



PROPOSED DERRYCLARE WILD WESTERN PEATLANDS PROJECT – ADDENDUM TO THE SUBMITTED NATURA IMPACT STATEMENT

Project Reference	210603a - Proposed Derryclare Wild Western Peatlands Project
Date & Time	20/12/2023
Subject	Addendum To The Submitted Natura Impact Statement
Author(s)	Pádraig Desmond (BSc.), reviewed by Pat Roberts (BSc. Env.).

Introduction

This addendum document has been prepared to address Item 2 of the request for further information (RFI) received from Galway County Council (GCC) in relation to the Proposed Derryclare Wild Western Peatlands Project. In light of the RFI, this addendum reconsiders the Natura Impact Statement (NIS) which was submitted as part of the planning application for the Proposed Project, taking into account the overall RFI response inputs pertinent to potential impacts on European Sites, including additional detail relating to the project description and additional baselines surveys for birds, mammals, and aquatic receptors.

Item 2 of the RFI from GCC stated:

The site of the proposed development is surrounded by The Twelve Bens/Garraun Complex SAC, within c2km from Maumturk Mountains SAC and Connemara Bog Complex SAC and SPA, and within a distance of 15km of 9 no. other designated European site for rare and threatened flora and fauna across the European Union (i.e. Natura 2000 network of sites), which are protected under the EU Habitats Directive (92/43/EEC) & EU Birds Directive (79/409/EEC, as amended by Directive 2009/147/EC) and the European Communities (Natural Habitats) Regulations 1997, as amended by the European Communities (Birds and Natural Habitats) Regulations 2011. The protection of these European sites is further reinforced in the Galway County Development Plan, 2022-2028, which was subject to a Natura Impact Report NIR and includes the following provisions to protect European Sites: Policy Objective NHB 1, Policy Objective NHB 2, Policy Objective NHB 3, Policy Objective NHB 4, Policy Objective WR 1 Water Resources, and DM Standard 50. Based on the information included with the planning application, and the concerns identified by the Planning Authority in relation to the potential direct, indirect and cumulative impacts which include Annex I habitat loss and damage, uncertainties in terms of mitigation measures proposed, deficiencies in the information contained in the NIS concerning potential impacts of the project on Qualifying interests of the European Sites. The planning authority in conjunction with the application of the precautionary principle, consider that adverse effects on the integrity and conservation objectives of the European sites in the vicinity, cannot be ruled out, as a result of the proposed project. Therefore, the Planning Authority requires the applicant to provide and update the submitted NIS accordingly including the following required.



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- a. *Full Bird Survey Report, focusing on breeding bird or winter /wetland bird surveys paying particular attention to Merlin, Golden Plover, Common Gull and Cormorant. (Merlin identified as breeding on island on Lough Inagh) Bird Surveys guidance should be followed – Institute of Ecology and Environmental Management Guidance Document states;*

“It is however, an underlying presumption of these guidelines that bird surveys (breeding/non-breeding) should always be scoped in unless robust justification can be provided as to why they are not required. This presumption is due to the wide range of habitats that may be of value to bird species, seasonal variations in habitat use and/or value, the mobility of bird species and the potential sensitivity of bird species to a range of impacts that may result from development projects.” Appropriate seasonal bird surveying shall be carried out and submitted.

- b. *Bat Survey Report, including the use of transect surveys and static detectors, any required mitigation measures identified for bat species.*
- c. *Aquatic Survey for all water courses within the site, due to the significance of Lough Inagh as an important salmonid lake and the hydrological connections between the site and European Sites*
- d. *Mammal surveys (including any required mitigation during construction and in a post development scenario), including the use of trail cameras.*
- e. *Full detailed explanation of the recreational use of the existing site and proposed use during operation and post-completion stages, any trails, locations of trails within and adjoining the site, use of fishing facilities at Lough Derryclare and Lough Inagh, this should include any required mitigation measures to protect the proposed bog landscape from humans, animals and any identified protected habitats/species. (This should also be updated in the EIAR).*

The issue of mobile species using this 567ha site is not fully addressed in the absence of dedicated surveys. For each field survey undertaken provide: Brief description of methodology/method, Names and qualifications of surveyors, Date(s) of surveys, Study area, Weather conditions at time of survey(s) and time of day (if relevant), Reference to relevant guidance document (where appropriate), Explanation of any departures from recommended guidance. Limitations Note: Where multiple survey visits have been undertaken, dates, times and weather conditions of surveys can be provided in a table in an appendix. Note: Detailed descriptions of survey method can be provided in an appendix.

