

NATURA IMPACT REPORT

IN SUPPORT OF THE APPROPRIATE ASSESSMENT

FOR THE

DRAFT WESTMEATH COUNTY DEVELOPMENT PLAN 2021-2027

for: Westmeath County Council

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1 Introduction

1.1 Background

This Natura Impact Report (NIR) has been prepared in support of the Appropriate Assessment (AA) of the draft Westmeath County Development Plan 2021-2027 (Plan) in accordance with the requirements of Article 6(3) of Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (hereafter referred to as the "Habitats Directive").

This report is part of the ongoing AA process that is being undertaken alongside the preparation of the Plan. It will be considered, alongside other documentation prepared as part of this process, when Westmeath County Council finalises the AA at adoption of the Plan.

1.2 Legislative Context

The Habitats Directive provides legal protection for habitats and species of European importance. The overall aim of the Habitats Directive is to maintain or restore the "favourable conservation status" of habitats and species of European Community Interest. These habitats and species are listed in the Habitats and Birds Directives (Council Directive 2009/147/EC on the conservation of wild birds) with Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated to afford protection to the most vulnerable of them. These two designations are collectively known as European sites and Natura 2000.

AA is required by the Habitats Directive, as transposed into Irish legislation by the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) and the Planning and Development Act (as amended). AA is an assessment of the potential for adverse or negative effects of a plan or project, in combination with other plans or projects, on the conservation objectives of a European site. These sites consist of SACs and SPAs and provide for the protection and long-term survival of Europe's most valuable and threatened species and habitats.

1.3 Approach

The AA is based on best scientific knowledge and has utilised ecological and hydrological expertise. In addition, a detailed online review of published scientific literature and 'grey' literature was conducted. This included a detailed review of the National Parks and Wildlife (NPWS) website including mapping and available reports for relevant sites and in particular sensitive qualifying interests/special conservation interests described and their conservation objectives.

The ecological desktop study completed for the AA of the Plan comprised the following elements:

- Identification of European sites within 15km of the Plan boundary with identification of potential pathways links for specific sites (if relevant) greater than Kim from the Plan boundary;
- Review of the NPWS site synopsis and conservation objectives for European sites with identification of potential pathways from the Plan area; and
- Examination of available information on protected species.

There are four main stages in the AA process as follow:

Stage One: Screening

The process that 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 Two: 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. If adequate mitigation is proposed to ensure no significant adverse impacts on European sites, then the process may end at this stage. However, if the likelihood of significant impacts remains, then the process must proceed to Stage Three.

Stage Three: Assessment of Alternative Solutions

The process that examines alternative ways of achieving the objectives of the project or plan that avoids adverse impacts on the integrity of the European site.

Stage Four: 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 Habitats Directive promotes a hierarchy of avoidance, mitigation and compensatory measures. This approach aims to avoid any impacts on European sites by identifying possible impacts early in the planmaking process and avoiding such impacts. Second, the approach involves the application of mitigation measures, if necessary, during the AA process to the point where no adverse impacts on the site(s) remain. If potential impacts on European sites remain, the approach requires the consideration of alternative solutions. If no alternative solutions are identified and the plan/project is required for imperative reasons of overriding public interest, then compensation measures are required for any remaining adverse effect(s).

The assessment of potential effects on European sites is conducted following a standard source-pathway-receptor¹ model, where, in order for an effect to be established all three elements of this mechanism must be in place. The absence or removal of one of the elements of the model is sufficient to conclude that a potential effect is not of any relevance or significance.

In the interest of this report, receptors are the ecological features that are known to be utilised by the qualifying interests or special conservation interests of a European site. A source is any identifiable element of the Plan provision that is known to interact with ecological processes. The pathways are any connections or links between the source and the receptor. This report provides information on whether direct, indirect and cumulative adverse effects could arise from the Plan.

The AA exercise has been prepared taking into account legislation including the aforementioned legislation and guidance including the following:

- Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities, Department of the Environment, Heritage and Local Government, 2009;
- "Commission Notice: Managing Natura 2000 sites The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC", European Commission 2018;
- "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 DG, 2002: and
- "Managing Natura 2000 sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC", European Commission, 2000.

¹ Source(s) – e.g. pollutant run-off from proposed works; Pathway(s) – e.g. groundwater connecting to nearby qualifying wetland habitats; and Receptor(s) – qualifying aquatic habitats and species of European sites.

2 Description of the Draft Westmeath County Development Plan 2021-2027

The Draft Westmeath County Development Plan 2021-2027 sets out the Council's proposed policies and objectives for the development of the County over the Plan period. The Development Plan seeks to develop and improve, in a sustainable manner, the social, economic, environmental and cultural assets of the County.

The Draft Plan has been prepared in accordance with the requirements of the Planning and Development Act, 2000 (as amended). This Plan, once adopted, replaces the Westmeath Development Plan 2014 – 2020 and consists of a Written Statement including specific policy objectives supported with Maps and Appendices.

The Written Statement is divided into 16 separate chapters setting out the vision, strategic context, aims, goals and the settlement and core strategies for the County. The format of the plan is as follows:

- Chapter 1 Introduction
- Chapter 2 Core Strategy
- Chapter 3 Housing Strategy
- Chapter 4 Sustainable Communities
- Chapter 5 Economy & Employment
- Chapter 6 Tourism
- Chapter 7 Urban Centres & Place-making
- Chapter 8 Settlement Plans
- Chapter 9 Rural Westmeath
- Chapter 10 Transport, Infrastructure & Energy
- Chapter 11 Climate Action
- Chapter 12 Natural Heritage & Green Infrastructure
- Chapter 13 Landscape & Lake Amenities
- Chapter 14 Cultural Heritage
- Chapter 15 Land Use Objectives
- Chapter 16 Development Management Standards

The Appendices include the Council's Housing Strategy, a statement detailing implementation of Ministerial Guidelines, County Westmeath Retail Strategy, List of Protected Views, List of Public Rights of Way, Trees & Woodland subject to Tree Preservation Orders, and Map Based Local Objectives (to be read in conjunction with the Development Plan Maps).

The Draft Plan's Strategic Vision is:

To create and facilitate sustainable competitive growth throughout the County that supports the health and wellbeing of the people of Westmeath, providing an attractive destination, as a place in which to live, work, invest, do business and visit, offering high quality employment and educational opportunities within sustainable communities whilst safeguarding the environmental, cultural, heritage and tourism assets of the County.

The Draft Plan's Strategic Aims are:

- **Sustainable Communities**: To develop and support vibrant sustainable communities in Westmeath where people can live, work and enjoy access to a wide range of community, health and educational facilities and amenities, suitable for all ages and needs, in both urban and rural areas, thereby supporting a high quality of life for all to enjoy.
- Economic Development and Employment: To promote and assist in Westmeath's economic development and
 encourage increased resilience in the County's enterprise, underpinned by talent and innovation, thereby ensuring that
 Westmeath is best placed to excel in the long-term delivery of sustainable jobs and an enhanced standard of living for
 all.
- **Tourism:** To provide for the continued expansion of the tourism sector, with a focus on creating strong visitor destination towns and sufficient high-quality visitor services and the continued development and enhancement of visitor attractions and activities to provide memorable, immersive visitor experiences, capitalising on our natural and cultural heritage assets, whilst safeguarding these resources for future generations.
- Urban Centres & Placemaking: To protect and enhance the unique identity and character of Westmeath's towns
 and villages and improve quality of life and wellbeing through the application of Healthy Placemaking, underpinned by

good urban design, with the creation of attractive public spaces that are vibrant, distinctive, safe and accessible and which promote and facilitate positive social interaction.

- **Settlements:** To create a network of attractive, liveable towns and villages in the County with increased levels of population, employment activity and enhanced levels of amenity which support a high quality of life and well-being.
- Rural: To support the role of rural areas and the countryside in sustaining the rural economy and improved connectivity, broadband and rural economic development opportunities through the development of the agricultural and agri-food sector, agricultural related developments and enterprises, including diversification of the rural economy, forestry, energy production, tourism, recreation, mineral extraction and/other new and emerging rural based enterprises, all within the context of the sustainable management of land and resources, thereby increasing the competitiveness of the rural economy, which will sustain and strengthen rural communities.
- Transport, Infrastructure and Energy: To achieve a sustainable, integrated and low carbon transport system with excellent connectivity within and to Westmeath by enhancing existing strategic transportation infrastructure in the County. To provide, improve and extend water, wastewater, surface water and flood alleviation services throughout the County and to prioritise the provision of water services infrastructure, to achieve improved environmental protection and to protect public health. To provide for the development of indigenous energy resources, with an emphasis on renewable energy supplies.
- Climate Action: To transition to a low carbon and climate resilient County, with an emphasis on reduction in energy
 demand and greenhouse gas emissions, through a combination of effective mitigation and adaptation responses to
 climate change.
- **Natural Heritage and Green Infrastructure:** Continue to protect and enhance the County's natural heritage and biodiversity and ensure that networks of green infrastructure are identified, created, protected and enhanced to provide a wide range of environmental, social and economic benefits to communities.
- Landscape and Lake Amenities: To improve the knowledge and understanding of the County's landscape and lakelands, and enhance the overall characteristics, qualities and diversity of landscape character, its sense of place and local distinctiveness in recognition of the amenity potential of the County.
- Cultural Heritage: Westmeath County Council recognises the importance of identifying, valuing and safeguarding
 our archaeological, architectural and cultural heritage for future generations and aims to do so by means of proper
 management, sensitive enhancement and/or appropriate development of this resource.

Westmeath County Council shall ensure that the future spatial development of Westmeath is directed by means of a plan led approach, directing residential and employment generating development to locations in accordance with National and Regional Policy, and with environmental carrying capacity, which can support investment in public infrastructure and services and that is sensitive to the physical character of the built and natural environment.

Section 2 sets out the core strategy for the Plan that states the strategic aims that relate to the advancement of this plan are set out hereunder. These aims are addressed more fully in subsequent chapters within the plan. A series of specific Core Strategy policy objectives are included in Section 2.22.

- To guide the future development of Westmeath in line with national and regional objectives set out in the NPF and RSES and other national guidelines and policies
- To promote and facilitate the development of the County in accordance with the provisions of the Core Strategy, including directing development in line with the settlement hierarchy and promoting development at an appropriate scale that is reflective of the terms of the Core Strategy Table and zoning maps.
- To apply the Settlement Hierarchy to determine the scale, rate and location of proposed developments and apply
 appropriate development management measures to ensure compliance with the Settlement Hierarchy including
 the population targets for the County.
- To promote the delivery of at least 30% of all new homes that are targeted in settlements within their existing built-up footprints
- To support the achievement of more self-sustaining towns and villages through residential and employment opportunities together with supporting social and community facilities
- To monitor and maintain a record of residential development permitted in settlements designated under the Settlement Hierarchy in order to ensure compliance with the population allocations defined by the Core Strategy and to adjust the approach to permitting development proposals in instances where Core Strategy objectives are not being met.

There are provisions in the Plan relating to supporting accessible community, cultural and recreational facilities, as well as increasing sport, childcare, youth and health/wellbeing initiative.

The Plan, including at Chapter 6, recognises the value of natural resources as a tourism product and provides for a collaborative multiagent approach to managing and developing tourism for the county. The policies focus on expanding and increasing the tourism market within the County and providing increased signage and opportunities for both rural and urban tourism. There are provisions to support initiatives along waterways including the River Shannon and Lough Ree as well as other waterways within the county. Other provisions include policies to support festivals within the County.

Chapter 7 identified the policies and objectives relating to urban development; these provisions have a focus on infrastructural development and provide for multipurpose developments such as roads, cycle tracks, multipurpose urban centres and streetscaping works etc. Chapter 8 provides various settlement plans for the County while Chapter 9 provides policy objectives for rural areas.

Chapter 10 that aims to achieve a sustainable, integrated and low carbon transport system with excellent connectivity within and to Westmeath by, inter alia, enhancing existing strategic transportation infrastructure in the County. Central to this approach is the promotion of a modal shift from private car use towards increased use of more sustainable forms of transport such as cycling, walking and public transport.

Chapter 11 provides for climate action policy objectives while Chapter 12 provides for policy objectives relating to the protection enhancement of biodiversity, ecological processes and the environment in general and the development of greenways and blueways.

Chapter 13 addresses landscape and lake amenities, including providing policy objectives that relate to the protection of and facilitation of access to and amenity use of the lakes as well as the establishment and/or protection of viewing points.

Cultural heritage is the focus of Chapter 14 of the Plan, which identifies the need to manage, develop and conserve cultural assets within the county, including language heritage.

3 Screening for Appropriate Assessment

3.1 Introduction to Screening

This stage of the process identifies any potential significant affects to European sites from a project or plan, either alone or in combination with other projects or plans.

An important element of the AA process is the identification of the "conservation objectives", "Qualifying Interests" (QIs) and/ or "Special Conservation Interests" (SCIs) of European sites requiring assessment. QIs are the habitat features and species listed in Annexes I and II of the Habitats Directive for which each European site has been designated and afforded protection. SCIs are wetland habitats and bird species listed within Annexes I and II of the Birds Directive. It is also vital that the threats to the ecological / environmental conditions that are required to support QIs and SCIs are considered as part of the assessment.

The following NPWS Generic Conservation Objectives have been considered in the screening:

- For SACs, 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; and
- For SPAs, to maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

Where available, Site-Specific Conservation Objectives (SSCOs) designed to define favourable conservation status for a particular habitat² or species³ at that site have been considered.

3.2 Identification of Relevant European Sites

The Department of the Environment (2009) Guidance on AA recommends a 15 km buffer zone to be considered. A review of all sites within this zone has allowed a determination to be made that in the absence of significant hydrological links the characteristics of the Plan will not impose effects beyond the 15 km buffer.

Details of European sites that occur within 15 km of the Plan is listed in Table 3.1. European sites and EPA Rivers and Catchments are also mapped in Figure 3.1 below. Information on QIs, SCIs and site-specific vulnerabilities and sensitivities (see Appendix I) and background information (such as that within Ireland's Article 17 Report to the European Commission, site synopses and Natura 2000 standard data forms) has been considered by both the AA screening assessment (provided under this section) and Stage 2 AA (provided under Section 4). Conservation objectives that have been considered by the assessment are included in the following NPWS/ Department of Culture, Heritage and the Gaeltacht documents:

- (2018) Conservation objectives for Lough Derravarragh SPA [004043]. Generic Version 6.0.
- (2018) Conservation objectives for Lough Ennell SPA [004044]. Generic Version 6.0.
- (2018) Conservation objectives for Glen Lough SPA [004045]. Generic Version 6.0.
- (2018) Conservation objectives for Lough Iron SPA [004046]. Generic Version 6.0.
- (2018) Conservation objectives for Lough Owel SPA [004047]. Generic Version 6.0.
- (2018) Conservation objectives for Lough Ree SPA [004064]. Generic Version 6.0.
- (2018) Conservation objectives for Middle Shannon Callows SPA [004096]. Generic Version 6.0.
- (2015) Conservation Objectives: Garriskil Bog SAC [000679]. Version 1.
- (2018) Conservation objectives for Middle Shannon Callows SPA [004096]. Generic Version 6.0.
- (2016) Conservation Objectives: Lough Ree SAC [000440]. Version 1.
- (2015) Conservation Objectives: Raheenmore Bog SAC [000582]. Version 1.
- (2018) Conservation Objectives: Lough Ennell SAC [000685]. Version 1.
- (2018) Conservation Objectives: Lough Owel SAC [000688]. Version 1.

² Favourable conservation status of a habitat is achieved when: its natural range, and area it covers within that range, are stable or increasing; the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and the conservation status of its typical species is favourable.

³ The favourable conservation status of a species is achieved when: population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats; the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future; and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

- (2018) Conservation Objectives: Scragh Bog SAC [000692]. Version 1.
- (2018) Conservation objectives for White Lough, Ben Loughs and Lough Doo SAC [001810]. Generic Version 6.0.
- (2018) Conservation Objectives: Split Hills and Long Hill Esker SAC [001831]. Version 1.
- (2016) Conservation Objectives: Crosswood Bog SAC [002337]. Version 1.
- (2016) Conservation Objectives: Moneybeg and Clareisland Bogs SAC [002340]. Version 1.
- (2016) Conservation Objectives: Mount Hevey Bog SAC [002342]. Version 1.
- (2018) Conservation objectives for Lough Lene SAC [002121]. Generic Version 6.0.
- (2018) Conservation Objectives: Ballymore Fen SAC [002313]. Version 1.
- (2015) Conservation Objectives: Carn Park Bog SAC [002336]. Version 1.
- (2015) Conservation Objectives: Garriskil Bog SAC [000679]. Version 1.
- (2018) Conservation objectives for Wooddown Bog SAC [002205]. Generic Version 6.0.
- (2018) Conservation objectives for Lough Bane and Lough Glass SAC [002120]. Generic Version 6.0.
- (2018) Conservation objectives for Lough Sheelin SPA [004065]. Generic Version 6.0.
- (2018) Conservation objectives for Mongan Bog SPA [004017]. Generic Version 6.0.
- (2016) Conservation Objectives: Mongan Bog SAC [000580]. Version 1.
- (2018) Conservation objectives for Girley (Drewstown) Bog SAC [002203]. Generic Version 6.0.
- (2018) Conservation objectives for Derragh Bog SAC [002201]. Generic Version 6.0.
- (2018) Conservation Objectives: Pilgrim's Road Esker SAC [001776]. Version 1.
- (2015) Conservation Objectives: Ferbane Bog SAC [000575]. Version 1.
- (2018) Conservation objectives for Lough Kinale and Derragh Lough SPA [004061]. Generic Version 6.0.
- (2015) Conservation Objectives: Moyclare Bog SAC [000581]. Version 1.
- (2018) Conservation objectives for Charleville Wood SAC [000571]. Generic Version 6.0.
- (2018) Conservation objectives for Castlesampson Esker SAC [001625]. Generic Version 6.0.
- (2016) Conservation Objectives: Ballynamona Bog and Corkip Lough SAC [002339]. Version 1.
- (2018) Conservation Objectives: Fortwilliam Turlough SAC [000448]. Version 1.
- (2018) Conservation Objectives: Lough Funshinagh SAC [000611]. Version 1.
- (2018) Conservation objectives for River Shannon Callows SAC [000216]. Generic Version 6.0.
- (2018) Conservation objectives for River Suck Callows SPA [004097]. Generic Version 6.0.
- (2018) Conservation objectives for River Shannon Callows SAC [000216]. Generic Version 6.0.
- (2018) Conservation objectives for River Boyne and River Blackwater SPA [004232]. Generic Version 6.0.
- (2018) Conservation objectives for River Boyne and River Blackwater SAC [002299]. Generic Version 6.0.
- (2018) Conservation Objectives: Lough Croan Turlough SAC [000610]. Version 1.
- (2011) Conservation Objectives: River Barrow and River Nore SAC [002162]. Version 1.0.
- (2015) Conservation Objectives: Ardagullion Bog SAC [002341]. Version 1.
- (2018) Conservation objectives for Fin Lough (Offaly) SAC [000576]. Generic Version 6.0.
- (2016) Conservation Objectives: Clara Bog SAC [000572]. Version 1.

The assessment considers available conservation objectives. Since conservation objectives focus on maintaining the favourable conservation condition of the QIs/SCIs of each site, the screening process concentrated on assessing the potential effects of the Plan against the QIs/SCIs of each site. The conservation objectives for each site were consulted throughout the assessment process.

