Bord na Móna

Derrybrat Bog, Co. Offaly

Screening for Appropriate Assessment

January 2022

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Quality Assurance

The findings outlined within this report and the data we have provided are to our knowledge true and express our bona fide professional opinions. This report has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) good practice guidelines. Where pertinent CIEEM Guidelines used in the preparation of this report include the *Guidelines for Ecological Report Writing* (CIEEM, 2017a), *Guidelines for Preliminary Ecological Appraisals* (CIEEM, 2017b) and *Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine*, (CIEEM, 2019). CIEEM Guidelines include model formats for Preliminary Ecological Appraisal and Ecological Impact Assessment. Also, where pertinent, evaluations presented herein take cognisance of recommended Guidance from the EPA such as *Draft Guidelines on the information to be contained in Environmental Impact Assessment Reports* (EPA, 2017), and in respect of European sites, *Managing Natura 2000 sites. The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC* (European Commission, 2018).

Due cognisance has been given at all times to the provisions of the *Wildlife Act, 1976,* the *Wildlife (Amendment) Act, 2000*, the *European Union (Natural Habitats) Regulations. SI 378/2005*, the *European Communities (Birds and Natural Habitats) Regulations 2011,* EU Regulation on Invasive Alien Species under *EU Regulation 1143/2014*, the EU Birds *Directive 2009/147/EC* and *Habitats Directive 92/43/EEC*.

No method of assessment can completely remove the possibility of obtaining partially imprecise or incomplete information. Any limitation to the methods applied or constraints however are clearly identified within the main body of this document.

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Title		Bord na Móna Derrybrat Bog, Co Offaly – Stage 1: Screening for Appropriate Assessment		

Notice

This report was produced by INIS Environmental Consultants Ltd. (INIS) on behalf of Bord na Móna, the client, for the specific purpose of the proposed rehabilitation at Bord na Móna Derrybrat Bog, Co. Offaly, with all reasonable skill, care and due diligence within the terms of the contract with the client, incorporating our terms and conditions and taking account of the resources devoted to it by agreement with the client.

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1. INTRODUCTION

This Screening for Appropriate Assessment Report has been prepared by Inis Environmental Consultants Ltd. (INIS) and contains information which will facilitate the Competent Authority in establishing whether the proposed works at Derrybrat Bog, Co. Offaly, will require Appropriate Assessment.

This Screening for Appropriate Assessment Report has been prepared with regard to:

- EU Habitats Directive (92/43/EEC);
- EU Birds Directive (Council Directive (2009/147/EC);
- the Part XAB of the Planning and Development Act 2000;
- European Communities (Birds and Natural Habitats) Regulations 2011 (as amended);
- 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, 2001);
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government (DoEHLG, 2010); and
- Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats Directive' 92/43/EEC, (European Commission, 2018).

1.1. Appropriate Assessment Process

Appropriate Assessment is the process through which the possible nature conservation implications of any plan or project on the Natura 2000 site network is considered by a Competent Authority, before a decision is made to allow that plan or project to proceed.

1.1.1. Stages of the Appropriate Assessment Process

Appropriate Assessment involves a number of steps and tests that are applied using a stage-by-stage approach. Each step or stage in the assessment process precedes and provides a basis for other steps. The four stages in an Appropriate Assessment (AA) are further described below.

Guidance on the Appropriate Assessment (AA) process was produced by the European Commission in 2002, which was subsequently developed into guidance specifically for Ireland by the Department of Environment, Heritage and Local Government (DoEHLG) (2010). These guidance documents identify a staged approach to conducting an AA, as shown in **Figure 1.1**.

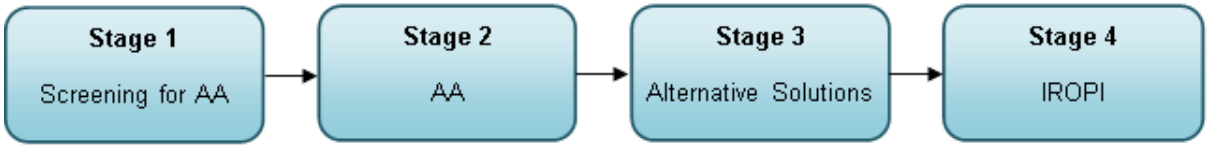

Figure 1.1: The Appropriate Assessment Process (from: Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities, DoEHLG, 2010).

1.1.1.1. Stage 1 – Screening for AA

This stage examines the likely effects of a project either alone or in combination with other projects upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant.

1.1.1.2. Stage 2- Appropriate Assessment

In this stage, the impact of the project on the integrity of the Natura 2000 site is considered with respect to the conservation objectives of the site and to its structure and function. Mitigation measures should be applied to the point where no adverse impacts on the site(s) remain.

1.1.1.3. Stage 3 – Alternative Solutions

Should the Appropriate Assessment determine that adverse impacts are likely upon a Natura 2000 site, this stage examines alternative ways of implementing the project that, where possible, avoid these adverse impacts. For the avoidance of doubt, no reliance is placed on Stage 3.

1.1.1.4. Stage 4 – IROPI

Assessment where no alternative solutions exist and where adverse impacts remain: where imperative reasons of overriding public interest (IROPI) exist, an assessment to consider whether compensatory measures will or will not effectively offset the damage to the Natura site will be necessary. European case law highlights that consideration must be given to alternatives outside the project area in carrying out the IROPI test. It is a rigorous test which projects are generally considered unlikely to pass.

2. DESCRIPTION OF THE PROPOSED REHABILITATION

2.1. Location of the Proposed Rehabilitation

The proposed rehabilitation is located at Derrybrat Bog which is part of the Boora Bog group, located approximately 6.3km southwest of Cloghan, Co. Offaly. The Silver River flows northward outside the western site boundary, with the Grand Canal located over 3km to the north of the site.

The Derrybrat site is considered to be comprised of a mosaic of habitats (see **Figure 2.1**), predominantly consisting of: shallow peat cutaway bog (PB4), with peat depths of 0.5-1.5m; partial commercial conifer forestry (WD4) planted by Coillte; and bordered by agricultural grassland (GA1) (habitat codes after Fossitt, 2000). The site is considered to be suited to wetland development (Bord na Móna, 2021).

2.2. Description of the Proposed Rehabilitation

Derrybrat Bog has been drained and extracted for peat production from the 1950s to 2016, with some rehabilitation work, namely drain-blocking, undertaken in 2018. Following the cessation of peat harvesting activities, Bord na Móna are required to undertake rehabilitation work on Derrybrat Bog as part of the conditions of their Integrated Pollution Control (IPC) Licence (P0500-01) which is regulated by the Environmental Protection Agency (EPA). The proposed rehabilitation consists of the enhanced rehabilitation and decommissioning as part of Bord na Móna's Peatlands Climate Action Scheme (PCAS), which is overseen by the National Parks and Wildlife Service (NPWS). This enhanced rehabilitation seeks to go beyond the requirements of the IPC licence to stabilise emissions from the site and offer increased benefits for reduced carbon emissions and biodiversity conservation through the formation of wetland and intensive re-wetting (**Appendix A**). Overall, the objective of the proposed rehabilitation is to achieve environmental stabilisation through the stabilisation of emissions to air and water. This means developing habitats and vegetation back onto the bare peat, and minimising impacts to downstream.

The bog was drained in the past to allow peat production. Better results for water quality improvements, climate action, the reduction of carbon emissions, and biodiversity are achieved when the remaining peat is re-wetted. This means drain-blocking and other measures to raise water levels to the surface of the bog and to encourage the natural colonisation of vegetation.

