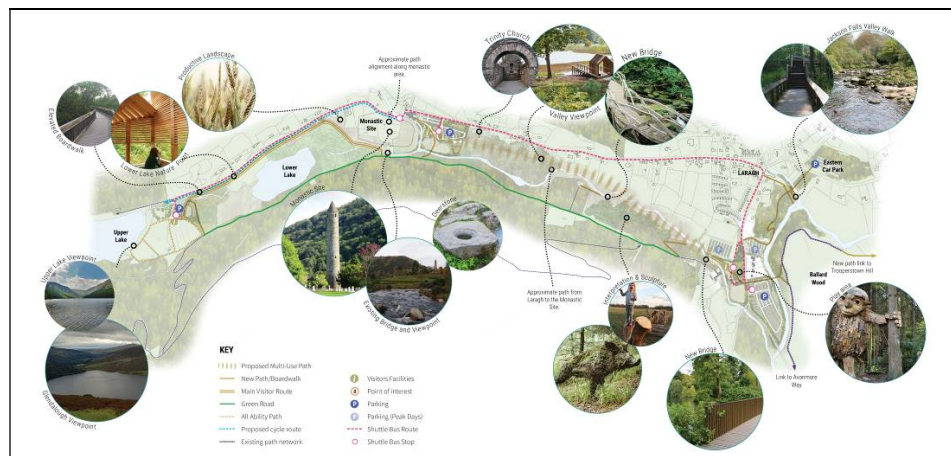


Figure 2. Glendalough Valley Plan.



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.

2.3.2 Improving the Sustainability of Existing Sites

The *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.

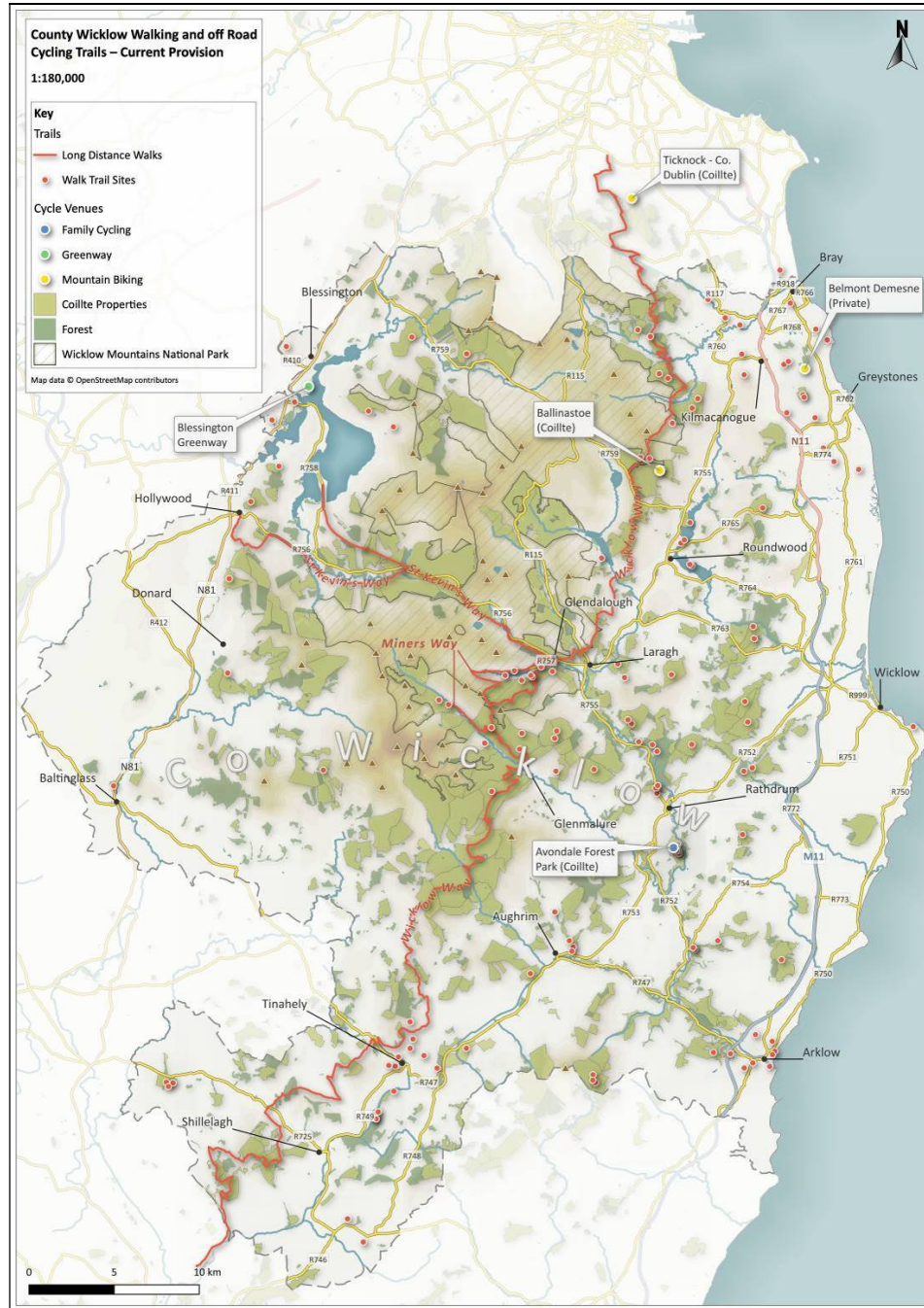


Figure 6. Existing walking and cycling facilities in the County.

2.3.3 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 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 as inclusion and promotion as Discovery Walks and each was then reviewed on the ground by the ORNI team.

Of these, 7 sites were recommended for immediate inclusion as Discovery Walks, as follows:

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

A further 2 sites were proposed (subject to landowner agreement and an ecological constraints/sensitivity assessment):

8. Trooperstown Hill
9. Croaghanmoira

On the basis of ecological sensitivity and the need for further detailed assessment and landowner agreement the proposed Discovery Walks were amended to exclude:

- Lackan Mass Path, Lugnagun
- Trooperstown Hill
- Croaghanmoira

The locations of the proposed Discovery Walks are as shown on **Figure 7** below.



Figure 7. Proposed Discovery Walks.

2.3.4 Recreational Trail Masterplan for Wicklow

The *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 *VEMMP for Glendalough and Wicklow Mountains National Park* is shown on **Figure 9**.

2.3.5 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 *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 *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**.