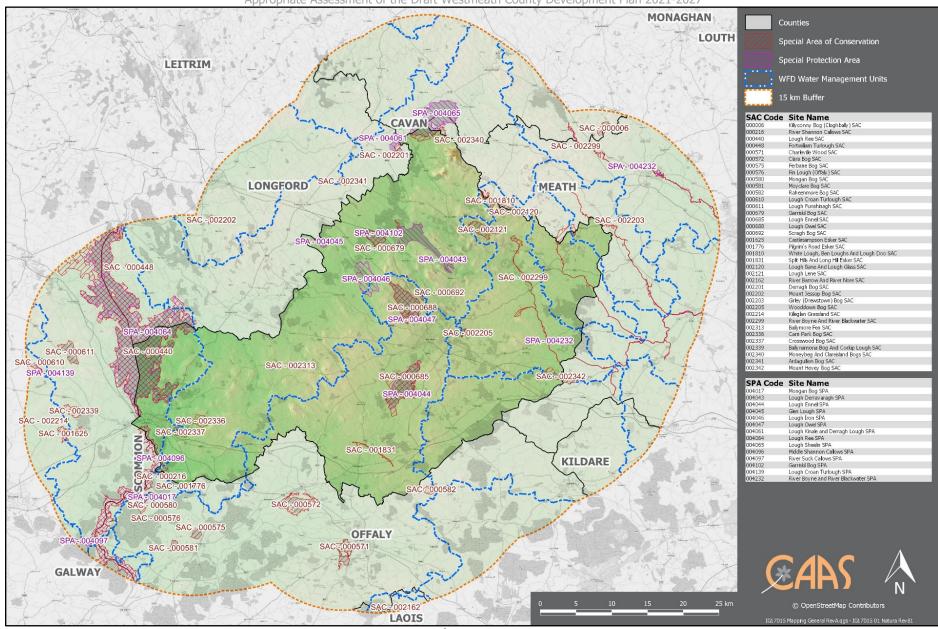


Figure 3.1 European sites within 15 km of the Draft Plan boundary⁴

CAAS for Westmeath County Council

⁴ Source: NPWS (datasets downloaded November 2019)

3.3 Assessment Criteria and Screening

3.3.1 Is the Plan Necessary to the Management of European Sites?

The overarching objective of the Plan is not the nature conservation management of the sites, but to coordinate and plan the future development of County Westmeath. Therefore, the Plan is not considered to be directly connected with or necessary to the management of European sites.

3.3.2 Elements of the Draft Plan with Potential to Give Rise to Effects

The Plan provides a framework for the sustainable development of the Westmeath area. There are a number of environmental sensitivities within the area and an assessment of effects indicates the potential effects relate to the following:

- Arising from both construction and operation of development and associated infrastructure:
 - Loss of/damage to biodiversity in designated sites (including European sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and nondesignated habitats; and disturbance to biodiversity and flora and fauna;
 - o Habitat loss, fragmentation and deterioration, including patch size and edge effects; and
 - Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species.
- Potential interactions if effects upon environmental vectors such as water and air.
- Adverse effects from tourism, amenity and recreation.
- Damage to the hydrogeological and ecological function of the soil resource.
- Adverse effects upon the status of water bodies arising from changes in quality, flow and/or morphology.
- Increase in the risk of flooding.
- Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity is needed to ensure the mitigation of potential conflicts).
- Emissions to air including greenhouse gas emissions and other emissions.

The elements of the Draft Plan with the highest potential to give rise to the effects indicated above are associated with construction phase elements of the implementation of the plan. The operational phase elements of the plan are consistent with the existing condition of the area. All policies and objectives are considered in this assessment with respect to the ecological integrity of each of the European sites identified. Considering the sensitivities/vulnerabilities of the QIs and SCIs in relation to all potential sources for effects and potential pathways for such effects. Where sources and pathways for effects are identified potential effects will be assessed in relation to the SSCOs.

3.3.3 Screening of Sites

Table 3.1 examines whether there is potential for effects on European sites considering information provided above, including Appendix I. Sites are screened out based on one or a combination of the following criteria:

- Where it can be shown that there are significant pathways such as hydrological links Plan proposals and the site to be screened;
- Where the site is located at such a distance from that area to that the Plan relates that effects are not foreseen; and
- Where it is that known threats or vulnerabilities at a site cannot be linked to potential impacts that may arise from the Plan.

Table 3.1 Screening of European sites within 15 km of the Draft Plan boundary

Site Code	European site	Distance (km)	Qualifying Features (Qualifying Interests and Special Conservation Interests)	Potential effects (refer also to Sections 3.3.2 and 3.3.3 above)	Pathway for Significant Effects	Potential for In- Combination Effects
004043	Lough Derravaragh SPA	Within	Whooper Swan (<i>Cygnus cygnus</i>) [A038] Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Coot (<i>Fulica atra</i>) [A125] Wetland and Waterbirds [A999]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Yes	Yes
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
004044	Lough Ennell SPA	Within	Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Coot (<i>Fulica atra</i>) [A125] Wetland and Waterbirds [A999]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Yes	Yes
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
004045	Glen Lough SPA	Within	Whooper Swan (<i>Cygnus cygnus</i>) [A038]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Yes	Yes
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
004046	Lough Iron Spa	Within	Whooper Swan (<i>Cygnus cygnus</i>) [A038] Wigeon (<i>Anas penelope</i>) [A050] Teal (<i>Anas crecca</i>) [A052] Shoveler (<i>Anas clypeata</i>) [A056] Coot (<i>Fulica atra</i>) [A125]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide	Yes	Yes

			Golden Plover (<i>Pluvialis apricaria</i>) [A140] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and Waterbirds [A999]	facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
004047	Lough Owel SPA	Within	Shoveler (<i>Anas clypeata</i>) [A056] Coot (<i>Fulica atra</i>) [A125] Wetland and Waterbirds [A999]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under Article 6(2). Stage 2.4A.	Yes	Yes
004064	Lough Ree SPA	Within	Little Grebe (<i>Tachybaptus ruficollis</i>) [A004] Whooper Swan (<i>Cygnus cygnus</i>) [A038] Wigeon (<i>Anas penelope</i>) [A050] Teal (<i>Anas crecca</i>) [A052] Mallard (<i>Anas platyrhynchos</i>) [A053] Shoveler (<i>Anas clypeata</i>) [A056] Tufted Duck (<i>Aythya fuligula</i>) [A061] Common Scoter (<i>Melanitta nigra</i>) [A065] Goldeneye (<i>Bucephala clangula</i>) [A067] Coot (<i>Fulica atra</i>) [A125] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Lapwing (<i>Vanellus vanellus</i>) [A142] Common Tern (<i>Sterna hirundo</i>) [A193] Wetland and Waterbirds [A999]	above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA. The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.	Yes	Yes
004096	Middle Shannon Callows SPA	Within	Whooper Swan (Cygnus cygnus) [A038] Wigeon (Anas penelope) [A050] Corncrake (Crex crex) [A122] Golden Plover (Pluvialis apricaria) [A140] Lapwing (Vanellus vanellus) [A142] Black-tailed Godwit (Limosa limosa) [A156] Black-headed Gull (Chroicocephalus ridibundus) [A179] Wetland and Waterbirds [A999]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.	Yes	Yes

004102	Garriskil Bog SPA	Within	Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.	Yes	Yes
000440	Lough Ree SAC	Within	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Alkaline fens [7230] Limestone pavements [8240] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Bog woodland [91D0] Otter (Lutra lutra) [1355]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.	Yes	Yes
000582	Raheenmore Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.	Yes	Yes
000685	Lough Ennell SAC	Within	Alkaline fens [7230]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Yes	Yes

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				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
000688	Lough Owel SAC	Within	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] Transition mires and quaking bogs [7140] Alkaline fens [7230] White-clawed Crayfish (Austropotamobius pallipes) [1092]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Yes	Yes
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
000692	Scragh Bog SAC	Within	Transition mires and quaking bogs [7140] Alkaline fens [7230] Slender Green Feather-moss (<i>Drepanocladus vernicosus</i>) [1393]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Yes	Yes
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
001810	White Lough, Ben Loughs And Lough Doo SAC	Within	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] White-clawed Crayfish (Austropotamobius pallipes) [1092]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Yes	Yes
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
001831	Split Hills And Long Hill Esker SAC	Within	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in	Yes	Yes

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				habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.		
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
002337	Crosswood Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Yes	Yes
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
002340	Moneybeg And Clareisland Bogs SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Yes	Yes
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
002342	Mount Hevey Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Yes	Yes
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
002121	Lough Lene SAC	Within	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] White-clawed Crayfish (Austropotamobius pallipes) [1092]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of	Yes	Yes

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				vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.		
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
002313	Ballymore Fen SAC	Within	Transition mires and quaking bogs [7140]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. This European site exists within the Westmeath Plan boundary, therefore there are pathways	Yes	Yes
				for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
002336	Carn Park Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Yes	Yes
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
000679	Garriskil Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Yes	Yes
				This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
002205	Wooddown Bog SAC	Within	Degraded raised bogs still capable of natural regeneration [7120]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development	Yes	Yes

				of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. This European site exists within the Westmeath Plan boundary, therefore there are pathways for potential direct effects to the ecological integrity of the site from the sources identified above. Therefore, further consideration is required under, Article 6(3), Stage 2 AA.		
002120	Lough Bane And Lough Glass SAC	0.8	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] White-clawed Crayfish (Austropotamobius pallipes) [1092]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. The Plan introduces sources for effects that have potential to effect water quality if not mitigated. There are hydrological pathways between the Draft Plan boundary and the European site. This site is sensitive to change to hydrological condition, therefore further assessment is required.	Yes	Yes
004065	Lough Sheelin SPA	1.8	Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Goldeneye (<i>Bucephala clangula</i>) [A067] Wetland and Waterbirds [A999	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. The Plan introduces sources for effects that have potential to effect water quality if not mitigated. There are hydrological pathways between the Draft Plan boundary and the European site. This site is sensitive to change to hydrological condition, therefore further assessment is required.	Yes	Yes
004017	Mongan Bog SPA	1.9	Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]	There will be no direct effects that will arise due to the implementation of the Plan due to the distances between the Plan and the SPA. Bird species are particularly sensitive to disturbances, however the SHN published a Review of Disturbance Distances in Selected Bird Species that indicates distances exceeding 1km are not significant when considering effects. In addition to this, the Plan does not contain provisions for any works that may introduce flight collision risks for birds. The Plan provides for infrastructural developments that have potential to effect water quality if not mitigated. There are hydrological pathways between the Draft Plan boundary and the European site. This site is sensitive to change to hydrological condition, therefore further assessment is required.	Indirect	Unknown
000580	Mongan Bog SAC	2.5	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such	Indirect	Unknown

				as tourism. Tourism introduces sources for effects such as trampling, destruction of		
				vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.		
				The Plan introduces sources for effects that have potential to effect water quality if not mitigated. There are hydrological pathways between the Draft Plan boundary and the European site. This site is sensitive to change to hydrological condition, therefore further assessment is required.		
002203	Girley (Drewstown) Bog SAC	2.9	Degraded raised bogs still capable of natural regeneration [7120]	This site is designated for terrestrial peatland habitats. They are sensitive to direct land use management action such as drainage and fire management etc. There are no provisions in the plan that introduce any sources for effects to the land use of the SAC and there are no hydrological pathways between the Draft Plan boundary and the European site. As there are no sources with pathways for effects, no further assessment is required.	No	No
002201	Derragh Bog SAC	3.4	Degraded raised bogs still capable of natural regeneration [7120] Bog woodland [91D0]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. The Plan introduces sources for effects that have potential to effect water quality if not mitigated. There are hydrological pathways between the Draft Plan boundary and the European site. This site is sensitive to change to hydrological condition, therefore further	Indirect	Unknown
001776	Pilgrim's Road Esker SAC	3.7	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]	assessment is required. This site is designated for terrestrial grassland and scrubland habitats. They are sensitive to direct land use management action such as drainage and graze management etc. There are no provisions in the plan that introduce any sources for effects to the land use of the SAC. These habitats are not influenced by surface water quality of the adjacent aquatic habitats. As there are no sources with pathways for effects, no further assessment is required.	No	No
000575	Ferbane Bog SAC	3.7	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.	Indirect	Unknown
				The Plan introduces sources for effects that have potential to effect water quality if not mitigated. There are hydrological pathways between the Draft Plan boundary and the European site. This site is sensitive to change to hydrological condition, therefore further assessment is required.		
004061	Lough Kinale and Derragh Lough SPA	3.8	Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Wetland and Waterbirds [A999]	The Plan provides for infrastructural developments that have potential to effect water quality if not mitigated. The SCI species that the SPA are designated for are sensitive to disturbance	Indirect	Unknown

002341	Ardagullion Bog SAC	3.8	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]	effects, however distances beyond 1km are accepted as the standard to mitigate against potential disturbances ⁵ . There are hydrological pathways between the Draft Plan boundary and the European site. This site is sensitive to change to hydrological condition, therefore further assessment is required. This site is designated for terrestrial peatland habitats. They are sensitive to direct land use management action such as drainage and fire management etc. There are no provisions in the plan that introduce any sources for effects to the land use of the SAC and there are no	No	No
000576	Fin Lough (Offaly) SAC	4.4	Depressions on peat substrates of the Rhynchosporion [7150] Alkaline fens [7230] Geyer's Whorl Snail (Vertigo geyeri) [1013]	hydrological pathways between the Draft Plan boundary and the European site. As there are no sources with pathways for effects, no further assessment is required. The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development	Indirect	Unknown
				of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.		
				The Plan introduces sources for effects that have potential to effect water quality if not mitigated. There are hydrological pathways between the Draft Plan boundary and the European site. This site is sensitive to change to hydrological condition, therefore further assessment is required.		
000572	Clara Bog SAC	5.5	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150] Bog woodland [9100]	This site is designated for terrestrial peatland and grassland habitats. They are sensitive to direct land use management action such as drainage, grazing and fire management etc. There are no provisions in the plan that introduce any sources for effects to the land use of the SAC and there are no hydrological pathways between the Draft Plan boundary and the European site. As there are no sources with pathways for effects, no further assessment is required.	No	No
000581	Moyclare Bog SAC	6.1	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	This site is designated for terrestrial peatland habitats. They are sensitive to direct land use management action such as drainage and fire management etc. There are no provisions in the plan that introduce any sources for effects to the land use of the SAC and there are no hydrological pathways between the Draft Plan boundary and the European site. As there are no sources with pathways for effects, no further assessment is required.	No	No
000571	Charleville Wood SAC	6.4	Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Desmoulin's Whorl Snail (Vertigo moulinsiana) [1016]	This site is designated for terrestrial habitats and the species. They are sensitive to direct land use management action such as drainage and management of invasive species. There are no provisions in the plan that introduce any sources for effects to the land use of the SAC and there are no hydrological pathways between the Draft Plan boundary and the European site. As there are no sources with pathways for effects, no further assessment is required.	No	No
001625	Castlesampson Esker SAC	8.8	Turloughs [3180] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]	This site is designated for terrestrial grassland and scrubland habitats. They are sensitive to direct land use management action such as drainage and graze management etc. There are no provisions in the plan that introduce any sources for effects to the land use of the SAC and there are no surface water pathways between the Draft Plan boundary and the European site. As there are no sources with pathways for effects, no further assessment is required.	Unknown	Unknown

⁵ SNH (2007) A review of Disturbance Distances in Selected Bird Species

				However, turloughs are a groundwater fed system. Therefore, further investigation is required to assess if there are any groundwater interactions that may arise due to the implementation of the Draft Plan.		
002339	Ballynamona Bog and Corkip Lough SAC	9.0	Turloughs [3180] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150] Bog woodland [91D0]	This site is designated for terrestrial peatland habitats. They are sensitive to direct land use management action such as drainage and fire management etc. There are no provisions in the plan that introduce any sources for effects to the land use of the SAC and there are no surface water pathways between the Draft Plan boundary and the European site. As there are no sources with pathways for effects, no further assessment is required. However, turloughs are a groundwater fed system. Therefore, further investigation is required to assess if there are any groundwater interactions that may arise due to the implementation of the Draft Plan.	Unknown	Unknown
000448	Fortwilliam Turlough SAC	11.4	Turloughs [3180]	Turloughs are a groundwater fed system. Therefore, further investigation is required to assess if there are any groundwater interactions that may arise due to the implementation of the Draft Plan.	Unknown	Unknown
000611	Lough Funshinagh SAC	12.2	Turloughs [3180] Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation [3270]	This site is designated for freshwater aquatic habitats. They are sensitive hydrological interactions such as drainage, water quality etc. There are no provisions in the plan that introduce any sources for effects to the land use of the SAC and there are no surface water pathways between the Draft Plan boundary and the European site. As there are no sources with pathways for effects, no further assessment is required. However, turloughs are a groundwater fed system. Therefore, further investigation is required to assess if there are any groundwater interactions that may arise due to the implementation of the Draft Plan.	Unknown	Unknown
000216	River Shannon Callows SAC	12.6	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis) [6510] Limestone pavements [8240] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Otter (Lutra lutra) [1355]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. The Plan introduces sources for effects that have potential to effect water quality if not mitigated. There are hydrological pathways between the Draft Plan boundary and the	Indirect	Unknown
004097	River Suck Callows SPA	13.0	Whooper Swan (<i>Cygnus cygnus</i>) [A038] Wigeon (<i>Anas penelope</i>) [A050] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Lapwing (<i>Vanellus vanellus</i>) [A142] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and Waterbirds [A999]	European site. This site is sensitive to change to hydrological condition, therefore further assessment is required. The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. The Plan introduces sources for effects that have potential to effect water quality if not mitigated. There are hydrological pathways between the Draft Plan boundary and the European site. This site is sensitive to change to hydrological condition, therefore further assessment is required.	Indirect	Unknown

004232	River Boyne and River Blackwater SPA	14.0	Kingfisher (<i>Alcedo atthis</i>) [A229]	The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. The Plan introduces sources for effects that have potential to effect water quality if not mitigated. There are hydrological pathways between the Draft Plan boundary and the European site. This site is sensitive to change to hydrological condition, therefore further	Indirect	Unknown
002299	River Boyne and River Blackwater SAC	14.0	Alkaline fens [7230] Alluvial forests with Alnus glutinosa and Fraxinus excelsiot (Alno-Padion, Alnion incanae, Salicion albae) [91E0] River Lamprey (Lampetra fluviatilis) [1099] Salmon (Salmo salar) [1106] Otter (Lutra lutra) [1355]	assessment is required. The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. The Plan introduces sources for effects that have potential to effect water quality if not mitigated. There are hydrological pathways between the Draft Plan boundary and the European site. This site is sensitive to change to hydrological condition, therefore further	Indirect	Unknown
004139	Lough Croan Turlough SPA	14.0	Shoveler (<i>Anas clypeata</i>) [A056] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and Waterbirds [A999]	assessment is required. The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light pollution, hydrological interactions, disturbance effects etc. Similarly, the further development of the County could introduce increased loading pressures for operational phase effects such as tourism. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly. The Plan introduces sources for effects that have potential to effect water quality if not mitigated. The SCI species that the SPA is designated for are sensitive to disturbance effects,	Indirect	Unknown
002162	River Barrow and River Nore SAC	14.0	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140]	however distances beyond 1km are accepted as the standard to mitigate against potential disturbances ⁶ . There are hydrological pathways between the Draft Plan boundary and the European site. This site is sensitive to change to hydrological condition, therefore further assessment is required. The Plan provides for infrastructural development including provisions for transport, urbanisation, streetscape works, education, tourism and recreation facilities. These provisions introduce sources for effects through construction phase such as habitat destruction, light	Indirect	Unknown

⁶ Scottish Natural Heritage (2007) A review of Disturbance Distances in selected Bird Species.