The proposed rehabilitation will be planned by ecologists, hydrologists, and engineers. Works will be undertaken between April 2022 and October 2022 inclusive (during normal working hours of 8am to 5pm) and no works will be undertaken in the winter months due to issues associated with working in wetter conditions at this time. Proposed works will consist of the following:

- Wetland creation and intensive re-wetting, to slow water movement across the site, minimising silt contamination;
- Regular and targeted filed drain blocking using a dozer/excavator (forming three peat barriers every 100m), blocking of outfalls, and managing water levels with overflow pipes to raise surface water levels, support vegetation growth, and enhance conditions for associated species;
- More intensive drain blocking (7/10m) will be used to manage overflows;

- Realignment of piped drainage;
- Establishing berms to control and retain water levels;
- Fertiliser application, to support vegetation growth;
- Continued use, inspection, and maintenance of silt ponds, to improve water quality;
- Modifying water levels at outfalls to change and control water levels over time, slowing the movement of water through the bog;
- One existing outfall to the northwest of the site will continue to be used for water leaving the site;
- A second existing outfall to the west of the site will be blocked and water will be conveyed through and existing silt pond towards the outfall to the northwest;
- Boundary drains will be left unblocked to prevent negative effects on adjacent lands. Boundary drains will also be observed and recorded to determine if they are functioning and whether upgrade works, in the form of relevant modifications, are required;
- Decommissioning of silt ponds, to be either de-watered, left in situ, or infilled, when they are no longer required;
- Quarterly site monitoring, to be reduced to bi-annually after two years, to assess the condition of silt ponds and status of rehabilitation, biodiversity ecosystems, and carbon emissions; and
- Water quality parameters monitoring for two years.

It is important to note the monitoring actions described above are not intended to prevent negative effects to European sites, but to gauge the rehabilitation measures success for the Derrybrat Bog and, if required, to plan for further rehabilitation measures.

Decommissioning of works will be conducted in line with condition 10.1 of the IPC License. This will be achieved by "identifying and quantifying any mechanical and infrastructural resources that were installed in the bog to enable the development and production operation at the site. This list is then refined to identify any items that would be deemed as possibly resulting in environmental pollution, should they not be removed". Resources monitored include equipment, waste material, unused raw materials.

In addition, a decommissioning plan has been established, consisting of the clean-up of the bog and the cleaning of silt ponds. As part of decommissioning, waste shall be conveyed to a waste contractor, while adverse environmental effects will be avoided in the transportation of waste. A record relating to waste management will also be kept for inspection purposes.

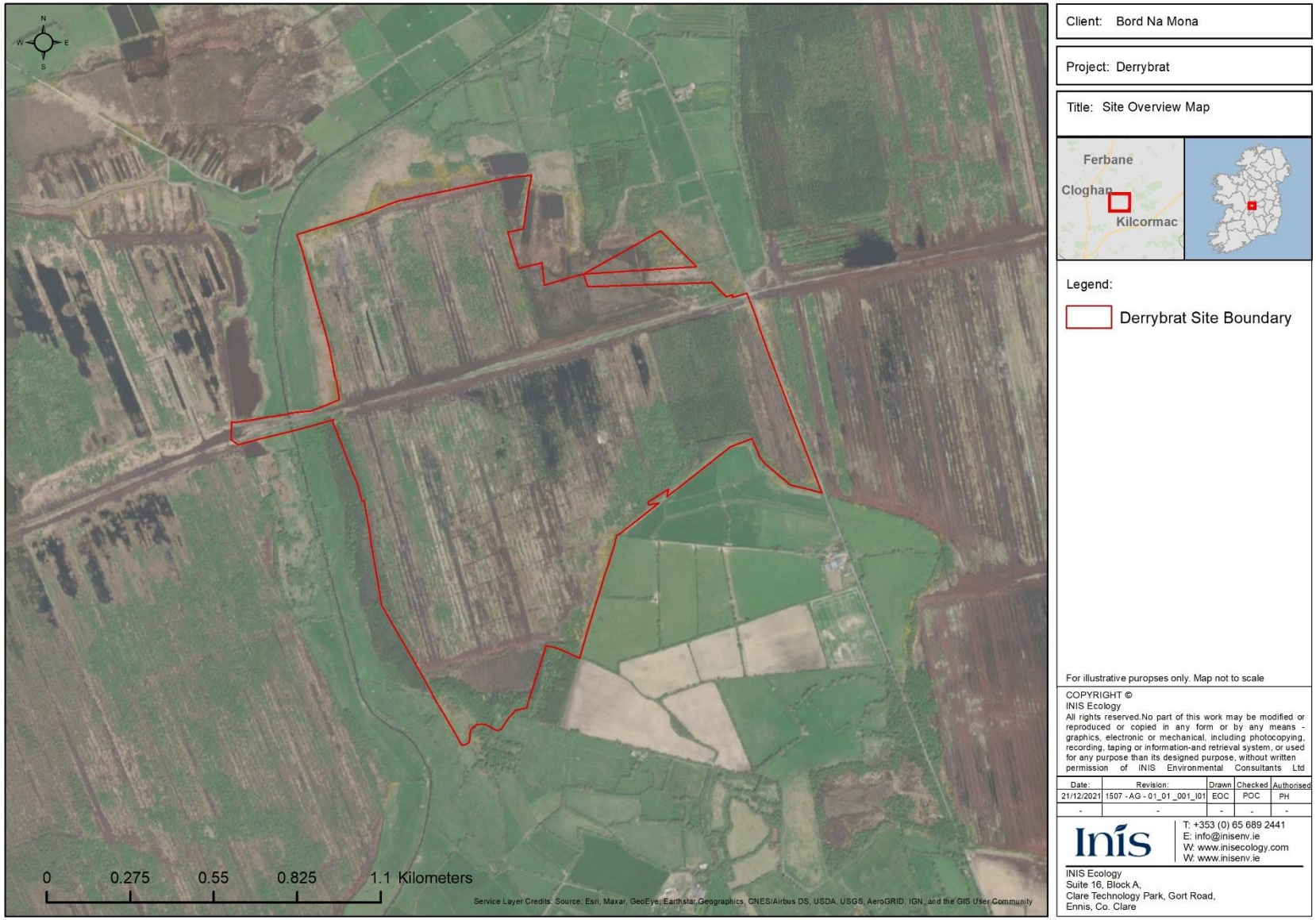

Figure 2.1: Site overview map of the proposed rehabilitation at Derrybrat Bog, Co. Offaly.

3. METHODOLOGY

3.1. Appropriate Assessment Guidance

EU and national guidance exist in relation to Member States' fulfilling their requirements under the EU Habitats Directive, with particular reference to Article 6(3) and 6(4) of that Directive. The methodology followed in relation to this AA has had regard to the following guidance:

- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of Environment, Heritage and Local Government (DoEHLG, 2010);
- Communication from the Commission on the Precautionary Principle (European Commission, 2000);
- Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (known as MN2000), Office for Official Publications of the European Communities, Luxembourg (European Commission, 2018);
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Brussels (European Commission, 2001);
- Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the Commission (European Comission, 2007);
- Nature and biodiversity cases: Ruling of the European Court of Justice (European Commission, 2006);
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (European Commission, 2013); and
- Article 6 of the Habitats Directive: Rulings of the European Court of Justice (Sundseth and Roth, 2014).
- Practice Note PN01: Appropriate Assessment Screening for Development Management. OPR (2021).

3.2. Ecological Data

3.2.1. Desk Study

A desk study was completed to assess the potential for all Qualifying Interests (QI) and Special Conservation Interests (SCI) of European sites, given their ecological requirements identified by NPWS (NPWS, 2019a, b, c). SCI birds and mobile QI species can travel many kilometers from their core areas, and the desk study assessed the potential presence of such species beyond the European sites for which they are QIs/SCIs. The desk study had particular regard to the following sources:

- Tabulated lists for all European sites in Ireland of SCIs and QIs, obtained through NPWS[1];
- Information on ranges of mobile QI populations in Volume 1 of NPWS' Status of EU Protected Habitats and Species in Ireland (NPWS, 2019a,2019b,2019c), and associated digital shapefiles;

[1] *Available at https://www.npws.ie/protected-sites. Accessed in December 2021.*

- Mapping of European site boundaries and Conservation Objectives (CO) for relevant sites and beyond, as relevant, available online from the NPWS[1];
- Distribution records for QI and SCI species of European sites held online by the National Biodiversity Data Centre (NBDC)[2];
- Review of sensitive biodiversity receptors on the site and environs via the Environmental Sensitivity Mapping Tool[3];
- Details of QIs/SCIs of European sites within the National Biodiversity Action Plan 2017-2021 (DoCHG, 2017); and
- Data including surface and ground water quality status, and river catchment boundaries available from the online database of the Environmental Protection Agency (EPA)[4];
- Information on groundwater aquifers, recharge, and vulnerability available from the online database of Geological Survey Ireland (GSI)[5];
- Boundaries for catchments with confirmed or potential Freshwater Pearl Mussel (FWPM) *Margaritifera margaritifera* populations in GIS format available online from the NPWS[6].

