

Bord na Móna

Cloncreen Bog, Co. Offaly

Screening for Appropriate Assessment

March 2022

This report considers the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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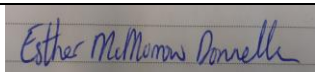


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The findings outlined within this report and the data we have provided are to our knowledge true and express our bona fide professional opinions. This report has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental 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, 1976-2021*, the *European Union (Natural Habitats) Regulations*, the *European Communities (Birds and Natural Habitats) Regulations 2011-2021*, 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 Cloncreen Bog, Co Offaly – Stage 1: Screening for Appropriate Assessment		

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Table of Contents

1. Introduction	1
1.1. Appropriate Assessment Process	1
1.1.1. Stages of the Appropriate Assessment Process	1
1.1.1.1. Stage 1 – Screening for AA	2
1.1.1.2. Stage 2- Appropriate Assessment	2
1.1.1.3. Stage 3 – Alternative Solutions	2
1.1.1.4. Stage 4 – IROPI	2
1.2. Statement of Authority	2
2. Description of the Proposed Plan	4
2.1. Location of the Proposed Plan	4
2.2. Description of the Proposed Plan	4
3. Methodology	8
3.1. Appropriate Assessment Guidance	8
3.1.1. Field Visit	8
3.2. Ecological Data	9
3.2.1. Desk Study	9
3.3. Relevant European Sites	9
3.3.1. Zone of Influence	9
3.3.2. Source-Pathway-Receptor Model	10
3.3.3. Likely Significant Effect	11
3.4. Screening Process	11
4. Receiving Environment	12
4.1. Desk study	12
4.1.1. Protected and Invasive Species	12
4.1.2. Protected Habitats	12
4.1.3. Aquatic Environment	12
4.1.4. European sites	13
5. Screening for Appropriate Assessment	17
5.1. Screening Evaluation Process	17
5.2. Screening: Is the Project Directly Connected to or Necessary for Management of a European site?	17
5.3. Assessment of Source-Pathway-Receptor Model	17
5.4. Scoping of Effects	18
5.4.1. Disturbance to mobile QIs	18
5.4.2. Contamination	18
5.5. In-Combination Effects	19
5.5.1. Offaly County Plan 2021-2027	19
5.5.2. Projects	19
5.5.3. Other BnM PCAS Plan/Projects	21
6. Screening Conclusions	23

7. References _____ 1

Appendices

Appendix A: Proposed plan layout

Appendix B: Finding of No Significant Effects Report

List of Tables

Table 4.2: Distance from European sites within Zol and the proposed plan. _____ 13

Table 4.3: Relevant European sites, Conservation Objectives and connectivity to the proposed plan (highlighted CO/European sites are identified with potential pathways for effects with the proposed plan). _____ 13

Table 5.1: Source-Pathway-Receptor Model for the Proposed Plan. _____ 17

Table 5.2: Relevant projects with potential for in-combination adverse effects to European sites. _____ 20

Table 5.3: Other BnM PCAS sites for rehabilitation in the surrounding area. _____ 22

List of Figures

Figure 1.1: The Appropriate Assessment Process (from: Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities, DoEHLG, 2010). _____ 1

Figure 2.1: Site overview map of the proposed plan at Cloncreen Bog, Co. Offaly. _____ 7

Figure 4.1: Designated sites within the considered Zol of proposed plan. _____ 16

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 rehabilitation at Cloncreen 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));
- European Communities (Birds and Natural Habitats) Regulations 2011-2021 (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, 2021);
- 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.

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.

1.2. Statement of Authority

Ms Esther McMorrow Donnellan BA MSc QCIEEM wrote this report. She is an Ecologist with Inis Environmental Consultants and has an MSc in Environmental Leadership in NUI Galway and a BA in History and Geography from NUI Galway. Esther has extensive bird survey experience, including Vantage Point surveys and breeding wader walkover surveys, which are all undertaken following Best Practice Guidance and standardised methodologies (e.g. Hardey *et al.*, 2013; SNH, 2017). Esther also has extensive report writing experience, including the preparation of Ecology Reports, Screenings for Appropriate Assessment and Natura Impact Statements.

Ms Peig Healy BSc MSc reviewed this report. She is an Assistant Ecologist with Inis Environmental Consultants and has a BSc in International Development and Food Policy from UCC and a M.Sc. in Environmental Leadership in NUI Galway. As part of her BSc and MSc, Peig has completed two dissertation projects relating to sustainability and environmental research. In association with these projects, Peig has carried out policy analysis, case study review, and reporting in relation to Fisheries Policy and EIA respectively. During her employment with Inis, Peig has been involved in the preparation of a variety of project reports, including AA Screening, NIS and EIA.

Dr Alex Copland BSc PhD MIEEnvSc reviewed this report. He is Technical Director with INIS, having over 25 years of professional experience working in both statutory and private companies, in third-level research institutions and with environmental NGOs. He is proficient in experimental design and data analysis and has managed several large-scale, multi-disciplinary ecological projects. These have included research and targeted management work for species of conservation concern, the design and delivery of practical conservation actions with a range of stakeholders and end-users, education and interpretation on the interface between people and the environment and the development of coordinated, strategic plans for birds and biodiversity. He has written numerous scientific papers, developed and contributed to evidence-based position papers, visions and strategies on birds and habitats in Ireland. He has supervised the successful completion of research theses for several post-graduate students, including doctoral candidates. He lectures to both undergraduate and post-graduate students at UCD, as well as being a collaborative researcher with both UCD and UCC. He also sits on the Editorial Panel of the scientific journal, *Irish Birds*, which publishes original ornithological research relevant to Ireland's avifauna.