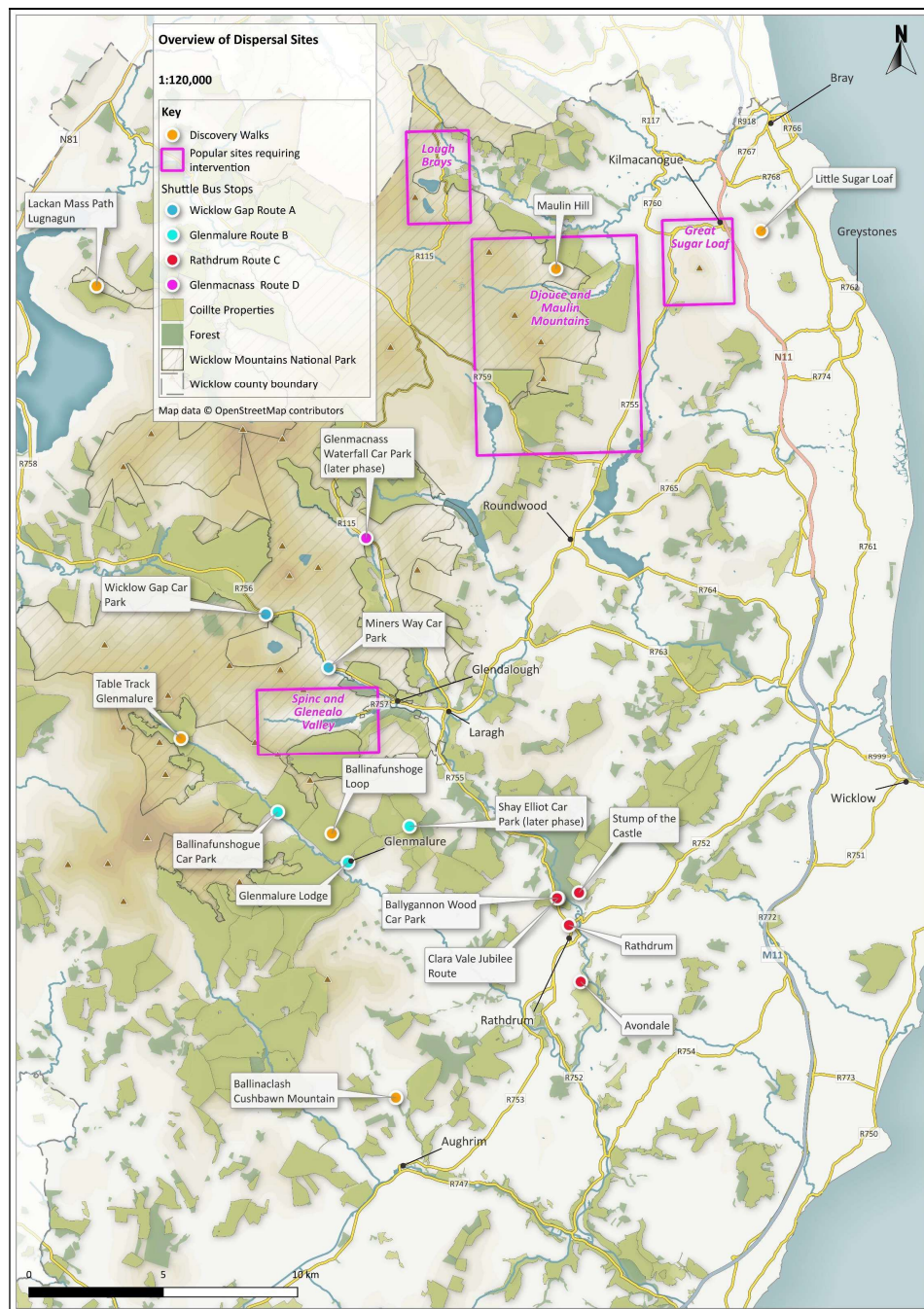


Figure 8. Recreational Trail Masterplan for Wicklow.

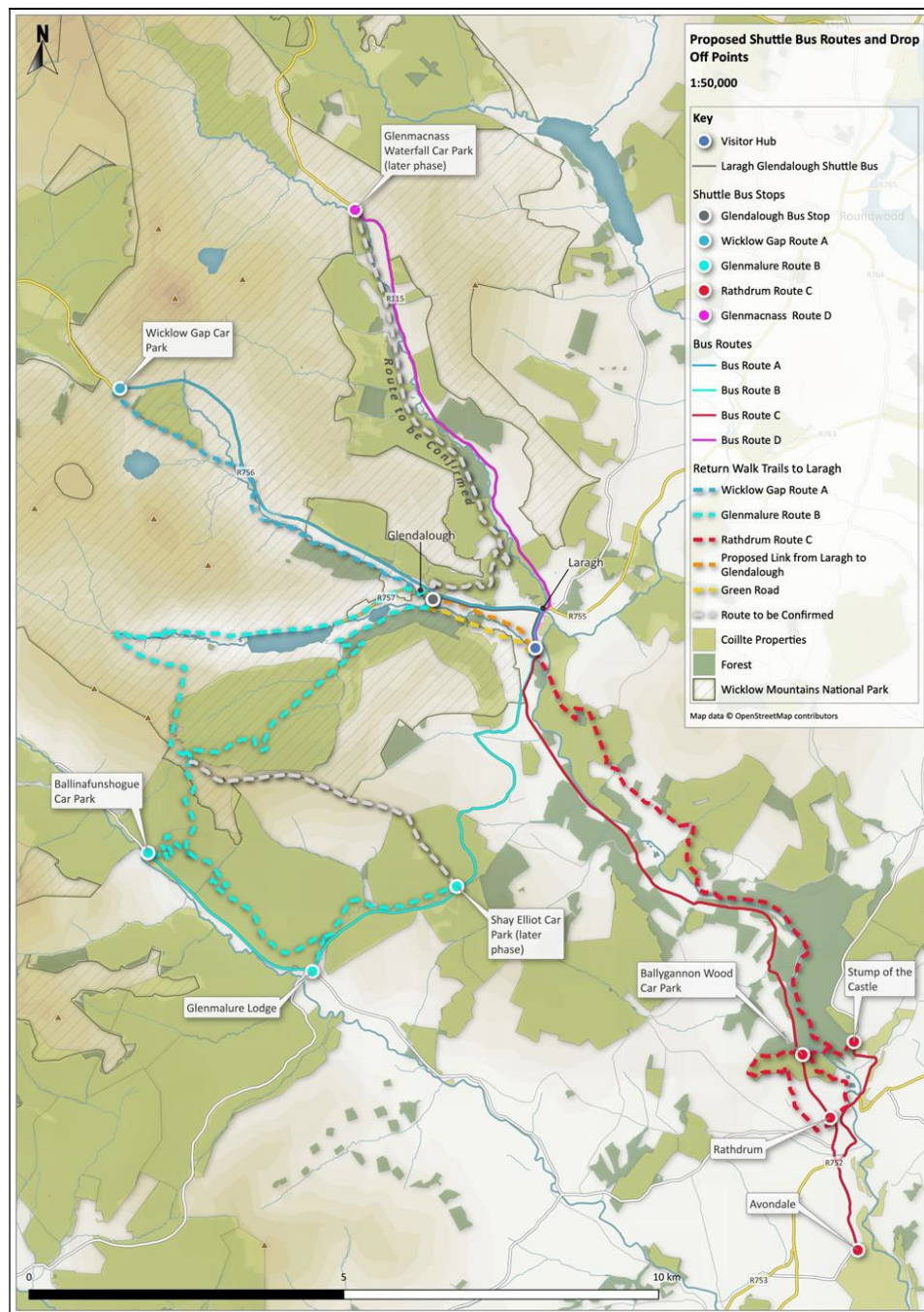


Figure 9. Proposed shuttle bus route, bus stops and drop off points.



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

2.4 Identification of European Sites potentially affected by the VEMMP for Glendalough and Wicklow Mountains National Park

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

These included any European Sites within or adjacent to the Wicklow Mountains National Park and any European Sites within the zone of impact of the proposed plan (using the source – pathway – receptor model) including any downstream.

The source-pathway-receptor model, dictates that, for an effect to occur, there must be a ‘source’ (such as a construction site); a ‘receptor’ (such as a designated site for nature conservation); and a ‘pathway’ between the two (such as a watercourse). If there is a possibility of ecological or environmental impacts occurring this is identified as a potential effect. The level and significance of that effect depends upon the nature and exposure to the potential effect and the characteristics of the receptor. Although there may be a risk of an effect, it may not necessarily occur, and if it does occur, it may not be significant.

There are no set recommended distances for projects to consider European Sites as being relevant for assessment. DoEHLG (2010, pp. 31 – 32) states that:

“The approach to screening is likely to differ somewhat for plans and projects, depending on scale and on the likely effects, but the following should be included:

1. *Any Natura 2000 sites within or adjacent to the plan or project area*
2. *Any Natura 2000 sites within the likely zone of impact of the plan or project. A distance of 15km is currently recommended in the case of plans, and derives from UK guidance (Scott Wilson et al., 2006). For projects, the distance could be much less than 15km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects*
3. *Natura 2000 sites that are more than 15km from the plan or project area depending on the likely impacts of the plan or project, and the sensitivities of the ecological receptors, bearing in mind the precautionary principle. In the cases of sites with water dependent habitats or species, and a plan or project that could affect water quality or quantity, for example, it may be necessary to consider the full extent of the upstream and/or downstream catchment.”*

This assessment therefore included any European sites within or adjacent to the Wicklow Mountains National Park and any European sites within the likely zone of impact of the VEMMP for Glendalough and Wicklow Mountains National Park which includes other European 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 2.1** above and their locations shown on **Figure 1**.

There are a number of other European 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 European 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 2.1** above for completeness.

2.5 Identification of Potential Impacts

The Stage 1 Screening process initially identified twenty six European sites within the zone of influence for the *VEMMP for Glendalough and Wicklow Mountains National Park* as detailed in **Table 2.1** above. These were as follows:

- 000713 Ballyman Glen SAC
- 000714 Bray Head SAC
- 000729 Buckroneys-Brittias 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
- 003000 Rockabill to Dalkey Islands SAC
- 000210 South Dublin Bay SAC
- 004024 South Dublin Bay and River Tolka Estuary SPA
- 000206 North Dublin Bay SAC
- 004006 North Bull Island SPA
- 004076 Wexford Harbour and Slobs SPA

Three of these European 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 *VEMMP for Glendalough and Wicklow Mountains National Park* and they were excluded from further assessment.

The four European 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 Slob SPA (004076) were also excluded from further examination on account of distance.

However the remaining eighteen European sites are potentially either directly or indirectly impacted by the proposals within the *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.

Table 2.5.1. The qualifying interests of the eighteen screened in European sites, existing visitor pressures and potential for likely effects (and in-combination effects) of the proposals in the VEMMP for Glendalough and Wicklow Mountains National Park.