Salicornia and other annuals colonising	of the County could introduce increased loading pressures for operational phase effects such	
mud and sand [1310]	as tourism. Tourism introduces sources for effects such as trampling, destruction of	
Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330]	vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in	
Mediterranean salt meadows	habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if	
(Juncetalia maritimi) [1410]	they are not planned and or managed correctly.	
Water courses of plain to montane	they are not planned and or managed correctly.	
levels with the <i>Ranunculion fluitantis</i>	The Plan introduces sources for effects that have potential to effect water quality if not	
and <i>Callitricho-Batrachion</i> vegetation	mitigated. There are hydrological pathways between the Draft Plan boundary and the	
[3260]	European site. This site is sensitive to change to hydrological condition, therefore further	
European dry heaths [4030]	assessment is required.	
Hydrophilous tall herb fringe		
communities of plains and of the		
montane to alpine levels [6430]		
Petrifying springs with tufa formation		
(Cratoneurion) [7220]		
Old sessile oak woods with Ilex and		
Blechnum in the British Isles [91A0]		
Alluvial forests with Alnus glutinosa		
and Fraxinus excelsior (<i>Alno-Padion, Alnion incanae, Salicion albæ</i>) [91E0]		
Desmoulin's Whorl Snail (Vertigo		
moulinsiana) [1016]		
Freshwater Pearl Mussel (Margaritifera		
margaritifera) [1029]		
White-clawed Crayfish		
(Austropotamobius pallipes) [1092]		
Sea Lamprey (Petromyzon marinus)		
[1095]		
Brook Lamprey (Lampetra planeri)		
[1096]		
River Lamprey (Lampetra fluviatilis)		
[1099]		
Twaite Shad (Alosa fallax fallax)		
Salmon (Salmo salar) [1106]		
Otter (Lutra lutra) [1355]		
Killarney Fern (Trichomanes		
speciosum) [1421]		
Nore Pearl Mussel (Margaritifera		
durrovensis) [1990]		

3.4 Other Plans and Programmes

Article 6(3) of the Habitats Directive requires an assessment of a plan or project to consider other plans or programmes that might, in combination with the plan or project, have the potential to adversely affect European sites. Appendix II outlines a selection of plans or projects that may interact with the Plan to cause in-combination effects to European sites such as the Westmeath Tourism Strategy 2016-2020 and Westmeath Local Economic & Community Plan 2016-2021. These plans and programmes were considered throughout the assessment.

All projects within the Draft Plan area and receiving environment will be considered in combination with any and all lower tiers projects that may arise due to the implementation of the Plan. Given the uncertainties that exist with regard to the scale and location of developments facilitated by the Draft Plan, it is recognised that the identification of in-combination effects is limited and that the assessment of in-combination effects will need to be undertaken in a more comprehensive manner at the project-level.

Additional information on the relationship with other plans and programmes is provided at Appendix II.

3.5 AA Screening Conclusion

The effects that could arise from the Plan have been examined in the context of several factors that could potentially affect the integrity of any European site. On the basis of the findings of this Screening for AA, it is concluded that the Plan:

- Is not directly connected with or necessary to the management of any European site; and
- May, if unmitigated, have significant adverse effects on 41 (no.) European sites.

Therefore, a Stage 2 AA is required for the Plan (see Section 4 of this report). An AA Screening Determination undertaken by the planning authority accompanies this report and the Draft Plan.

4 Stage 2 Appropriate Assessment

4.1 Introduction

The Stage 2 AA assesses whether the Plan alone, or in-combination with other plans, programmes, and/or projects, would result in adverse impacts on the integrity of the 41 European sites brought forward from screening (see Table 3.1), with respect to site structure, function and/or conservation objectives.

4.2 Characterisation of European sites Potentially Affected

The AA Screening identified 41 European sites with pathway receptors for potential effects arising from the implementation of the Plan.

Appendix I characterises each of the qualifying features of the 41 European sites brought forward from Stage 1 in context of each of the sites' vulnerabilities. Each of these site characterisations were taken from the NPWS website⁷.

4.3 Identifying and Characterising Potential Significant Effects

The following parameters can be used when characterising impacts⁸:

Direct and Indirect Impacts - An impact can be caused either as a direct or as an indirect consequence of a Plan/Project. **Magnitude** - Magnitude measures the size of an impact, which is described as high, medium, low, very low or negligible. **Extent** - The area over that the impact occurs – this should be predicted in a quantified manner.

Duration - The time that the effect is expected to last prior to recovery or replacement of the resource or feature.

- Temporary: Up to 1 Year;
- Short Term: The effects would take 1-7 years to be mitigated;
- Medium Term: The effects would take 7-15 years to be mitigated;
- Long Term: The effects would take 15-60 years to be mitigated; and
- Permanent: The effects would take 60+ years to be mitigated.

Likelihood – The probability of the effect occurring taking into account all available information.

- Certain/Near Certain: >95% chance of occurring as predicted;
- Probable: 50-95% chance as occurring as predicted;
- Unlikely: 5-50% chance as occurring as predicted; and
- Extremely Unlikely: <5% chance as occurring as predicted.

Ecologically Significant Impact - An impact (negative or positive) on the integrity of a defined site or ecosystem and/or the conservation status of habitats or species within a given geographic area.

Integrity of a Site - The coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified.

The Habitats Directive requires the focus of the assessment at this stage to be on the integrity of the site as indicated by its Conservation Objectives. It is an aim of NPWS to draw up conservation management plans for all areas designated for nature conservation. These plans will, among other things, set clear objectives for the conservation of the features of interest within a site.

SSCOs have been prepared for a number of European sites. These detailed SSCOs aim to define favourable conservation condition for the qualifying habitats and species at that site by setting targets for appropriate attributes that define the character habitat. The maintenance of the favourable condition for these habitats and species at the site level will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level.

Favourable conservation status of a **species** can be described as being achieved when: 'population data on the species concerned indicate that it is maintaining itself, and the natural range of the species is neither being reduced or likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.'

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⁷ Last accessed 8th December 2019; https://www.npws.ie/protected-sites.

⁸ These descriptions are informed by publications including: Chartered Institute of Ecology and Environmental Management (2016) "Guidelines for ecological impact assessment"; Environmental Protection Agency (2002) "Guidelines on the Information to be contained in Environmental Impact Statements"; and National Roads Authority (2009) "Guidelines for Assessment of Ecological Impacts of National Roads Schemes".

Favourable conservation status of a **habitat** can be described as being achieved when: 'its natural range, and area it covers within that range, is stable or increasing, and the ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and the conservation status of its typical species is favourable'.

Generic Conservation Objective for cSACs:

• To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species that the SAC has been selected.

One generic Conservation Objective for SPAs:

• To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

4.3.1 Types of Potential Effects

Assessment of potential impacts on European sites is conducted utilising a standard source-pathway model (see approach referred to under Sections 1.3 and 3).

The 2001 European Commission AA guidance outlines the following potential changes that may occur at a designated site, which may result in effects on the integrity and function of that site:

- Loss/reduction of habitat area;
- Habitat or species fragmentation;
- Disturbance to key species;
- · Reduction in species density;
- Changes in key indicators of conservation value (water quality etc.); and
- Climate change.

Each of these potential changes are considered below and in Table 4.1 with reference to the QIs/SCIs of all of the European sites brought forward from Stage 1 of the AA process (see Section 3).

4.3.1.1 Loss/Reduction of Habitat Area

The Plan provides for infrastructural development across the County with specific urban settlement zones identified to facilitate more intensive development in these areas. The Plan provides for accessibility and transport development with a focus on prioritising sustainable travel. The development of all infrastructural works such as water services, energy provisions, residential and commercial structures, facilities, roadways, access tracks and pathways etc. have associated construction phase effects. These potential effects include land take, habitat destruction, disturbance effects, light pollution, dust, hydrological interactions, airborne pollution, excessive noise etc. Therefore, mitigation measures are required to ensure that there are no significant adverse effects due to construction on the ecological integrity of any European site.

CPO 12.5 states that it is Council policy to 'ensure that no plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, <u>land take</u>, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects). Similarly, Chapter 12 of the Plan identifies a number of policy objectives that ensure ecological processes and the protection of European sites are considered throughout the planning process (see Section 5 of this report).

These policies ensure that there will be no loss of habitat or supporting habitat for species that are necessary to maintain the ecological integrity of European sites throughout the lifetime of the plan.

4.3.1.2 Habitat or species Fragmentation

The Plan provides for infrastructural development across the County with specific urban settlement zones identified to facilitate more intensive development in these areas. The Plan provides for accessibility and transport development with a focus on prioritising sustainable travel. The development of all infrastructural works such as water services, energy provisions, residential and commercial structures, facilities, roadways, access tracks and pathways etc. have associated construction phase effects. These potential effects include land take, habitat destruction, disturbance effects, light pollution, dust, hydrological interactions, airborne pollution, excessive noise etc. Therefore, mitigation

measures are required to ensure that there are no significant adverse effects due to construction on the ecological integrity of any European site.

The Plan recognises the role of non-designated sites for the maintenance and enhancement of European sites due to the connectivity and accessibility of ecological resources (see measures reproduced at Section 5 of this report).

Further to these provisions there are policy objectives related to specific ecological resources and/or habitats such as waterways, wetlands and peatlands etc. These policies apply to all plans, programmes and/or projects that may arise due to the implementation of the Plan and will ensure that habitat or species fragmentation will not occur in relation to the connectivity of the ecological resources necessary to maintain the ecological integrity of European sites throughout the lifetime of the Plan.

4.3.1.3 Disturbance to Key Species

The Plan provides for infrastructural development across the County with specific urban settlement zones identified to facilitate more intensive development in these areas. The Plan provides for accessibility and transport development with a focus on prioritising sustainable travel. The development of all infrastructural works such as buildings, facilities, roadways, access tracks and pathways etc. have associated construction phase effects. These potential effects include land take, habitat destruction, disturbance effects, light pollution, dust, hydrological interactions, airborne pollution, excessive noise etc. Therefore, mitigation measures are required to ensure that there are no significant adverse effects due to construction on the ecological integrity of any European site.

Chapter 13 addresses landscape and lake amenities, including providing policy objectives that relate to the protection of and facilitation of access to and amenity use of the lakes as well as the establishment and/or protection of viewing points. These policies introduce potential disturbance effects to sensitive and or vulnerable areas during the operational phase.

Similarly, the Plan identifies a focus on tourism, recreation and amenity use. Tourism is identified as a known threat to several of the European sites brought forward to Stage 2. Tourism introduces sources for effects such as trampling, destruction of vegetation, littering, fishing etc. as well as potential infrastructure development to provide facilities and services such as piers, toilets, visitor centres etc. These sources could result in habitat loss, disturbance effects, interactions with water quality and/habitat fragmentation if they are not planned and or managed correctly.

The Plan also contains provisions that recognises the need to consider the carrying capacity of destinations that is reflected in the Tourism Infrastructure and Visitor Services Policy Objectives CPO 6.249. Similarly, the General Tourism Development Policy Objective CPO 6.210 identifies the need to consider capacity issues and aims to increase capacity while ensuring all future tourism developments are appropriately placed taking account of environmental sensitivities. The Plan addresses the need for the protection of natural assets from over exploitation in the Tourism Infrastructure and Visitor Services Policy Objectives CPO 6.2911. The Waterways Policy Objective CPO 12.5412 specifically addresses potential issues in relation to disturbance effects to sensitive sites.

The operational effects of the CPD in general outside of tourism have potential to cause encroachment, disturbance effects, pollution in the form of littering, light pollution etc. if not managed or maintained in a sensitive manner. The Natura 2000 Sites Policy Objectives CPO 12.10¹³ specifically identifies provisions to prepare strategic management plans for European sites within the County in consultation with the NPWS; this provision will facilitate the identification and prioritisation of resource requirements and sensitivities of the European sites to promote sustainable development. Chapter 12 of the Plan

⁹ Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity.

¹⁰ Promote the development and strengthening of the overall value of Westmeath as a tourist destination by encouraging the enhancement and development of sustainable and high-quality visitor attractions, activities and infrastructure, enabling an increase in the overall capacity and long-term development of the county's tourism industry, subject to appropriate siting and design criteria and the protection of environmentally sensitive areas.

areas. ¹¹ Ensure that the development of visitor infrastructure linked to natural and heritage environments, does not detract from the quality and value of these environments..

¹² Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that any new projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones..

¹³ Prepare Strategic Habitat Management Plans for Natura 2000 Sites in Council ownership in consultation with the National Parks and Wildlife Service and relevant stakeholders.

identifies a number of policy objectives that ensure ecological processes and the protection of European sites are considered throughout the planning process; such as Regional Policy Objective 7.26¹⁴ and/or Natural Heritage Policy Objectives CPO 12.1¹⁵. This Chapter details extensive policy objectives that relate to the protection and enhancement of biodiversity, ecological processes and the environment in general. Furthermore, CPO 12.5 states that it is Council policy to 'ensure that no plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc., or projects).

Further details in relation to the full set of mitigation measures integrated into the text of the Plan can be found in Section 5 below.

4.3.1.4 Reduction in species density

Species densities are reliant on species distributions, habitat condition, connectivity of ecological resources and availability of resources such as prey/food. The Plan introduces potential sources for effects to affect these four determinant factors for species densities in the form of construction phase effects such as habitat destruction, light pollution, hydrological interaction or operational effects such as disturbance effects, habitat encroachment, trampling etc. However, the Plan contains provisions to enhance biodiversity, landscape and the environment within Westmeath (CPO12.13)¹⁶.

In addition to this the Plan identifies policy objectives to prepare habitat management plans for European sites in Council ownership in consultation with the National Parks and Wildlife Service and relevant stakeholders (CPO 12.10)¹⁷. Similarly, the Plan recognises the role of non-designated sites for the maintenance and enhancement of European sites due to the connectivity and accessibility of ecological resources. Further to these provisions there are policy objectives related to specific ecological resources and/or habitats such as waterways and peatlands. These policies apply to all plans, programmes and projects that may arise due to the implementation of the plan. Furthermore, CPO 12.5 states that it is Council policy to 'ensure that no plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects). There are also a number of provisions relating to protective buffer zones, further assessment requirements as well as commitments to increasing water quality standards etc. These measures are detailed in Chapter 12 of the Plan and further details in relation to the mitigation measures incorporated into the text of the plan see Section 5 below.

4.3.1.5 Changes of Indicators of Conservation Value

Indicators of conservation value are identified as key ecological resources such as water quality, air quality, habitat quality, population health of ecosystem engineers or 'keystone species' etc.

The Plan identifies policy objectives to prepare habitat management plans for European sites in Council ownership in consultation with the National Parks and Wildlife Service and relevant stakeholders (CPO 12.10)¹⁸. These are an invaluable resource for the protection and enhancement of European sites. There are also a number of provisions relating to protective buffer zones, further assessment requirements as well as commitments to increasing water quality standards etc. The Plan specifically recognises the value of lakes and waterways within the County as recreational resources while recognising the sensitivities of these resources. Lakes and Waterways Policy Objectives identify provisions to facilitate and support access to and between waterways within the county; as previously

¹⁴ Support the development of guidance for assessment of proposed land zonings in order to achieve appropriate riparian setback distances that support the attainment of high ecological status for waterbodies, the conservation of biodiversity and good ecosystem health, and buffer zones from flood plains.

¹⁵ Contribute as appropriate towards the protection of designated sites in compliance with relevant EU Directives and applicable National Legislation. 16 Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset.

17 Prepare Strategic Habitat Management Plans for Natura 2000 Sites in Council ownership in consultation with the National Parks and Wildlife

Service and relevant stakeholders.

¹⁸ Prepare Strategic Habitat Management Plans for Natura 2000 Sites in Council ownership in consultation with the National Parks and Wildlife Service and relevant stakeholders.

stated these provisions must be considered in compliance with the capacity policies previously stated. However, there are additional provisions made to ensure effects to the natural resources are considered for all infrastructural developments aimed to increase tourism activities around lakes; namely Lakes and Waterways Policy Objectives CPO 6.45¹⁹. Furthermore, the Plan identifies policy objectives to prepare habitat management plans for the lakes of the County and visitor management plans at lakes that are particularly sensitive to visitor pressures (CPO 6.54)²⁰. The protection of habitats, landscapes and waterways are a key focus of the policy objectives within Chapters 12 and 13.

These provisions ensure the protection and enhancement of conservation indicators for biodiversity and Europeans sites is considered throughout the lifetime of the Plan. Further details in relation to the mitigation measures incorporated into the text of the Plan see Section 5 below.

4.3.1.6 Climate change

The Plan includes provisions that potentially conflict with climate mitigation and provisions that will help to contribute towards climate mitigation. CPO 12.5 states that it is Council policy to 'to ensure that no plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects)'. Greenhouse gas emissions arising from the Plan will not affect changes projected to arise from climate change to the degree that it would affect the QIs or SCIs of the European Sites considered.

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¹⁹ Support the provision of infrastructure to enable increased tourism activity associated with Westmeath's lakes, including boating, canoeing, angling, ensuring that such provision does not negatively impact on sensitive environments and subject to the requirements of the Habitats Directive.

²⁰ Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term.

Site	European	Distance	Potential Effects ari	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation Interests)	Characterisation of Potential Effects	for Significant Effects	Required
004043	Lough Derravaragh SPA	Within	Whooper Swan (<i>Cygnus cygnus</i>) [A038] Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Coot (<i>Fulica atra</i>) [A125] Wetland and Waterbirds [A999]	Agriculture, forestry, hunting and leisure fishing are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as: Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. For a full list of mitigation measures please refer to Section 5 below.	Yes	Yes
004044	Lough Ennell SPA	Within	Pochard (Aythya ferina) [A059] Tufted Duck (Aythya fuligula) [A061] Coot (Fulica atra) [A125] Wetland and Waterbirds [A999]	Agriculture, forestry, urbanisation, fishing and recreational activities are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as: Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. For a full list of mitigation measures please refer to Section 5 below.	Yes	Yes
004045	Glen Lough SPA	Within	Whooper Swan (<i>Cygnus cygnus</i>) [A038]	Agriculture and forestry are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as:	Yes	Yes

²¹ Informed by, inter alia, The Status of Protected EU Habitats and Species in Ireland, Overview Volume 1 (NPWS, 2013). CAAS for Westmeath County Council

Site Code	European site	Distance (km)	Qualifying Features (Qualifying Interests and Special Conservation Interests)	Characterisation of Potential Effects ²¹	Pathway for Significant Effects	Mitigation Required
				Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. For a full list of mitigation measures please refer to Section 5 below.		
004046	Lough Iron SPA	Within	Whooper Swan (Cygnus cygnus) [A038] Wigeon (Anas penelope) [A050] Teal (Anas crecca) [A052] Shoveler (Anas clypeata) [A056] Coot (Fulica atra) [A125] Golden Plover (Pluvialis apricaria) [A140] Greenland White-fronted Goose (Anser albifrons flavirostris) [A395] Wetland and Waterbirds [A999]	Agriculture and forestry are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as: Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. For a full list of mitigation measures please refer to Section 5 below.	Yes	Yes
004047	Lough Owel	Within	Shoveler (<i>Anas clypeata</i>) [A056] Coot (<i>Fulica atra</i>) [A125] Wetland and Waterbirds [A999]	Agriculture, forestry and human induced changes in hydraulic conditions are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as: Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. For a full list of mitigation measures please refer to Section 5 below.	Yes	Yes
004064	Lough Ree SPA	Within	Little Grebe (<i>Tachybaptus ruficollis</i>) [A004]	Agriculture, forestry. Fishing activities, recreation and invasive species are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.	Yes	Yes

Site	European	Distance	Qualifying Features	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation		for Significant	Required
			Interests)		Effects	
			Whooper Swan (Cygnus cygnus) [A038] Wigeon (Anas penelope) [A050] Teal (Anas crecca) [A052] Mallard (Anas platyrhynchos) [A053] Shoveler (Anas clypeata) [A056] Tufted Duck (Aythya fuligula) [A061] Common Scoter (Melanitta nigra) [A065] Goldeneye (Bucephala clangula) [A067] Coot (Fulica atra) [A125] Golden Plover (Pluvialis apricaria) [A140] Lapwing (Vanellus vanellus) [A142] Common Tern (Sterna hirundo) [A193] Wetland and Waterbirds	The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as: Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. For a full list of mitigation measures please refer to Section 5 below.	Effects	
004096	Middle Shannon Callows SPA	Within	Wetland and Waterbirds [A999] Whooper Swan (Cygnus cygnus) [A038] Wigeon (Anas penelope) [A050] Corncrake (Crex crex) [A122] Golden Plover (Pluvialis apricaria) [A140] Lapwing (Vanellus vanellus) [A142] Black-tailed Godwit (Limosa limosa) [A156] Black-headed Gull (Chroicocephalus ridibundus) [A179] Wetland and Waterbirds [A999]	Therefore, mitigation measures are required to be integrated into the Plan, such as: Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term.	Yes	Yes
004102	Garriskil Bog SPA	Within	Greenland White-fronted Goose (<i>Anser albifrons</i> <i>flavirostris</i>) [A395]	For a full list of mitigation measures please refer to Section 5 below. Agriculture, forestry. Fishing activities, transportation services and fire management are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as:	Yes	Yes