He has been working on bird populations on cutaway peatland habitats in Ireland for over 12 years, covering both breeding and wintering birds at numerous sites. He managed breeding wader surveys on 11 Bord na Móna cutaway peatland sites in 2006 and 2012 and surveyed two additional Bord na Móna peatland sites for breeding wader in 2014. In 2010 and 2011, he undertook baseline bird recording at ten cutaway peatland sites, including bogs within the Derryarkin and Derryadd bog groups. In 2015 and 2016, Alex undertook breeding Curlew surveys at 14 individual bog sites. In collaboration with Bord na Móna, he has published several papers and abstracts in relation to the ecology of cutaway peatlands arising from several projects,

2. DESCRIPTION OF THE PROPOSED PLAN

2.1. Location of the Proposed Plan

Cloncreen Bog is situated approximately 4.5 km southwest of Edenderry, Co. Offaly. Cloncreen Bog is located within the Allen-Clonsast bog group with Ballycon situated to the west and Ballydermot to the east of the site. Minor public roads pass along the eastern (R401), northern (R402), western and southern (L1003) sides of the bog. A number of small, unpaved, bog roads allow access to the site at various points around the site. The bog is divided into several different sections by the Bord na Móna railway network that connected the bog with Edenderry Power Station to the east.

Cloncreen Bog is in the River Barrow catchment and is drained by the Figile River to the east and the Daingean River (EPA)/ Philipstown River (OSI) to the west and south. The Figile River joins the Daingean River which in turn forms part of the River Barrow located further to the south.

The drainage of Cloncreen is partially pumped. There are a series of drains through the bog at regular intervals that form part of the main drainage system. There are 11 no. silt ponds located at the site boundary to the west, south and east.

Cloncreen Bog has developed a mosaic of pioneer cutaway habitats with some bare peat mosaics and emergent scrub habitats. The surrounding landscape comprises of a mosaic of low-lying agricultural land (pasture) interspersed with other raised bogs, many of which have also been managed by Bord na Móna for peat production. Forestry also occurs to the southeast and south of the site boundary. Several sections of remnant raised bog are located along the margins of the site, notably to the southeast and west. Small areas within the west of the site have also been used for the production of domestic turf.

Cloncreen Wind Farm, which is within the boundary of Cloncreen Bog, is currently under construction and nearing completion. It is located 4km east of Bord na Móna's 84MW (megawatt) Mountlucas Wind Farm. The wind farm will consist of 21 no. V136-3.45 MW Vestas turbines. Turbine delivery is expected to begin in the first quarter of 2022, while commissioning is planned for the fourth quarter of 2022. When completed it will have an installed generating capacity of 75MW which will power approximately 55,000 homes per annum. The maximum permanent footprint of the development measures 40.1 hectares, which represents approximately 4% of the site.

A modular Battery Energy Storage System (BESS) facility, within the footprint of a previously consented construction compound (ABP REF. PL19.PA0047), has also been consented within the east of the site. The facility will consist of up to 28 no. battery storage modules.

The proposed Irish Water Shannon Pipeline corridor also traverses Cloncreen Bog to the north.

2.2. Description of the Proposed Plan

Cloncreen Bog was drained and developed for industrial peat production in the 1970s. Peat production ceased in 2018. Therefore, much of the former production bog is dominated by bare peat. Some areas within the north of the site that have been out of production for some years have some pioneering vegetation established.

The key objective of rehabilitation, as defined by this licence, is environmental stabilisation of the bog. Bord na Móna have defined the key goal and outcome of rehabilitation at Cloncreen Bog as optimising suitable hydrological conditions and setting the site on a trajectory towards the development of naturally functioning peatland habitats. It is planned to rehabilitate and re-wet cutaway bog between wind farm infrastructure, while taking account of the planned renewable energy generation, storage infrastructure and land-uses. Rehabilitation of Cloncreen Bog will support multiple National strategies, including climate action, biodiversity action, and other key environmental strategies, such as the Water Framework Directive. The time frame for the delivery of the planned rehabilitation will be undertaken according to available resources and appropriate constraints.

The rehabilitation actions will be a combination of PCAS measures to re-wet peat. Measures proposed for Cloncreen Bog include drain blocking and other measures required to raise water levels to the surface of the peat (changing levels of pipes for example). Some fertiliser will be spread on headlands and other areas (a small part of the overall area) to encourage vegetation growth.

These enhanced measures for Cloncreen Bog will include:

- Re-assessment of the pumping regime; managing pumping on site in order to achieve wet conditions across the site, while also avoiding impacts on the Cloncreen wind farm and energy storage infrastructure.
- Initial hydrological modelling (depression analysis) indicates that a significant part of the site between windfarm infrastructure has the potential to retain wet conditions. It is anticipated that this will develop a mosaic of wetland and peatland habitats. Hydrological management will look to optimise summer water levels to maximise the extent and development of wetland vegetation. Water-levels will be modified by drain-blocking and by adjusting piped drainage, where possible.
- Re-wetting the extensive areas of peat remaining on site within the former production area using berms and drain blocking.
- Undertaking intensive drain blocking (up to 7/100 metre) and managing overflows in areas where depression analysis predicts wet conditions will occur. Drain blocking will also occur across other areas in order to retain surface water locally.
- Some targeted drain blocking in marginal (degraded) remnant raised high bog areas is proposed as part of this plan, although they are small in size and degraded nature.
- The existing silt ponds will be retained and maintained during the rehabilitation phase. During the monitoring and verification phase the silt ponds will be continually inspected and maintained, where appropriate. When it is deemed that the silt ponds are not required, as the bog has been successfully stabilised and there is no run-off of suspended solids, the condition of the silt ponds will be reviewed. The silt ponds will either be de-watered (water levels lowered to a level where the silt pond will naturally develop as a small wetland feature), left in-situ or infilled (where discharges do not require silt control).
- Targeted fertiliser applications to accelerate vegetation establishment on areas of bare peat on headlands and high fields as required.