Site Code	Site Name and Designation	Qualifying Interest	Existing visitor pressures and potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact using the Source-Pathway-Receptor Link
000713	Ballyman Glen SAC	<ul style="list-style-type: none"> • (7220) Petrifying springs with tufa formation (Cratoneurion) • (7230) Alkaline fens 	<p>This site is currently under pressure from recreational use – primarily the ongoing use of the site for clay pigeon shooting and ongoing developments associated with same, rezoning of nearby land for development and housing.</p>
000714	Bray Head SAC	<ul style="list-style-type: none"> • (1230) Vegetated sea cliffs of the Atlantic and Baltic coasts • (4030) European dry heaths 	<p>This site is under increasing pressure from recreational use with associated trampling, human induced erosion, camping, fires, etc.</p> <p>Upgrades to the cliff walk below Bray Head are required following rock falls and landslips.</p> <p>Proposals to further develop access and amenities on the former pitch and putt course at Raheen will increase visitor pressures on the site as access is improved.</p> <p>The introduction of invasive non-native species or problematic native species to this site is an existing issue.</p> <p>A mobile beverage kiosk, which had operated with no planning permission for some time within the SAC was recently refused planning permission by Wicklow County Council.</p> <p>This site is potentially further impacted by the proposed wider Wicklow visitor dispersal strategy.</p>

Site Code	Site Name and Designation	Qualifying Interest	Existing visitor pressures and potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact using the Source-Pathway-Receptor Link
000729	Buckroney-Brittis Dunes And Fen SAC	<ul style="list-style-type: none"> • Annual vegetation of drift lines [1210] • Perennial vegetation of stony banks [1220] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] • Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2150] • Dunes with <i>Salix repens ssp. argentea</i> (<i>Salicion arenariae</i>) [2170] • Humid dune slacks [2190] • Alkaline fens [7230] 	<p>This site is under increasing pressure from recreational use with associated trampling, human induced erosion, camping, fires, etc.</p> <p>Natural erosion which occurred at the southern end of the dune system with dune building occurring at the northern end of the system was particularly evident in the winter of 2022/2023. These cycles form part of the natural dune building process.</p> <p>Improved access, via wooden steps from the caravan park, was installed in the winter of 2022/2023.</p> <p>Large populations of the invasive species Sea buckthorn (<i>Hippophae rhamnoides</i>) threaten this site. The introduction of other invasive non-native species (such as winter heliotrope (<i>Petasites pyrenaicus</i>) and Alexanders (<i>Smyrniolum olusatrum</i>) or problematic native species to this site is an existing issue.</p> <p>The wastewater treatment system servicing the public toilets at this site needs remediation/upgrading.</p> <p>There has been illegal development on lands at the southern end of the SAC and applications here for tourist developments have been recently refused (Planning Reference: 211441).</p> <p>This site is potentially further impacted by the proposed</p>

Site Code	Site Name and Designation	Qualifying Interest	Existing visitor pressures and potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact using the Source-Pathway-Receptor Link
			wider Wicklow visitor dispersal strategy.
000714	Carrigower Bog SAC	<ul style="list-style-type: none"> Transition mires and quaking bogs [7140] 	None - this site is not hydrologically connected to the WMNP lands and no impacts on this site from visitors are envisaged on account of its wet and treacherous nature which protect it.
000717	Deputy's Pass Nature Reserve SAC	<ul style="list-style-type: none"> (91A0) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles 	<p>This site is under increasing pressure from recreational use with associated disturbance and trampling pressure.</p> <p>The introduction of invasive non-native species or problematic native species to this site is an existing issue.</p> <p>This site is potentially further impacted by the proposed wider Wicklow visitor dispersal strategy.</p>
000719	Glen Of The Downs SAC	<ul style="list-style-type: none"> (91A0) Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles 	<p>This site is under increasing pressure from recreational use with associated trampling, human induced erosion, disturbance, fires, etc.</p> <p>Invasive species such as Cherry laurel (<i>Prunus laurocerasus</i>) and Old man's beard (<i>Clematis vitalba</i>) currently threaten this site. The introduction of other invasive non-native species or problematic native species to this site is an existing issue.</p> <p>This site is potentially further impacted by the proposed wider Wicklow visitor dispersal strategy.</p>
001209	Glenasmole Valley SAC	<ul style="list-style-type: none"> (6210) Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco Brometalia) (*important orchid sites) (6410) <i>Molinia</i> meadows on calcareous, peaty or clayey-silt- 	<p>This site is under increasing pressure from recreational use with associated trampling, camping, fires, etc.</p> <p>The introduction of invasive non-native species or</p>

Site Code	Site Name and Designation	Qualifying Interest	Existing visitor pressures and potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact using the Source-Pathway-Receptor Link
		<p>laden soils (<i>Molinion caeruleae</i>)</p> <ul style="list-style-type: none"> • (7220) Petrifying springs with tufa formation (<i>Cratoneurion</i>) 	<p>problematic native species to this site is an existing issue.</p> <p>This site is potentially further impacted by the proposed wider Wicklow visitor dispersal strategy.</p>
001742	Kilpatrick Sandhills SAC	<ul style="list-style-type: none"> • Annual vegetation of drift lines [1210] • Embryonic shifting dunes [2110] • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] • Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2150] 	<p>This site is under increasing pressure from recreational use with associated trampling, human induced erosion, camping, fires, access by quads and scramblers, etc.</p> <p>Various applications to develop the adjoining lands for tourism/glamping purposes (Planning reference: 20181022 and 20190356) have been proposed but to date have been refused.</p> <p>This site is potentially further impacted by the proposed wider Wicklow visitor dispersal strategy.</p>
000725	Knocksink Wood SAC	<ul style="list-style-type: none"> • (7220) Petrifying springs with tufa formation (<i>Cratoneurion</i>) • (910E0) Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) 	<p>This site is under increasing pressure from recreational use with associated trampling, dog walking, human induced erosion of woodland soils, camping, fires, etc.</p> <p>The introduction of invasive non-native species or problematic native species to this site is an existing issue.</p> <p>Housing developments adjoining the SAC will increase human pressures on this site.</p> <p>This site is potentially further impacted by the proposed wider Wicklow visitor dispersal strategy.</p>
001766	Magherabeg Dunes SAC	<ul style="list-style-type: none"> • Annual vegetation of drift lines [1210] • Embryonic shifting dunes [2110] 	<p>This site is under increasing pressure from recreational use.</p>

Site Code	Site Name and Designation	Qualifying Interest	Existing visitor pressures and potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact using the Source-Pathway-Receptor Link
		<ul style="list-style-type: none"> • Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2120] • Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130] • Petrifying springs with tufa formation (Cratoneurion) [7220] 	<p>Car parking in the area was developed on private lands during the Covid 19 Pandemic which increased visitor pressures.</p> <p>Applications to develop the lands for glamping/ tourism purposes have been proposed on several occasions (Planning Reference: 141160 and 22763). An application for a large tourism facility has been recently submitted for planning (Planning Reference: 23337) immediately adjacent to the SAC.</p> <p>A storage facility (shipping container) for ?surfing? equipment is currently located within the SAC.</p> <p>The beach has been used regularly by the film industry in recent years as a filming location which potentially increases overseas visitor interest in the site.</p> <p>The introduction of invasive non-native species or problematic native species to this site is an existing issue.</p> <p>This site is potentially further impacted by the proposed wider Wicklow visitor dispersal strategy.</p>
004063	Poulaphouca Reservoir SPA	<ul style="list-style-type: none"> • Greylag Goose (<i>Anser anser</i>) • Lesser Black-backed Gull (<i>Larus fuscus</i>) 	<p>This site is under increasing pressure from recreational use with the development of the Blessington Greenway and increasing use.</p> <p>Development of the Greenway also introduces the risk of invasive species to the area during construction and use.</p>

Site Code	Site Name and Designation	Qualifying Interest	Existing visitor pressures and potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact using the Source-Pathway-Receptor Link
000781	Slaney River Valley SAC	<ul style="list-style-type: none"> • Estuaries [1130] • Mudflats and sandflats not covered by seawater at low tide [1140] • Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330] • Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] • Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0] • 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] • <i>Margaritifera margaritifera</i> (Freshwater Pearl Mussel) [1029] • <i>Petromyzon marinus</i> (Sea Lamprey) [1095] • <i>Lampetra planeri</i> (Brook Lamprey) [1096] • <i>Lampetra fluviatilis</i> (River Lamprey) [1099] • <i>Alosa fallax fallax</i> (Twait Shad) [1103] • <i>Salmo salar</i> (Salmon) [1106] • <i>Lutra lutra</i> (Otter) [1355] • <i>Phoca vitulina</i> (Harbour Seal) [1365] 	<p>The headwater streams of this site rise within WMNP.</p> <p>Invasive species such as <i>Rhododendron</i> (<i>Rhododendron ponticum</i>), Himalayan balsam (<i>Impatiens glandulifera</i>), etc. are present.</p>
002249	The Murrough Wetlands SAC	<ul style="list-style-type: none"> • (1210) Annual vegetation of drift lines • (1220) Perennial vegetation of stony banks • (1330) Atlantic salt meadows (<i>Glauco Puccinellietalia maritima</i>) • (1410) Mediterranean salt meadows (<i>Juncetalia maritimi</i>) • (7210) * Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davalliana</i> 	<p>This site is under increasing pressure from recreational use with associated trampling, human induced erosion, camping, fires, etc. and a proposal for a coastal greenway.</p> <p>The site has been used by the film industry in recent years as a filming location which potentially increases overseas visitor interest in the site.</p>