Site Code	European site	Distance (km)	Qualifying Features (Qualifying Interests and Special Conservation Interests)	Characterisation of Potential Effects ²¹	Pathway for Significant Effects	Mitigation Required
000440	Lough Ree	Within	Natural eutrophic lakes with	Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. For a full list of mitigation measures please refer to Section 5 below. Land uses within the site include recreation in the form of cruiser hire, angling, camping, picnicking and shooting. Chalet	Yes	Yes
	SAC		Magnopotamion or Hydrocharition - type vegetation [3150] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Alkaline fens [7230] Limestone pavements [8240] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Bog woodland [91D0] Otter (Lutra lutra) [1355]	accommodation occurs at a few locations around the lake. Low-intensity grazing occurs on dry and wet grassland around the shore, and some hay is made within the site. Some of these activities are damaging, but in a very localised way, and require careful planning. The main threat to the aquatic life in the lake comes from artificial enrichment of the waters by agricultural and domestic waste, and also by peat silt in suspension that is increasingly limiting the light penetration, and thus restricting aquatic flora to shallower waters. At present Lough Ree is less affected by eutrophication than Lough Derg. Agriculture, forestry, recreational activities, pollution through surface water or groundwater, dumping, drainage, transportation services, inappropriate species introduction and urbanisation are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, fishing, poaching, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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 woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, geological and woodlands, trees, hedgerows, semi-natural grasslands or stepping stones in the context of Article 10 of the Habitats Directive. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature cons		
000582	Raheenmore Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	The structure of the bog habitat has been affected by drainage. This has resulted from peat-cutting along the margins of the bog that has led to the lowering of the water table within the adjoining, intact high bog areas. However, the prospects for the future functioning of the habitat are generally good, as the National Parks and Wildlife Service (NPWS) own much of the site and an extensive programme of drain blocking has taken place. Although the north-eastern section of the bog suffered from burning in the past, the majority of the site is relatively unaffected by this practice at present. Also, peat extraction has largely discontinued. Agriculture and drainage are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.	Yes	Yes

Site	European	Distance	Appropriat Qualifying Features	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation Interests)		for Significant Effects	Required
				The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing faci		
000685	Lough Ennell SAC	Within	Alkaline fens [7230]	For a full list of mitigation measures please refer to Section 5 below. Levels of planktonic algal growth in the lake water continue to fluctuate, in response to the variable efficiency of the phosphate removal facility at the sewage treatment plant and the re-mobilization of phosphate from the lake sediments. Agriculture, forestry, noise, recreational activities, pollution through surface water or groundwater, dumping, drainage and transport infrastructure are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settle	Yes	Yes

Site	European	Distance	Qualifying Features	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation Interests)		for Significant Effects	Required
000688	Lough Owel	Within	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] Transition mires and quaking bogs [7140] Alkaline fens [7230] White-clawed Crayfish (Austropotamobius pallipes) [1092]	Potential threats to the conservation interest of Lough Owel include the increasing level of water supply to Mullingar, overfishing, eutrophication caused by local farming practices and pressure from amenity uses such as boating and fishing. Agriculture, noise, recreational activities, pollution through surface water or groundwater, dumping, drainage and transport infrastructure are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, poaching, fisheries activities, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capa	Yes	Yes
000692	Scragh Bog SAC	Within	Transition mires and quaking bogs [7140] Alkaline fens [7230] Slender Green Feather-moss (<i>Drepanocladus vernicosus</i>) [1393]	Agriculture, pollution through surface water or groundwater, and transport infrastructure (paths and tracks) are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones.	Yes	Yes

Site Code	European site	Distance (km)	Qualifying Features (Qualifying Interests and	Characterisation of Potential Effects ²¹	Pathway for	Mitigation Required
			Special Conservation Interests)		Significant Effects	
			and easy)	Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. For a full list of mitigation measures please refer to Section 5 below.	indus	
001810	White Lough,	Within	Hard oligo-mesotrophic	Agriculture, recreational activities, trapping/poisoning/poaching, infilling of drainage ditches, and urbanisation are the main threats	Yes	Yes
301010	Ben Loughs and Lough Doo SAC	William.	waters with benthic vegetation of Chara spp. [3140] White-clawed Crayfish	or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, fisheries activities, poaching and invasive species. The	163	163
			(Austropotamobius pallipes) [1092]	Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives.		
				Therefore, mitigation measures are required to be integrated into the Plan, such as:		
				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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation,		
				archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset.		
				Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance,		
				including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones.		
				Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof.		
				For a full list of mitigation measures please refer to Section 5 below.		
001831	Split Hills and Long Hill Esker SAC	Within	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]	The main threat to the esker is quarrying for sand and gravel. This activity already occurs on the site at several locations. Grazing is a critical factor affecting esker habitats, and getting a balance right is important. The presence of too many grazers causes damage to the ground vegetation in both woodlands and grasslands and prevents regeneration of woody species. However, if the grazing level is too low, grasslands are vulnerable to the encroachment of scrub at the expense of species that require open conditions. Fertiliser application, associated with agricultural improvement, also leads to a reduction in species-richness of grasslands.	Yes	Yes
				Recreational activities, agriculture, floral competition and compositional dynamics are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.		
				The QIs of the site are sensitive to surface water interactions, direct land use management actions, inappropriate development and invasive species. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives.		
				Therefore, mitigation measures are required to be integrated into the Plan, such as: 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.		

Site Code	European site	Distance (km)	Qualifying Features (Qualifying Interests and Special Conservation Interests)	Characterisation of Potential Effects ²¹	Pathway for Significant Effects	Mitigation Required
				Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof.		
002337	Crosswood Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]	For a full list of mitigation measures please refer to Section 5 below. Current land use on the site consists of peat-cutting around the edge of the high bog; it is more intensively cut on the western and southern margins. While the northern margin has drains that extend into the intact bog, it is relatively protected from development due to the proximity to the railway. Forestry is found to the south of the site on areas of cutover bog. Some fields on old cutover are used for pasture and are presently undergoing further reclamation. Damaging activities associated with these land uses include drainage throughout the site (both old and recent) and extensive burning of the high bog. These are activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability. Agriculture, invasive species, road infrastructure, urbanisation, fire and drainage issues are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected	Yes	Yes
				sites. The QIs of the site are sensitive to surface water interactions, direct land use management actions, inappropriate grazing, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term.		
002340	Moneybeg and Clareisland	Within	Active raised bogs [7110]	Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. For a full list of mitigation measures please refer to Section 5 below. Land use at Moneybeg Bog includes active peat-cutting to the east and west and forestry along the western margin. Current land use at Clareisland Bog includes peat-cutting to the west and north-west of the high bog and forestry along the southern margin.	Yes	Yes

Site	European	Distance	Qualifying Features	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation Interests)		for Significant Effects	Required
			Degraded raised bogs still capable of natural regeneration [7120]	the past and at Moneybeg Bog there is evidence of recent and frequent burning of the high bog. These activities have resulted in habitat loss and damage to the hydrological status, and pose a continuing threat to the viability of these high bogs.		
			Depressions on peat substrates of the Rhynchosporion [7150]	Agriculture, invasive species, extraction, road infrastructure, urbanisation, fire and drainage issues are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.		
				The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives.		
				Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation,		
				archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset.		
				Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian		
				zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof.		
				For a full list of mitigation measures please refer to Section 5 below.		
002342	Mount Hevey Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	Current land use on the site consists of limited mechanised peat-cutting, mostly on the eastern end of the high bog. There are areas of old peat cuttings all around the site with some very old abandoned regenerating cutover along the edge of the railway. The area to the east of the site has been afforested. Areas of cutover have been reclaimed for agricultural purposes. Damaging activities associated with these land uses include drainage throughout the site (both old and recent) and burning of the high bog. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability.	Yes	Yes
			(All friends political (All friends)	Agriculture, invasive species, extraction, road infrastructure, urbanisation, fire and drainage issues are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.		
				The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives.		
				Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality.		

Site	European	Distance	Qualifying Features	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation Interests)		for Significant Effects	Required
				Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. For a full list of mitigation measures please refer to Section 5 below.		
002121	Lough Lene SAC	Within	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] White-clawed Crayfish (Austropotamobius pallipes) [1092]	Agriculture, surface water pollution and transport infrastructure are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, and invasive species. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and	Yes	Yes
002313	Ballymore Fen SAC	Within	Transition mires and quaking bogs [7140]	Agriculture, surface water pollution and invasive species are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to surface water interactions, direct land use management actions, inappropriate grazing, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality.	Yes	Yes

Site	European	Distance	Qualifying Features	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation Interests)		for Significant Effects	Required
				Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. For a full list of mitigation measures please refer to Section 5 below.		
002336	Carn Park Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]	Current land use on the site consists of mechanised peat-cutting, forestry and agricultural reclamation around the edge of the high bog. Peat-cutting is carried out along the track and road, which form the northern and north-western site boundaries. Afforestation occurs on the bog margins and extends onto intact or high bog. Some agricultural grassland has been reclaimed from cuttover bog to the south and north-west of the site. Damaging activities associated with these land uses include drainage throughout the site (both old and recent) and extensive burning of the bog. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and that pose a continuing threat to its viability. Surface water pollution, transport infrastructure, turf cutting and invasive species are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its vis	Yes	Yes
000679	Garriskil Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]	For a full list of mitigation measures please refer to Section 5 below. Turf cutting, invasive species, agriculture, as well as interactions with ground and surface water are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.	Yes	Yes

Site	European	Distance	Qualifying Features	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation Interests)		for Significant Effects	Required
			Depressions on peat substrates of the Rhynchosporion [7150]	The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing faci		
002205	Wooddown Bog SAC	Within	Degraded raised bogs still capable of natural regeneration [7120]	Current landuse on the site consists of conservation management with the removal of conifer plantations and the blocking of drainage associated with these plantations, both on the high bog and on the cutover. This work was undertaken as part of the Coillte E.U. Life Project Demonstrating Best Practice in Raised Bog Restoration in Ireland. Active peat-cutting and drainage is occurring outside the south-western boundary and to the north-east of the SAC and there is a major drain running through the centre of the adjacent high bog. There is also some dumping around the site. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability. The site is being actively managed for conservation as part of the Coillte E.U. LIFE Project and most of the required restoration measures have already been carried out. However, some significant threats remain and an After-LIFE management plan is being developed for the future conservation management of the SAC. Turf cutting, invasive species, as well as interactions with ground and surface water are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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 landscap	Yes	Yes

Site Code	European site	Distance (km)	Qualifying Features (Qualifying Interests and Special Conservation Interests)	Characterisation of Potential Effects ²¹	Pathway for Significant Effects	Mitigation Required
				Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. For a full list of mitigation measures please refer to Section 5 below.		
002120	Lough Bane and Lough Glass SAC	0.8	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] White-clawed Crayfish (Austropotamobius pallipes) [1092]	Agriculture is the main threat or pressure identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to surface water interactions, direct land use management actions, and invasive species. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the	Yes	Yes
004065	Lough Sheelin SPA	1.8	Great Crested Grebe (Podiceps cristatus) [A005] Pochard (Aythya ferina) [A059] Tufted Duck (Aythya fuligula) [A061] Goldeneye (Bucephala clangula) [A067] Wetland and Waterbirds [A999	For a full list of mitigation measures please refer to Section 5 below. Agriculture, forestry and leisure fishing are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as: Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. For a full list of mitigation measures please refer to Section 5 below.	Yes	Yes

Site Code	European site	Distance (km)	Appropriat Qualifying Features (Qualifying Interests and Special Conservation Interests)	Characterisation of Potential Effects ²¹	Pathway for Significant Effects	Mitigation Required
004017	Mongan Bog SPA	1.9	Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]	Agriculture, transport infrastructure, peat extraction and sand/gravel extraction are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as: Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term.	Indirect	Yes
000580	Mongan Bog SAC	2.5	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	Extraction, drainage, agriculture and on-site land use activities are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Manage	Indirect	Yes
002201	Derragh Bog SAC	3.4	Degraded raised bogs still capable of natural regeneration [7120] Bog woodland [91D0]	Invasive species, fire regime and human induced changes in hydraulic conditions are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives.	Indirect	Yes

Site	European	Distance	Qualifying Features	te Assessment of the Draft Westmeath County Development Plan 2021-2027 Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation Interests)		for Significant Effects	Required
				Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof.		
000575	Ferbane Bog SAC	3.7	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	For a full list of mitigation measures please refer to Section 5 below. Agriculture, urbanisation, transport infrastructure and succession processes are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparia	Indirect	Yes
004061	Lough Kinale and Derragh Lough SPA	3.8	Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuliqula</i>)	For a full list of mitigation measures please refer to Section 5 below. Agriculture. fisheries activities (bottom culture) and forestry are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.	Indirect	Yes
	Lough St A		[A061] Wetland and Waterbirds [A999]	The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the		

Site	European	Distance	Appropriat Qualifying Features	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation Interests)		for Significant Effects	Required
				waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as: Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors		
				and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term.		
000576	Fin Lough (Offaly) SAC	4.4	Alkaline fens [7230] Geyer's Whorl Snail (<i>Vertigo</i> <i>geyeri</i>) [1013]	For a full list of mitigation measures please refer to Section 5 below. Current land uses on the site include forestry, peat-cutting and agriculture. The forestry is found on a small section of high bog and adjoining cutover in the southwest of the site. Areas of cutover in the south and west of the site that were previously forested have only recently been clear-felled. Active peat-cutting is taking place in the north-west, east and south-east of the site. Two fields in the north of the site have been reclaimed for agriculture. Damaging activities associated with these land uses include drainage throughout the site and burning of the high bog. There is also evidence of old burning in the northern part of the high bog. All these activities have resulted in the loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability.	Indirect	Yes
				There are no site-specific threats identified in the standard data form by the NPWS. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives.		
				Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation,		
				archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian		
				zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof.		
001625	Castlesampson Esker SAC	8.8	Turloughs [3180] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (*	For a full list of mitigation measures please refer to Section 5 below. Agriculture, modification to natural processes, hydrological interactions such as drainage, and urbanisation are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.	Unknown	Yes

Site Code	European site	Distance (km)	Qualifying Features (Qualifying Interests and	Characterisation of Potential Effects ²¹	Pathway for	Mitigation Required
			Special Conservation Interests)		Significant Effects	
			important orchid sites) [6210]	The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing faci		
002339	Ballynamona Bog and Corkip Lough SAC	9.0	Turloughs [3180] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150] Bog woodland [91D0]	For a full list of mitigation measures please refer to Section 5 below. Current land use on the site consists of limited peat-cutting at the north-east and south-west of the site. There is a small area of commercial forestry at the east of the site. Some areas of cutover bog at the south have been reclaimed for agriculture. Damaging activities associated with these land uses include frequent burning. This recurrent burning is having a serious drying effect on the bog. Drainage, for the most part, is restricted to the cutover areas of the bog. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability. Urbanisation, invasive species, landfill, land reclamation and drying out, general and modification of hydrographic functioning, general are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as	Unknown	Yes

Site	European	Distance	Qualifying Features	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation Interests)		for Significant Effects	Required
				Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof.		
				For a full list of mitigation measures please refer to Section 5 below.		
000448	Fortwilliam Turlough SAC	11.4	Turloughs [3180]	Threats to turloughs stem mainly from drainage and agricultural improvement. Fortwilliam seems largely unaffected by drainage, and standing water may persist throughout the summer. It is an oligotrophic site, that indicates that it has escaped significant nutrient input but renders it sensitive to damage should this occur. The turlough is grazed by cattle and sheep, but is undivided.	Unknown	Yes
				Agriculture, ground water pollution, landfill, land reclamation and drying out, general and modification of hydrographic functioning, general are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.		
				The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives.		
				Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to		
				protect the ecology and wildlife thereof.		
				For a full list of mitigation measures please refer to Section 5 below.		
000611	Lough Funshinagh SAC	12.2	Turloughs [3180] Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation [3270]	Some of the major threats to lakes in Ireland arise from drainage and agricultural intensification. In the case of the latter, the application of fertiliser can lead to eutrophication and a general loss of species diversity. Lough Funshinagh is currently mesotrophic, but it has been described in the past as being full of vegetation. Thus, it may be that it has not been enriched significantly by agricultural run-off in recent times. There are localised eutrophic patches around the shores where grazing animals congregate, but the lake water is strikingly clear. There have been attempts at drainage in the past, most recently in 1990. As yet, this has resulted in little structural damage to the site.	Unknown	Yes
				Agriculture and transport infrastructure are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.		
				The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation and invasive species. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives.		
				Therefore, mitigation measures are required to be integrated into the Plan, such as: 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		

Site Code	European site	Distance (km)	Qualifying Features (Qualifying Interests and Special Conservation Interests)	Characterisation of Potential Effects ²¹	Pathway for Significant Effects	Mitigation Required
				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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof.		
000216	River Shannon Callows SAC	12.6	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis) [6510] Limestone pavements [8240] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Otter (Lutra lutra) [1355]	The Shannon Callows are used for summer dry-stock grazing (mostly cattle, with some sheep and a few horses), and permanent hay meadow. About 30 ha is a nature reserve owned by voluntary conservation bodies. The River Shannon is used increasingly for recreational purposes with coarse angling and boating accounting for much of the visitor numbers. Intermittent and scattered damage to the habitats has occurred due to over-deepening of drains and peat still deposition, water-skiing, ploughing and neglect of hay meadow (or reversion to pasture). However, none of these damaging activities can yet be said to be having a serious impact. Threats to the quality of the site may come from the siting of boating marinas in areas away from centres of population, fertilising of botanically-rich fields, the use of herbicides, reversion of hay meadow to pasture, neglect of pasture and hay meadow, disturbance of birds by boaters, anglers, birdwatchers and the general tourist. The maintenance of generally high-water levels in winter and spring benefits all aspects of the flora and fauna, but in this regard, summer flooding is a threat to breeding birds, and may cause neglect of farming. Forestry, agriculture, tourism, recreation and amenity, hydrological interactions and paths, tracks and trails are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: Contribute towards the protection and enhancement of biodiversity and ecological connectivity, includin	Indirect	Yes

Site	European	Distance	Qualifying Features	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation Interests)		for Significant Effects	Required
				For a full list of mitigation measures please refer to Section 5 below.		
004097	River Suck Callows SPA	13.0	Whooper Swan (Cygnus cygnus) [A038] Wigeon (Anas penelope) [A050] Golden Plover (Pluvialis apricaria) [A140] Lapwing (Vanellus vanellus) [A142] Greenland White-fronted Goose (Anser albifrons flavirostris) [A395] Wetland and Waterbirds [A999]	NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as: Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. For a full list of mitigation measures please refer to Section 5 below.		Yes
004232	River Boyne and River Blackwater SPA	14.0	Kingfisher (<i>Alcedo atthis</i>) [A229]	Urbanisation, transport infrastructure and human induced changes in hydraulic conditions are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as: Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term.		Yes
002299	River Boyne and River Blackwater SAC	14.0	Alkaline fens [7230] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] River Lamprey (Lampetra fluviatili) [1099] Salmon (Salmo salar) [1106] Otter (Lutra lutra) [1355]	For a full list of mitigation measures please refer to Section 5 below. Fishing is a main tourist attraction on the Boyne and Blackwater and there are a number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. The Eastern Regional Fishery Board have erected fencing along selected stretches of the river as part of their salmonid enhancement programme. Parts of the river system have been arterially dredged. In 1969 an arterial dredging scheme commenced and disrupted angling for 18 years. The dredging altered the character of the river completely and resulted in many areas in very high banks. The main channel from Drogheda upstream to Navan was left untouched, as were a few stretches on the Blackwater. Ongoing maintenance dredging is carried out along stretches of the river system where the gradient is low. This is extremely destructive to salmonid habitat in the area. Drainage of the adjacent river systems also impacts on the many small wetland areas throughout the site. The River Boyne is a designated Salmonid Water under the E.U. Freshwater Fish Directive.	Indirect	Yes