3.2.2. Field Visit

A field visit was undertaken to Derrybrat Bog on 20th December 2021 in the company of Bord na Móna Ecologists to view the site and habitats. A particular emphasis was placed on viewing the silt ponds and water outflows from the site, in addition to reviewing the various rehabilitation activities proposed to be undertaken.

3.3. Relevant European Sites

The identification of relevant European sites to be included in this report was based on the identification of the Zone of Influence (ZoI) of the proposed rehabilitation, a source-pathway-receptor model of effects, and the likely significance of any identified effects.

3.3.1. Zone of Influence

The proximity of the proposed rehabilitation to European sites, and more importantly QIs/SCIs of European sites, is of importance when identifying potentially likely significant effects. During the initial scoping of this report, a 15km ZoI was applied for impact assessment. A conservative approach has been used, which minimises the risk of overlooking distant or obscure effect pathways, while also avoiding reliance on buffer zones within which all European sites should be considered. This approach assesses the complete list of all QIs/SCIs of European sites in Ireland (i.e. potential receptors), instead of listing European sites within buffer zones. This follows Irish departmental guidance on AA:

> "*For projects, the distance could be much less than 15km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and*

[2] *Available at https://maps.biodiversityireland.ie/Map. Accessed in December 2021*
[3] *Available at https://airomaps.geohive.ie/ESM/. Accessed in December 2021.*
[4] *Available at https://gis.epa.ie/EPAMaps/. Accessed in December 2021*
[5] *Available at https://www.gsi.ie/en-ie/data-and-maps/Pages/Groundwater.aspx. Accessed in December 2021*
[6] *Available at https://www.npws.ie/maps-and-data/habitat-and-species-data. Accessed in December 2021*

location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects" (DoEHLG, 2010; p.32, para 1).

Following the guidance set out by the NRA (2009), the proposed rehabilitation has been evaluated based on an identified ZoI with regard to the potential impact pathways to ecological features (e.g. mobile and static). The ZoI of the proposed rehabilitation works on mobile species (e.g. birds, mammals, and fish), and static species and habitats (e.g. saltmarshes, woodlands, and flora) is considered differently. Mobile species have 'range' outside of the European site in which they are listed as QIs/SCIs. The range of mobile QI/SCI species varies considerably, from several meters (e.g. in the case of whorl snails *Vertigo* spp.), to hundreds of kilometers (in the case of migratory wetland birds). Whilst static species and habitats are generally considered to have ZoI's within close proximity of the proposed rehabilitation, they can be significantly affected at considerable distances from an effect source; for example, where an aquatic QI habitat or plant is located many kilometers downstream from a pollution source.

Hydrological linkages between the proposed rehabilitation area and European sites (and their QIs/SCIs) can occur over significant distances; however, any effect will be site specific depending on the receiving water environment and nature of the potential impact. A reasonable worst-case ZoI for water pollution from the proposed rehabilitation site is considered to be the hydrological pathway from the proposed rehabilitation until it reaches the first lenthic water body (e.g. lake), as the depositional nature of these water bodies would limit the transport capacity of any potential influences from the proposed rehabilitation to European sites located downstream..

3.3.2. Source-Pathway-Receptor Model

The likely effects of the proposed rehabilitation on European sites has been appraised using a source-pathway-receptor model, where:

- A 'source' is defined as the individual element of the proposed rehabilitation that has the potential to impact on a European site, its qualifying features and its conservation objectives;
- A 'pathway' is defined as the means or route by which a source can affect the ecological receptor; and
- A 'receptor' is defined as the Special Conservation Interests of Special Protection Areas (SPA) or Qualifying Interests (QI) of Special Areas of Conservation (SAC) for which Conservation Objectives have been set for the European sites being screened.

A source-pathway-receptor model is a standard tool used in environmental assessment. In order for an effect to be likely, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism results in no likelihood for the effect to occur. The source-pathway-receptor model was used to identify a list of European sites, and their QIs/SCIs, with potentially links to European site. These are termed as 'relevant' European sites/QIs/SCIs throughout this report.

3.3.3. Likely Significant Effect

The threshold for a Likely Significant Effect (LSE) is treated in the screening exercise as being above *a de minimis* level[7]. The opinion of the Advocate General in CJEU case C-258/11 outlines:

[7] *Sweetman v. An Bord Pleanála (Court of Justice of the EU, case C-285/11). A de minimis effect is a level of risk that is too*

> "*the requirement that the effect in question be 'significant' exists in order to lay down a de minimis threshold. Plans or projects that have no appreciable effect on a European site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill.*"

In this report, therefore, 'relevant' European sites are those within the potential ZoI of activities associated with the proposed rehabilitation, where LSE pathways to European sites were identified through the source-pathway-receptor model.

3.4. Screening Process

The Screening for Appropriate Assessment will incorporate the following steps:

- Determining whether a project or plan is directly connected with or necessary to the conservation management of any European sites;
- Describing the project or plan;
- Identifying the European sites potentially affected by the project or plan;
- Identifying and describing any potential effects of the project or plan on European sites, alone, in-combination and cumulatively with other plans/projects; and
- Assessing the likelihood of significant effects on European sites.

small to be concerned with when considering ecological requirements of an Annex I habitat or a population of Annex II species present on a European site necessary to ensure their favourable conservation condition. If low level effects on habitats or individuals of species are judged to be in this order of magnitude and that judgment has been made in the absence of reasonable scientific doubt, then those effects are not considered to be likely significant effects.

4. RECEIVING ENVIRONMENT

4.1. Desk study

4.1.1. Protected and Invasive Species

A search was undertaken on the National Biodiversity Data Centre[2] for protected and invasive species presence in the vicinity of the proposed rehabilitation. The 10km OSI grid squares that overlap the proposed rehabilitation was used to determine species that were recorded at the site. Protected and invasive species records available for this location are shown in **Table 4.1** below (records exceeding 50 years were excluded from the table).

Table 4.1: NBDC records of protected and invasive species within the proposed rehabilitation location.

Common name	Scientific name	Date of record	Designation*
Birds			
Little Egret	*Egretta garzetta*	31/12/2011	Wildlife Acts Birds Directive Annex I
European Golden Plover	*Pluvialis apricaria*	31/12/2011	Wildlife Acts Birds Directive Annex I, II & III BoCCI Red List
Greater White-fronted Goose	*Anser albifrons*	31/12/2011	Wildlife Acts Birds Directive Annex I, II & III BoCCI Amber List
Common Kingfisher	*Alcedo atthis*	31/12/2011	Wildlife Acts Birds Directive Annex I BoCCI Amber List
Corncrake	*Crex crex*	31/07/1972	Wildlife Acts Birds Directive Annex I BoCCI Red List
European Nightjar	*Caprimulgus europaeus*	31/07/1972	Wildlife Acts Birds Directive Annex I BoCCI Red List
Hen Harrier	*Circus cyaneus*	31/12/2011	Wildlife Acts Birds Directive Annex I BoCCI Amber List
Merlin	*Falco columbarius*	31/12/2011	Wildlife Acts Birds Directive Annex I BoCCI Amber List
Whooper Swan	*Cygnus cygnus*	31/12/2011	Wildlife Acts Birds Directive Annex I BoCCI Amber List
Insects			
Marsh Fritillary	*Euphydryas aurinia*	31/12/2010	Habitats Directive Annex II

Common name	Scientific name	Date of record	Designation*
Non-volant Mammals			
Eurasian Badger	*Meles meles*	31/12/2009	Wildlife acts
Invasive Species			
American Mink	*Mustela vison*	31/08/1989	High Impact Invasive Species Regulation S.I. 477 (Ireland)
Fallow Deer	*Dama dama*	31/12/2008	High Impact Invasive Species Regulation S.I. 477 (Ireland) Wildlife acts
Greylag Goose	*Anser anser*	31/12/2011	Invasive Species Regulation S.I. 477 (Ireland) Wildlife Acts Birds Directive Annex II & III BoCCI Amber List

* Birds of Conservation Concern in Ireland 2020–2026 (Gilbert *et al.*, 2021).

4.1.2. Protected Habitats

The Environmental Sensitivity Mapping Tool[3] was used to confirm the presence of designated habitats within the proposed rehabilitation boundary and surrounding environment. However, no records of any Annex 1 habitats of the EU Habitats Directive were displayed in the results of the Environmental Sensitivity Mapping Tool.