This document first details the additional information which has been made available in response to the RFI, such as restoration plans for each sub-compartment of the Proposed Project site and the findings of the additional surveys undertaken, while also explaining to the reader where to find this information in the RFI response. It then revisits the results of the Appropriate Assessment Screening Report (AASR) and carries out an amended impact assessment, in light of the additional information. Finally, the conclusion of the submitted NIS is reviewed against the revisited AASR and impact assessment and amendments are made where necessary.

Additional Information taken into consideration in this NIS Addendum

The sections below detail the additional information that has been prepared in response to the RFI from GCC.

Updated Project description

A full project description of the Proposed Project has been included in Section 3.2 of the submitted NIS, which details procedures and methods for the following elements of the project:

- Treefelling
- Habitat Restoration and Enhancement
 - Blanket Bog and Wet Heath Restoration
 - Establishment of Native Pioneer Woodland
- Site Roads



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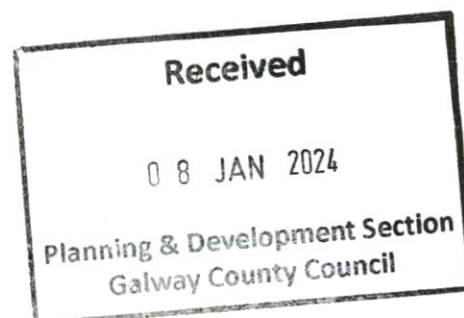
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- Existing roads
- New temporary access roads
- Watercourse crossings
- > Visitor Entrance and Car Park Improvement
- > Visitor Information Signage
- > Site Fencing
- > Vegetation Control/Invasive Species

In light of the RFI received from GCC, particularly in addressing the concerns relating to impacts on water quality (Item 2c), a Best practice Operational Guidelines for Blanket Bog Restoration in Ireland has been prepared (Appendix 7 of the RFI document) by Coillte and includes a 'Decision matrix for selecting the Forest to bog restoration option'. These guidelines have informed the sub-compartment restoration plan which has been included in the RFI document, detailing the restoration options to be used for each of the sub-compartments of the Proposed Project site. The restoration options have been allocated to each sub-compartment based on the sensitivity of that section of the Proposed Project site and are detailed in each in relevant drawing.

Regards vegetation control and Invasive species, an additional Derryclare management and maintenance plan has been provided in Section 4.6 of the response to the RFI document. This document sets out a timeline of management treatment for invasive species including rhododendron within the Proposed Project site.



Additional baseline surveys

To inform the Submitted NIS, detailed habitat surveys and mapping of the site were undertaken by Jackie Hunt (M.Sc.) and Louise Scally (M.Sc., Ph.D.) on the following dates:

- > 15th to 18th June 2021
- > 7th and 16th July 2021

Additional multi-disciplinary walkover surveys were also undertaken by MKO ecologists on the 30th of July, 6th of August and the 9th and 10th of September 2021 and again on the 27th of October and 15th of November 2022. These surveys included a search for indications of otter throughout the site, particularly along watercourses and along the banks of Lough Inagh and Derryclare Lough.

In response to Items 2a, 2c, and 2d of the RFI from GCC, additional targeted surveys for birds, aquatic receptors, and mammals were undertaken in 2023, the details of which are included in the Bird Report, Biological & Chemical Monitoring of Surface Waters report, and Mammal Report which accompany the RFI, and are summarised in the RFI response document.

Merlin, cormorant, and common gull were recorded at the proposed development site and in the adjacent Lough Inagh and Derryclare Lough during the additional surveys. No golden plover were recorded. While no breeding evidence of any of these species was identified within the Proposed Project site, it was concluded that merlin were likely breeding in north Derryclare Lough, outside the boundary of the site.