Site	European	Distance	Qualifying Features	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and Special Conservation Interests)		for Significant Effects	Required
			andicacy	Urbanisation, invasive species, human disturbance from recreational pressures particularly nautical activities, storm damage, succession processes, bridge works, and coastal defence works are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives. Therefore, mitigation measures are required to be integrated into the Plan, such as: 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. Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset. Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity. Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ec	Eneces	
004139	Lough Croan Turlough SPA	14.0	Shoveler (Anas clypeata) [A056] Golden Plover (Pluvialis apricaria) [A140] Greenland White-fronted Goose (Anser albifrons flavirostris) [A395] Wetland and Waterbirds [A999]	For a full list of mitigation measures please refer to Section 5 below. Agriculture is the only threat/pressure identified in the standard data form for the site. No other site-specific threats have been identified from the NPWS database of protected sites. The SCI species are particularly sensitive to disturbance effects that can be caused by recreational activities etc. that are identified in the plan. Similarly, these species are sensitive to hydrological interactions that may influence the trophic structure of the waterways and thus indirectly effect food availability. Careful considerations are required for the design and placement of infrastructural developments in relation to this site as well as the management of visitors at this destination. Therefore, mitigation measures are required to be integrated into the Plan, such as: Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance, including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian zones. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term. Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to protect the ecology and wildlife thereof. Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term.		Yes
002162	River Barrow and River Nore SAC	14.0	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Reefs [1170]	For a full list of mitigation measures please refer to Section 5 below. The main threats to the site and current damaging activities include high inputs of nutrients into the river system from agricultural run-off and several sewage plants, over-grazing within the woodland areas, and invasion by non-native species, for example Cherry Laurel (Prunus laurocerasus) and Rhododendron (Rhododendron ponticum). The water quality of the site remains vulnerable. Good quality water is necessary to maintain the populations of the Annex II animal species listed above. Good quality is dependent on controlling fertilisation of the grasslands, particularly along the Nore. It also requires that sewage be properly treated before discharge. Drainage activities in the catchment can lead to flash floods that can damage the many Annex II species present. Capital	Indirect	Yes

Site	European	Distance	Qualifying Features	Characterisation of Potential Effects ²¹	Pathway	Mitigation
Code	site	(km)	(Qualifying Interests and		for	Required
			Special Conservation		Significant	
			Interests)		Effects	
			Salicornia and other annuals	and maintenance dredging within the lower reaches of the system pose a threat to migrating fish species such as lamprey and		
			colonising mud and sand	shad. Land reclamation also poses a threat to the salt meadows and the populations of legally protected species therein.		
			[1310] Atlantic salt meadows	Hybritation invasive angine human distributance from recognized programs particularly positive action damage.		
			Atlantic salt meadows (Glauco-Puccinellietalia	Urbanisation, invasive species, human disturbance from recreational pressures particularly nautical activities, storm damage, succession processes, bridge works, and coastal defense works are the main threats or pressures identified by the NPWS in the		
			maritimae) [1330]	standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.		
			Mediterranean salt meadows	standard data form. No other site specific directs have been identified from the Ni was database of protected sites.		
			(Juncetalia maritimi) [1410]	The QIs of the site are sensitive to ground and surface water interactions, direct land use management actions, inappropriate		
			Water courses of plain to	grazing, drainage, compaction of substrate, trampling of vegetation, invasive species, succession processes and fire regime		
			montane levels with the	changes. The Plan introduces potential sources for effects through development infrastructure, amenity and land use objectives.		
			Ranunculion fluitantis and			
			Callitricho-Batrachion	Therefore, mitigation measures are required to be integrated into the Plan, such as:		
			vegetation [3260]	Contribute towards the protection and enhancement of biodiversity and ecological connectivity, including woodlands, trees,		
			European dry heaths [4030]	hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, geological and geo-morphological systems, other		
		1	Hydrophilous tall herb fringe	landscape features, natural lighting conditions, and associated wildlife where these form part of the ecological network and/or may		
			communities of plains and of	be considered as ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive.		
		1	the montane to alpine levels	Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation,		
			[6430] Petrifying springs with tufa	archaeology and groundwater quality. Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition		
			formation (<i>Cratoneurion</i>)	of its importance as both a non-renewable resource and a natural asset.		
			[7220]	Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying		
			Old sessile oak woods with	rapacity.		
			Ilex and Blechnum in the	Seek to manage any increase in visitor numbers in order to avoid significant effects including loss of habitat and disturbance,		
			British Isles [91A0]	including ensuring that new any projects, such as greenways, are a suitable distance from ecological sensitivities, such as riparian		
			Alluvial forests with Alnus	zones.		
			glutinosa and Fraxinus	Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors		
			excelsior (Alno-Padion, Alnion	and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term.		
			incanae, Salicion albae)	Seek the continued improvement of water quality, bathing facilities and other recreational opportunities in waterways and to		
			[91E0]	protect the ecology and wildlife thereof.		
			Desmoulin's Whorl Snail	For a fill the desired and a second s		
			(Vertigo moulinsiana) [1016]	For a full list of mitigation measures please refer to Section 5 below.		
			Freshwater Pearl Mussel (Margaritifera margaritifera)			
			[1029]			
		1	White-clawed Crayfish			
			(Austropotamobius pallipes)			
			[1092]			
		1	Sea Lamprey (<i>Petromyzon</i>			
		1	marinus) [1095]			
		1	Brook Lamprey (<i>Lampetra</i>			
			planeri) [1096]			
			River Lamprey (Lampetra			
			fluviatilis) [1099]			
		1	Twaite Shad (Alosa fallax fallax) [1103]			
		1	Salmon (<i>Salmo salar</i>) [1106]			
		1	Otter (<i>Lutra lutra</i>) [1355]			
l		1	Killarney Fern (<i>Trichomanes</i>			
			speciosum) [1421]			
		1	Nore Pearl Mussel			
		1	(Margaritifera durrovensis)			
			[1990]			

5 Mitigation Measures

This section outlines measures that have been incorporated into the Draft Plan in order to mitigate against potential effects to European sites as identified above.

The Draft Plan was being prepared in an iterative manner whereby the Plan and AA documents have informed subsequent versions of the other. These mitigation measures also considered all submissions made during the public consultation during the plan making process.

These mitigation measures ensure that there will be no significant adverse effects to the ecological integrity of any European site from implementation of the Plan. The mitigation measures most relevant to the protection of European sites are identified in Table 5.1 below.

Table 5.1 Measures most relevant to the protection of European sites

Draft Plan Provisions

CPO 10.47 and subsection 10.5.3

Corridor and Route Selection Process

The Council will preserve a corridor to enable design options for road improvements and upgrades to be advanced. In this regard, the following Corridor and Route Selection Process will be undertaken for relevant new infrastructure:

Stage 1 – Route Corridor Identification, Evaluation and Selection

- Environmental constraints (including those identified in Section 4 of the SEA Environmental Report) 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 the relevant specialists; and
- In addition to the constraints identified above, site-specific field data may be required to identify the most appropriate corridors.

Stage 2 - Route Identification, Evaluation and Selection

- 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 the 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 route lines is likely to be informed by other considerations.

Core Strategy Objectives CPO 2.13 In the assessment of development proposals, to take account of transport corridors, environmental carrying capacity, availability and/or capacity to provide waste water and water supply services, potential to conflict with Water Framework Directive objectives, potential to impact on the integrity of European sites and Annexed Habitats and species, features of biodiversity value including ecological networks, impact on landscape and visual characteristics, education and other socioeconomic objectives.

Natural Heritage Policy Objectives

- CPO 12.1 Contribute as appropriate towards the protection of designated sites in compliance with relevant EU Directives and applicable national legislation.
- CPO 12.2 Support the implementation of any relevant recommendations contained in the National Biodiversity Plan, the All Ireland Pollinator Plan and the National Peatlands Strategy.
- CPO 12.3 Support the implementation of the Westmeath Biodiversity Action Plan 2014-2020 and any revisions made thereto.

Natura 2000 Sites Policy Objectives

- CPO 12.4 Protect and conserve Special Areas of Conservation, candidate Special Areas of Conservation, Special Protection Areas and candidate Special Protection Areas, designated under the EU Birds and Habitats Directives respectively.
- CPO 12.5 Ensure that no plans, programmes, etc. or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European Sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans, programmes, etc. or projects).
- CPO 12.6 Ensure that any plan or project that could have a significant adverse impact (either by themselves or in combination with other plans and projects) upon the conservation objectives of any Natura 2000 Site or would result in the deterioration of any habitat or any species reliant on that habitat will not be permitted.
- CPO 12.7 Assess any plan or project in accordance with Article 6 of the Habitats Directive to determine whether the plan or project is likely to have a significant effect on the site either individually or cumulatively upon the integrity, conservation objectives and qualifying interest of any Natura 2000 Site.
- CPO 12.8 Require an ecological appraisal for development not directly connected with or necessary to the management of Natura Sites, or a proposed Natura Site and which are likely to have significant effects on that site either individually or cumulatively.
- CPO 12.9 Identify and provide appropriate buffer zones between Designated Sites and local biodiversity features and areas zoned for development.
- CPO 12.10 Prepare Strategic Habitat Management Plans for Natura 2000 Sites in Council ownership in consultation with the National Parks and Wildlife Service and relevant stakeholders.
- CPO 12.11 Promote the maintenance and as appropriate, achievement of favourable conservation status of habitats and species and to improve the ecological coherence of the Natura 2000 network, by maintaining and where appropriate, developing features in the landscape which are of major importance for wild fauna and flora.
- CPO 12.12 Require that new development proposals affecting designated sites have regard to the sensitivities identified in the SEA Environmental Report prepared in respect of this plan.

Rare and Protected Sites Policy Objectives

- CPO 12.13 Protect, manage and enhance the natural heritage, biodiversity, landscape and environment of County Westmeath, in recognition of its importance as both a non-renewable resource and a natural asset.
- CPO 12.14 Require all new developments in the early pre-planning stage of the planning process to identify, protect and enhance ecological features by making provision for local biodiversity (e.g. through provision of swift boxes, bat roost sites, green roofs, etc.) and provide links to the wider Green Infrastructure network as an essential part of the design process.
- CPO 12.15 Support the protection of all native woodlands listed in the National Survey of Native Woodlands 2003 to 2008.
- CPO 12.16 Apply the precautionary principle in relation to development proposals in areas identified as being of national nature conservation interest, by requiring a Scientific/ Ecological Risk Assessment to ensure that the development will not impact on the integrity and habitat value of the site.

Draft Plan Provisions

- CPO 12.17 Support and cooperate with Statutory Authorities and other relevant bodies in support of measures taken to manage designated nature conservation sites, in order to achieve their conservation objectives. Specific regard shall be had to Conservation Management Plans and their conservation objectives/ management practices, where they exist.
- CPO 12.18 Consult with the National Parks and Wildlife Service (NPWS) in regard to any developments (those requiring permission and those not requiring planning permission) which the Council proposes to carry out within pNHAs, NHAs, SACs, SPAs, and other important ecological sites.
- CPO 12.19 Maintain the conservation value of Council owned land within NHAs and pNHAs and promote the conservation value of Council owned lands adjoining NHAs.
- CPO 12.20 Protect and conserve NHAs and pNHAs including NHAs that become designated and notified to the Local Authority during the lifetime of the Plan.
- CPO 12.21 Lighting fixtures should provide only the amount of light necessary for personal safety and should be designed so as to avoid creating glare or emitting light above a horizontal plane. Lighting fixtures should have minimum environmental impact, thereby contributing towards the protection of amenity and the protection of light sensitive species such as bats.

Sites of Biodiversity Value and Non-designated Sites Policy Objectives

- CPO 12.22 Seek to create and enhance ecological linkages and buffer zones from development.
- CPO 12.23 Protect and where possible enhance 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. Appropriate mitigation and/or compensation to conserve biodiversity, landscape character and green infrastructure networks will be required where habitats are at risk or lost as part of a development.
- CPO 12.24 Recognise that nature conservation is not just confined to designated sites and acknowledge the need to protect non-designated habitats and landscapes and to conserve the biological diversity.

Invasive Species Policy Objectives

- CPO 12.25 Prevent the spread of invasive species within the plan area, including requiring landowners and developers to adhere to best practice guidance in relation to the control of invasive species.
- CPO 12.26 Ensure that proposals for development do not lead to the spread or introduction of invasive species. If developments are proposed on sites where invasive species are or were previously present, the applicant will be required to submit a control and management program for the particular invasive species as part of the planning process and to comply with the provisions of the European Communities Birds and Habitats Regulations 2011 (S.I. 477/2011).
- CPO 12.27 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.

Trees, Woodlands and Hedgerows Policy Objectives

- CPO 12.35 Preserve and enhance the amenity and biodiversity value of the County, by promoting the protection of trees, groups of trees and ancient woodlands, of significant amenity value, especially native and broadleaf species.
- CPO 12.36 Protect trees subject to Tree Preservation Orders and seek to designate additional Tree Preservation Orders, where appropriate.
- CPO 12.37 Discourage the felling of mature trees and hedgerow, particularly species rich roadside and townland boundary hedgerows to facilitate development and seek Tree Management Plans to ensure that trees are adequately protected during development and incorporated into the design of new developments.
- CPO 12.38 Protect and preserve existing hedgerows in new developments, particularly species rich roadside and townland boundary hedgerows, and where their removal is necessary during the course of road works or other works seek their replacement with new hedgerows of native species indigenous to the area.
- CPO 12.39 Encourage the development of proposals for new woodlands and community woodlands in urban/urban fringe areas utilising funding available through schemes such as the NeighbourWood and Native Woodland Schemes.
- CPO 12.40 Encourage the protection of the trees which are considered an important component of demesne landscapes.

Wetlands Policy Objectives

- CPO 12.41 Resist development that would destroy, fragment or degrade any wetland in the County.
- CPO 12.42 Support the implementation of recommendations made in the County Westmeath Wetlands Survey 2019 and subsequent versions thereof.
- CPO 12.43 Require an Ecological Impact Assessment where is it proposed to fill or reclaim a wetland area.
- CPO 12.44 Protect floodplains, wetlands and watercourses, for their biodiversity and flood protection value.
- CPO 12.45 Ensure that all proposed land zonings take cognisance of appropriate riparian setback distances that support the attainment of high ecological status for water bodies, the conservation of biodiversity and good ecosystem health, and buffer zones from flood plains.
- CPO 12.46 Implement the relevant parts of the Planning and Development (Amendment) (No. 2) Regulations 2011 and the European Communities (Amendment to Planning and Development) Regulations 2011, which require planning permission to be applied for where the area impacted by works relating to the drainage or reclamation of a wetland exceeds 0.1 hectares or where such works may have a significant effect on the environment. Such applications for permission would need to be supported by an Appropriate Assessment where necessary.

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CPO 10.124 Control lighting in urban and rural areas and in particular in sensitive locations, in order to minimise impacts on residential amenity, habitats and species of importance.

Draft Plan Provisions

Habitat and Visitor Management

CPO 6.2 Promote the development and strengthening of the overall value of Westmeath as a tourist destination by encouraging the enhancement and development of sustainable and high-quality visitor attractions, activities and infrastructure, enabling an increase in the overall capacity and long-term development of the county's tourism industry, subject to appropriate siting and design criteria and the protection of environmentally sensitive areas.

CPO 6.15 Monitor and 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. Visitor/Habitat Management Plans will be required for proposed projects as relevant and appropriate.

CPO 6.24 Promote tourism-related developments in existing settlements within the Settlement Hierarchy, subject to existing carrying capacity.

CPO 6.29 Ensure that the development of visitor infrastructure linked to natural and heritage environments, does not detract from the quality and value of these environments

CPO 6.54 Prepare Habitat Management Plans for Westmeath's lakes and Visitor Management Plans for particular areas most used by visitors and where particular sensitivities occur, to support the protection and conservation of our natural resources into the long term.

Lakes

CPO 6.45 Support the provision of infrastructure to enable increased tourism activity associated with Westmeath's lakes, including boating, canoeing and angling while ensuring that such provision does not negatively impact on sensitive environments and subject to the requirements of the Habitats Directive.

Forestry Policy Objective

CPO 9.47 Encourage the development of a well-managed sustainable forestry sector, which is compatible with the protection of the environment including the avoidance of likely significant effects on Natura 2000 sites (SACs and SPAs) and is planted, managed and harvested in accordance with the Forest Service Guidelines for Landscape, Forest Harvesting and Environmental, Archaeology, Biodiversity and Water Quality.

CPO 9.53 Promote in co-operation with the Forest service, Department of Agriculture, Food and the Marine the preparation and adoption of an Indicative Forest Strategy for the County, as an important means of contributing to the protection and enhancement of the county's biodiversity, natural resources and landscape, as resources permit.

Extractive Industry Policy Objective

CPO 9.58 Ensure that development for aggregate extraction, processing and associated concrete production does not significantly impact the following: • Areas of Geological interest as identified in the County Esker Survey • Existing and Candidate Special Areas of Conservation (SACs) • Special Protection Areas (SPAs)

• Existing and proposed Natural Heritage Areas (pNHAs) • Other areas of importance for the conservation of flora and fauna • High Amenity Areas • Zones of archaeological potential • Important aquifers and sensitive groundwater resources • The vicinity of a recorded monument • Sensitive landscape areas • Established rights of way and walking routes.

Extractive Industry Policy Objective

CPO 9.63 Ensure that all extractions shall be subjected to landscaping requirements and that worked out quarries should be rehabilitated to a use agreed with the Planning Authority which could include recreational, biodiversity, amenity or other end-of-life uses. The use of these rehabilitated sites shall be limited to inert waste and sites shall be authorised under the appropriate waste regulations.

CPO 9.62 Ensure that extractive developments do not adversely impact on environmental quality, including water quality, tourism value, existing infrastructure, residential amenity or the amenity value of neighbouring lands.

6 Conclusion

Stage 1 AA Screening and Stage 2 AA of the Draft Westmeath Plan has been carried out. Implementation of the Draft Plan has the potential to result in effects to the integrity of any European sites, if unmitigated.

The 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 Draft Plan will themselves be subject to AA when further details of design and location are known.

This assessment was undertaken with reference to all subsequent staged of the Plan making process, including all submissions made during the process.

In-combination effects from interactions with other plans and projects was considered in the assessment and the mitigation measures incorporated into the plan are seen to be robust to ensure there will be no significant adverse effects as a result of the implementation of the Draft Plan either alone or in-combination with other plans/projects.

Having incorporated mitigation measures, it is concluded that the Draft Westmeath Plan is not foreseen to give rise to any significant adverse effects on designated European sites, alone or in combination with other plans or projects²². This evaluation is made in view of the conservation objectives of the habitats or species, for which these sites have been designated.

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²² Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be:

a) no alternative solution available,

b) imperative reasons of overriding public interest for the plan to proceed; and

c) Adequate compensatory measures in place.