4.1.3. Aquatic Environment

The proposed rehabilitation is located within the Lower Shannon Water Framework Directive (WFD) Catchment (25A) and Brosna_SC_070 WFD Sub-catchment (25A_11). There are two existing outfalls onsite – one in the northwest and one in the west of the site – draining into the existing silt pond, which then discharge into the Silver (Kilcormac)_050 WFD river water body (IE_SH_25S020700). Searches of the EPA Unified GIS Application[4] and the EPA Catchments database[8] were conducted for water bodies draining the proposed rehabilitation area and their water quality for 2013-2018.

The Silver (Kilcormac)_050 WFD river water body runs outside the western boundary of the site, and its WFD water quality status for 2013-2018 was classified as 'moderate', due to its *Ecological Status or Potential*, perhaps linked to the 'moderate' *Nitrogen conditions* it presented in the monitoring period.

4.1.4. European sites

The nearest European sites to the proposed rehabilitation are separated by a minimum of approximately 7.3km – Ferbane Bog SAC [000575] and Moyclare Bog SAC [000581] (**Table 4.2**). A precautionary distance of 15km was chosen for the preliminary ZoI of the proposed rehabilitation to

[8] *Available at https://www.catchments.ie/. Accessed in December 2021.*

evaluate the potential for significant effects on European sites, alone and/or in-combination with other plans or projects, further extended to include the full extent of a potential hydrological pathway, from the proposed rehabilitation until the first lenthic water body (as described in **Section 3.3.1**). In total, the considered ZoI of the proposed rehabilitation works intersects 17 European sites (**Figure 4.1**).

Table 4.2: Distance from European sites within ZoI and the proposed rehabilitation.

Site code	Site name	Distance to proposed rehabilitation
000575	Ferbane Bog SAC	7.3km
000581	Moyclare Bog SAC	7.3km
000216	River Shannon Callows SAC	9.0km
004096	Middle Shannon Callows SPA	9.0km
000566	All Saints Bog and Esker SAC	11.5km
000859	Clonaslee Eskers and Derry Bog SAC	11.5km
004137	Dovegrove Callows SPA	11.8km
004103	All Saints Bog SPA	11.9km
000919	Ridge Road, SW of Rapemills SAC	12.0km
004160	Slieve Bloom Mountains SPA	12.2km
004086	River Little Brosna Callows SPA	13.3km
000576	Fin Lough (Offaly) SAC	14.3km
000412	Slieve Bloom Mountains SAC	14.4km
000572	Clara Bog SAC	14.4km
002236	Island Fen SAC	14.7km
002241	Lough Derg, North-east Shore SAC	27km
004058	Lough Derg (Shannon) SPA	27km

Potential pathways between the proposed rehabilitation and European sites are appraised in **Table 4.3**, including hydrological connectivity. The CO of the relevant European sites are also presented and illustrated in **Figure 4.1**.

Table 4.3: Relevant European sites, Conservation Objectives and connectivity to the proposed rehabilitation

Designated site [code]	Conservation Objectives version	Qualifying Interests [code]/Special Conservation Interests [code]	Connectivity with the proposed rehabilitation
Ferbane Bog SAC [000575]	Version 1, 2nd November 2015 (NPWS, 2015a)	Active raised bogs [7110]* Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	**No.** Given the intervening distance, and lack of hydrological connectivity, no complete source-impact-pathway was identified. Therefore there is no potential for direct or indirect effects to occur.
Moyclare Bog SAC [000581]	Version 1, 2nd November 2015 (NPWS, 2015b)	Active raised bogs [7110]* Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	**No.** Given the intervening distance, and lack of hydrological connectivity, no complete source-impact-pathway was identified. Therefore there is no potential for direct or indirect effects to occur.
River Shannon Callows SAC [000216]	Generic Version 8.0, 23rd March 2021 (NPWS, 2021a)	*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae)* [6410] Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*) [6510] Alkaline fens [7230] Limestone pavements [8240]* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]* Otter (*Lutra lutra)* [1355]	**Yes.** The River Shannon Callows SAC is located within the Shannon (Lower)_010 WFD river water body (IE_SH_25S012000), which is hydrologically connected with the Silver (Kilcormac)_050 WFD river water body and the proposed rehabilitation. Furthermore, the proposed rehabilitation holds suitable habitat for the mobile QI Otter.
Middle Shannon Callows SPA [004096]	Generic Version 8.0, 23rd March 2021 (NPWS, 2021b)	Whooper Swan (*Cygnus cygnus*) [A038] Wigeon (*Anas penelope*) [A050]	**Yes.** The Middle Shannon Callows SPA is hydrologically connected with the proposed rehabilitation and offers

Designated site [code]	Conservation Objectives version	Qualifying Interests [code]/Special Conservation Interests [code]	Connectivity with the proposed rehabilitation
		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]	suitable habitat within the flight rage of the designated SCIs.
All Saints Bog and Esker SAC [000566]	Version 1, 2nd March 2016 (NPWS, 2016a)	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 [91D0]*	**No.** Given the intervening distance, and lack of hydrological connectivity, no complete source-impact-pathway was identified. Therefore there is no potential for direct or indirect effects to occur.
Clonaslee Eskers and Derry Bog SAC [000859]	Version 1, 7th February 2019 (NPWS, 2019d)	Geyer's Whorl Snail (*Vertigo geyeri)* [1013] Alkaline fens [7230]	**No.** The Clonaslee Eskers and Derry Bog SAC is located upstream of the proposed rehabilitation, within the Silver (Kilcormac)_20 WFD river water body (IE_SH_25S020200), therefore away from any potential influence from the proposed rehabilitation. Furthermore, the separation distance between the proposed rehabilitation and this SAC (11.5km) also precludes

Designated site [code]	Conservation Objectives version	Qualifying Interests [code]/Special Conservation Interests [code]	Connectivity with the proposed rehabilitation
			ecological connectivity with regards to the mobile QI - Geyer's Whorl Snail.
Dovegrove Callows SPA [004137]	Generic Version 8.0, 23rd March 2021 (NPWS, 2021c)	Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]	**No.** Although the proposed rehabilitation site offers suitable habitat for Greenland White-fronted Goose, it is outside of the normal foraging range for the species of 8km (SNH, 2016).
All Saints Bog SPA [004103]	Generic Version 8.0, 23rd March 2021 (NPWS, 2021d)	Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]	**No.** Although the proposed rehabilitation site offers suitable habitat for Greenland White-fronted Goose, it is outside of the normal foraging range for the species of 8km (SNH, 2016).
Ridge Road, SW of Rapemills SAC [000919]	Version 1, 26th June 2018 (NPWS, 2018a)	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210]	**No.** Given the intervening distance, and lack of hydrological connectivity, no complete source-impact-pathway was identified. Therefore there is no potential for direct or indirect effects to occur
Slieve Bloom Mountains SPA [004160]	Generic Version 8.0, 23rd March 2021 (NPWS, 2021e)	Hen Harrier (*Circus cyaneus*) [A082]	**No.** Given the core range of Hen Harrier being 2km, and a maximum of 10km (SNH 2016), there is absence of pathways between the Slieve Bloom Mountains SPA and the proposed rehabilitation site.
River Little Brosna Callows SPA [004086].	Generic Version 8.0, 23rd March 2021 (NPWS, 2021f)	Whooper Swan (*Cygnus cygnus*) [A038] Wigeon (*Anas penelope*) [A050] Teal (*Anas crecca*) [A052] Pintail (*Anas acuta*) [A054]	**No.** Although the proposed rehabilitation site offers suitable habitat for the River Little Brosna Callows SPA SCI, it is outside of the normal foraging range for the species of (up to) 8km (SNH, 2016).