Short-term planning actions will be undertaken from 2021 to 2022 while the short-term practical actions will be undertaken in 2022. The evaluation of the success of the short-term rehabilitation

measures and remediation (where necessary) will be undertaken from 2022 to 2025 while the decommissioning of the silt ponds (if necessary) will be completed in 2025.

The development of a range of habitats in Cloncreen Bog will support biodiversity including plants, insects, birds and mammals. This includes some species that are rare and protected in the wider landscape. This will increase the national area of native woodland. Many wetland and peatland habitats in the wider landscape have been reclaimed for agriculture and other uses, therefore peatland rehabilitation is an opportunity to create new wetland and peatland habitats.

The proposed “Water Supply Project – Eastern and Midlands Region” (Irish Water) Project, currently in the pre-planning stage, also traverses the north-western headland of Cloncreen Bog. It is expected that the enhanced rehabilitation measures planned for Cloncreen will be carried out in advance of the construction of the pipeline, which is still subject to planning consent. Bord na Móna do not propose to carry out any rehabilitation works within the footprint of the proposed “Water Supply Project – Eastern and Midlands Region” until a decision has been made by the relevant authorities in relation to the statutory consent applications for the project. It is expected that the footprint of the corridor will be rehabilitated post the construction of the proposed “Water Supply Project – Eastern and Midlands Region” project.

The invasive species Giant Hogweed (*Heracleum mantegazzianum*), listed on the Third Schedule of the Birds and Natural Habitats Regulations, had been recorded within the south of the site, near the ash depository during Bord na Móna site surveys. However, following recent surveys undertaken in 2021, no evidence of the species has been recorded and the species is considered to be no longer present on site.

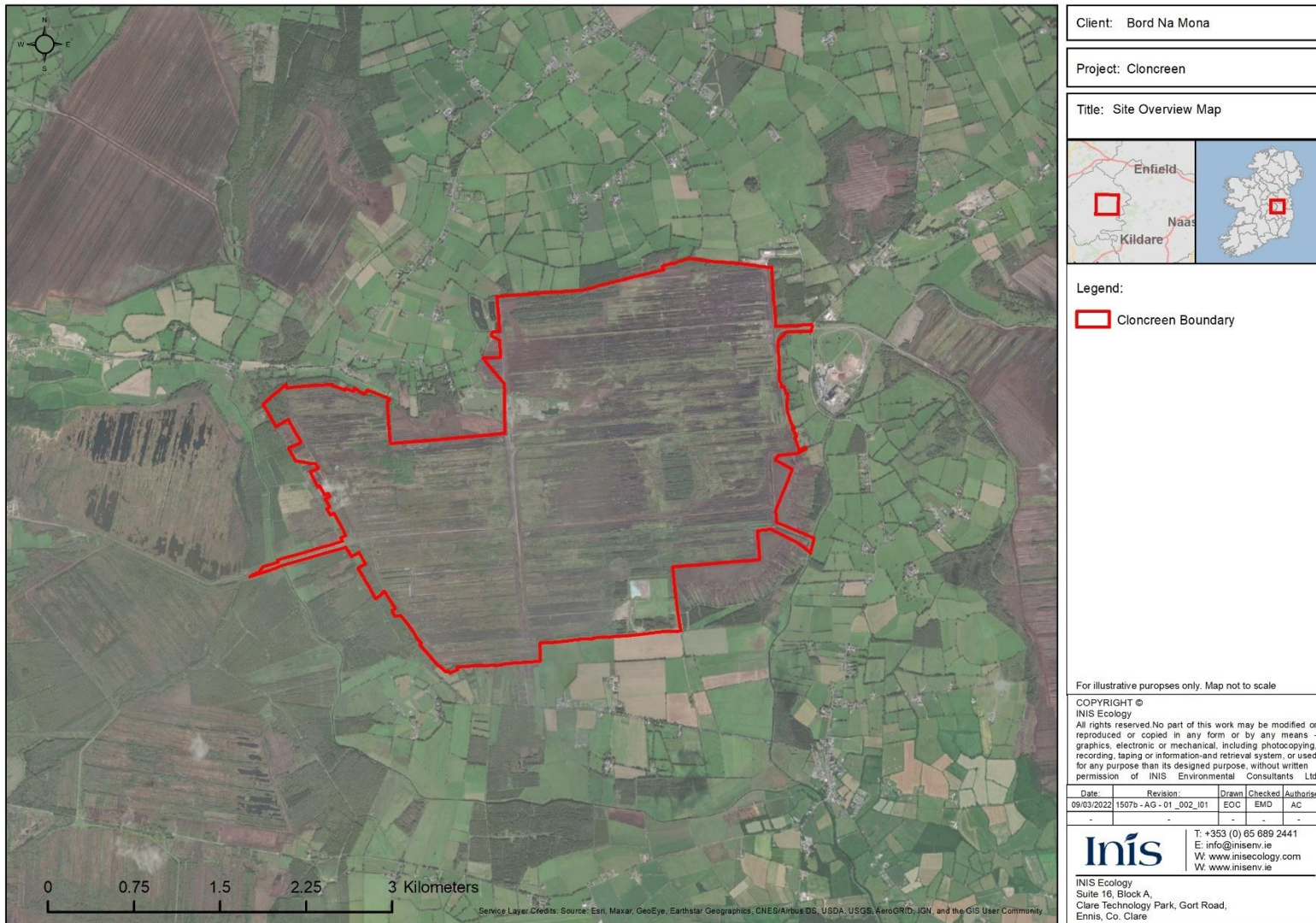


Figure 2.1: Site overview map of the boundary for rehabilitation works at Cloncreen Bog, Co. Offaly.