Site Code	Site Name and Designation	Qualifying Interest	Existing visitor pressures and potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact using the Source-Pathway-Receptor Link
		<ul style="list-style-type: none"> • (7230) Alkaline fens 	<p>The introduction of invasive non-native species or problematic native species to this site is an existing issue.</p> <p>Coastal erosion (some of which is exacerbated by trampling) is a major threat to this site.</p> <p>This site is potentially further impacted by the proposed wider Wicklow visitor dispersal strategy.</p>
004186	The Murrough SPA	<ul style="list-style-type: none"> • Red-throated Diver (<i>Gavia stellata</i>) • Greylag Goose (<i>Anser anser</i>) • Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) • Wigeon (<i>Anas penelope</i>) • Teal (<i>Anas crecca</i>) • Black-headed Gull (<i>Chroicocephalus ridibundus</i>) • Herring Gull (<i>Larus argentatus</i>) • Little Tern (<i>Sterna albifrons</i>) • Wetlands & Waterbirds 	<p>This site is under increasing pressure from recreational use with associated trampling, human induced erosion, camping, fires, etc. and a proposal for a coastal greenway.</p> <p>Human disturbance can lead to changes in bird behaviour including displacement, leading to a reduction in winter feeding and migratory condition.</p> <p>Human disturbance to the Little Tern colony at Kilcoole/Newcastle is managed through the Little Tern Protection Scheme funded by NPWS.</p> <p>Coastal erosion (some of which is exacerbated by trampling) is a major threat to this site.</p> <p>The site has been used by the film industry in recent years as a filming location which potentially increases overseas visitor interest in the site.</p> <p>The introduction of invasive non-native species or</p>

Site Code	Site Name and Designation	Qualifying Interest	Existing visitor pressures and potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact using the Source-Pathway-Receptor Link
			<p>problematic native species to this site is an existing issue.</p> <p>This site is potentially further impacted by the proposed wider Wicklow visitor dispersal strategy.</p>
000733	Vale Of Clara (Rathdrum Wood) SAC	<ul style="list-style-type: none"> • Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles [91A0] 	<p>This site is under increasing pressure from recreational use with associated disturbance, trampling, camping, fires, foraging, dog walkers, etc.</p> <p>The development of the Samuel Hayes Memorial Bridge and promotion of the Avonmore Way has increased footfall in the woods.</p> <p>The introduction of invasive non-native species or problematic native species to this site is an existing issue.</p> <p>Control of deer which is necessary for the woodland management may be problematic with human/visitor sentiment.</p>
004127	Wicklow Head SPA	<ul style="list-style-type: none"> • Kittiwake (<i>Rissa tridactyla</i>) [A188] 	<p>This site is under increasing pressure from recreational use with human induced erosion and disturbance.</p> <p>Human disturbance can lead to a reduction in breeding success at seabird colonies.</p> <p>Although not a QI for the European site the beach at Brides Head and the coves of Wicklow head are used as a breeding and resting place for the Annex II species Grey Seal (<i>Halichoerus grypus</i>). These are sensitive to human</p>

Site Code	Site Name and Designation	Qualifying Interest	Existing visitor pressures and potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact using the Source-Pathway-Receptor Link
			<p>disturbance.</p> <p>The introduction of invasive non-native species or problematic native species to this site is an existing issue.</p>
002122	Wicklow Mountains SAC	<ul style="list-style-type: none"> • (3130) Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoeto-Nanojuncetea • (3160) Natural dystrophic lakes and ponds, • (4010) Northern Atlantic wet heaths with <i>Erica tetralix</i>, • (4030) European dry heaths, • (4060) Alpine and Boreal heaths, • (6230) Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas, • (7130) Blanket bog (*active only), • (8110) Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>), • (8210) Calcareous rocky slopes with chasmophytic vegetation, • (8220) Siliceous rocky slopes with chasmophytic vegetation, • (9990) Blanket bog (not active), • (1355) Otter (<i>Lutra lutra</i>). 	<p>This site is under increasing pressure from recreational use with associated trampling, human induced erosion, camping, fires, wild swimming, disturbance of habitat from dogs, littering, and disturbance to fauna.</p> <p>A mobile beverage kiosk is in place on the R759 above Lugalla Estate – no planning permission is documented for same.</p> <p>The WMNP has been used by the film industry in recent years as a filming location which potentially increases overseas visitor interest in the site.</p> <p>The introduction of invasive non-native species or problematic native species to this site is an existing issue.</p> <p>Habitats within this site are potentially further impacted by the proposals for the Glendalough Valley and the proposed wider Wicklow visitor dispersal strategy.</p>
004040	Wicklow Mountains SPA	<ul style="list-style-type: none"> • Peregrine falcon (<i>Falco peregrinus</i>), • Merlin (<i>Falco columbarius</i>) 	<p>This site is under increasing pressure from recreational use with associated trampling, human induced erosion, camping, disturbance from dogs, littering, fires, etc. and disturbance to birdlife.</p> <p>A mobile beverage kiosk is in place on the R759 above</p>

Site Code	Site Name and Designation	Qualifying Interest	Existing visitor pressures and potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact using the Source-Pathway-Receptor Link
			<p>Lugalla Estate - no planning permission is documented for same.</p> <p>The WMNP has been used by the film industry in recent years as a filming location which potentially increases overseas visitor interest in the site.</p> <p>Human disturbance can lead to a reduction in breeding success.</p> <p>Visual disturbance and physical disturbance (including noise disturbance) of breeding birds in the uplands and potential displacement from breeding sites may occur.</p> <p>Changes in the behaviour of breeding birds including displacement is likely, leading to a reduction in breeding success.</p> <p>Habitat loss at nesting sites will result in a reduction in breeding success. Habitat loss and disturbance will result in a reduction in habitat range (breeding and hunting).</p> <p>Human littering and the deposition of food waste can attract opportunistic species such as rooks, hooded crows and magpies to upland areas which then prey upon ground nesting birds.</p> <p>There can be direct predation of chicks, adults and eggs by dogs causing a reduction in breeding success and</p>

Site Code	Site Name and Designation	Qualifying Interest	Existing visitor pressures and potential for likely effects of the plan (in combination with other plans and projects) and pathway for impact using the Source-Pathway-Receptor Link
			<p>population levels.</p> <p>Habitats within this site are potentially further impacted by the proposals for the Glendalough Valley and the proposed wider Wicklow visitor dispersal strategy.</p>

The *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 *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 *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 arising from a Proposed Plan. These categories define criteria for either a Potential Adverse Effect or No Adverse Effect from implementation of the Aims, Objectives and Actions of the *VEMMP for Glendalough and Wicklow Mountains National Park* (see **Table 2.5.2** below) and these were applied during the assessment process.

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

Category	Criteria for Proposed Plan Action/Objective	Potential for Adverse Effect
1	General Policy Statements	No Effect
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	
2	No likely significant effects on any European site	No Effect
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 European 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 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 European 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 European 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 European 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.	
3	Adverse effects on site integrity cannot be ruled out	Potential Adverse Effect
3	Elements of the Proposed Plan with potential to result in an adverse effect on the integrity of a particular European site and therefore require further assessment. This category includes: <ul style="list-style-type: none"> ▪ Elements of the Proposed Plan identified as having potential for adverse effects, either alone or in-combination, and directly or indirectly; and ▪ Elements of the Proposed Plan where adverse effects cannot be ruled out 	

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 *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.

Table 2.5.3 below details the Aims, Objectives and Actions of the *VEMMP* and assesses them against the criteria presented in **Table 2.5.2** above.

When assessing the Aims, Objectives and Actions of the *VEMMP* against the Category 2 criteria, the assessment of 'No Potential Adverse Effects' was undertaken applying the source>pathway>receptor chain model as described above.

The Aims, Objectives and Actions of the *VEMMP* were assessed to determine if they will have an adverse effect on the integrity of the identified European Sites. Where it was determined that an Aim or Objective of the *VEMMP* is a general statement with no scope for resulting in a pressure on a European site, or an Action of the *VEMMP* would have no adverse effect on any of the identified European Sites, they were categorised under Category 1 and Categories 2a to 2e where appropriate.

Where an Aim, Objective or Action of the *VEMMP* has the potential to result in an activity which could lead to an Adverse Effect on the SCIs of the identified European Sites, or an Adverse Effect could not be ruled out based on current known information, the Aim, Objective or Action was assigned to Category 3 and therefore assessed as Potential for Adverse Effects.

The European Court of Justice has indicated that if the effects of a plan or project would not undermine the conservation objectives of a European site, its effects cannot be regarded as significant. Therefore, where a plan or project may affect a European site, but its effects are positive, that aspect of the plan or project can be assessed as No Potential Adverse Effects. This clarification is applicable to elements of the *VEMMP* which may be assessed as No Potential Adverse Effect under category 2c.