Appendix I Background information on European sites

List of European sites within 15 km of the Plan boundary; including the Qualifying features (Qualifying Interests or Special Conservation Interests) and Site Vulnerability/Sensitivity

Site	Site Code	Distance	Qualifying Features	Site Description/Vulnerability
Name 004043	Lough Derravaragh SPA	(km) Within	(Qualifying Interests and Special Conservation Interests) Whooper Swan (<i>Cygnus cygnus</i>) [A038] Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Coot (<i>Fulica atra</i>) [A125] Wetland and Waterbirds [A999]	Lough Derravaragh is located approximately 12 km north of Mullingar town in Co. Westmeath. It is a medium- to large-sized lake of relatively shallow water (maximum depth 23 m). The lake extends along a south-east/north-west axis for approximately 8 km. The Inny River, a tributary of the River Shannon, is the main inflowing and outflowing river. It is a typical limestone lake with water of high hardness and alkaline pH, and is classified as a mesotrophic system. Agriculture, forestry, hunting and leisure fishing are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
004044	Lough Ennell SPA	Within	Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Coot (<i>Fulica atra</i>) [A125] Wetland and Waterbirds [A999]	Lough Ennell is a large, limestone lake located south of Mullingar in Co. Westmeath. It has a length of approximately 6.5 km along its long axis and is mostly about 2 km wide. The River Brosna is the principal inflowing and outflowing river. It is a relatively shallow lake, with a maximum depth of c. 30 m. The water is hard, with low colour and markedly alkaline pH. The lake is classified as a mesotrophic system though it has been eutrophic in the past. The lake bottom is of limestone with a marl deposit. Agriculture, forestry, urbanisation, fishing and recreational activities are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
004045	Glen Lough SPA	Within	Whooper Swan (<i>Cygnus cygnus</i>) [A038]	Glen Lough is situated about 5 km north-west of Lough Iron on the border of Co. Westmeath and Co. Longford. Extensive drainage in the 1960s has resulted in a dramatic drop in the watertable here, with the result that there is now little open water, except during flooding in the winter months. Sedge-dominated freshwater marsh now occupies the majority of what was once open water. Plant species present include Bottle Sedge (<i>Carex rostrata</i>), Water Horsetail (<i>Equisetium fluviatile</i>) and Canary Reed-grass (<i>Phalaris arundinacea</i>). Other habitats present include reedswamp, wet and dry grassland, cutaway bog colonised by heath vegetation, scrub and wet willow (<i>Salix spp.</i>) woodland. Agriculture and forestry are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific
004046	Lough Iron SPA	Within	Whooper Swan (<i>Cygnus cygnus</i>) [A038] Wigeon (<i>Anas penelope</i>) [A050] Teal (<i>Anas crecca</i>) [A052] Shoveler (<i>Anas clypeata</i>) [A056] Coot (<i>Fulica atra</i>) [A125] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and Waterbirds [A999]	threats have been identified from the NPWS database of protected sites. Lough Iron is a small- to moderately-sized midland lake, located some 12 km northwest of Mullingar. It is situated on the Inny River, which flows from Lough Derravaragh approximately 5 km to the north-east. Lough Owel occurs a few kilometres to the south-east and is connected to Lough Iron by a small stream. The underlying geology is limestone and the lake is mesotrophic in character. Agriculture and forestry are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
004047	Lough Owel SPA	Within	Shoveler (<i>Anas clypeata</i>) [A056] Coot (<i>Fulica atra</i>) [A125] Wetland and Waterbirds [A999]	Lough Owel is a medium- to large-sized lake in Co. Westmeath, with a length of c. 6 km along its long axis and a maximum width of 3 km. It is fed by a number of small streams and the main outflow is to the Royal Canal. Water is relatively shallow, with a maximum depth of 22 m. Overlying carboniferous limestone, Lough Owel is one of the most important examples of a limestone lake in the Midlands. The water is moderately hard, alkaline and virtually colourless. The lake appears to be relatively unproductive with low levels of orthophosphate and moderate chlorophyll concentrations. The lake is classified as a mesotrophic system and its status has been stable in recent years. Agriculture, forestry and human induced changes in hydraulic conditions are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
004064	Lough Ree SPA	Within	Little Grebe (<i>Tachybaptus ruficollis</i>) [A004] Whooper Swan (<i>Cygnus cygnus</i>) [A038] Wigeon (<i>Anas penelope</i>) [A050] Teal (<i>Anas crecca</i>) [A052] Mallard (<i>Anas platyrhynchos</i>) [A053] Shoveler (<i>Anas clypeata</i>) [A056] Tufted Duck (<i>Aythya fuligula</i>) [A061] Common Scoter (<i>Melanitta nigra</i>) [A065] Goldeneye (<i>Bucephala clangula</i>) [A067]	Situated on the River Shannon between Lanesborough and Athlone, Lough Ree is the third largest lake in the Republic of Ireland. It lies in an ice-deepened depression in carboniferous Limestone. Some of its features (including the islands) are based on glacial drift. The main inflowing rivers are the Shannon, Inny and Hind, and the main outflowing river is the Shannon. The greater part of Lough Ree is less than 10 m in depth, but there are six deep troughs running from north to south, reaching a maximum depth of about 36 m just west of Inchmore. The lake has a very long, indented shoreline and hence has many sheltered bays. It also has a good scattering of islands, most of which are included in the site. Agriculture, forestry. Fishing activities, recreation and invasive species are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.

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			Coot (<i>Fulica atra</i>) [A125] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Lapwing (<i>Vanellus vanellus</i>) [A142] Common Tern (<i>Sterna hirundo</i>) [A193] Wetland and Waterbirds [A999]	
004096	Middle Shannon Callows SPA	Within	Whooper Swan (<i>Cygnus cygnus</i>) [A038] Wigeon (<i>Anas penelope</i>) [A050] Corncrake (<i>Crex crex</i>) [A122] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Lapwing (<i>Vanellus vanellus</i>) [A142] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Wetland and Waterbirds [A999]	The Middle Shannon Callows SPA is a long and diverse site that extends for approximately 50 km from the town of Athlone to the town of Portumna; it lies within Counties Galway, Roscommon, Westmeath, Offaly and Tipperary. The site averages about 0.75 km in width though in places is up to 1.5 km wide. Water levels on the site are greatly influenced by the very small fall between Athlone and Portumna and by the weir at Meelick. The site has extensive areas of callow, or seasonally flooded, semi-natural, lowland wet grassland, along both sides of the river. The callows are mainly too soft for intensive farming but are used for hay or silage or for summer grazing. Other habitats of smaller area that occur alongside the river include lowland dry grassland, freshwater marshes, reedbeds and wet woodland. The diversity of semi-natural habitats present and the sheer size of the site attract an excellent diversity of bird species, including significant populations of several. Agriculture, forestry, Fishing activities, transportation services and urbanisation are the main threats or pressures identified by the
004102	Garriskil Bog SPA	Within	Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]	NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. Garriskil Bog SPA, a raised bog, is located 3 km west of Lough Derravaragh and 3 km east of Rathowen in Co. Westmeath. It is bounded to the south-east and southwest by the rivers Inny and Riffey. The bog is underlain by calcareous shales with a low permeability. A substantial area of uncut high bog remains though much of this is classified as degraded raised bog. Old cutaway bog surrounds the high bog and parts of this are dominated by Downy Birch (<i>Betula pubescens</i>) scrub. Agriculture, forestry. Fishing activities, transportation services and fire management are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected
000440	Lough Ree SAC	Within	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation [3150] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Alkaline fens [7230] Limestone pavements [8240] Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Bog woodland [91D0] Otter (Lutra lutra) [1355]	sites. Lough Ree is the third largest lake in Ireland and is situated in an ice-deepened depression in carboniferous limestone on the River Shannon system between Lanesborough and Athlone. The site spans Counties Longford, Roscommon and Westmeath. Some of its features (including the islands) are based on glacial drift. It has a very long, indented shoreline and hence has many sheltered bays. Although the main habitat, by area, is the lake itself, interesting shoreline, terrestrial and semiaquatic habitats also occur. Land uses within the site include recreation in the form of cruiser hire, angling, camping, picnicking and shooting. Chalet accommodation occurs at a few locations around the lake. Low-intensity grazing occurs on dry and wet grassland around the shore, and some hay is made within the site. Some of these activities are damaging, but in a very localised way, and require careful planning. The main threat to the aquatic life in the lake comes from artificial enrichment of the waters by agricultural and domestic waste, and also by peat silt in suspension that is increasingly limiting the light penetration, and thus restricting aquatic flora to shallower waters. At present Lough Ree is less affected by eutrophication than Lough Derg. Agriculture, forestry, recreational activities, pollution through surface water or groundwater, dumping, drainage, transportation services, inappropriate species introduction and urbanisation are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
000582	Raheenmore Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	This raised bog developed in a small basin in the catchment of two major river systems i.e. the Brosna and the Boyne. It is situated about 5 km from Daingean in Co. Offaly. The peat is very deep, up to 15 m in places. The bog has a well-developed hummock and hollow system. The structure of the bog habitat has been affected by drainage. This has resulted from peat-cutting along the margins of the bog that has led to the lowering of the water table within the adjoining, intact high bog areas. However, the prospects for the future functioning of the habitat are generally good, as the National Parks and Wildlife Service (NPWS) own much of the site and an extensive programme of drain blocking has taken place. Although the north-eastern section of the bog suffered from burning in the past, the majority of the site is relatively unaffected by this practice at present. Also, peat extraction has largely discontinued. Agriculture and drainage are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites
000685	Lough Ennell SAC	Within	Alkaline fens [7230]	Lough Ennell is a large, open, steep-sided lake, located 3 km south of Mullingar in Co. Westmeath. The lake bottom is of limestone with a marl deposit. The water is markedly alkaline and mesotrophic, possibly owing to effluents received from Mullingar town and to fertilizer inputs from farmland surrounding the lake. The River Brosna flows into the lake from the north at Butler's Bridge, and out from the south.

				Levels of planktonic algal growth in the lake water continue to fluctuate, in response to the variable efficiency of the phosphate
				removal facility at the sewage treatment plant and the re-mobilization of phosphate from the lake sediments.
				Agriculture, forestry, noise, recreational activities, pollution through surface water or groundwater, dumping, drainage and transport infrastructure are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
000688	Lough Owel SAC	Within	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] Transition mires and quaking bogs [7140]	Lough Owel is a large hard water lake located approximately 4 km north-west of Mullingar in Co. Westmeath. It is a relatively shallow lake with a rocky, marl-covered bottom.
			Alkaline fens [7230] White-clawed Crayfish <i>(Austropotamobius pallipes)</i> [1092]	Potential threats to the conservation interest of Lough Owel include the increasing level of water supply to Mullingar, overfishing, eutrophication caused by local farming practices and pressure from amenity uses such as boating and fishing.
				Agriculture, noise, recreational activities, pollution through surface water or groundwater, dumping, drainage and transport infrastructure are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
000692	Scragh Bog SAC	Within	Transition mires and quaking bogs [7140] Alkaline fens [7230] Slender Green Feather-moss (Drepanocladus vernicosus) [1393]	Scragh Bog lies approximately 10 km north-west of Mullingar, Co. Westmeath. This site comprises a wet transition fen with a floating root mat that has developed in a small oval-shaped depression. The fen is fed by weak surface springs and drains by an artificially defined outlet. The fen becomes open carr in the central area and in places grades into ombrotrophic bog.
				Agriculture, pollution through surface water or groundwater, and transport infrastructure (paths and tracks) are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
001810	White Lough, Ben Loughs And Lough Doo SAC	Within	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] White-clawed Crayfish (Austropotamobius pallipes) [1092]	White Lough, Ben Loughs and Lough Doo SAC is comprised of four hard water lakes in a small, poorly-drained valley, 4 km east of Castlepollard, Co. Westmeath.
				Agriculture, recreational activities, trapping/poisoning/poaching, infilling of drainage ditches, and urbanisation are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
001831	Split Hills And Long Hill Esker SAC	Within	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]	Split Hills and Long Hill Esker is a 5 km long site that crosses the main Galway-Dublin road mid-way between Kilbeggan and Tyrrellspass in Co. Westmeath. It is a prominent feature on the local landscape.
				The main threat to the esker is quarrying for sand and gravel. This activity already occurs on the site at several locations. Grazing is a critical factor affecting esker habitats, and getting a balance right is important. The presence of too many grazers causes damage to the ground vegetation in both woodlands and grasslands and prevents regeneration of woody species. However, if the grazing level is too low, grasslands are vulnerable to the encroachment of scrub at the expense of species that require open conditions. Fertiliser application, associated with agricultural improvement, also leads to a reduction in species-richness of
				grasslands.
				Recreational activities, agriculture, floral competition and compositional dynamics are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
002337	Crosswood Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]	Crosswood Bog is situated approximately 5 km east of Athlone, Co. Westmeath, mainly in the townlands of Crosswood, Glenaghanvoneen, and Creggan Lower. The site comprises a raised bog that includes both areas of high bog and cutover bog. The northern margin of the bog lies along the southern side of the Dublin-Galway railway line.
				Current land use on the site consists of peat-cutting around the edge of the high bog; it is more intensively cut on the western and southern margins. While the northern margin has drains that extend into the intact bog, it is relatively protected from development due to the proximity to the railway. Forestry is found to the south of the site on areas of cutover bog. Some fields on old cutover are used for pasture and are presently undergoing further reclamation. Damaging activities associated with these land uses include drainage throughout the site (both old and recent) and extensive burning of the high bog. These are activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability.
				Agriculture, invasive species, road infrastructure, urbanisation, fire and drainage issues are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.

002340	Moneybeg And Clareisland Bogs	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration	This site is located on the border of Counties Meath and Westmeath, 9 km east of the town of Granard. It is situated mainly in the townlands of Clareisland or Derrymacegan, Williamstown and Moneybeg in Co. Westmeath, and Ross in Co. Meath.
	SAC		[7120] Depressions on peat substrates of the Rhynchosporion [7150]	Land use at Moneybeg Bog includes active peat-cutting to the east and west and forestry along the western margin. Current land use at Clareisland Bog includes peat-cutting to the west and north-west of the high bog and forestry along the southern margin. Damaging activities associated with these land uses include drainage and burning. Drainage has occurred on these high bogs in the past and at Moneybeg Bog there is evidence of recent and frequent burning of the high bog. These activities have resulted in habitat loss and damage to the hydrological status, and pose a continuing threat to the viability of these high bogs. Agriculture, invasive species, extraction, road infrastructure, urbanisation, fire and drainage issues are the main threats or
				pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
002342	Mount Hevey Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	Mount Hevey Bog is situated approximately 4 km north-east of Kinnegad, in the townlands of Cloncrave, White Island, Aghamore, Kilwarden and Kilnagalliagh. The Meath-Westmeath County boundary runs through the centre of the bog. The site comprises a raised bog that includes both areas of high bog and cutover bog. The Dublin-Sligo railway runs through the northern part of the bog isolating two northern lobes. The northern lobes are adjacent to the Royal Canal.
				Current land use on the site consists of limited mechanised peat-cutting, mostly on the eastern end of the high bog. There are areas of old peat cuttings all around the site with some very old abandoned regenerating cutover along the edge of the railway. The area to the east of the site has been afforested. Areas of cutover have been reclaimed for agricultural purposes. Damaging activities associated with these land uses include drainage throughout the site (both old and recent) and burning of the high bog. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability.
				Agriculture, invasive species, extraction, road infrastructure, urbanisation, fire and drainage issues are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
002121	Lough Lene SAC	Within	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] White-clawed Crayfish (Austropotamobius pallipes) [1092]	This lake is situated 4 km north-east of Castlepollard in Co. Westmeath. It is a deep (20 m maximum depth), clear, hard-water lake with marl deposition (especially noticeable on the margins). Agriculture, surface water pollution and transport infrastructure are the main threats or pressures identified by the NPWS in the
002313	Ballymore Fen SAC	Within	Transition mires and quaking bogs [7140]	standard data form. No other site-specific threats have been identified from the NPWS database of protected sites. Ballymore Fen lies approximately 17 km west of Mullingar adjacent to the Mullingar to Ballymore road (R390) in Co. Westmeath. The geology of the area is carboniferous Limestone. The site occupies a relatively wide and deep depression in the surrounding drift that is fed on both the east and west by springs. The area may at one stage have been a lake of some size but at present is occupied by a transition mire complex with a characteristic lagg fen at the edges.
				Agriculture, surface water pollution and invasive species are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
002336	Carn Park Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]	Carn Park Bog is situated 8 km east of Athlone, in the townlands of Tullywood, Carn Park, Cappaghbrack, Warren High and Moydrum, Co. Westmeath. The site comprises a raised bog that includes both areas of high bog and cutover bog. The margins of the site are bounded by roads on the north, west and southern margins and forestry on the east.
				Current land use on the site consists of mechanised peat-cutting, forestry and agricultural reclamation around the edge of the high bog. Peat-cutting is carried out along the track and road, which form the northern and north-western site boundaries. Afforestation occurs on the bog margins and extends onto intact or high bog. Some agricultural grassland has been reclaimed from cutover bog to the south and north-west of the site. Damaging activities associated with these land uses include drainage throughout the site (both old and recent) and extensive burning of the bog. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and that pose a continuing threat to its viability.
				Surface water pollution, transport infrastructure, turf cutting and invasive species are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
000679	Garriskil Bog SAC	Within	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]	Garriskil Bog SAC consists of two areas of raised bog: Garriskil Bog, which covers 324.81 ha and lies 3 km east of Rathowen in Co. Westmeath; and a small outlier, within the townland of Derrya, which covers 22.9 ha and lies 2.2 km to the east on the northern shore of Lough Derravaragh. Both bogs are remnants of the large river floodplain bogs that developed where the River Inny enters and leaves Lough Derravarragh. Garriskil Bog is bounded to the south-east and south-west by the rivers Inny and Riffey and by

			Depressions on peat substrates of the Rhynchosporion [7150]	the Dublin-Sligo railway line to the north. It is considered an exceptional example of a midland raised bog and includes 170.26 ha of uncut raised bog and 154.55 ha of surrounding areas that includes 109 ha of cutover bog. The Section at Derrya (that comprises part of Lough Derravaragh Bog NHA (site code 000684)) has been restored as part of an EU LIFE project. The site consists of 2.5 ha of high bog and 20.4 ha of cutover, all of which, except for a broadleaf woodland fringe along the River Inny, was afforested in the 1970s. All the conifer plantations were recently clear-felled and restored by drain-blocking. It is bordered by open high bog to the north-east, by the River Inny to the west and by cutover bog grading into Lough Derravaragh to the south-east. The bedrock geology of both sites is carboniferous limestone. Turf cutting, invasive species, agriculture, as well as interactions with ground and surface water are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
002205	Wooddown Bog SAC	Within	Degraded raised bogs still capable of natural regeneration [7120]	Wooddown Bog SAC occurs within the larger raised bog system that is designated as Wooddown Bog NHA (000694). It is situated 5.0 km north-east of Mullingar in the townland of Wooddown, Co. Westmeath. The underlying geology is carboniferous limestone. Current landuse on the site consists of conservation management with the removal of conifer plantations and the blocking of drainage associated with these plantations, both on the high bog and on the cutover. This work was undertaken as part of the Coillte E.U. Life Project Demonstrating Best Practice in Raised Bog Restoration in Ireland. Active peat-cutting and drainage is occurring outside the south-western boundary and to the north-east of the SAC and there is a major drain running through the centre of the adjacent high bog. There is also some dumping around the site. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability. The site is being actively managed for conservation as part of the Coillte E.U. LIFE Project and most of the required restoration measures have already been carried out. However, some significant threats remain and an After-LIFE management plan is being developed for the future conservation management of the SAC. Turf cutting, invasive species, as well as interactions with ground and surface water are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected
002120	Lough Bane And Lough Glass SAC	0.8	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140] White-clawed Crayfish (Austropotamobius pallipes) [1092]	sites. This site is located on the Meath/Westmeath border, about 10 km south of Oldcastle. It comprises three lakes situated in a shallow valley. Lough Bane is by far the largest of the group, with the much smaller Lough Glass occurring immediately to the east and Lough Glass North to the north-west. The lakes occur at the headwaters of the River Deel, with the main outflow at the south-east end of Lough Bane. The outflow is not very substantial and partly overgrown with vegetation. The connection between Lough Glass and Lough Bane has now been severed and the flow from Lough Glass is diverted to the south-west. The water level has dropped over the years and has exposed soft marl along parts of the shore. Agriculture is the main threat or pressure identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
004065	Lough Sheelin SPA	1.8	Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Goldeneye (<i>Bucephala clangula</i>) [A067] Wetland and Waterbirds [A999	Lough Sheelin is a medium to large-sized lake, located on the border of Counties Cavan, Westmeath and Meath. It is a relatively shallow alkaline lake with a maximum depth of 14 m. The Inny River, a main tributary of the River Shannon, is the main outflow from the lake. Agriculture, forestry and leisure fishing are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
004017	Mongan Bog SPA	1.9	Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]	Mongan Bog is a midland raised bog of medium size situated immediately east of the monastic site of Clonmacnoise, Co. Offaly, and 12 km south of Athlone. It is situated in a basin, surrounded on part of its perimeter by high ground on mineral soil. Agriculture, transport infrastructure, peat extraction and sand/gravel extraction are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
000580	Mongan Bog SAC	2.5	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	Mongan Bog is a midland raised bog of medium size situated immediately east of the monastic site of Clonmacnoise, Co. Offaly, and 12 km south of Athlone. It is situated in a basin, surrounded on 95% of its perimeter by high ground on mineral soil. At two points in the north it shares a common boundary with Pilgrim's Road Esker SAC. Most of the bog is a Statutory Nature Reserve, established in 1987. The bog has been the subject of ongoing intensive research since 1972. Although there have been only low levels of disturbance in the recent past, the hydrology of the bog has been adversely affected by drainage, due mainly to the effects of domestic peat-cutting. The presence of algal mats in many of the pools indicates a serious lowering of water levels due to drainage. Burning is a further threat though there have been no serious fires in recent years. As most of the high bog lies within a Nature Reserve the future prospects for the site are good.