Designated site [code]	Conservation Objectives version	Qualifying Interests [code]/Special Conservation Interests [code]	Connectivity with the proposed rehabilitation
		Shoveler (*Anas clypeata*) [A056] Golden Plover (*Pluvialis apricaria*) [A140] Lapwing (*Vanellus vanellus*) [A142] Black-tailed Godwit (*Limosa limosa*) [A156] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395] Wetland and Waterbirds [A999]	
Fin Lough (Offaly) SAC [000576]	Version 1, 6th February 2019 (NPWS, 2019e)	Geyer's Whorl Snail (*Vertigo geyeri*) [1013] Alkaline fens [7230]	**No.** Given the intervening distance, and lack of hydrological connectivity, no complete source-impact-pathway was identified. Therefore there is no potential for direct or indirect effects to occur
Slieve Bloom Mountains SAC [000412]	Version 1, 6th September 2016 (NPWS, 2016b)	Northern Atlantic wet heaths with *Erica tetralix* [4010] Blanket bogs (* if active bog) [7130] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0]*	**No.** Given the intervening distance, and lack of hydrological connectivity, no complete source-impact-pathway was identified. Therefore there is no potential for direct or indirect effects to occur
Clara Bog SAC [000572]	Version 1, 3rd August 2016 (NPWS, 2016c)	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210] Active raised bogs [7110]*	**No.** Given the intervening distance, and lack of hydrological connectivity, no complete source-impact-pathway was identified. Therefore there is no potential for direct or indirect effects to occur

Designated site [code]	Conservation Objectives version	Qualifying Interests [code]/Special Conservation Interests [code]	Connectivity with the proposed rehabilitation
		Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150] Bog woodland [91D0]*	
Island Fen SAC [002236]	Version 1, 18th October 2018 (NPWS, 2018b)	*Juniperus communis* formations on heaths or calcareous grasslands [5130] Alkaline fens [7230]	**No.** Given the intervening distance, and lack of hydrological connectivity, no complete source-impact-pathway was identified. Therefore there is no potential for direct or indirect effects to occur
Lough Derg (Shannon) SPA [004058]	Generic Version 8.0, 23rd March 2021 (NPWS, 2021g)	Cormorant *Phalacrocorax carbo* [A017] Tufted Duck *Aythya fuligula* [A061] Goldeneye *Bucephala clangula* [A067] Common Tern *Sterna hirundo* [A193] Wetland and Waterbirds [A999][9]	**Yes.** There is hydrological connectivity between the Lough Derg (Shannon) SPA and the proposed rehabilitation.
Lough Derg, North-east Shore SAC [002241]	Version 1, 24th April 2019 (NPWS, 2019f)	*Juniperus communis* formations on heaths or calcareous grasslands [5130] Calcareous fens with *Cladium mariscus* and species of the Caricion davallianae [7210] Alkaline fens [7230] Limestone pavements* [8240]	**Yes.** The Lough Derg, North-east Shore SAC is hydrologically connected to the proposed rehabilitation.

Designated site [code]	Conservation Objectives version	Qualifying Interests [code]/Special Conservation Interests [code]	Connectivity with the proposed rehabilitation
		Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)* [91E0] *Taxus baccata* woods of the British Isles* [91J0]	

* indicates a priority habitat under the Habitats Directive.

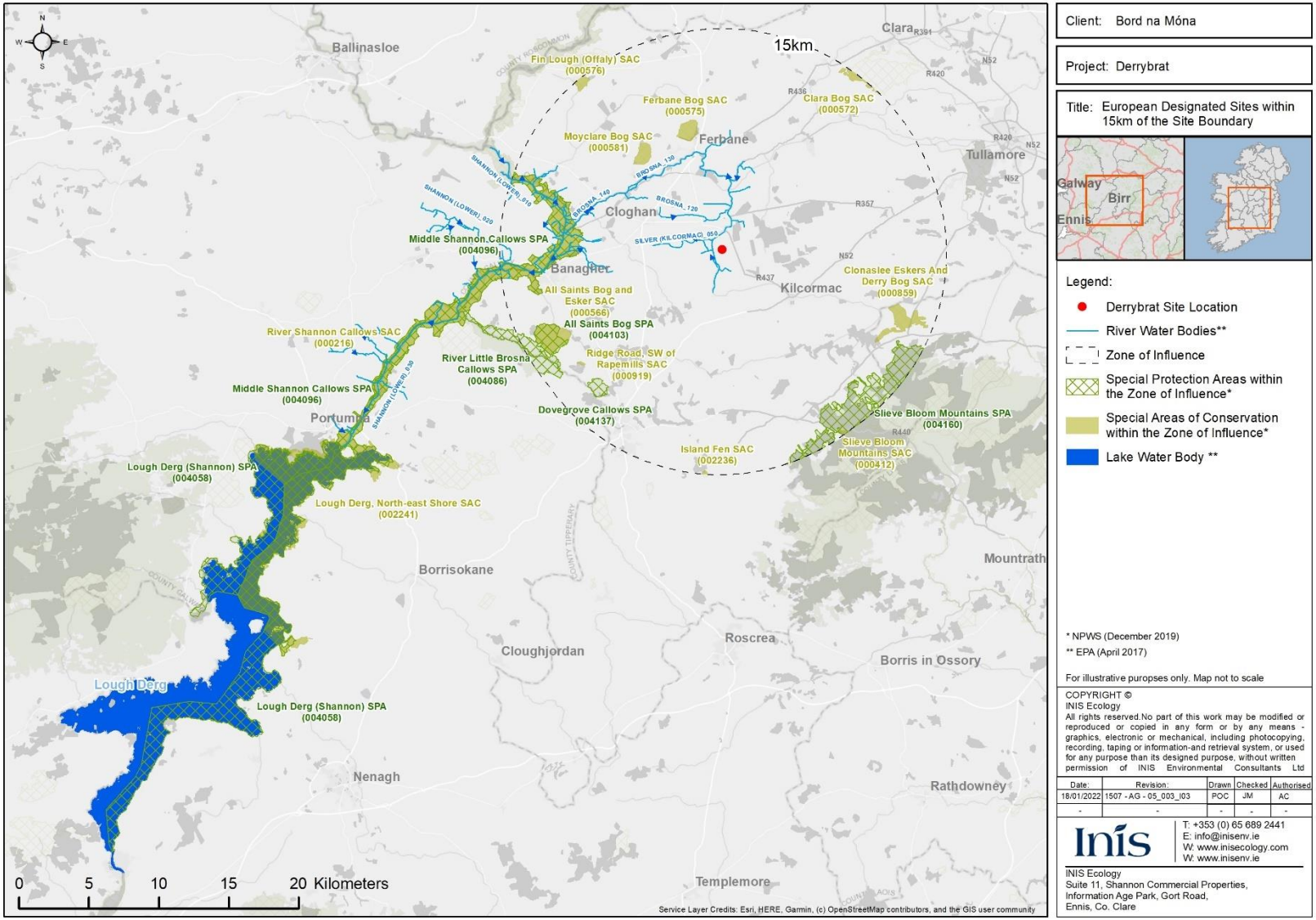

Figure 4.1: Designated sites within the considered ZoI of proposed rehabilitation.

5. SCREENING FOR APPROPRIATE ASSESSMENT

5.1. Screening Evaluation Process

The Screening process examines the likely effects of the proposed rehabilitation, as described, either alone or in combination, with other projects or plans, upon a Natura 2000 site and considers whether it can be objectively concluded that these effects will not be significant.

5.2. Screening: Is the Project Directly Connected to or Necessary for Management of a European site?

For a project or plan to be 'directly connected with or necessary to the management of the site', the 'management' component must refer to management measures that are for conservation purposes, and the 'directly' element refers to measures that are solely conceived for the conservation management of a site and not direct or indirect consequences of other activities.

Finding: **No**, the proposed rehabilitation is not directly connected to, or necessary for the management of, a European site.

5.3. Assessment of Source-Pathway-Receptor Model

As described in the methodology (**Section 3**), the AA Screening Report appraisal adopts a comprehensive and precautionary approach for which the starting point is a complete list of all QIs/SCIs of European sites in Ireland. In this context, **Table 5.1** assesses a specific source-pathway-receptor model for this proposed rehabilitation.

Table 5.1: Source-Pathway-Receptor Model for the Proposed Rehabilitation.

Source of Potential Effect	Description of Pathway	Potential Zone of Influence of the Effect
• **Noise, vibration;** • **Human presence; and** • **Movements of vehicles.**	Noise or other works-related disturbance could reduce the ability of populations of QI/SCI species to forage, roost or breed.	Varies by species. Generally assessed within 500 m of the proposed rehabilitation footprint for wintering birds (see Madsen, 1985; Smit & Visser, 1993; and Rees *et al*., 2005). However, distance can be significantly lower (e.g. 150 m for otter underground sites - NRA, 2006), or higher (e.g. Greenland White-fronted Goose may forage up to 8km from roosting areas (SNH, 2016)).