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 Screening for 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, 2019, 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, 2021);
- 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 Commission, 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);
- Article 6 of the Habitats Directive: Rulings of the European Court of Justice (Sundseth & Roth, 2014).
- Practice Note PN01: Appropriate Assessment Screening for Development Management. OPR (2021).
- Birds Directive (Council Directive 2009/147/EC);
- European Communities (Birds and Natural Habitats) Regulations 2011 (as amended);
- Communication from the Commission on the Precautionary Principle (European Commission, 2000);
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government (2010); and
- National Parks and Wildlife Service (NPWS) Guidance for Planning Authorities (2010).

3.1.1. Field Visit

A field visit was undertaken in Cloncreen Bog on 11th March 2022 to assess the site and habitats. A particular emphasis was placed on observing the silt ponds and water outflows from the site, in addition to reviewing the various rehabilitation activities proposed to be undertaken.

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 the National Parks and Wildlife Services (NPWS, 2019a, 2019b, 2019c). 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 NPWS¹;
- 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;
- Mapping of European site boundaries and Conservation Objectives (CO) for relevant sites and beyond, as relevant, available online from the NPWS¹;
- 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 Tool³;
- 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 NPWS⁶.

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 plan, 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 plan 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,

¹ Available at <https://www.npws.ie/protected-sites>. Accessed in March 2022.

² Available at <https://maps.biodiversityireland.ie/Map>. Accessed in March 2022.

³ Available at <https://airomaps.geohive.ie/ESM/>. Accessed in March 2022.

⁴ Available at <https://gis.epa.ie/EPAMaps/>. Accessed in March 2022.

⁵ Available at <https://www.gsi.ie/en-ie/data-and-maps/Pages/Groundwater.aspx>. Accessed in March 2022.

⁶ Available at <https://www.npws.ie/maps-and-data/habitat-and-species-data>. Accessed in March 2022.

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 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 plan has been evaluated based on an identified Zol with regard to the potential impact pathways to ecological features (e.g. mobile and static). The Zol of the proposed plan 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 QI/SCI. 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 Zol’s within close proximity of the proposed plan, 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 plan 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 Zol for water pollution from the proposed plan site is considered to be the hydrological pathway from the proposed plan until it reaches the first lentic 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 plan to European sites located downstream.

3.3.2. Source-Pathway-Receptor Model

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

- A ‘source’ is defined as the individual element of the proposed plan 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* level⁷. The opinion of the Advocate General in CJEU case C-258/11 outlines:

“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 Zol of activities associated with the proposed plan, 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.

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 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 Centre² for Protected and Invasive Species presence in the vicinity of the proposed plan. The proposed rehabilitation works are located within six 2km Grid Squares; N52T, N52Y, N62D, N62C, N52X and N52S. 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 plan location.

Common Name	Scientific Name	Date of Record	Designation*
Invasive Alien Species			
American Mink	<i>Mustela vison</i>	22/08/2012	Invasive Species >> Regulation S.I. 477 (Ireland)
Fallow Deer	<i>Dama dama</i>	12/03/2015	Invasive Species >> Regulation S.I. 477 (Ireland)
Brown Rat	<i>Rattus norvegicus</i>	15/05/2017	Invasive Species >> Regulation S.I. 477 (Ireland)
Mammals			
European Otter	<i>Lutra lutra</i>	12/03/2015	EU Habitats Directive >> Annex II Annex IV
Plants			
Basil Thyme	<i>Clinopodium acinos</i>	19/06/2019	Threatened Species: Endangered
Blue Fleabane	<i>Erigeron acer</i>	05/08/2010	Threatened Species: Endangered
Aquatics			
Freshwater White-clawed Crayfish	<i>Austropotamobius pallipes</i>	22/08/2017	EU Habitats Directive >> Annex II, Annex V

4.1.2. Protected Habitats

The Environmental Sensitivity Mapping Tool⁸ was used to confirm the presence of designated habitats within the proposed plan 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 decommissioning and rehabilitation plan is located within the Barrow Water Framework Directive (WFD) Catchment (14). The majority of the site is located in the Figile_SC_020 (14_14) Sub

⁸ <https://airomaps.geohive.ie/ESM/>

catchment, while the north eastern section of the bog is located in the Figile_SC_010 (14_3) Sub catchment.

The drainage on Cloncreen is partially pumped. There are a series of drains through the bog at regular intervals that form part of the main drainage system. There are 11 no. silt ponds located at the site boundary to the west, south and east, which flow into one river water body, the Figile_040 (IE_SE_14F010300), at three different locations (Table 4.1.2). Searches of the EPA Unified GIS Application⁹ and the EPA Catchments database¹⁰ were conducted for water bodies draining the proposed plan area and their water quality for 2013-2018. The Figile_040 (IE_SE_14F010300) is located to the east, west and south of the bog and is described as having a Moderate Ecological Status.