		l		Extraction, drainage, agriculture and on-site land use activities are the main threats or pressures identified by the NPWS in the
				standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
002203	Girley (Drewstown) Bog SAC	2.9	Degraded raised bogs still capable of natural regeneration [7120]	Girley (Drewstown) Bog SAC occurs within the larger raised bog system that is designated as Girley Bog NHA (001580). It is situated 5.5 km north of Athboy in the townland of Drewstown, Co. Meath. The site is part of a raised bog that includes both areas of high bog and cutover bog. It is bordered by open high bog on its northern and eastern margins, by agricultural land on its western margin and by a conifer plantation on cutover bog on its southern side. The underlying geology is carboniferous limestone.
				Current landuse on the site consists of conservation management with the removal of conifer plantations and the blocking of the drainage associated with these plantations, both on the high bog and on the cutover. However, active drains are still present on the northern and eastern boundaries of the SAC that are adversely impacting on its restoration and need to be blocked in consultation with other stakeholders. In addition, there have been fires on the adjacent bog and within the SAC causing some damage to the recovering vegetation. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability. There is also some dumping around the site.
				Invasive species, fire regime and human induced changes in hydraulic conditions are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
002201	Derragh Bog SAC	3.4	Degraded raised bogs still capable of natural regeneration [7120] Bog woodland [91D0]	Derragh Bog SAC includes most of the raised bog system known as Derragh Bog that occurs within Lough Kinale and Derragh Lough NHA (000985). The boundary in the west and south of the site is contiguous with the boundary of Lough Kinale and Derragh Lough SPA (site code 004061). It is a small raised bog situated 2.5 km east of Abbylara in County Longford in the townland of Derragh. This bog is an example of a floodplain raised bog that borders two lakes, Lough Kinale to the west and Derragh Lough to the south, the River Inny to the east and wet agricultural grassland to the north. To the west and south there is a full transition from high bog to cutover bog to semi-natural birch woodland, fen and swamp to Lough Kinale and Derragh Lough. The underlying geology of both lakes and bog is carboniferous limestone.
				Invasive species, fire regime and human induced changes in hydraulic conditions are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
001776	Pilgrim's Road Esker SAC	3.7	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]	Pilgrim's Road Esker SAC is a narrow esker ridge extending 2 km east from Clonmacnoise in Co. Offaly. The site is adjacent to the River Shannon Callows, to the north, and Mongan raised bog, to the south. The western area includes Bunthulla Hill (north of the road) and Hanging Hill (south of the road); the central area runs along both sides of the summit ridge before widening out eastwards to include a substantial area of esker grassland centred on the site of an old ring-fort.
				Agriculture, urbanisation, transport infrastructure and succession processes are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
000575	Ferbane Bog SAC	3.7	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]	Ferbane Bog is a relatively large, domed, raised bog located about 10 km east of Shannonbridge in Co. Offaly. It is underlain by low permeability Waulsortian limestone and clay-rich tills.
			Depressions on peat substrates of the Rhynchosporion [7150]	Drainage is extensive at this site and has caused significant drying out. Past peat cutting and some active peat-cutting have also speeded up water loss. However, although the high bog has suffered some water loss, it is still in restorable condition.
				Agriculture, turf cutting, forestry, drainage, hydrological interactions, urbanisation, transport infrastructure and succession processes are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
004061	Lough Kinale and Derragh Lough SPA	3.8	Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Wetland and Waterbirds [A999]	Lough Kinale is a relatively small lake that is situated immediately downstream of Lough Sheelin, both lakes being near the top of the catchment of the Inny River, a main tributary of the River Shannon. Derragh Lough, a much smaller system, is connected to Lough Kinale and the Inny River. The site is located on the border of Cos Cavan, Longford and Westmeath. This is a typical limestone system and is very shallow (maximum depth of Lough Kinale is c. 4 m). As with Lough Sheelin, the trophic status of the lake has varied greatly since the 1970s due to pollution. It was recently (1998-2000) classified as a highly eutrophic system. The lake was formerly an important Trout fishery.
				Agriculture. fisheries activities (bottom culture) and forestry are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
002341	Ardagullion Bog SAC	3.8	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]	Ardaguillion Bog is located 5 km north-east of Edgeworthstown, mainly in the townlands of Cloonshannagh (Coolamber Manor Demesne) and Ardaguillon in Co. Longford. The site comprises a raised bog that includes both areas of high bog and cutover bog. The site is bounded in the north-east by the local road running to Coolagherty.

			Depressions on peat substrates of the Rhynchosporion [7150]	Current land uses on the site include forestry, peat-cutting and agriculture. The forestry is found on a small section of high bog and adjoining cutover in the southwest of the site. Areas of cutover in the south and west of the site that were previously forested have only recently been clear-felled. Active peat-cutting is taking place in the north-west, east and south-east of the site. Two fields in the north of the site have been reclaimed for agriculture. Damaging activities associated with these land uses include drainage throughout the site and burning of the high bog. There is also evidence of old burning in the northern part of the high bog. All these activities have resulted in the loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability. There are no site-specific threats identified in the standard data form by the NPWS.
000576	Fin Lough (Offaly) SAC	4.4	Alkaline fens [7230] Geyer's Whorl Snail <i>(Vertigo geyeri)</i> [1013]	Fin Lough is a shallow limestone lake surrounded by a complex of wetland habitats; 7 km north-east of Shannonbridge in Co. Offaly. The name Fionn Loch, "White Lake", probably derives from the white colour of the lake bottom caused by marl deposits. It is a shallow lake, about 16 ha in extent (in winter) and bounded to the north and east by the Clonfinlough esker ridge, and to the south and west by Blackwater Bog, which is now largely cut-over. The lake and its surrounding wetland communities are arranged in distinct zones reflecting wetness and substrate. They include open water, reedswamp, tall sedge, alkaline fen, fen-bog transition, swamp woodland and bog. The transition from calcium-rich lake to reedbed, to fen, to bog is relatively intact in some areas, which is exceptional for this part of the country. Agriculture, modification to natural processes, hydrological interactions such as drainage, and urbanisation are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
000572	Clara Bog SAC	5.5	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150] Bog woodland [9100]	Clara Bog is situated some 2 km south of Clara village in Co. Offaly. Much of it is State-owned and designated a statutory Nature Reserve. Paths, tracks and walkways, agriculture, hydrological interactions, urbanisation, and fisheries activities are the main threats or pressures identified by the NPWS in the standard data form.
000581	Moyclare Bog SAC	6.1	Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	Moyclare Bog is a small raised bog situated 4 km west of Ferbane in Co. Offaly. Its mean height above sea level is 54 m. On the western edge of the bog, a low peat face with no perimeter drain lies adjacent to wet peaty pasture, which has a spring-line at its junction with mineral soil. The water from this spring disappears under the peat dome of the bog. The site occurs in close proximity to a number of important raised bogs close to the floodplain of the River Shannon. Agriculture, turf cutting, forestry, drainage, hydrological interactions, and urbanisation are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
000571	Charleville Wood SAC	6.4	Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0] Desmoulin's Whorl Snail (Vertigo moulinsiana) [1016]	Charleville Wood is a large Oak woodland surrounded by estate parkland and agricultural grassland located about 3 km south-west of Tullamore in Co. Offaly. The site, which is underlain by deep glacial deposits, includes a small lake with a wooded island, and a stream runs along the western perimeter. The woodland is considered to be one of very few ancient woodlands remaining in Ireland, with some parts undisturbed for at least 200 years. Recreational activities, fishing, poaching and the removal of vegetation are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
001625	Castlesampson Esker SAC	8.8	Turloughs [3180] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]	Castlesampson Esker is a complex site with esker, turlough and raised bog all found. The esker is the most westerly of an important group of eskers centred on Adrnacloon Hill in south-east Co. Roscommon, 9 km west of Athlone. It forms a steep-sided, crescent-shaped hill composed of glacial gravels, situated on the south side of a metalled road. Although gravel is being quarried all around the esker and gravel pits occur within the site, the esker ridge itself is largely intact and fairly undisturbed. Lying to the east of the esker is a raised bog, whilst to its west is a turlough. Removal of material such as gravel/clay is the only threat/pressure identified in the standard data form for the site. No other site-specific threats have been identified from the NPWS database of protected sites.
002339	Ballynamona Bog And Corkip Lough SAC	9.0	Turloughs [3180] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120]	Ballynamona Bog and Corkip Lough is situated approximately 9 km west of Athlone, mainly in the townlands of Skeanamuck, Carrowkeeran and Pollalaher, in Co. Roscommon. The site comprises a relatively small portion of what was once a large bog complex, and includes areas of high bog and cutover bog, and also the turlough, Corkip Lough.

			Depressions on peat substrates of the Rhynchosporion [7150] Bog woodland [91D0]	Current land use on the site consists of limited peat-cutting at the north-east and south-west of the site. There is a small area of commercial forestry at the east of the site. Some areas of cutover bog at the south have been reclaimed for agriculture. Damaging activities associated with these land uses include frequent burning. This recurrent burning is having a serious drying effect on the bog. Drainage, for the most part, is restricted to the cutover areas of the bog. These are all activities that have resulted in loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability. Urbanisation, invasive species, landfill, land reclamation and drying out, general and modification of hydrographic functioning, general are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
000448	Fortwilliam Turlough SAC	11.4	Turloughs [3180]	Fortwilliam Turlough is situated close to the eastern shore of Lough Ree, 6 km south of Lanesborough, in Co. Longford. The surrounding countryside is flat, with a thin cover of drift. The floor of the basin is at two levels, a lower central area with several lakes and ponds, and a higher surrounding area of till with scattered rocks, extending north-westwards into flat fields and woodland. There is a little surface flow into the basin and floodwater appears to be strongly calcareous. Threats to turloughs stem mainly from drainage and agricultural improvement. Fortwilliam seems largely unaffected by drainage, and standing water may persist throughout the summer. It is an oligotrophic site, which indicates that it has escaped significant nutrient input but renders it sensitive to damage should this occur. The turlough is grazed by cattle and sheep, but is undivided. Agriculture, ground water pollution, landfill, land reclamation and drying out, general and modification of hydrographic functioning, general are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
000611	Lough Funshinagh SAC	12.2	Turloughs [3180] Rivers with muddy banks with <i>Chenopodion rubri p.p. and Bidention p.p.</i> vegetation [3270]	Lough Funshinagh is located approximately 12 km north-west of Athlone, in Co. Roscommon. The lake, which is underlain by carboniferous limestone, is classified as a turlough because it fluctuates to a significant extent every year and occasionally dries out entirely (approximately two to three times every ten years). In most years, however, an extensive area of water persists. This is filled with vegetation, providing excellent breeding habitat for wildfowl, and the site is designated a Wildfowl Sanctuary. The lake is fed by springs and a small catchment to the west. It is mesotrophic in quality, with some marl (calcium carbonate) deposition, and is surrounded by pastures. Some of the major threats to lakes in Ireland arise from drainage and agricultural intensification. In the case of the latter, the application of fertiliser can lead to eutrophication and a general loss of species diversity. Lough Funshinagh is currently mesotrophic, but it has been described in the past as being full of vegetation. Thus, it may be that it has not been enriched significantly by agricultural run-off in recent times. There are localised eutrophic patches around the shores where grazing animals congregate, but the lake water is strikingly clear. There have been attempts at drainage in the past, most recently in 1990. As yet, this has resulted in little structural damage to the site. Agriculture and transport infrastructure are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
000216	River Shannon Callows SAC	12.6	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) [6410] Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis) [6510] Limestone pavements [8240] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] Otter (Lutra lutra) [1355]	The River Shannon Callows is a long and diverse site that consists of seasonally flooded, semi-natural, lowland wet grassland, along and beside the river between the towns of Athlone and Portumna. It is approximately 50 km long and averages about 0.75 km wide (reaching 1.5 km wide in places). Along much of its length the site is bordered by raised bogs (many, but not all, of which are subject to large-scale harvesting), esker ridges and limestone-bedrock hills. The soils grade from siltyalluvial to peat. This site has a common boundary, and is closely associated, with two other sites with similar habitats, River Suck Callows and Little Brosna Callows. The Shannon Callows are used for summer dry-stock grazing (mostly cattle, with some sheep and a few horses), and permanent hay meadow. About 30 ha is a nature reserve owned by voluntary conservation bodies. The River Shannon is used increasingly for recreational purposes with coarse angling and boating accounting for much of the visitor numbers. Intermittent and scattered damage to the habitats has occurred due to over-deepening of drains and peat silt deposition, water-skiing, ploughing and neglect of hay meadow (or reversion to pasture). However, none of these damaging activities can yet be said to be having a serious impact. Threats to the quality of the site may come from the siting of boating marinas in areas away from centres of population, fertilising of botanically-rich fields, the use of herbicides, reversion of hay meadow to pasture, neglect of pasture and hay meadow, disturbance of birds by boaters, anglers, birdwatchers and the general tourist. The maintenance of generally high-water levels in winter and spring benefits all aspects of the flora and fauna, but in this regard, summer flooding is a threat to breeding birds, and may cause neglect of farming.

				Forestry, agriculture, tourism, recreation and amenity, hydrological interactions and paths, tracks and trails are the main threats
				or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
004097	River Suck Callows SPA	13.0	Whooper Swan (<i>Cygnus cygnus</i>) [A038] Wigeon (<i>Anas penelope</i>) [A050] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Lapwing (<i>Vanellus vanellus</i>) [A142] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and Waterbirds [A999]	The River Suck Callows SPA is a linear, sinuous site comprising a section of the River Suck from Castlecoote, Co. Roscommon to its confluence with the River Shannon close to Shannonbridge, a distance of approximately 70 km along the course of the river. The river forms part of the boundary between Counties Galway and Roscommon. The site includes the River Suck itself and the adjacent areas of seasonally-flooded semi-natural lowland wet callow grassland. The River Suck is the largest tributary of the River Shannon. Agriculture, forestry, urbanisation, recreational activities and fisheries activities are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
004232	River Boyne and River Blackwater SPA	14.0	Kingfisher (<i>Alcedo atthis</i>) [A229]	The River Boyne and River Blackwater SPA is a long, linear site that comprises stretches of the River Boyne and several of its tributaries; most of the site is in Co. Meath, but it extends also into Cos Cavan, Louth and Westmeath. It includes the following river sections: the River Boyne from the M1 motorway bridge, west of Drogheda, to the junction with the Royal Canal, west of Longwood, Co Meath; the River Blackwater from its junction with the River Boyne in Navan to the junction with Lough Ramor in Co. Cavan; the Tremblestown River/Athboy River from the junction with the River Boyne at Kilnagross Bridge west of Trim to the bridge in Athboy, Co. Meath; the Stoneyford River from its junction with the River Boyne to Stonestown Bridge in Co. Westmeath; the River Deel from its junction with the River Boyne to Cummer Bridge, Co. Westmeath. The site includes the river channel and marginal vegetation. Urbanisation, transport infrastructure and human induced changes in hydraulic conditions are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of
002299	River Boyne And River Blackwater SAC	14.0	Alkaline fens [7230] Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] River Lamprey (Lampetra fluviatilis) [1099] Salmon (Salmo salar) [1106] Otter (Lutra lutra) [1355]	This site comprises the freshwater element of the River Boyne as far as the Boyne Aqueduct, the Blackwater as far as Lough Ramor and the Boyne tributaries including the Deel, Stoneyford and Tremblestown Rivers. These riverine stretches drain a considerable area of Meath and Westmeath, and smaller areas of Cavan and Louth. The underlying geology is carboniferous Limestone for the most part, with areas of Upper, Lower and Middle well represented. In the vicinity of Kells Silurian Quartzite is present while close to Trim are carboniferous Shales and Sandstones. There are many large towns adjacent to but not within the site, including Slane, Navan, Kells, Trim, Athboy and Ballivor. Fishing is a main tourist attraction on the Boyne and Blackwater and there are a number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. The Eastern Regional Fishery Board have erected fencing along selected stretches of the river as part of their salmonid enhancement programme. Parts of the river system have been arterially dredged. In 1969 an arterial dredging scheme commenced and disrupted angling for 18 years. The dredging altered the character of the river completely and resulted in many areas in very high banks. The main channel from Drogheda upstream to Navan was left untouched, as were a few stretches on the Blackwater. Ongoing maintenance dredging is carried out along stretches of the river system where the gradient is low. This is extremely destructive to salmonid habitat in the area. Drainage of the adjacent
				river systems also impacts on the many small wetland areas throughout the site. The River Boyne is a designated Salmonid Water under the E.U. Freshwater Fish Directive. Urbanisation, invasive species, human disturbance from recreational pressures particularly nautical activities, storm damage, succession processes, bridge works, and coastal defence works are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.
004139	Lough Croan Turlough SPA	14.0	Shoveler (<i>Anas clypeata</i>) [A056] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395] Wetland and Waterbirds [A999]	Situated approximately 6 km east of the River Suck in Co. Roscommon, Lough Croan Turlough is a linear wetland, aligned northwest/south-east, which lies in a flattish area of glacial till. It is split into two main parts - the east functions as a typical turlough, with a wet, reedy centre, while the west is a fen, floating in places, which also floods in winter. Agriculture is the only threat/pressure identified in the standard data form for the site. No other site-specific threats have been identified from the NPWS database of protected sites.
002162	River Barrow And River Nore SAC	14.0	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Reefs [1170] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330]	This site consists of the freshwater stretches of the Barrow and Nore River catchments as far upstream as the Slieve Bloom Mountains, and it also includes the tidal elements and estuary as far downstream as Creadun Head in Waterford. The site passes through eight counties – Offaly, Kildare, Laois, Carlow, Kilkenny, Tipperary, Wexford and Waterford. Major towns along the edge of the site include Mountmellick, Portarlington, Monasterevin, Stradbally, Athy, Carlow, Leighlinbridge, Graiguenamanagh, New Ross, Inistioge, Thomastown, Callan, Bennettsbridge, Kilkenny and Durrow. The larger of the many tributaries include the Lerr, Fushoge, Mountain, Aughavaud, Owenass, Boherbaun and Stradbally Rivers of the Barrow, and the Delour, Dinin, Erkina, Owveg, Munster, Arrigle and King's Rivers on the Nore.

Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Water courses of plain to montane levels with the Ranunculion fluitantis and *Callitricho-Batrachion* vegetation [3260]

European dry heaths [4030]

Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]

Petrifying springs with tufa formation (Cratoneurion) [7220]

Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]

Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]
Desmoulin's Whorl Snail (Vertigo moulinsiana) [1016]
Freshwater Pearl Mussel (Margaritifera margaritifera) [1029]

White-clawed Crayfish (Austropotamobius pallipes) [1092]
Sea Lamprey (Petromyzon marinus) [1095]
Brook Lamprey (Lampetra planeri) [1096]
River Lamprey (Lampetra fluviatilis) [1099]
Twaite Shad (Alosa fallax fallax) [1103]
Salmon (Salmo salar) [1106]
Otter (Lutra lutra) [1355]
Killarney Fern (Trichomanes speciosum) [1421]

Nore Pearl Mussel (Margaritifera durrovensis) [1990]

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

Urbanisation, invasive species, human disturbance from recreational pressures particularly nautical activities, storm damage, succession processes, bridge works, and coastal defense works are the main threats or pressures identified by the NPWS in the standard data form. No other site-specific threats have been identified from the NPWS database of protected sites.