Source of Potential Effect	Description of Pathway	Potential Zone of Influence of the Effect
• **Accidental hydrocarbon spills;** • **Use of contaminants (e.g. hydrocarbons).** • **Earthworks (e.g. Digging); and** • **Movement of People, soils, and vehicles.**	Contamination through surface water runoff and release of suspended solids.	• Surface water run-off carrying suspended silt or contaminants into local water bodies can be restricted to the surface water catchment or sub-catchment.

5.4. Scoping of Effects

5.4.1. Disturbance to mobile QIs and SCIs

The proposed rehabilitation site holds suitable habitats for SCIs of a number of SPAs, including Middle Shannon Callows SPA [004096], the nearest to the rehabilitation site, at a distance of 9.01km. SCIs from other SPAs, which could be affected by the proposed rehabilitation include Dovegrove Callows SPA [004137], All Saints Bog SPA [004103], and the River Little Brosna Callows SPA [004086].

However, given the distance from the proposed rehabilitation to these SPAs, along with the abundance of availability of alternative habitat in the vicinity of the proposed rehabilitation for SCIs, any disturbance effects to mobile SCIs are considered unlikely (SNH, 2016).

The proposed rehabilitation site also holds suitable habitat for the mobile QI Otter from the River Shannon Callows SAC [000216]. Otter can range up to 25km during the breeding season (Chanin, 2003a), so the proposed rehabilitation site is within this ranging distance from the River Shannon Callows SAC. However, Otters typically forage at night (Chanon, 2003b), so the proposed period for undertaken the rehabilitation works (during the day) limits likely disturbance impacts. This, coupled with the abundance of availability of alternative habitat in the vicinity of the proposed rehabilitation for foraging Otter, means that any effects are considered unlikely.

In addition to the distance and availability of alternative habitats noted above, the small-scale nature of the works, which will only be undertaken in small section of the whole proposed rehabilitation footprint, also limits disturbance impacts (i.e., any mobile QI species or SCI will still be able to use parts pf the site even when the rehabilitation works are taking place). Furthermore, upon completion, the proposed rehabilitation will likely increase the quantity and quality of suitable habitat for these species, which may increase the local presence of mobile QIs and/or SCIs.

5.4.2. Contamination through surface water run-off

Potential contamination effects from surface water run-off are related via the potential sources for likely significant effects, identified in the conceptual source-pathway-receptor model (**Table 5.1**), and the identified hydrological connectivity with European sites (**Table 4.3**).

Hydrological pathways have been identified between the proposed rehabilitation and four European sites – the River Shannon Callows SAC [000216], Middle Shannon callows SPA [004096], Lough Derg, North-east Shore SAC [002241], and Lough Derg (Shannon) SPA [004058]. The only outflow from Derrybrat is through on-site drainage (including an existing silt pond) which flows into the Silver (Kilcormac)_050 WFD river water body and then into the Brosna_120 WFD, Brosna_130 WFD before

reaching the River Shannon (Shannon (Lower)_010 WFD). The nearest hydrologically connected European site, the River Shannon Callows SAC [000216], is separated by a significant distance (9km terrestrial but over 20km hydrologically). The volumes of silt expected from the proposed rehabilitation works are considered to be low, and the dilution factor of sediment flowing downstream, the release of silt to the Silver (Kilcormac) river water body and the Brosna river water bodies during these works are considered to have the potential to result in localised impacts to water quality. Therefore, significant effects to hydrologically connected European Sites, and SPAs for which suitable habitat is offered for SCIs within the ZoI – Dovegrove Callows SPA, All Saints Bog SPA, and River Little Brosna Callows SPA - are considered unlikely.

5.5. In-Combination Effects

Legislation, guidance and case law (**Section 1.1** and **Section 3.1**) requires that in-combination effects with other plans or projects are considered. On this basis, a range of other plans and projects were considered in terms of their potential to have in-combination effects with the proposed rehabilitation.

5.5.1. Offaly County Development Plan 2021-2027

The Offaly County Development Plan 2021-2027 (Offaly County Council, 2021) corresponds with a number of other plans and projects in accordance with the Habitats Directive, in which the council is deemed responsible for, including:

- **BLO-03**; to support and co-operate with statutory authorities and others in support of measures taken to manage proposed or designated sites in order to achieve their conservation objectives; and

- **BLP-07**: to protect the county's designated peatland areas, including the rehabilitation, restoration, and re-wetting of bogs.

Therefore, it is expected that every planning application developed within the Offaly County Council authority will assess the potential for in-combination effects and impacts on ecological receptors. Therefore, the proposed rehabilitation is not likely to have an in-combination effect with the Council development plan.

5.5.2. Projects

A search of planning applications (projects) was conducted within the vicinity of the proposed rehabilitation and along hydrological pathways previously identified, using the Offaly County Council planning portal map viewer[9] and the Department of Housing, Planning and Local Government EIA portal map viewer[10]. The search was limited to projects with potential to have in-combination impacts on European sites within the ZoI in a five year period preceding the date of issue of this report. Incomplete, withdrawn, and refused project applications were excluded. The projects considered to

[9] *Available at Offaly County Council Planning GIS Viewer (arcgis.com) Accessed in December 2021*
[10] *Available at https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=d7d5a3d48f104ecbb206e7e5f84b71f1 Accessed in December 2021*

hold potential for in-combination adverse effects on the integrity of relevant European sites to the proposed rehabilitation are detailed in **Table 5.2.**

Furthermore, minor projects within the surrounding area with an absence of ecological or environmental documentation within the planning application were also considered not likely to have any in-combination effects with this project as they were not considered, by the relevant Competent Authority, as likely to cause any impact.

The NIS accompanying project 2020029 concluded that the project would not result in any likely significant effects to European Sites, either alone or in-combination with other projects assessed. Therefore, the proposed rehabilitation works are Derrybrat Bog will not result in in-combination effects with this proposed development.

Regarding NPWS raised bog projects, there are no designated sites located within the European Sites assessed within the ZoI for the proposed rehabilitation works at Derrybrat Bog. Therefore, in-combination effects are considered unlikely as the bog is not hydrologically connected with any NPWS raised bogs. Furthermore, there will be no displacement or disturbance of SCIs or QIs from the proposed rehabilitation works, as all have been screened out in this assessment.

There are no potential effects on European Sites reported, either alone or in-combination with other projects, according to the conclusion of the AA Screening accompanying the project listed in **Table 5.2**. Therefore, it is considered that no likely in-combination effects can be anticipated from the proposed rehabilitation with other plans or projects.

Table 5.2: Relevant projects with potential for in-combination adverse effects to European sites.

Planning Application /Case Reference Number	Project/Applicant Name and Proposed Location	Brief Development Description	Approximate Distance from Proposed Works	Date Planning Application Granted
21486	Irish Water/Ferbane Wastewater Treatment Works, Ballyclare Road, Ferbane, Co. Offaly	Installation of 215m^2 (45Kw) of ground mounted solar photovoltaic (PV) panels and all associated ancillary works.	*c.a. 6.45km*	28-Sep-2021
2020029	Derrinlough Wind Farm, Bord na Móna, Clongawny and Drinagh Bogs, Co. Offaly	Bord na Móna is proposing to develop a wind farm on Clongawny and Drinagh bogs located in Co. Offaly. The proposed wind farm will be known as Derrinlough Wind Farm. It is proposed that the wind farm will consist of 21 turbines. The proposed wind farm will have approximately 28 km of internal road network. It is intended that approximately 18 km of this	*c.a. 8km*	26-Aug-2021

Planning Application /Case Reference Number	Project/Applicant Name and Proposed Location	Brief Development Description	Approximate Distance from Proposed Works	Date Planning Application Granted
		road network will be open for public use when the wind farm becomes operational. Approximately 6.5 km of local amenity links will also be provided. This will include three access points from the adjacent road network and provision for future connectivity to Lough Boora Discovery Park and the proposed Whigsborough Amenity Walk (BnM, 2021i).		