4.1.4. European sites

The nearest European site to the rehabilitation plan is separated by a minimum distance of approximately 4.88km – The Long Derries, Edenderry SAC (Table 4.2). A precautionary distance of 15km was chosen for the preliminary Zol of the proposed plan to 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 plan until the first lentic water body (as described in Section 3.3.1. In total, the considered Zol of the proposed plan intersects three European sites (Figure 4.1).

Table 4.2: Distance from European sites within Zol and the proposed plan.

Site code	Site name	Distance to proposed plan
000925	The Long Derries, Edenderry SAC	4.88km
002162	River Barrow and River Nore SAC	12.14km
000582	Raheenmore Bog SAC	12.43km

Potential pathways between the proposed plan 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 plan (highlighted CO/European sites are identified with potential pathways for effects with the proposed plan).

Designated site [code]	Conservation Objectives version	Qualifying Interests [code]/Special Conservation Interests [code]	Connectivity with the proposed plan
The Long Derries, Edenderry SAC [000925]	Version 1, 11 th November 2021 (NPWS, 2021)	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (*important orchid sites) [6210]	No. The rehabilitation plan is not hydrologically connected with the Long Derries, Edenderry SAC, which is situated upstream, to the

⁹Available at <https://gis.epa.ie/EPAMaps/>. Accessed in February 2022.

¹⁰ Available at <https://www.catchments.ie/>. Accessed in February 2022.

Designated site [code]	Conservation Objectives version	Qualifying Interests [code]/Special Conservation Interests [code]	Connectivity with the proposed plan
			northwest of the proposed works site.
River Barrow and River Nore SAC (002162)	Version 1, 19 th July 2011 (NPWS, 2011)	Estuaries [1130]	Yes. The River Barrow and River Nore SAC is hydrologically connected to the proposed plan with a hydrological separation distance of ~20km.
		Mudflats and sandflats not covered by seawater at low tide [1140]	
		<i>Salicornia</i> and other annuals colonising mud and sand [1310]	
		Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) [1330]	
		Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]	
		Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> 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 (<i>Cratoneurion</i>) [7220]	
		Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]	
*Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>) [91E0]			

Designated site [code]	Conservation Objectives version	Qualifying Interests [code]/Special Conservation Interests [code]	Connectivity with the proposed plan
		Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>) [1016]	
		Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) [1029]	
		White-clawed Crayfish (<i>Austropotamobius pallipes</i>) [1092]	
		Sea Lamprey (<i>Petromyzon marinus</i>) [1095]	
		Brook Lamprey (<i>Lampetra planeri</i>) [1096]	
		River Lamprey (<i>Lampetra fluviatilis</i>) [1099]	
		Twaite Shad (<i>Alosa fallax fallax</i>) [1103]	
		Atlantic Salmon (<i>Salmo salar</i>) (only in fresh water) [1106]	
		Otter (<i>Lutra lutra</i>) [1355]	
		Killarney Fern (<i>Trichomanes speciosum</i>) [1421]	
		Nore Pearl Mussel (<i>Margaritifera durrovensis</i>) [1990]	
Raheenmore Bog SAC (000582)	Version 1, 2 nd November 2015 (NPWS, 2015)	*Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] Depressions on peat substrates of the Rhynchosporion [7150]	No. The proposed plan is not hydrologically connected to Raheenmore Bog SAC.

* indicates a priority habitat under the Habitats Directive.