List of all Qualifying Interests of SACs that have undergone Assessment including Summaries of Current Threats and Sensitivity to Effects

Qualifying Interests	Current threats to Qualifying Interests	Sensitivity of Qualifying Interests
Active raised bogs [7110]	Drainage; burning; peat extraction; overgrazing; afforestation; erosion; and climate change.	Surface and groundwater dependent. Low sensitivity to hydrological changes. Erosion, land-use changes.
Alkaline fens [7230]	Land reclamation, peat extraction; afforestation; erosion and landslides triggered by human activity; drainage; burning and infrastructural development.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management.
Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]	Inappropriate grazing levels; invasive species; and clearance for agriculture or felling for timber.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Changes in management.
Twaite Shad (Alosa fallax fallax) [1103]	Habitat quality, particularly at spawning sites is the most notable threat to this species.	Changes in management. Changes in nutrient or base status. Moderately sensitive to hydrological change.
Alpine and Boreal heaths [4060]	Abandonment; overgrazing; burning; outdoor recreation; quarries; communication networks; and wind farm developments.	Changes in management. Changes in nutrient or base status. Moderately sensitive to hydrological change.
Annual vegetation of drift lines [1210]	Grazing; sand and gravel extraction; recreational activities; coastal protection works.	Overgrazing and erosion. Changes in management.
Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330]	Overgrazing; erosion; invasive species, particularly common cordgrass (<i>Spartina anglica</i>); infilling and reclamation.	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion.
White-clawed Crayfish (Austropotamobius pallipes) [1092]	Poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.	Invasive species, disease, surface water dependent. Highly sensitive to hydrological change. Very highly sensitive to pollution.
Blanket bogs (* if active bog) [7130]	Land reclamation, peat extraction; afforestation; erosion and landslides triggered by human activity; drainage; burning and infrastructural development.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management.
Bog woodland [91D0]	The introduction of alien species; sub-optimal grazing patterns; general forestry management; increases in urbanisation and human habitation adjacent to oak woodlands; and the construction of communication networks through the woodland.	Changes in management. Changes in nutrient or base status. Introduction of alien species.
Calaminarian grasslands of the (Violetalia calaminariae) [6130]	Land reclamation, afforestation; drainage; and infrastructural development.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management.
Calcareous rocky slopes with chasmophytic vegetation [8210]	Overgrazing; extractive industries; recreational activities and improved access.	Erosion, overgrazing and recreation.
Degraded raised bogs still capable of natural regeneration [7120]	Drainage; burning; peat extraction; overgrazing; afforestation; erosion; and climate change.	Surface and groundwater dependent. Low sensitivity to hydrological changes. Erosion, land-use changes.
Depressions on peat substrates of the Rhynchosporion [7150]	Drainage; burning; peat extraction; overgrazing; afforestation; erosion; and climate change.	Surface and groundwater dependent. Low sensitivity to hydrological changes. Erosion, land-use changes.
Slender Green Feather-moss (Drepanocladus vernicosus) [1393]	Pollution, land use, climate change and invasive species.	Erosion, overgrazing and recreation.
Dunes with Salix repens ssp. argentea (Salicion arenariae) [2170]	Agricultural improvement; overgrazing and inappropriate grazing; forestry; recreational activity.	Overgrazing, and erosion. Changes in management.
Embryonic shifting dunes [2110]	Natural erosion processes exacerbated by recreation and sand extraction. Coastal protection interfering with natural processes.	Overgrazing, and erosion. Changes in management.
Estuaries [1130]	Pollution, fishing /aquaculture and habitat quality.	Inappropriate development, changes in turbidity
Marsh Fritillary (Euphydryas aurinia) [1065]	Declines in habitat quality lead to species decline.	Habitat management; land use change and drainage.
European dry heaths [4030]	Afforestation, overburning, over-grazing, under-grazing and bracken invasion.	Moderately sensitive to hydrological change. Changes in management. Changes in nutrient status.
Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]	Recreation; overgrazing and inappropriate grazing: non-native plant species, particularly sea buckthorn (<i>Hippophae rhamnoides</i>).	Overgrazing, and erosion. Changes in management.
Grey Seal (Halichoerus grypus) [1364]	Distance to human activities, accidental entanglement in fishing gear competition for prey resources, illegal killing, pollution and habitat degradation.	Prey availability, reduction in available habitat and water quality.
Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. [3140]	Hydrological changes, afforestation; waste water; invasive alien species; sport and leisure activities.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
Humid dune slacks [2190]	Agricultural improvement; overgrazing and inappropriate grazing; forestry; recreational activity.	Overgrazing, and erosion. Changes in management. Sensitive to hydrological change.
River Lamprey (Lampetra fluviatilis) [1099]	Channel maintenance, barriers, passage obstruction, gross pollution and specific pollutants.	Surface water dependent Highly sensitive to hydrological change.
Brook Lamprey (Lampetra planeri) [1096]	Channel maintenance, barriers, passage obstruction, gross pollution and specific pollutants.	Surface water dependent Highly sensitive to hydrological change.

Limestone pavements [8240]	Overgrazing; extractive industries; recreational activities and improved access.	Erosion, overgrazing and recreation.
Otter (Lutra lutra) [1355]	Decrease in water quality: Use of pesticides; fertilization; vegetation removal; professional fishing (including lobster pots and fyke nets); unting; poisoning; sand and gravel extraction; mechanical removal of peat; urbanised areas; human habitation; continuous urbanization; drainage; management of aquatic and bank vegetation for drainage purposes; and canalization or modifying structures of inland water course.	Surface and marine water dependent. Moderately sensitive to hydrological change. Sensitivity to pollution.
Freshwater Pearl Mussel (Margaritifera margaritifera) [1029]	Poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.	Surface water dependent. Highly sensitive to hydrological change. Very highly sensitive to pollution.
Mediterranean salt meadows (Juncetalia maritimi) [1410]	Over-grazing by cattle or sheep; infilling and reclamation.	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Coastal development and reclamation.
Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410]	Agricultural intensification; drainage; abandonment of pastoral systems.	Surface and groundwater dependent. Moderately sensitive to hydrological change. Changes in management. Changes in nutrient status.
Mudflats and sandflats not covered by seawater at low tide $\left[1140\right]$	Aquaculture, fishing, bait digging, removal of fauna, reclamation of land, coastal protection works and invasive species, particularly cord-grass; hard coastal defence structures; sea-level rise.	Surface and marine water dependent. Moderately sensitive to hydrological change. Moderate sensitivity to pollution. Changes to salinity and tidal regime. Coastal development.
Natural dystrophic lakes and ponds [3160]	Nutrient alterations; management shifts in the associated peatland habitat, afforestation; waste water; invasive alien species; sport and leisure activities.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution
Natural eutrophic lakes with <i>Magnopotamion or Hydrocharition</i> - type vegetation [3150]	Hydrological changes, afforestation; waste water; invasive alien species; sport and leisure activities.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
Northern Atlantic wet heaths with Erica tetralix [4010]	Reclamation, afforestation and burning; overstocking; invasion by non-heath species; exposure of peat to severe erosion.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management.
Old sessile oak woods with Ilex and Blechnum in the British Isles \cite{black} [91A0]	The introduction of alien species; sub-optimal grazing patterns; general forestry management; increases in urbanisation and human habitation adjacent to oak woodlands; and the construction of communication networks through the woodland.	Changes in management. Changes in nutrient or base status. Introduction of alien species.
Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [3130]	Nutrient enrichment; afforestation; waste water; invasive alien species; sport and leisure activities.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3110]	Nutrient enrichment; afforestation; waste water; invasive alien species; sport and leisure activities.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
Perennial vegetation of stony banks [1220]	Disruption of the sediment supply, owing to the interruption of the coastal processes, caused by developments such as car parks and coastal defence structures including rock armour and sea walls. The removal of gravel.	Marine water dependent. Low sensitivity to hydrological changes. Coastal development, trampling from recreational activity and gravel removal.
Petalwort (<i>Petalophyllum ralfsii</i>) [1395]	There are no significant impacts affecting this species.	None identified.
Petrifying springs with tufa formation (<i>Cratoneurion</i>) [7220]	Ground water interactions, on site management activities.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
Sea Lamprey (Petromyzon marinus) [1095]	Barriers to upstream migration (e.g. weirs), which limit access to spawning beds and juvenile habitat are main threats to this species.	Marine water dependent. Low sensitivity to hydrological changes. Coastal development, trampling from recreational activity.
Reefs [1170]	Professional fishing; taking for fauna; taking for flora; water pollution; climate change; and change in species composition.	Sensitive to disturbance and pollution.
Salicornia and other annuals colonising mud and sand [1310]	Invasive Species; erosion and accretion.	Marine water dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Infilling, reclamation, invasive species.
Salmon (Salmo salar) [1106]	Marine survival rates are of concern for the populations.	Disease, parasites and barriers to movement.
Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]	Land reclamation, afforestation; drainage; and infrastructural development.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Inappropriate management.
Transition mires and quaking bogs [7140]	Drainage; burning; peat extraction; overgrazing; afforestation; erosion; and climate change.	Surface and groundwater dependent. Low sensitivity to hydrological changes. Erosion, land-use changes.
Killarney Fern (Trichomanes speciosum) [1421]	Threatened by habitat loss, deliberate collection, encroachment of invasive or vigorous species, or indirectly by water pollution, removal of woodland or alteration of watercourses.	Land use management and direct impacts.
Turloughs [3180]	Nutrient enrichment; afforestation; waste water; invasive alien species; sport and leisure activities.	Surface and groundwater dependant. Highly sensitive to hydrological changes. Highly sensitive to pollution.
Geyer's Whorl Snail (Vertigo geyeri) [1013]	Loss of riverside and canalside habitat; exploitation of esker sites and drainage of wetlands, and sheep grazing and overexploitation of dune sites.	Groundwater dependent. Highly sensitive to hydrological changes.

Desmoulin's Whorl Snail (Vertigo moulinsiana) [1016]	Loss of riverside and canalside habitat; exploitation of esker sites and drainage of wetlands, and sheep grazing and overexploitation of dune sites.	Groundwater dependent. Highly sensitive to hydrological changes.
Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]	Eutrophication; overgrazing, excessive fertilisation; afforestation; and the introduction of invasive alien species.	Surface and groundwater dependent. Highly sensitive to hydrological changes. Highly sensitive to pollution.
White-clawed crayfish (Austropotamobius pallipes) [1092]	Poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.	Surface water dependent. Highly sensitive to hydrological change. Very highly sensitive to pollution.
Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]	Agricultural intensification; drainage; abandonment of pastoral systems.	Surface and groundwater dependent. Moderately sensitive to hydrological change. Changes in management. Changes in nutrient status.
Lowland hay meadows (<i>Alopecurus pratensis, Sanguisorba officinalis</i>) [6510]	Agricultural intensification; drainage; abandonment of pastoral systems.	Surface and groundwater dependent. Moderately sensitive to hydrological change. Changes in management. Changes in nutrient status.
Rivers with muddy banks with Chenopodion rubri p.p. and Bidention p.p. vegetation [3270]	Aquaculture, fishing, bait digging, removal of fauna, reclamation of land, coastal protection works and invasive species, particularly cord-grass; hard coastal defence structures; sea-level rise.	Surface and marine water dependent. Moderately sensitive to hydrological change. Moderate sensitivity to pollution. Changes to salinity and tidal regime. Coastal development.

List of all Special Conservation Interest of SPAs that have undergone Assessment including Summaries of Current Threats and Sensitivity to Effects

Special Conservation Interests			Vulnerabilities of Special Conservation Interests
Whooper Swan (<i>Cygnus cygnus</i>) [A038] Pochard (<i>Aythya ferina</i>) [A059] Tufted Duck (<i>Aythya fuligula</i>) [A061] Coot (<i>Fulica atra</i>) [A125] Wigeon (<i>Anas penelope</i>) [A050] Teal (<i>Anas crecca</i>) [A052] Shoveler (<i>Anas clypeata</i>) [A056] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) [A395]	Little Grebe (<i>Tachybaptus ruficollis</i>) [A004] Mallard (<i>Anas platyrhynchos</i>) [A053] Common Scoter (<i>Melanitta nigra</i>) [A065] Goldeneye (<i>Bucephala clangula</i>) [A067] Lapwing (<i>Vanellus vanellus</i>) [A142] Common Tern (<i>Sterna hirundo</i>) [A193]	Corncrake (<i>Crex crex</i>) [A122] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Great Crested Grebe (<i>Podiceps cristatus</i>) [A005] Kingfisher (<i>Alcedo atthis</i>) [A229]	 Bird species are particularly vulnerable to direct disturbance due to noise and/or vibration. These effects are localised, and disturbance effects are foreseen to be low at distances beyond 2km. Direct habitat loss is a serious concern for bird species, as well as the reduction in habitat quality. Habitat degradation could occur through effects such as local enrichment due to agricultural practices or damage to habitat through activities such as trampling. Prey species diversity and availability is a key element of species conservation. Community dynamics and ecosystem functionality are complex concepts and require site specific information. The site synopsis and conservation objectives for the SPAs identified within the ZOI were used to identify any specific prey sensitivities. Availability of nesting/roosting habitat. Vegetation composition, structure and functionality.
Wetland and Waterbirds [A999]			Direct land take is a common vulnerability to all sites; as well as significant water quality effects. The conservation objective of all SPAs designated for Wetland and Waterbirds is to maintain the favourable conservation condition of the wetland habitat as a resource for the regularly-occurring migratory waterbirds using it.

Appendix II Relationship Other Plans and Programmes

Relationship Other Plans and Programmes	Summary of high-level aim/ purpose/ objective	Relevance to the Plan
Ireland 2040 - Our Plan, the National Planning Framework, (replacing the National Spatial Strategy 2002-2020) and the National Development Plan (2018-2027)	 The National Planning Framework is the Government's high-level strategic plan for shaping the future growth and development of to the year 2040. It is a framework to guide public and private investment, to create and promote opportunities for people, and to protect and enhance the environment - from villages to cities, and everything around and in between. The National Development Plan sets out the investment priorities that will underpin the successful implementation of the new National Planning Framework. This will guide national, regional and local planning and investment decisions in Ireland over the next two decades, to cater for an expected population increase of over 1 million people. 	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Infrastructure and Capital Investment Plan (2016-2021)	• €27 billion multi-annual Exchequer Capital Investment Plan, which is supported by a programme of capital investment in the wider State sector, that over the period 2016 to 2021 will help to lay the foundations for continued growth in Ireland.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Draft Grid Implementation Plan 2017-2022	EirGrid's mission is to develop, maintain and operate a safe, secure, reliable, economical and efficient transmission system for Ireland.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Strategy for the Future Development of National and Regional Greenways (2018)	 The objective of this Strategy is to assist in the strategic development of nationally and regionally significant Greenways in appropriate locations constructed to an appropriate standard in order to deliver a quality experience for all Greenways users. It also aims to increase the number and geographical spread of Greenways of scale and quality around the country over the next 10 years with a consequent significant increase in the number of people using Greenways as a visitor experience and as a recreational amenity. 	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Strategic Plan for Aquaculture Development (2014- 2020)	Vision: "Aquaculture in RC is economically, socially and ecologically sustainable, with a developed infrastructure, strong human potentials and an organized market. The consumption of aquaculture products is equal or above EU average, while the technological development of the sector is among the best in the EU."	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Construction 2020, A Strategy for a Renewed Construction Sector	 Construction 2020 sets out a package of measures agreed by the Government and is aimed at stimulating activity in the building industry. The Strategy aims both to increase the capacity of the sector to create and maintain jobs, and to deliver a sustainable sector, operating at an appropriate level. It seeks to learn the lessons of the past and to ensure that the right structures and mechanisms are in place so that they are not repeated. 	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Marine Spatial Plan for Ireland (in/pending preparation)	It is intended that the Marine Spatial Plan will be finalised in 2020, and forwarded to the European Commission at that time, ahead of the due date for submission by Member States of their plans in March 2021.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Tourism Action Plan 2019-2021	The Tourism Action Plan 2019-2021 sets out actions that the Tourism Leadership Group has identified as priorities to be progressed between now and 2021 in order to maintain sustainable growth in overseas tourism revenue and employment.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Irish Water's Water Services Strategic Plan 2015 and associated Proposed Capital Investment Plan (2014-2016)	This Water Services Strategic Plan sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. It details current and future challenges that affect the provision of water services and identifies the priorities to be tackled in the short and medium term.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Food Harvest 2020	Food Harvest 2020 is a roadmap for the Irish food industry, as it seeks to innovate and expand in response to increased global demand for quality foods. It sets out a vision for the potential growth in agricultural output after the removal of milk quotas.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Rural Development Programme	The National Rural Development Programme, prepared by the Department of Agriculture, Fisheries and Food, sets out a national programme based on the EU framework for rural development and prioritises improving the competitiveness of agriculture, improving the environment and improving the quality of life in rural areas	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.

Relationship Other Plans and	Summary of high-level aim/ purpose/ objective	Relevance to the Plan
Programmes	January of mg. 10101 anny purpose, objective	reservance to the Fight
Food Wise 2025 (DAFM)	Food Wise 2025 sets out a ten-year plan for the agri-food sector. It underlines the sector's unique and special position within the Irish economy, and it illustrates the potential that exists for this sector to grow even further.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Cycle Network Scoping Study 2010	 Outlines objectives and actions aimed at developing a strong cycle network in Ireland Sets out 19 specific objectives, and details the 109 actions, aimed at ensuring that a cycling culture is developed 	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
National Policy Framework for Alternative Fuels Infrastructure for Transport in Ireland 2017 to 2030	 This National Policy Framework on Alternative Fuels Infrastructure for Transport represents the first step in communicating our longer-term national vision for decarbonising transport by 2050, the cornerstone of which is our ambition that by 2030 all new cars and vans sold in Ireland will be zero-emissions capable. By 2030 it is envisaged that the movement in Ireland to electrically-fueled cars and commuter rail will be well underway, with natural gas and biofuels developing as major alternatives in the freight and bus sectors. Outlines objectives and actions aimed at developing a strong cycle network in Ireland 	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Regional Economic and Spatial Strategies, replacing Regional Planning Guidelines [in preparation] National Policy Framework for Alternative Fuels Infrastructure for Transport in Ireland 2017 to 2030	 Regional Planning Guidelines (RPGs) provide long-term strategic planning frameworks and will be replaced by Regional Spatial and Economic Strategies (RSESs). The Regional Spatial and Economic Strategies will provide a long-term regional level strategic planning and economic framework in support of the implementation of the National Planning Framework. This National Policy Framework on Alternative Fuels Infrastructure for Transport represents the first step in communicating our longer-term national vision for decarbonising transport by 2050, the cornerstone of which is our ambition that by 2030 all new cars and vans sold in Ireland will be zero-emissions capable. By 2030 it is envisaged that the movement in Ireland to electrically-fueled cars and commuter rail will be well underway, with natural gas and biofuels developing as major alternatives in the freight and bus sectors. 	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management. Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
NPWS Conservation Plans and/or Conservation Objectives for SACs and SPAs	Management planning for nature conservation sites has a number of aims. These include: To identify and evaluate the features of interest for a site To set clear objectives for the conservation of the features of interest To describe the site and its management To identify issues (both positive and negative) that might influence the site To set out appropriate strategies/management actions to achieve the objectives	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Regional Economic and Spatial Strategies	The Regional Spatial and Economic Strategies will provide a long-term regional level strategic planning and economic framework in support of the implementation of the National Planning Framework.	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Local Economic and Community Plans (LECPs), including Westmeath LECP 2016-2021	The overarching vision for each LECP is: "to promote the well-being and quality of life of citizens and communities "Management planning for nature conservation sites has a number of aims. These include: To identify and evaluate the features of interest for a site To set clear objectives for the conservation of the features of interest To describe the site and its management To identify issues (both positive and negative) that might influence the site To set out appropriate strategies/management actions to achieve the objectives	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management.
Westmeath Tourism Strategy 2016- 2020	a strategy designed to deliver one common goal for 2020 and beyond – to develop Westmeath as a first-choice high quality destination that provides an authentic and memorable holiday experience	Implementation of the Plan needs to comply with all environmental legislation and align with and cumulatively contribute towards – in combination with other users and bodies and their plans etc. – the achievement of the objectives of the regulatory framework for environmental protection and management



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