Of the six sites sampled in Derryclare for water quality, two (DB-1 and DB5) were not suitable for sampling as they were too deep with a peaty substrate. Samples were taken from the remaining sites and had a Q-value range of High (Q4-5) to Moderate (Q3-4).

No significant mammal activity was recorded within the site boundary during the targeted mammal surveys undertaken in July 2023, nor in the previous survey efforts in 2021 and 2022. While some indications of mammals using the site were recorded (tracks, trails, scats, feeding remains), the presence of badger (*Meles meles*), fox (*Vulpes vulpes*), red deer (*Cervus elaphus*), red squirrel (*Sciurus vulgaris*), and pine marten (*Martes martes*) was confirmed via trail cameras. No mammal breeding sites were recorded, including setts, dreys, or holts.



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Conclusions of the submitted Article 6(3) Appropriate Assessment Screening Report (AASR)

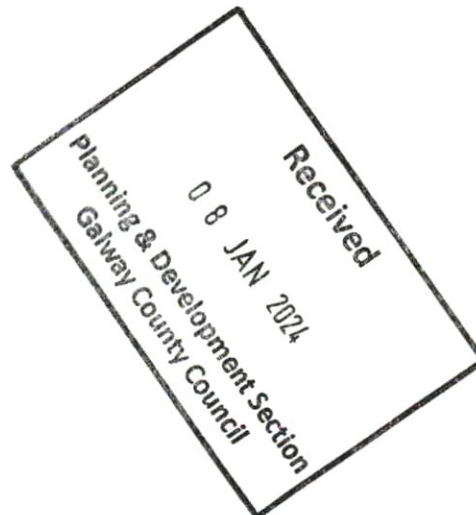
The Article 6(3) Appropriate Assessment Screening report submitted as part of the planning application identified the potential for the Proposed Project to result in significant effects on the following European Sites:

- The Twelve Bens/Garraun Complex SAC [002031]
- Connemara Bog Complex SAC [002034]
- Connemara Bog Complex SPA [004181]

Each of these sites were discussed individually in the submitted NIS in terms of their Qualifying Interests or Special Conservation Interests with the potential to be affected and the pathways by which any such effects may occur. The potential pathways for effect included:

- Direct effects via habitat loss/degradation
- Direct effects via disturbance
- Indirect effect via habitat loss/degradation
- Direct ex-situ effects on SCIs via habitat loss/degradation
- Direct ex-situ effects on SCIs via habitat disturbance

Following consideration to the additional information pertaining the Proposed Project, as discussed above, as well as the findings of the additional surveys undertaken, no additional pathways for impact on any other European Site were identified and the findings of the submitted AASR remains unchanged.



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Amended Impact Assessment

In light of the additional information prepared in response to the RFI from GCC, the below impact assessment revisits the potential for significant effects on European Sites from the Proposed Project undertaken in the submitted NIS. It considers the additional information, as well as that already provided in the submitted NIS, to provide a full and accurate assessment.

The Twelve Bens/Garraun Complex SAC [002031]

Potential pathways for effect on the QIs associated with the Twelve Bens/Garraun Complex SAC include the following:

- Direct effects via habitat loss/degradation
- Direct effects via disturbance to otter
- Indirect effect via habitat loss/degradation to aquatic receptors

Direct Effects on Habitats

Small sections of the Proposed Project site are located within The Twelve Bens/Garraun Complex SAC [002031]. While there is no works proposed within any Annex I habitat, taking a precautionary approach, there is potential for direct impacts on the following QI habitats of the SAC via accidental habitat loss/degradation during construction and felling activities associated with the Proposed Project.

- [7130] Blanket bogs (* if active bog)
- [7150] Depressions on peat substrates of the Rhynchosporion

Taking the precautionary approach, there is potential for the direct loss/degradation of the above QIs of the SAC, as a result of the inadvertent encroachment of machinery into peatland habitats. Therefore, the following measures will be implemented during the construction phase of the Proposed Project to avoid the inadvertent encroachment of machinery into peatland habitat and the potential loss of this habitat.

- Designated site access tracks and extraction routes will be established prior to the construction phase of the Proposed Project. Machinery will use only these marked tracks/routes for entry and exit of the site.
- Where peatland habitat is adjacent to the footprint of the Proposed Project, fencing will be erected between the works area and this habitat to ensure no machinery encroaches.
- All machinery operators will be made aware of the sensitive nature of peatland habitats by the site manager.