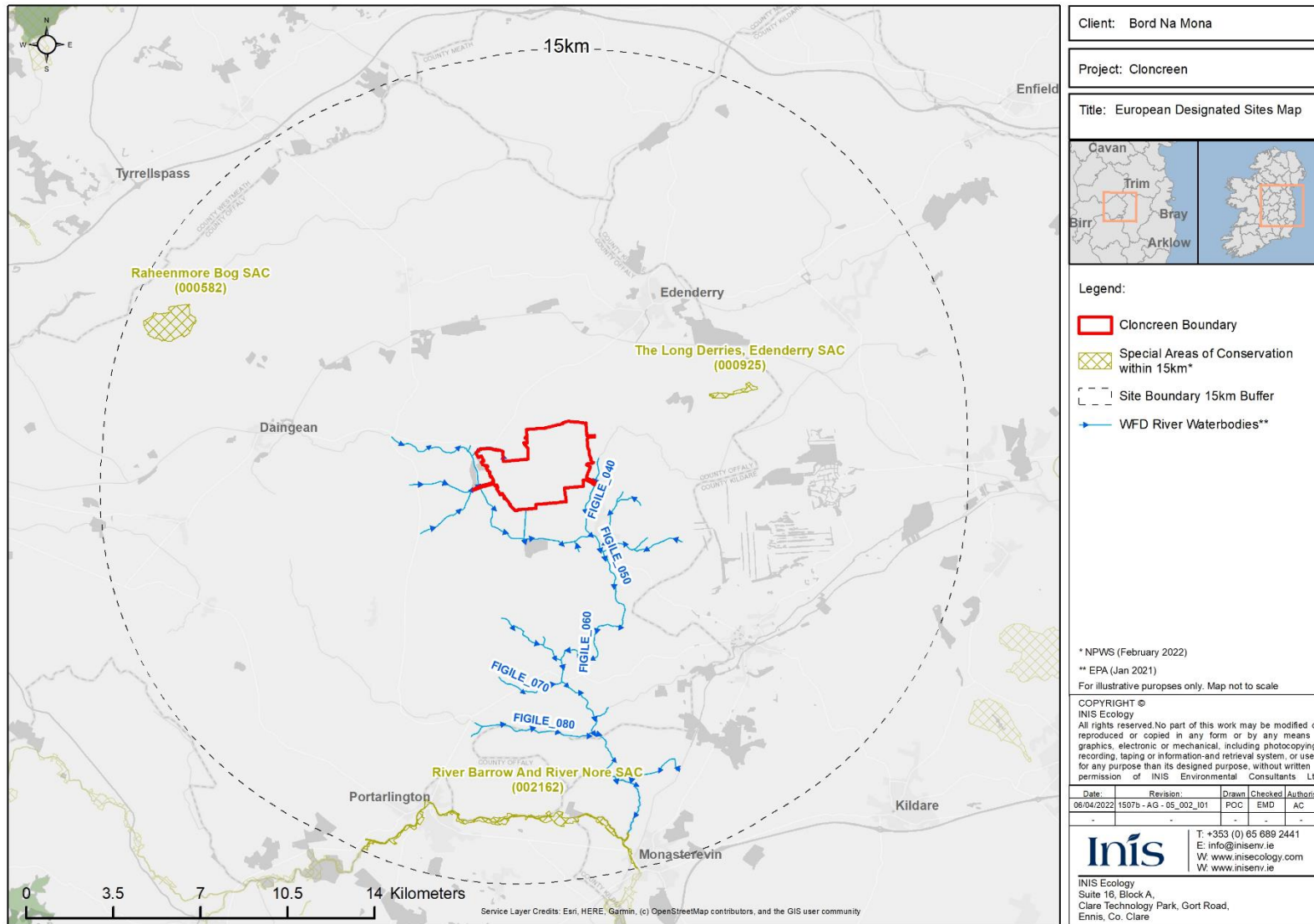


Figure 4.1: Designated sites within the considered Zol of proposed plan.

5. SCREENING FOR APPROPRIATE ASSESSMENT

5.1. Screening Evaluation Process

The Screening process examines the likely effects of the proposed plan, 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 plan 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 of European sites in Ireland. In this context, **Table 5.1** assesses a specific source-pathway-receptor model for this proposed plan.

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

Source of Potential Effect	Description of Pathway	Potential Zone of Influence of the Effect
<ul style="list-style-type: none"> • Noise, vibration; • Human presence; and • Movements of vehicles. 	Noise or other works-related disturbance could reduce the ability of populations of QI species to forage, roost or breed.	Varies by species. Generally, for otters the maximum foraging range is 13km (Reid <i>et al.</i> , 2013).
<ul style="list-style-type: none"> • Use of contaminants (e.g. hydrocarbons); and • Earthworks (e.g. Digging). 	Contamination through surface water runoff.	<ul style="list-style-type: none"> • Surface water run-off carrying suspended silt or contaminants into local water bodies can be restricted to the first lentic waterbody that is hydrologically downstream from the proposed Plan.

5.4. Scoping of Effects

5.4.1. Disturbance to mobile QIs

The proposed Plan is hydrologically connected (approx. 20km hydrological separation distance), upstream, of the River Barrow and River Nore SAC within which the Otter (*Lutra lutra*) is a QI. The proposed Plan is within the foraging range of the Otter (Reid *et al.*, 2013). However, Otters typically forage at night (Chanin, 2003), so the proposed period for undertaken the rehabilitation works (during the day) limits likely disturbance impacts. Further, due to the nature of the proposed Plan which does not involve the alteration of riverbank habitat and as, upon completion, the proposed Plan will likely increase the quantity and quality of suitable habitat for this species, significant effects as a result of disturbance on Otter are not likely.

5.4.2. Contamination

Potential contamination effects from surface water run-off are related to 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 plan and one European site – the River Barrow and River Nore SAC [002162]. The only outflow in Cloncreen is through onsite drainage (including existing silt ponds) which flows into the Figile_040 river waterbody and then into the Barrow_110 (IE_SE_14B011300). The nearest European site, the River Barrow and the River Nore SAC is separated by a significant distance (12km terrestrially and 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 Figile_040 river waterbody 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 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 plan.

5.5.1. Offaly County Plan 2021-2027

The Offaly County 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, the proposed rehabilitation is not likely to have an in-combination effect with the Council plan.

5.5.2. Projects

A search of planning applications (projects) was conducted within the vicinity of the proposed plan and along hydrological pathways previously identified, using the Offaly County Council planning portal map viewer¹¹ and the Kildare County Council planning portal map viewer¹² the Department of Housing, Planning and Local Government EIA portal map viewer¹³. 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 hold potential for in-combination adverse effects on the integrity of relevant European sites to the proposed works 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.

There are no potential effects on European Sites reported, either individually or in-combination with other projects, according to the conclusion of the NIS accompanying the projects with application numbers 20621 and 150504 listed in **Table 5.2**. Therefore, it is considered that no likely in-combination effects can be anticipated from the proposed works with other plans or projects.

¹¹ Available at [Offaly County Council Planning GIS Viewer \(arcgis.com\)](http://arcgis.com) Accessed in March 2022.

¹² Available at <http://webgeo.kildarecoco.ie/planningenquiry> Accessed in March 2022.

¹³ Available at <https://housinggov.ie/maps.arcgis.com/apps/webappviewer/index.html?id=d7d5a3d48f104ecbb206e7e5f84b71f1> Accessed in March 2022.