5.5.3. Other BnM PCAS Plans/Projects

There are a number of other Bord na Móna bogs with rehabilitation plans in the surrounding area, that are dedicated PCAS sites, as presented in **table 5.3**. However, there will be no in-combination effects on European sites, or their Conservation Objectives, with any of the bogs listed, as this screening determines no impacts should arise from the proposed rehabilitation works as Derrybrat Bog.

Table 5.3: Other BnM PCAS sites for rehabilitation in the surrounding area.

Project/Applicant Name and Proposed Location	Brief Development Description	Approximate Distance from Proposed Works
Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Móna, Derrinboy Bog, Co. Offaly	Carrying out enhanced rehabilitation with the application of enhanced peat rehabilitation measures to re-wet peat and slow water movement across the site. Rehabilitation will focus on targeted actions to raise water levels and areas where there is still significant bare peat cover. This site will develop a mosaic of compatible *Sphagnum*-rich vegetation, heath, Birch woodland and other cutaway peatland habitats. -Optimising hydrological conditions for the development of Sphagnum-rich, embryonic raised bog on deep peat and, fen, reed swamp and wet woodland on shallow	*c.a.9.5km*

Project/Applicant Name and Proposed Location	Brief Development Description	Approximate Distance from Proposed Works
	cutaway peat, and eventually naturally functioning peatland and wetland habitats. -Stabilisation or improvement in water quality parameters (e.g. suspended solids). -Optimising hydrological conditions for the protection of exposed archaeological structures, their retention in situ and preservation into the future. -Supporting the National Policies on Climate Action and Green House Gas (GHG) mitigation by maintaining and enhancing the current condition peat storage capacity of the bog (locking the carbon into the ground). In time, it is expected that the bog will develop as a reduced carbon source with potential to develop as a partial carbon sink (BnM, 2021a).	
Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Móna, Boora Bog, Co. Offaly	The proposed decommissioning at Boora Bog includes the cleaning of existing silt ponds, the decommissioning and removal of a Porto-cabin tea centre and a further materials store, decommissioning and de-gassing mobile fuel tanks, and peat stockpile management via levelling. Further measures may include the lifting of the existing rail line, decommissioning of existing level crossings and measures to restrict access to the bog. The proposed Boora Bog rehabilitation comprises a series of bespoke (to Boora Bog) interventions designed to stabilise the existing baseline and meet compliance with the requirements of the existing EPA, IPC License and the proposed PCAS (BnM, 2021b).	*c.a.5km*
Decommissioning and Rehabilitation Plan, Bord na Móna, Derries Bog, Co. Offaly	The rehabilitation goals and outcomes outline what Bord na Móna want to achieve by implementing the rehabilitation. These include: -meeting conditions of IPC licence.	*c.a. 5km*

Project/Applicant Name and Proposed Location	Brief Development Description	Approximate Distance from Proposed Works
	-stabilisation or reduction in water quality parameters of water discharging from the site (e.g. suspended solids). -reducing pressure on receiving water-bodies that have been classified as At Risk from peatlands and from peat extraction, via stabilization or improving water-quality from this bog, and therefore, reducing pressures. -optimising hydrological conditions for climate action benefits as part of PCAS. -optimising hydrology for the development of embryonic Sphagnum-rich vegetation communities on deep peat, and eventually naturally functioning and peatland habitats. -optimising hydrological conditions for the development of Reed Swamp and fen on shallow more alkaline peat and other subsoils. -optimising hydrological conditions for the protection of exposed archaeological structures, their retention in situ and preservation into the future, where possible (BnM, 2021c).	
Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Móna, Oughter Bog, Co. Offaly	Since industrial peat production ceased in 2012, the primary rehabilitation goal and outcome for Oughter Bog is environmental stabilisation of the bog. Enhanced Rehabilitation interventions will ensure that environmental stabilisation is achieved (meaning IPC obligations are met), and importantly, significant additional benefits, particularly relating to climate action and other ecosystem services, will also be delivered (BnM, 2020a).	*c.a. 8.8km*
Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Móna, Pollagh Bog, Co. Offaly	Since industrial peat production ceased in 2019, the primary rehabilitation goal and outcome for Pollagh Bog is environmental stabilisation of the bog. Enhanced	*c.a. 10km*

Project/Applicant Name and Proposed Location	Brief Development Description	Approximate Distance from Proposed Works
	Rehabilitation interventions will ensure that environmental stabilisation is achieved (meaning IPC obligations are met) and significant additional benefits, particularly relating to climate action and other ecosystem services, will also be delivered (BnM, 2020b).	
Decommissioning and Rehabilitation 2021, Bord na Móna, Turraun Bog, Co. Offaly	The proposed decommissioning at Turraun Bog includes clean-up of bog, cleaning of silt ponds, peat stockpile management via levelling, decommissioning and removal of porto-cabin tea centre and materials stove, decommissioning and de-gassing of mobile fuel tanks and de-sludgeing of septic tanks. Enhanced measures include lifting of the existing rail line, decommissioning of existing level crossings and measures to restrict access to areas of the bog (where level crossings are to be removed and around silt ponds) (BnM, 2021d).	*c.a. 7.5km*
Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Móna, Belmont Bog, Co. Offaly	The proposed decommissioning at Belmont Bog includes the cleaning of existing silt ponds, the decommissioning and Removal of a Porto-cabin tea centre and a further materials store, decommissioning and de-gassing mobile fuel tanks, and peat stockpile management via levelling. Further measures may include the lifting of the existing rail line, decommissioning of existing level crossings and measures to restrict access to the bog. The proposed Belmont Bog rehabilitation comprises a series of bespoke (to Belmont Bog) interventions designed to stabilise the existing baseline and meet compliance with the requirements of the existing EPA, IPC License and the proposed PCAS (BnM, 2021e).	*c.a. 14km*
Decommissioning and Rehabilitation 2021, Bord na Móna, Kilmacshane Bog, Co. Galway	The proposed decommissioning at Kilmacshane Bog includes clean-up of bog, cleaning of existing silt ponds, peat stockpile management, decommissioning	*c.a. 13.5km*

Project/Applicant Name and Proposed Location	Brief Development Description	Approximate Distance from Proposed Works
	and de-gassing of mobile fuel tanks, de-sludgeing of septic tanks and removal/decommissioning of bog pump sites, buildings and compounds (if feasible). Enhanced measures include lifting of the existing rail line, decommissioning of existing level crossings, measures to restrict access to areas of the bog (where level crossings are to be removed and around silt ponds) removal of high voltage power lines (if feasible) and decommissioning of bridges and underpasses (if feasible) (BnM, 2021f).	
Decommissioning and Rehabilitation 2021, Bord na Móna, Garryduff Bog, Co. Galway	The proposed decommissioning at Garryduff Bog includes clean-up of bog, cleaning of existing silt ponds, peat stockpile management via levelling, decommissioning and de-gassing of mobile fuel tanks and de-sludgeing of septic tanks. If feasible, bog pump sites will be decommissioned and removed, and buildings and compounds will be decommissioned or removed. Enhanced measures include lifting of the existing rail line, decommissioning of existing level crossings, measures to restrict access to areas of the bog (where level crossings are to be removed and around silt ponds). If feasible, high voltage power lines will be removed and bridges and underpasses will be decommissioned (BnM, 2021g).	*c.a. 19km*

6. SCREENING CONCLUSIONS

Inis Environmental Consultants Ltd. has prepared this report to inform an Appropriate Assessment screening to assess whether the proposed rehabilitation at Derrybrat Bog, individually or in combination with other plans or projects, and in view of best scientific knowledge, are likely to have a significant effect on any European site(s).

The screening exercise was completed in compliance with the relevant European Commission guidance, national guidance, and case law. The potential impacts of the proposed rehabilitation have been considered in the context of the European sites potentially affected, their Qualifying Interests or Special Conservation Interests, and their Conservation Objectives.

Through an assessment of the source-pathway-receptor model, which considered the ZoI of effects from the proposed rehabilitation and the potential in-combination effects with other plans or projects, the following findings were reported:

- The proposed rehabilitation is not directly connected with, or necessary to, the management of any European site;
- The proposed rehabilitation will not give rise to any likely significant effects alone or in combination on the Qualifying Interests of SACs, in view of best scientific knowledge and in view of the Conservation Objectives of the European sites concerned; and
- The proposed rehabilitation will not give rise to likely significant in-combination effects alone or in combination on the special conservation interests of any SPA, in view of best scientific knowledge and in view of the conservation objectives of the European sites concerned.