As part of the Proposed Project, approx. 281 ha of existing forestry will be restored to blanket bog wet heath habitat. This will be achieved through the felling of existing forestry, blocking site drains and where suitable, reprofiling of ploughed areas. Additionally, approx. 62.26 hectares of coniferous forestry will be felled and replanted with native scrub woodland. Once the construction activities associated with the Proposed Project cease, it is intended that the target peatland and woodland habitats establish during the operational phase of the Proposed Project.

Following the mitigation measures above and considering the targets of the proposed bog restoration project, there is potential for the Proposed Project to result in an overall positive impact on the above QIs of the SAC.

Direct Effects on Species

The Proposed Project site is partially within The Twelve Bens/Garraun Complex SAC [002031]. Therefore, there is potential for direct impacts on the following QI species of the SAC via disturbance from works associated with the construction phase of the Proposed Project.

- [1355] Otter *Lutra lutra*

Received

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No resting or breeding sites for otter were recorded during the multidisciplinary surveys undertaken in 2021 and 2022 and during the targeted mammals surveys undertaken in 2023. However, the shores on Lough Inagh and Derryclare Lough, which form part of the Twelve Bens/Garraun Complex SAC provide suitable foraging, resting, and breeding habitat for otter. There is, therefore, potential for disturbance to otter during the construction phase of the Proposed Project.

Otter are predominantly crepuscular in nature and are unlikely to be adversely impacted by the proposed works. Works will be confined to daytime hours, thus minimizing potential disturbance related impacts to the species. The NPWS Threat Response Plan for Otter acknowledges that "Little evidence has come to light in recent studies to suggest that disturbance by recreation is a significant pressure." It also identifies that Otter are known to travel significant distances from streams and lakes in search of new territory and feeding areas.

Channin P (2003)¹ provides a literary review with regard to anthropogenic disturbance and refers to several reports which have found that disturbance is not detrimental to Otters (Jefferies (1987), (Durbin 1993), (Green & Green 1997). The report also describes successful breeding in towns, under ferry terminals and under the jetties of one of Europe's largest oil and gas terminals at Sullom Voe in North Scotland.

Irish Wildlife Manual No 23 (National Otter Survey of Ireland 2004/2005) found no significant relationship between disturbance and otter occurrence. In addition, no significant difference in otter presence was found between sites with and without recreational activity. It also states, "the lowest percentage occurrence was found at the sites with the lowest recorded disturbance!" Irish Wildlife Manual No 76 (National Otter Survey of Ireland 2010/2012) notes that the occurrence of Otter was unaffected by perceived levels of disturbance at the survey sites. It also notes that there is little published evidence demonstrating any consistent relationship between Otter occurrence and human disturbance (Mason & Macdonald 1986, Delibes et al. 1991; Bailey & Rochford, 2006). Best practice disturbance limitation measures will be followed and are detailed below.

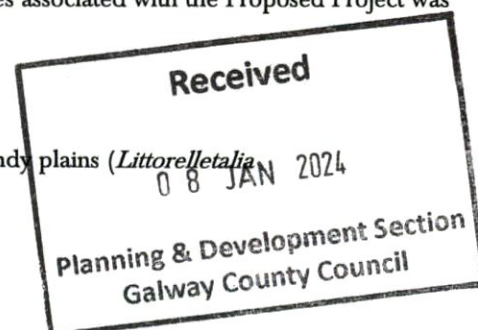
- All construction plant and equipment to be used on-site will be modern equipment and will comply with the European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations 1998, and any subsequent amendments.
- Plant machinery will be turned off when not in use. Machines, which are used intermittently, will be shut down during those periods when they are not in use.
- Operating machinery will be restricted to the Proposed Project site boundary.
- Light spills during construction works will be minimised where possible thus reducing the effect on areas outside the Proposed Project, and consequently on fauna of conservation value including otter.

Based on the above review of scientific literature and on the best practice disturbance limitation measures included above the potential for adverse impact on the integrity of the Otter population associated with the Twelve Bens/Garraun Complex SAC [002031] as a result of disturbance from the construction and operational phases of the Proposed Project can be excluded.