The Habitats Directive recognises that in some cases the effects of a plan or project on its own would be either unlikely or insignificant. It also recognises that there may be a number of plans and projects, each which alone are unlikely to result in a significant effect, but which, if their individual effects were to be added together, by them all coming forward over time, the effects in combination would be likely to be significant.

Elements of the *VEMMP* that have been classified under Category 2d because any effects of change are likely to be minor, should also be assessed in combination with any other elements of the *VEMMP* classified under 2d to consider any cumulative effects.

Elements of the *VEMMP* that have individually been classified under Categories 2a, 2b, 2c because they will have no effect at all on a European site or because that element is too general in nature (Categories 1 and 2e) do not require an in-combination assessment, since they clearly will have no cumulative effects.

Table 2.5.3. Examination of the Aims, Objectives and Actions of the VEMMP and requirement for further assessment.

Aim 1 - Enhance the natural, built and cultural heritage

Aim/Objective/Action	Discussion	Category of Effect (Tyldesley, 2015)	Further Assessment required at Project, Funding or Consent Stage
<i>Aim 1 - Enhance the natural, built and cultural heritage</i>			
Objectives			
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 European 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 European 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 European 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 European sites.	2a	No
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 European sites.	2a	No

Aim/Objective/Action	Discussion	Category of Effect (Tyldesley, 2015)	Further Assessment required at Project, Funding or Consent Stage
Actions			
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 European 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 European sites as World Heritage Site Status will attract more visitors. Therefore, it will require further assessment and monitoring of existing visitor numbers and impacts to determine sustainable carrying capacity of the site and if this should be pursued.	3	Yes
Erosion Repair project for upland trails	While this Action has the potential to reduce the impacts of trail erosion within European sites, it is not detailed how this will be implemented. Therefore, it will require further assessment at project stage.	2a	Yes
Support bog rewetting and native woodland enhancement projects on public and private land	While this Action has the potential to restore habitats within European 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 European sites and improve visitor behaviour.	2b	No

Aim 2 - Disperse the benefits and impacts of tourism

Aim/Objective/Action	Discussion	Category of Effect (Tyldesley, 2015)	Further Assessment required at Project, Funding or Consent Stage
<i>Aim 2 - Disperse the benefits and impacts of tourism</i>			
Objectives			
Increase multi-day stays centred around a variety of experiences within the County	This Objective has the potential to increase visitor numbers in general in the County with the potential to further increase visitor numbers and pressures on European sites outside the WMNP which are already in poor ecological condition. Therefore, it will require further assessment.	3	Yes
Actively disperse visitors more evenly throughout the County	This Objective has the potential to further increase visitor numbers and pressures on European sites outside the WMNP which are already in poor ecological condition. Therefore, it will require further assessment.	3	Yes
Pro-active visitor management to avoid congestion and enhance experience	This Objective has the potential to impact on QIs within European sites as it entails the development of additional car parking and visitor infrastructure. Therefore, it will require further assessment.	3	Yes
Actions			
'One stop shop' - website for visitor information - including publicising/Marketing/Social media messaging	This Action could have a beneficial effect in terms of improving visitor knowledge on the sensitivities and QIs of the identified European sites and improve visitor behaviour however it could also simply increase visitor pressures.	3	Yes

Aim/Objective/Action	Discussion	Category of Effect (Tyldesley, 2015)	Further Assessment required at Project, Funding or Consent Stage
Co-ordinated signage	This Action is unlikely to have a significant effect on a European site.	1	No
Transport offers	This Action is unlikely to have a significant effect on a European site.	1	No
Pricing mechanisms in car parks	This Action is unlikely to have a significant effect on a European site.	1	No
Traffic management	Traffic management could lead to increased visitor pressures or dispersal of visitors to additional areas	3	Yes
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 to sustainable trails and to restore damaged habitats along trails within European sites, it could also result in increased access or visitor impacts on sensitive habitats or cause disturbance impacts. 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 European site.	1	No
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 European site if the existing trails are not upgraded in advance of same and measures to ensure the management of visitors are implemented. 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

Aim 3: Improve the visitor experience

Aim/Objective/Action	Discussion	Category of Effect (Tyldesley, 2015)	Further Assessment required at Project, Funding or Consent Stage
<i>Aim 3: Improve the visitor experience</i>			
Objectives			
Understanding the markets and tailoring facilities accordingly	This Objective is unlikely to have a significant effect on a European site.	1	No
Improving the quality of the visitor facilities in the Glendalough valley	This Objective could result in damage to habitats and disturbance to species within the European site. Therefore, it will require further assessment at project stage.	3	Yes
Developing the varied experiences to encourage the multi-day stays	This Objective could have a significant effect on a European site as it could increase pressures on existing sites.	3	Yes
Active visitor management to enhance the experience	This Objective is unlikely to have a significant effect on a European 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 European sites and improve visitor behaviour.	2b	No
Actions			
Qualitative visitor surveys to inform future visitor services	Visitor surveys conducted only with a focus on visitor requirements could result in pressures for future development on European Sites. This Action could also have a beneficial effect in terms of informing visitor impacts and pressures on the QIs of the identified European sites if the survey was correctly designed.	3	Yes

Aim/Objective/Action	Discussion	Category of Effect (Tyldesley, 2015)	Further Assessment required at Project, Funding or Consent Stage
New visitor arrival Hub in Laragh with supporting car parks and infrastructure - 'Arrival'	This Action could have a beneficial effect in terms of improving visitor knowledge on the sensitivities and QIs of the identified European 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
Improved and re-purposed Visitor Centre incorporating natural and monastic heritage - 'Learning'	This Action could have a beneficial effect in terms of improving visitor knowledge on the sensitivities and QIs of the identified European 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 - 'Discovery'	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/Action	Discussion	Category of Effect (Tyldesley, 2015)	Further Assessment required at Project, Funding or Consent Stage
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 European 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 European site and has the potential to increase visitor awareness of nature conservation designations and sensitives.	2a	No
Specific Proposals			
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	While this Proposal has the potential to improve the sustainability of popular sites and to restore damaged habitats/trails within European sites, it could also result in increased access or visitor impacts on sensitive habitats or cause disturbance impacts. 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

Aim/Objective/Action	Discussion	Category of Effect (Tyldesley, 2015)	Further Assessment required at Project, Funding or Consent Stage
Proposed Discovery Walks	While this Proposal has the potential to disperse visitor around the county and to restore damaged habitats along the proposed Discovery Trails, it could also result in increased access or visitor impacts on sensitive habitats or cause disturbance impacts within European sites. This Proposal also aims to restore damaged habitats along the proposed Discovery Walks. The detailed design for these measures will require further assessment at project stage.	3	Yes
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"> • Great Sugar Loaf • Djouce • Lough Brays/Glenree • Lough Dan/Old Bridge • Glenmalure • Shay Elliot • Seskin • Glenmacnass Waterfall Car Park • Glendasan Valley Lead Mines (near Laragh) <p>Detailed design will be required for these facilities and further assessment at project stage as they could result in increased access or visitor impacts on sensitive habitats or cause disturbance impacts within European sites.</p>	3	Yes

2.6 Plan Stage Mitigation

The Masterplan is by its nature a high-level strategic document designed to form a framework for future projects within the plan area. Such projects will be realised by relevant plan partners and landowners. The co-ordination and governance on how this is executed will be through an Implementation Group which will be set up on adoption of the Plan.

As a result, mitigation at plan level NIS will naturally be high level and influence driven in nature. Mitigation at this level is designed where appropriate to mitigate for outputs of the Plan but also to influence project stage through a plethora of requirements both general and specific to the project in question and relevant project owner. **Table 2.6.1** sets out expected requirements at project stage in this regard.

Of utmost importance when developing an approach to mitigation is to ensure that where mitigation is proposed that it can actually be achievable and monitored at this strategic level. The mitigation proposed here aims to fulfil these fundamental requirements.

The following sub sections set out how mitigation can be successfully implemented at Plan stage with the desired outcome of ensuring all outputs, at project stage, are rigorously assessed and monitored by the Plan Implementation Group.

The SEA and AA team worked with Fáilte Ireland and other project partners to develop practical measures that should be used to mitigate any potential or actual negative impacts resulting from the proposed Plan.

The plan includes a section on Sustainable Tourism which included detailed Guiding Principles for Sustainable and Responsible Tourism that the VEMMP would implement and also a section on Environmental Protection both of which further reduce the impacts of the plan.

Note: Refer to **Table 2.6.1** for requirements for mitigation at project level. These were included in **Appendix D2** of the masterplan.