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 Plan Description	Approximate Distance from Proposed Works	Date Planning Application Granted
20621	Bord na Mona Energy Ltd., Cloncreen, Clonbullogue, Co. Offaly	The continued use of the previously permitted ash repository for deposition of up to 20,000 tonnes of peat ash and biomass ash during 2023, with an amendment to the planning boundary to incorporate the site entrance. no new infrastructure is proposed as part of this application.	ca 0km	22/06/2021
21598	Kilcush Solar Farm Ltd., Ballinowlart North, Ballykillen, Kilcumber, Cloncant and Cushaling, Edenderry, Co. Offaly	A period of 10 years to construct and complete a solar PV plan with a total site area of circa 117.47 hectares, to include PV panels mounted on metal frames, new access tracks, underground cabling, perimeter fencing with CCTV cameras, 22 no. MV power stations, temporary construction compounds and all ancillary grid infrastructure and associated works. The solar farm would be operational for 40 years.	ca 0km	-
2021041	Cloncant Renewable Energy Limited, Townlands of Ballykilleen, Cloncreen and Ballinowlart North, Co. Offaly	The proposed plan is a 110kV substation with a 400m 110kV overhead line grid connection.	ca 0.1km	-
150504	Bord na Mona Powergen, Cloncreen, Co. Offaly	The proposed plan comprises the construction of 21 No. wind turbines with a maximum blade tip height of up to 170 metres, and all associated works.	ca 0km	

5.5.3. Other BnM PCAS Plan

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 concludes no impacts will arise from the proposed rehabilitation works at Clonreen Bog.

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

Project/Applicant Name and Proposed Location	Brief Plan Description	Approximate Distance from Proposed Works
Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Mona, Timahoe South, Co. Offaly	Meeting conditions of IPC Licence, the main goal and outcome of this plan is the enhanced rehabilitation (environmental stabilisation) of peatlands used for industrial peat extraction at the bog in a manner that is acceptable to both external stakeholders and to Bord na Móna and which optimise climate action and other ecosystem service benefits.	<i>ca 12.6km</i>
Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Mona, Ummeras Bog, Co. Offaly and Co. Kildare	Meeting conditions of IPC Licence, the main goal and outcome of this plan is the enhanced rehabilitation (environmental stabilisation) of peatlands used for industrial peat extraction at the bog in a manner that is acceptable to both external stakeholders and to Bord na Móna and which optimise climate action and other ecosystem service benefits.	<i>ca 8.6km</i>
Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Mona, Eskers Bog, Co. Offaly	Meeting conditions of IPC Licence, the main goal and outcome of this plan is the enhanced rehabilitation (environmental stabilisation) of peatlands used for industrial peat extraction at the bog in a manner that is acceptable to both external stakeholders and to Bord na Móna and which optimise climate action and other ecosystem service benefits.	<i>ca 1.3km</i>
Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Mona, Ballycon Bog, Co. Offaly	Meeting conditions of IPC Licence, the main goal and outcome of this plan is the enhanced rehabilitation (environmental stabilisation) of peatlands used for industrial peat extraction at the bog in a manner that is acceptable to both external stakeholders and to Bord na Móna and which optimise climate action and other ecosystem service benefits.	<i>0km</i>
Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Mona, Lodge Bog, Co. Kildare	Meeting conditions of IPC Licence, the main goal and outcome of this plan is the enhanced rehabilitation (environmental stabilisation) of	<i>ca 10km</i>

Project/Applicant Name and Proposed Location	Brief Plan Description	Approximate Distance from Proposed Works
	peatlands used for industrial peat extraction at the bog in a manner that is acceptable to both external stakeholders and to Bord na Móna and which optimise climate action and other ecosystem service benefits.	
<p align="center">Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Mona, Cavemount Bog, Co. Offaly</p>	<p>Meeting conditions of IPC Licence, the main goal and outcome of this plan is the enhanced rehabilitation (environmental stabilisation) of peatlands used for industrial peat extraction at the bog in a manner that is acceptable to both external stakeholders and to Bord na Móna and which optimise climate action and other ecosystem service benefits.</p>	<p align="center"><i>ca 3.5km</i></p>
<p align="center">Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Mona, Clonad Bog, Co. Offaly</p>	<p>Meeting conditions of IPC Licence, the main goal and outcome of this plan is the enhanced rehabilitation (environmental stabilisation) of peatlands used for industrial peat extraction at the bog in a manner that is acceptable to both external stakeholders and to Bord na Móna and which optimise climate action and other ecosystem service benefits.</p>	<p align="center"><i>ca 8.5km</i></p>
<p align="center">Cutaway Bog Decommissioning and Rehabilitation Plan, Bord na Mona, Mountlucas Bog, Co. Offaly</p>	<p>Meeting conditions of IPC Licence, the main goal and outcome of this plan is the enhanced rehabilitation (environmental stabilisation) of peatlands used for industrial peat extraction at the bog in a manner that is acceptable to both external stakeholders and to Bord na Móna and which optimise climate action and other ecosystem service benefits.</p>	<p align="center"><i>ca 2.9km</i></p>

6. SCREENING CONCLUSIONS

Inis Environmental Consultants Ltd. has prepared this report to inform an Appropriate Assessment screening to assess whether the proposed plan at Cloncreen 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 plan 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 plan and the potential in-combination effects with other plans or projects, the following findings were reported:

- The proposed plan is not directly connected with, or necessary to, the management of any European site;
- The proposed plan, alone or in-combination with other plans or projects, will not give rise to any likely significant effects 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 plan will not give rise to likely significant alone or in-combination effects 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.