On the basis of objective scientific information, it is the considered opinion of Inis Environmental Consultants Ltd. that, in completing its report to inform Screening for Appropriate Assessment in respect of the proposed rehabilitation at Derrybrat Bog, it is not likely, either individually or in-combination with other projects and plans, to have a likely significant effect on any European sites. Therefore, a Stage 2 Appropriate Assessment under Article 6(3) of the Habitats Directive is not required for this proposed rehabilitation.

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APPENDIX A: PROPOSED REHABILITATION LAYOUT

BNM-DR-23-01-05: Enhanced Rehabilitation Measures

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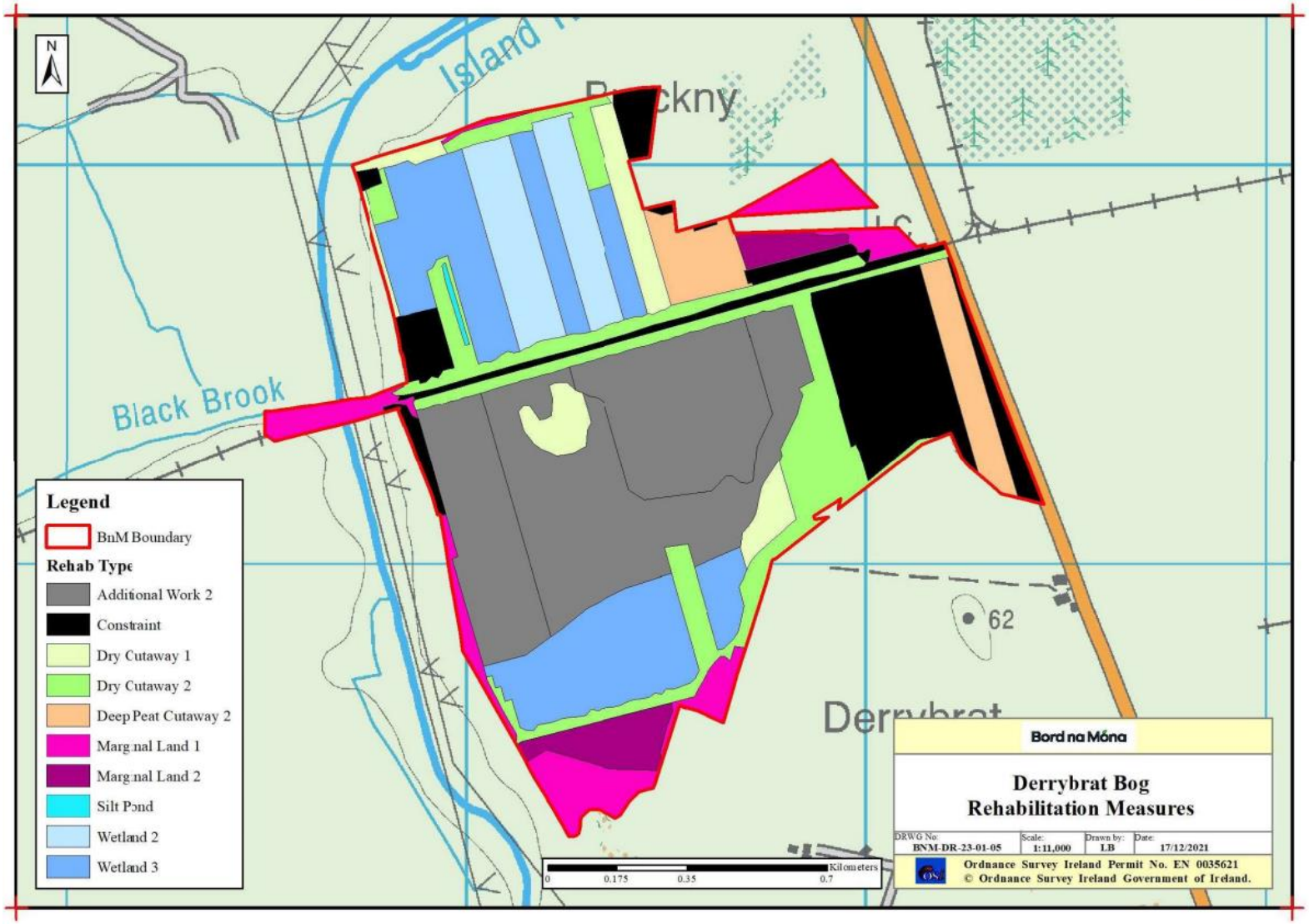

APPENDIX B: FINDING OF NO SIGNIFICANT EFFECTS REPORT

In accordance with the European Commission (2001) guidance document, Assessment of plans and projects significantly affecting Natura 2000 sites – *Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*, a Finding of No Significant Effects Report has been completed for the rehabilitation works at Bord na Móna, Derrybrat Bog. The standard matrix for this report provided in Annex 2 of the guidance document was followed. Line items in italics are taken directly from the guidance document.

Finding of No Significance Effects Report	
Name and location of the Natura 2000 sites	There are 17 Natura 2000 sites located within the 15km ZoI of the proposed rehabilitation works, including: **000575** Ferbane Bog SAC **000581** Moyclare Bog SAC **000216** River Shannon Callows SAC **004096** Middle Shannon Callows SPA **000566** All Saints Bog and Esker SAC **000859** Clonaslee Eskers and Derry Bog SAC **004137** Dovegrove Callows SPA **004103** All Saints Bog SPA **000919** Ridge Road, SW of Rapemills SAC **004160** Slieve Bloom Mountains SPA **004086** River Little Brosna Callows SPA **000576** Fin Lough (Offaly) SAC **000412** Slieve Bloom Mountains SAC **000572** Clara Bog SAC **002236** Island Fen SAC **002241** Lough Derg, North-east Shore SAC **004058** Lough Derg (Shannon) SPA
Description of the project or plan	The proposed rehabilitation works consists of the rehabilitation and re-wetting of Derrybrat Bog through: • Wetland creation and intensive re-wetting, to slow water movement across the site, minimising silt contamination; • Targeted drain blocking, to raise surface water levels, support vegetation growth, and enhance conditions for associated species; • Fertiliser application, to support vegetation growth; • Continued use of silt ponds, to improve water quality; • One existing outfall to the northwest of the site will continue to be used for water leaving the site; • A second existing outfall to the west of the site will be blocked and water will be conveyed through the silt pond towards the outfall to the northwest;

	• Boundary drains will be left unblocked to prevent negative effects on adjacent lands; • A decommissioning plan has been established, consisting of the clean-up of the bog, the cleaning of silt ponds, and records of resources used; • Waste shall be conveyed to a waste contractor; • Quarterly site monitoring, to be reduced to bi-annually after 2 years, to assess the condition of silt ponds and status of rehabilitation, biodiversity ecosystems, and carbon emissions; and • Water quality parameters monitoring for 2 years.
Is the Project directly connected with or necessary to the management of the site (provide details)?	No.
Are there other projects or plans that together with the project of plan being assessed could affect the site (provide details)?	No. Plans and projects in the vicinity of the project area or hydrological pathway are not considered likely to contribute towards in-combination effects with the proposed rehabilitation.
The Assessment of Significant Effects	
Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site	Significant effects arising from the proposed rehabilitation are not likely.
Explain why these effects are not considered significant	Outflows from Derrybrat are through on-site drainage (including an existing silt pond) before flowing into the Silver (Kilcormac)_050 WFD river water body. The distance separating the proposed site to the nearest hydrologically connected European site, the River Shannon Callows SAC [000216], is significant (9km terrestrial but over 20km hydrologically). In addition, the volumes of silt expected from the proposed rehabilitation works are considered to be low, and the dilution factor of sediment flowing downstream, the release of silt to the Silver (Kilcormac) river water body and the Brosna river water bodies during these works are considered to have the potential to result in localised impacts to water quality. Disturbance was identified as a pathway, however, proposed rehabilitation works are considered unlikely to cause significant impacts on QIs and SCIs identified due to distance and availability of alternative habitat within the area.
Data Collected to Carry out the Assessment	
Who carried out the assessment	Inis Environmental Consultants Ltd.
Sources of Data used	Desktop studies. Please refer to reference list.
Level of assessment completed	Following Screening it can reasonably be concluded that there is no likelihood of significant effects on any of the European sites under consideration.