The main mitigation measures for the plan include:

a) Compliance

In order to be realised, projects included in this Masterplan (in a similar way to other projects from any other sector) will have to comply, as relevant, with various legislation, policies, strategy's and programmes. These will typically include the following:

- Lower-tier Appropriate Assessment, Environmental Impact Assessment and other licencing requirements as appropriate,
- Statutory land use plans that form part of the statutory decision-making and consent-granting framework e.g. Wicklow County Development Plan 2022 – 2028,
- The Climate Action Plan 2023, the Wicklow County Council Climate Change Adaptation Strategy 2019-2024, and the National Climate Change Adaptation Framework (2018, and all subsequent versions).

In order to ensure full compliance and protection of the Natura 2000 Network and wider natural environment the Masterplan Implementation Group will be tasked with ensuring relevant and stringent compliance is adhered to in this regard. This measure will be monitored for its success through relevant consent process and will be reported in the SEA monitoring process.

b) Funding & Support

Fáilte Ireland and other Project Partners, with governance from the Plan Implementation Group, will provide funding and support for sustainable tourism projects that emerge as part of this Masterplan. Such funding and support mechanisms are not yet detailed, agreed or in place. However they will include for projects relating to land use, infrastructural development and land use activities and attractions in some instances as alluded to in the Masterplan.

Reference made to such projects included in the Plan does not guarantee funding or support. While such support will be provided to certain projects, in some instance Plan Partners will not be the project owner, land owner or developer.

In order to achieve funding (including promotion) for projects coming from this Plan stakeholders shall be required to demonstrate compliance (which may be supported by monitoring undertaken by the beneficiary and will be considered by the Plan Implementation Group) with measures relating to sustainable development, ecological protection and environmental management. This is likely to include further survey work, production of Visitor Management Plans and detailed Construction and Environment Management Plans as appropriate at project consent stage.

Listed here are some Fáilte Ireland Guidance documents which will be considered where relevant:

- Site Maintenance Guidelines
- Visitor Management Guidelines
- Environmental Management for Local Authorities and Others
- Environmental Damage Resolution
- Greenway Visitor Experience & Interpretation Toolkit
- Environmentally Responsible Tourism Promotion & Campaign Statement
- Blueway Management & Development Guide).

c) Visitor & Site Management

Those developing projects as a result of this Plan shall seek to manage any increase in visitor numbers and/or any change in visitor behaviour in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new projects are a suitable distance from ecological sensitivities. This will include the preparation of Visitor Management Plans, where relevant.

Extensive research by Fáilte Ireland has shown improved environmental outcomes (including improved attainment of conservation objectives) in areas with visitor management strategies. Visitor management strategies will be required for plans, programmes and projects that are generated as a direct result of this Masterplan as relevant and appropriate.

Extensive monitoring of the effects of tourism to date has shown predictors of impact occurrence to include: site type; group type; the number of activities; activity intensity; and the interaction between activity intensity and abundance. Site management must consider these factors in seeking to reduce the potential for impacts to occur in the first instance.

Where available, this research will continue to be used as part of a feedback loop to inform ongoing review of Fáilte Ireland and other Plan Partners activities, including the Plan Implementation Group.

d) Infrastructure Capacity

With respect to infrastructural capacity (including drinking water, wastewater, waste and transport) the potential impact on existing infrastructure as well as the potential environmental effects of a likely increase in tourism-related traffic volumes along any routes resulting from the relevant initiative shall be considered and mitigated as appropriate, where relevant. The promotion of developing visitor friendly infrastructure where it is required will also be encouraged.

Any proposed site management and maintenance guidelines produced by Fáilte Ireland and other Plan Partners will encourage site owners and operators to consider environmentally sustainable solutions and compliance with the Water Framework Directive and the Habitats Directive.

Infrastructural capacity at project level will also be considered by the Masterplan Implementation Group as projects resulting from the Plan arise.

d) Green Infrastructure and Ecosystem Services

Those receiving funding and support under this Masterplan shall contribute towards the maintenance of existing green infrastructure and its ecosystem services, taking into account the output of the Mapping and Assessment of Ecosystem Services project being undertaken by the NPWS. Proposals for the development of any green infrastructure should demonstrate the synergies that can be achieved with regard to the: protection and management of biodiversity; provision of open space amenities;

sustainable management of water; protection of cultural heritage; and protection of protected landscape sensitivities.

Green infrastructure and its ecosystem services at project level will also be considered by the Masterplan Implementation Group as projects resulting from the Plan arise.

e) 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.

This will be applicable to the outputs of this Masterplan and the various projects that come from it.

f) Environmental Damage Resolution

Pre-emptive and action-based responses are essential at site-specific level in response to instances of perceived or actual environmental damage. This is not only important in reaction to an existing issue but should also be considered and applied to situations in order that the risk for potential future damage is recognised and avoided. Fáilte Ireland's Environmental Damage Resolution procedure provides for a consistent approach in recognising and where required responding to such warning signs. This procedure should be considered, as relevant, in the implementation of this Plan.

Implementation of this procedure at similar habitats, sites and situations should be applied where relevant to projects coming from this Masterplan to pre-empt and avoid similar impact.

Table 2.6.1 Ecological Requirements for the Successful Funding & Support of Projects Resulting from the Masterplan.

Ecological Component Requiring Mitigation	Ecological Requirement for Plan Partners to Consider in Order to Receive Funding & Support at Project Level
<p>Natura 2000 Network</p>	<p>Regulatory framework for environmental protection and management Cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management and will ensure that plans, programmes and projects comply with EU Directives – including the Habitats Directive (92/43/EEC), the Birds Directive (2009/147/EC), the Environmental Impact Assessment Directive (2011/92/EU, as amended by 2014/52/EC) and the Strategic Environmental Assessment Directive (2001/42/EC) – and relevant transposing Regulations.</p> <p>Protection of European sites No plans or projects giving rise to adverse effects on the integrity of European sites (cumulatively, directly or indirectly) arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Masterplan (either individually or in combination with other plans or projects).</p> <p>Appropriate Assessment All projects and plans arising from this Masterplan will be screened for the need to undertake Appropriate Assessment under Article 6 of the Habitats Directive. A plan or project will only be authorised after the competent authority has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and subsequent Appropriate Assessment where necessary, that:</p> <ul style="list-style-type: none"> • The Plan or project will not give rise to adverse direct, indirect or secondary effects on the integrity of any European site (either individually or in combination with other plans or projects); or • The Plan or project will have significant adverse effects on the integrity of any European site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000; or • The Plan or project will have a significant adverse effect on the integrity of any European site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a

Ecological Component Requiring Mitigation	Ecological Requirement for Plan Partners to Consider in Order to Receive Funding & Support at Project Level
	<p>requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.</p> <p>NPWS & Integrated Management Plans Article 6(1) of the Habitats Directive requires that Member States establish the necessary conservation measures for European sites involving, if need be, appropriate management plans specifically designed for the sites or integrated into other development plans. The NPWS's current priority is to identify site specific conservation objectives; management plans may be considered after this is done.</p> <p>Where Integrated Management Plans are being prepared for European sites (or parts thereof), Fáilte Ireland and local authorities shall engage with the National Parks and Wildlife Service in order to ensure that plans are fully integrated with the Masterplan and other plans and programmes, with the intention that such plans are practical, achievable and sustainable and have regard to all relevant ecological, cultural, social and economic considerations, including those of local communities.</p>
<p>Natura 2000 Network and Supporting Habitats and Species</p>	<p>Information to be considered by local authorities and others at lower levels of decision making and environmental assessment Lower levels of decision making and environmental assessment should consider the environmental sensitivities identified in Section 4 of the SEA Environmental Report, including the following:</p> <p>Special Areas of Conservation and Special Protection Areas; Features of the landscape that provide linkages/connectivity to designated sites (e.g., watercourses and areas of semi-natural habitat, such as linear woodlands);</p> <ul style="list-style-type: none"> • Salmonid Waters; • Shellfish Waters; • Freshwater Pearl Mussel catchments; • Nature Reserves; • Natural Heritage Areas and proposed Natural Heritage Areas; • Areas likely to contain a habitat listed in Annex 1 of the Habitats Directive; • Entries to the Record of Monuments and Places and Zones of Archaeological Potential; • Entries to the Record of Protected Structures; • Un-designated sites of importance to wintering or breeding bird species of conservation concern; • The National Biodiversity Action Plan;