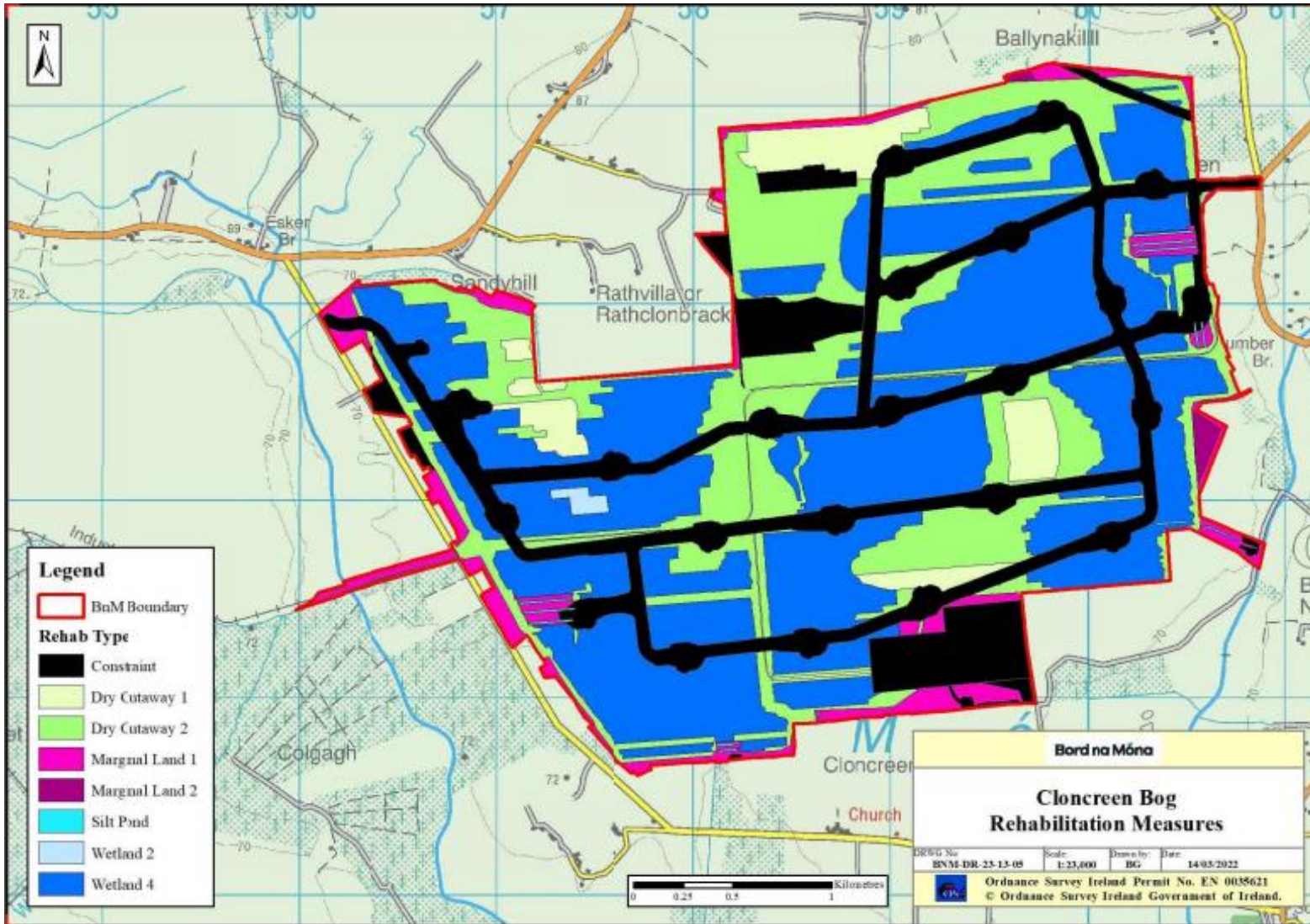
On the basis of objective scientific information, it is the considered opinion of Inis Environmental Consultants Ltd. that, in completing its report to inform Screening for Appropriate Assessment in respect of the proposed plan at Cloncreen Bog, it is not likely, either individually or in-combination 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 plan.

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APPENDIX A: PROPOSED PLAN LAYOUT



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 proposed plan. 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	
<i>Name and location of the Natura 2000 sites</i>	The Stage 1 Screening Evaluation provided herein has examined potential effects via source pathway linkages on the designated SACs and SPAs within 15km of the proposed plan. There is a total of three no. European or Natura 2000 sites located within the 15km zone of consideration: <ul style="list-style-type: none"> • The Long Derries, Edenderry SAC (000925) • River Barrow and River Nore SAC (002162) • Raheenmore Bog SAC (000582)
<i>Description of the project or plan</i>	Rehabilitation of Clonreen Bog.
<i>Is the Project directly connected with or necessary to the management of the site (provide details)?</i>	No.
<i>Are there other projects or plans that together with the project of plan being assessed could affect the site (provide details)?</i>	No. The proposed plan at Clonreen Bog will not give rise to likely significant in-combination effects to any European sites due to their duration and nature.
The Assessment of Significant Effects	
<i>Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site</i>	The assessment identified the following potential effects: <ul style="list-style-type: none"> • Disturbance to mobile QI; • Contamination of surface water;
<i>Explain why these effects are not considered significant</i>	<ul style="list-style-type: none"> • Disturbance of mobile QIs <p>Due to the nature of the proposed Plan which does not involve the alteration of riverbank habitat and as, upon completion, the proposed Plan will likely increase the quantity and quality of suitable habitat for this species, significant effects on QI species as a result of disturbance are considered unlikely.</p> <ul style="list-style-type: none"> • Contamination of surface water <p>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 Figile_040 river waterbody 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 are considered unlikely.</p>

Finding of No Significance Effects Report	
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.