Ecological Component Requiring Mitigation	Ecological Requirement for Plan Partners to Consider in Order to Receive Funding & Support at Project Level
	<ul style="list-style-type: none"> • Architectural Conservation Areas; and • Relevant landscape designations. <p>Where developments, arising from this Masterplan, do not require Environmental Impact Assessment, impacts to biodiversity the preparation of a non-statutory Ecological Impact Assessment (EcIA) may be required.</p>
Biodiversity, Flora and Fauna	<ul style="list-style-type: none"> • Protection of Biodiversity including Natura 2000 Network • Contribute, as appropriate, towards the protection of designated ecological sites including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs); UNESCO World Heritage and UNESCO Biosphere sites; Ramsar Sites; Salmonid Waters; Shellfish Waters; Freshwater Pearl Mussel catchments; Flora Protection Order sites and species; Wildlife sites (including Nature Reserves); the Water Framework Directive Register of Protected Areas; Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs); Wildfowl Sanctuaries (see S.I. 192 of 1979); and Tree Preservation Orders (TPOs). • Contribute towards compliance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines, including the following and any updated/superseding documents): <ul style="list-style-type: none"> ○ EU Directives, including the Habitats Directive (92/43/EEC, as amended), the Birds Directive (2009/147/EC), the Environmental Liability Directive(2004/35/EC), the Environmental Impact Assessment Directive (2011/92/EU, as amended by 2014/52/EC), the Water Framework Directive (2000/60/EC)and the Strategic Environmental Assessment Directive (2001/42/EC). ○ National legislation, including the Wildlife Acts 1976 and 2010 (as amended), the Planning and Development Act 2000 (as amended) and associated Regulations, Environmental Impact Assessment Regulations, the European Union (Water Policy) Regulations 2003 (as amended), the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), the European Communities (Environmental Liability) Regulations 2008 (as amended) and the Flora Protection Order 2015. ○ National policy guidelines (including any clarifying Circulars or superseding versions of same), including the “Landscape and Landscape Assessment” Draft Guidelines 2000, the Environmental Impact Assessment Sub-Threshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines2004 and the

Ecological Component Requiring Mitigation	Ecological Requirement for Plan Partners to Consider in Order to Receive Funding & Support at Project Level
	<p>Appropriate Assessment Guidance 2010.</p> <ul style="list-style-type: none"> ○ Catchment and water resource management Plans, including the relevant River Basin Management Plan and Flood Risk Management Plan (including any superseding versions of same). ○ Biodiversity Plans and guidelines, including the 3rd National Biodiversity Plan 2017-2023 (including its measures relating to ecological corridors and any superseding version of same) and the All-Ireland Pollinator Plan. ○ Freshwater Pearl Mussel Regulations (S.I. 296 of 2009) (including any associated designated areas or management plans). ○ Ireland’s Environment 2020 - An Assessment (EPA, 2020, including any superseding versions of same), and to make provision where appropriate to address the report’s goals and challenges. <p>Where developments, arising from this Masterplan, do not require Environmental Impact Assessment, a non-statutory Ecological Impact Assessment may be required to assess potential impacts on biodiversity.</p>
Ecological Networks & Connectivity	<ul style="list-style-type: none"> • Contribute towards the protection and enhancement of biodiversity and ecological connectivity, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, geological and geo-morphological systems, other landscape features, natural lighting conditions, and associated wildlife where these form part of the ecological network and/or may be considered as ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive
General Ecological Features/Non-designated Biodiversity	<ul style="list-style-type: none"> • Ensure the undertaking of appropriately detailed surveying and assessment at project/EIA/EIAR level and minimisation of loss of biodiversity, including old trees or tree lines or areas of vegetation, as a result of the development of new or widened infrastructure. • Help to ensure the appropriate protection of non-designated habitat features, landscapes and biological diversity. Where possible, to strive to achieve no net loss of these features as a result of new development granted permission under the Plan. • Contribute towards the protection and management of fisheries as appropriate and take into account Inland Fisheries Ireland’s “Planning for Watercourses in the Urban Environments” (2020) for developments along watercourses

Ecological Component Requiring Mitigation	Ecological Requirement for Plan Partners to Consider in Order to Receive Funding & Support at Project Level
Non-Native Species	<ul style="list-style-type: none"> Support, as appropriate, the National Parks and Wildlife Service’s efforts to seek to control and manage the spread of non-native invasive species on land and water. Where the presence of non-native invasive species is identified at the site of any proposed development or where the proposed activity has an elevated risk of resulting in the presence of these species, details of how these species will be managed and controlled will be required.
Habitat or Species Fragmentation and/or Disturbance - due to the Development or Extension of Trails and Walkways for the Purposes of Tourism	<p>Corridor and Route Selection Process The following Corridor and Route Selection Process will be undertaken for relevant trail infrastructure:</p> <p>Stage 1 – Route Corridor Identification, Evaluation and Selection</p> <ul style="list-style-type: none"> Environmental constraints and opportunities (such as existing linear infrastructure) will assist in the identification of possible route corridor options; Potentially feasible corridors within which infrastructure could be accommodated will be identified and these corridors assessed. The selection of the preferred route corridor will avoid constraints and meet opportunities to the optimum extent, as advised by relevant specialists; and In addition to the constraints identified above, site-specific field data may be required to identify the most appropriate corridors. <p>Stage 2 – Route Identification, Evaluation and Selection</p> <ul style="list-style-type: none"> Potentially feasible routes within the preferred corridor will be identified and assessed. The selection of preferred routes will avoid constraints and meet opportunities to the optimum extent, as advised by relevant specialists, taking into account project level information and potential mitigation measures that are readily achievable; In addition to the constraints identified above, site-specific field data may be required to identify the most appropriate routes; and In addition to environmental considerations, the identification of route corridors and the refinement of the route lines is likely to be informed by other considerations. European sites may be vulnerable to greenway/cycleway developments due to their location. As outlined in Appendix I to the AA Natura Impact Statement, amenity and leisure activities are already posing an existing level of threat and pressure to various European sites. Some of these sites are in close proximity to a number of already proposed greenways. Screening for AA, and subsequent stages of AA as relevant, will be required for all greenway/cycleway developments

Ecological Component Requiring Mitigation	Ecological Requirement for Plan Partners to Consider in Order to Receive Funding & Support at Project Level
	<p>when implementing the Masterplan.</p> <p>The feasibility and determination of any route is subject to presenting no significant adverse effect(s) to the integrity of European sites, alone or in combination with other plans or projects, where projects do not meet the strict criteria for imperative reasons of overriding public interest and/or where alternative routes are identified.</p> <p>Green Infrastructure and Ecosystem Services</p> <ul style="list-style-type: none"> • In contributing towards outcomes under the Strategies, partners and stakeholders shall contribute towards the maintenance of existing green infrastructure and its ecosystem services, taking into account the output of the Mapping and Assessment of Ecosystem Services project being undertaken by the NPWS. Proposals for the development of any green infrastructure should demonstrate the synergies that can be achieved with regard to the: provision of open space amenities; sustainable management of water; protection and management of biodiversity; protection of cultural heritage; and protection of protected landscape sensitivities. • Where possible, extension of existing greenways and future development of new greenways and blueways should complement and integrate rather than replace existing green infrastructure. Stakeholders considering the development of greenways and blueways should have regard to the Fáilte Ireland publication “Greenway - Visitor Experience & Interpretation Toolkit” and, “Connecting with nature for health and wellbeing” EPA Research Report 2020.
<p>Appropriate and tailored site management, which responds to ongoing monitoring results, to reduce direct impacts of tourism (such as trampling, dog walking, littering, disturbance) to sensitive ecological receptor</p>	<p>Site and Visitor Management</p> <ul style="list-style-type: none"> • Fáilte Ireland’s extensive monitoring of the effects of tourism to date has shown predictors of impact occurrence to include: site type; group type; the number of activities; activity intensity; and the interaction between activity intensity and abundance. Site management must consider these factors in seeking to reduce the potential for impacts to occur and to remove impacts. <p>Visitor Management</p> <ul style="list-style-type: none"> • In contributing towards outcomes under the Strategies, partners and stakeholders shall seek to manage any increase in visitor numbers and/or any change in visitor behaviour in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new projects are a suitable distance from ecological sensitivities. • Extensive research by Fáilte Ireland has shown improved environmental outcomes (including improved attainment of conservation objectives) in areas with visitor management strategies. Visitor management strategies may be required from partners and stakeholders who are contributing towards outcomes under the Strategies, as relevant and

Ecological Component Requiring Mitigation	Ecological Requirement for Plan Partners to Consider in Order to Receive Funding & Support at Project Level
	<p>appropriate.</p> <ul style="list-style-type: none"> • Visitor management strategies will be required for proposed plans, programmes and projects that are to receive funding as relevant and appropriate.
<p>Protection of Riparian Zone, Waterbodies, Watercourses and Peatlands</p>	<ul style="list-style-type: none"> • Help to ensure that waterbodies and watercourses are protected from inappropriate development, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include the preservation habitat features/structure, such as treeline density, and protection buffers in riverine, wetland and coastal areas, as appropriate. • Support, as appropriate, any relevant recommendations contained in the National Peatlands Strategy 2015. • Water Framework Directive and associated legislation. • Support the implementation of the relevant recommendations and measures as outlined in the most up to date River Basin Management Plan, and associated Programme of Measures. Proposed plans, programmes and projects shall not have an unacceptable impact on the water environment, including surface waters, groundwater quality and quantity, river corridors and associated woodlands. Also, to have cognisance of, where relevant, the EU's Common Implementation Strategy Guidance Document No. 20 and 36 which provide guidance on exemptions to the environmental objectives of the Water Framework Directive.
<p>Flood Risk Management</p>	<ul style="list-style-type: none"> • Comply with the Planning System and Flood Risk Management Guidelines (2009, DEHLG/OPW) (including any clarifying Circulars or superseding versions of same) and relevant outputs of the Catchment and Flood Risk Assessment and Management Studies.
<p>Water Quality</p>	<ul style="list-style-type: none"> • Contribute towards, as appropriate, the protection of existing and potential water resources, and their use by humans and wildlife, including rivers, streams, wetlands, groundwater, coastal waters and associated habitats and species in accordance with the requirements and guidance in the EU Water Framework Directive 2000 (2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the European Communities Environmental Objectives (Surface Waters) Regulations 2009 (SI No. 272 of 2009), the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (groundwater) Regulations, 2010 (S.I. No. 9 of 2010) and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same). To support the application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable Drainage System techniques for new development.

Ecological Component Requiring Mitigation	Ecological Requirement for Plan Partners to Consider in Order to Receive Funding & Support at Project Level
<p>Built Environment and Infrastructure</p>	<ul style="list-style-type: none"> • With respect to infrastructural capacity (including drinking water, wastewater, waste and transport) the potential impact on existing infrastructure as well as the potential environmental effects of a likely increase in tourism-related traffic volumes along any routes resulting from the relevant initiative shall be considered and mitigated as appropriate, where relevant. This consideration and associated mitigation shall take into account the need to provide for climate resilience. • Close collaboration will also be undertaken with the relevant stakeholders, such as Local Authorities and Irish Water, to ensure that any proposed tourism developments align with the capacity of the supporting critical service infrastructure. • Plan partners will encourage site owners and operators to consider environmentally sustainable solutions and ensure compliance with the Water Framework Directive. • There is a need for close collaboration with Irish Water, to ensure that proposals align with the capacity of the supporting critical water services infrastructure. Local authorities and others shall seek the support of Irish Water, as relevant and appropriate, in its role as the lead authority for water services. Fáilte Ireland will encourage site owners and operators to consider environmentally sustainable solutions and ensure compliance with the Water Framework Directive. • Ensure that new development is adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems as appropriate.
<p>Detailed Assessments at Project Stage</p>	<p>Detailed assessments will be required for the following and should include ecological baseline surveys, surveys and monitoring of visitor numbers and habitat condition surveys. This will inform if these objectives are sustainable and where visitors should be directed to and what mitigation measures would be required at these sites at project level. These proposals will then be subject to further assessment.</p> <ul style="list-style-type: none"> • Assess existing visitor impacts on European Sites and to inform mitigation measures for same required; • There should be no promotion of sites until detailed studies to assess existing visitor impacts on European Sites and to inform mitigation measures for same are completed • Assess existing visitor impacts on European Sites at the proposed bus drop off/collection locations and to inform mitigation measures for same required • Assess existing visitor impacts within the Glendalough Valley and to inform mitigation measures for same required • Detailed studies to assess existing visitor impacts at the proposed Discovery Walk locations and to inform mitigation

Ecological Component Requiring Mitigation	Ecological Requirement for Plan Partners to Consider in Order to Receive Funding & Support at Project Level
	measures for same required
Construction Stage Protection	<p>Construction Environmental Management Plan (CEMP)</p> <p>Potential sources of impact must be address in a CEMP at project stage to ensure there are no hydrological interactions which could lead to significant adverse effects to European sites.</p> <p>The CEMP must detail control measures for:</p> <ul style="list-style-type: none"> • All hazardous materials; such as bunding of materials, appropriate work practices etc. • Dust control measures to ensure dust emissions are minimised. • All surface water runoff must be controlled in an appropriate manner; where necessary silt fences will be installed in advance of works and appropriately maintained to ensure hydrological interactions are minimised. • Construction phase lighting will need to be controlled to minimise light pollution as a matter of good practice – for example: via the implementation of lights out hours when construction is not active on site (evening and night hours), and the use of low UV, directional lighting.

2.7 Difficulties in Assessment

This assessment has been made based on consultation with NPWS, best expert judgement and knowledge of the European sites in question and pressures on same. It is acknowledged that a current conservation status assessment of the conditions of the habitats and species within Wicklow Mountains National Park and many of the other identified European sites is not currently available from National Parks and Wildlife Service. In addition an up to date management plan for the Wicklow Mountains National Park is not available. Should this exist it would serve to bolster and reinforce the findings of this assessment.

2.8 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
- County Wicklow Outdoor Recreation Strategy, 2020-2025

The Appropriate Assessment prepared for the Draft Wicklow County Development Plan, 2022-2028 reviewed the potential for disturbance impacts on the QIs of designated European 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 CPO11.131¹, CPO 11.432², CPO 11.477³, CPO 11.488⁴ and CPO 11.499⁵ ensure that the integrity of European Sites and sensitive areas that contribute to the site, are protected’.

¹ To promote, encourage and facilitate the development of the tourism and recreation sectors in a sustainable manner.

² 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.

³ 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.

⁴ 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.

⁵ 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.

2.9 Predicted Impacts of the VEMMP

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

It is considered that, in the absence of mitigation, the *VEMMP for Glendalough and Wicklow Mountains National Park* has the potential to restrict the ability of those European 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 European 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 European sites within Wicklow. This resulted in a concentration of domestic visitors at the most popular and well known locations within the County (including those European 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 *VEMMP for Glendalough and Wicklow Mountains National Park* was cognisant of these pressures and impacts and seeks to address same.

Within the *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 *VEMMP for Glendalough and Wicklow Mountains National Park* is not part and does not contribute towards.

In developing such objectives within the *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 measure 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 *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.

2.10 Conclusion and Recommendations

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

Any identified risks to the safeguarding and integrity of the qualifying interests, special conservation interests and conservation objectives of the European 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 *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 *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 *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 *VEMMP for Glendalough and Wicklow Mountains National Park* is not foreseen to give rise to any adverse effects on the integrity of European 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.

In conclusion, the Actions and Objectives that the *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 network of European 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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4. WICKLOW MOUNTAINS NATIONAL PARK - RECEIVING ENVIRONMENT

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"*.⁶

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.

IUCN: International Union for Conservation of Nature

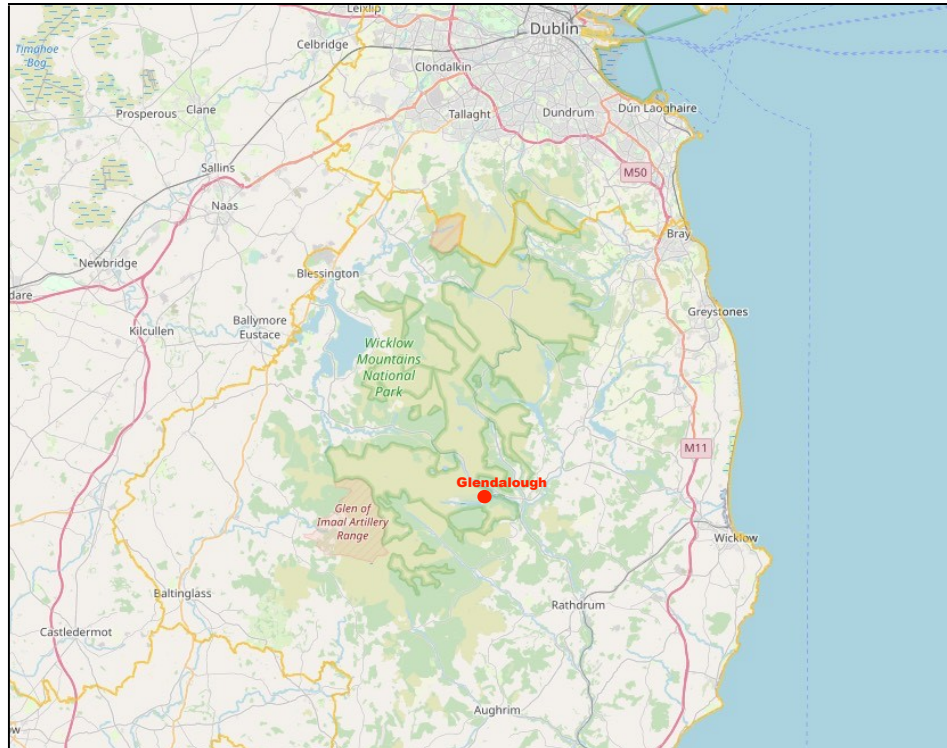


Figure 1. The location of Wicklow Mountains National Park within Counties Wicklow and Dublin (EPA Maps).

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 1. The National Condition of Upland Habitats under Article 17 of the EU Habitats Directive as reported in 2007, 2013 and 2019.

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 implemented⁷ 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.

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. Of the eleven species of bats recorded in Ireland (nine resident and two vagrant), Ten species 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 there in over a century. This species is legally protected under the Flora (Protection) Order 2022. A new site was discovered for the species in the county in 2022 (Hanley, 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 Glenmalur, these areas have *poor* status.