Indirect Effects via Deterioration in Water Quality

In the absence of mitigation, a potential pathway for indirect effects on the below listed QIs of the Twelve Bens/Garraun Complex SAC in the form of deterioration of water quality arising from runoff of pollutants and nutrients into surface waters during felling and construction activities associated with the Proposed Project was identified:

- [1106] Salmon *Salmo salar*
- [1355] Otter *Lutra lutra*
- [3110] Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)



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Construction phase

The Proposed Project will include the felling of approx. 343 hectares of conifer plantation within 20 harvest blocks, habitat restoration and enhancement, upgrading of existing road and construction of new temporary access roads, temporary water crossings, the resurfacing of an existing carpark and perimeter fencing, each of which create the potential for pollution in various forms, i.e. the generation of suspended solids and the potential for spillage of fuels associated with the refueling of felling and construction machinery. There is also a risk of surface water runoff from bare soil and soil storage areas during restoration works.

Taking a precautionary approach and considering the findings of Biological & Chemical Monitoring of Surface Waters report which accompanies the RFI response document, the release of suspended solids or spillage of fuels during restoration and felling activities of the Proposed Project could potentially affect the water quality of downstream European Sites.

Additionally, there is potential for the release of nutrients into nearby watercourses as a result of the forestry operations associated with the Proposed Project, potentially resulting in the deterioration in water quality.

Mitigations

Whilst Sections 5.1.1.3.1 of the submitted NIS has provided mitigations against potential pathways for impacts on water quality, these have been repeated here again with slight amendments to remove any ambiguity in their implementation. In addition, Chapter 8; Hydrology and Hydrogeology of the submitted EIAR gives comprehensive detail on mitigation by avoidance and mitigation by design.

Furthermore, in response to the RFI, a Best practice Operational Guidelines for Blanket Bog Restoration in Ireland has been prepared (Appendix 7 of the RFI document) by Coillte and includes a 'Decision matrix for selecting the Forest to bog restoration option'. These guidelines have informed the sub-compartment restoration plan which has been included in the RFI document, detailing the restoration options and mitigations to be used for each of the sub-compartments of the Proposed Project site. The restoration options and mitigations have been allocated to each sub-compartment based on the sensitivity of that section and is detailed in each in relevant drawing in the restoration plan.

Site Set up

- Designated site access tracks and extraction routes will be established prior to the construction phase of the Proposed Project. Machinery will use only these marked tracks/routes for entry and exit of the site.
- The appointed contractor will be fully briefed by an ecologist as to the sensitive nature of the site and the required mitigation measures.
- A site compound will be established within the site boundary. The exact location of the site compound will be established by the contractor and will be located a minimum of 50m from any watercourses. The compound will be used for storage of material, machinery, fuel, and workers facilities.
- All construction materials and substances will be stored in the site compound and the compound will be located a minimum of 50m from any watercourse.

Below summarises the mitigating principals detailed in the CEMP, that will prevent the Proposed Project having an adverse impact on any European Site via runoff of pollutants into surface water systems.

Pollution Prevention

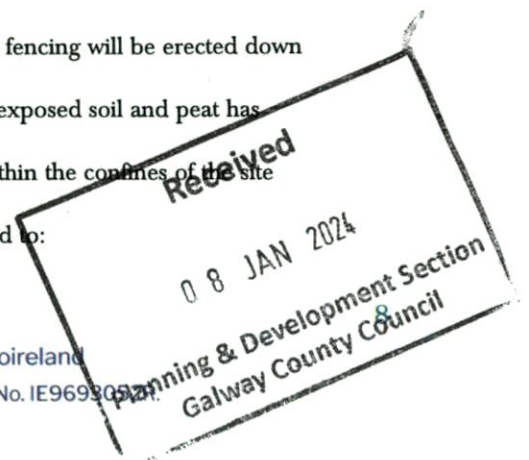
- Prior to the commencement of earth and peat works, embedded silt fencing will be erected down gradient of the works area and up gradient of any watercourses.
- The silt fences will be left in place throughout construction until all exposed soil and peat has revegetated.
- Excavated spoil (if any) will be stockpiled and contained entirely within the confines of the site boundaries.
- During earthwork activities, the following mitigations will be adhered to:



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- Excavated material that is not re-used on site will be transported off site to a designated facility.
 - Suitable stone material will be imported to the site to be used as back-fill.
 - Stockpiling of soil during construction, should it be required, will take place in designated areas within the site boundary and a minimum of 50m from any watercourses.
 - A silt fence will be erected around any stockpiling of material to prevent any sediment-laden run-off occurring.
- During restoration of peatland habitats, there will be a 10-meter buffer to adjacent streams/drains and silt fences will be erected downstream of all restoration works including drain blocking and ground re-profiling.
 - All diesel or petrol pumps required onsite will be operated within bunded units.
 - Any requirement for temporary fills or stockpiles will be damped down or covered with polyethylene sheeting as required to avoid sediment release associated with heavy rainfall.
 - The design, construction and maintenance of an on-site drainage system can prevent sediment related pollution of nearby surface waters. Ground disturbance will be kept to a minimum, water from excavations will be filtered, other sediment trapping technologies such as silt fences can prevent sediment leaving the site. Exposed surfaces will be re-vegetated as soon as possible following construction.
 - Earthworks will not be carried out during periods of heavy rainfall.

Refuelling, Fuel and Hazardous Materials Storage

- Storage/refuelling will be located in and carried out in a designated area of the proposed site, located a suitable distance from excavation works. Bunded tanks will be used, and these should be inspected for leaks regularly. Spill kits will be available on site and staff should be trained in their use and in spill control. All spills shall be diverted for collection and not discharged into waterbodies without treatment and other best management practices.
- Fuels, lubricants and hydraulic fluids for equipment used on the site will be carefully handled to avoid spillage, properly secured against unauthorised access or vandalism, and provided with spill containment.
- Minimal refuelling or maintenance of construction vehicles or plant will take place on site. Off-site refuelling will occur at a controlled fuelling station.
- On-site refuelling will take place by direct refuelling from the delivery truck or from fuel stored within a bunded fuel tank. Mobile measures such as drip trays and fuel absorbent mats will be used during all refuelling operations.
- Vehicles will never be left unattended during refuelling. Only dedicated trained and competent personnel will carry out refuelling operations and plant refuelling procedures shall be detailed in the contractor's method statements.
- The small volume of fuels, lubricants and hydraulic fluids that will be stored at the site will be placed within an appropriately bunded storage area within the boundaries of the Proposed Project site.
- Storage bunds/trays, if required will be constructed of an impermeable membrane (HDPC Plastic) and will have the adequate capacity to contain the volume of the liquids contained therein, if a leak/spillage does occur from one of the storage vessels.
- The storage area will contain a small bund lined with an impermeable membrane in order to prevent any contamination of the surrounding soils and vegetation.
- All site plant will be inspected at the beginning of each day prior to use. Defective plant shall not be used until the defect is satisfactorily fixed. All major repair and maintenance operations will take place off site.
- Potential impacts caused by spillages etc. during the construction phase will be reduced by keeping spill kits and other appropriate equipment on-site.
- Spill kits will be used to deal with any accidental spillage in and outside the refuelling area. Spill control measures as outlined fully in the CEMP accompanying this application will be adhered to.
- Harmful materials such as fuels/chemicals shall be stored on site for use in connection with the construction works only. These materials shall be stored in a safe and controlled manner such as within an appropriately sized bunded unit. Fuels/chemicals will be stored for periods in line with the manufacturer's recommendations.



Spill Control Measures

In the event of minor spills and leaks from road vehicles and the onsite excavator, the following steps provide the procedure to be followed in the event of any significant spill or leak.

- Stop the source of the spill and raise the alarm to alert people working in the vicinity of any potential dangers.
- If applicable, eliminate any sources of ignition in the immediate vicinity of the incident
- Contain the spill using the spill control materials, track mats or other material as required. Do not spread or flush away the spill.
- If possible, cover or bund off any vulnerable areas where appropriate such as drains or watercourses.
- Clean up as much as possible using the spill control materials.
- Contain any used spill control material and dispose of used materials appropriately using a fully licensed waste contractor with the appropriate permits so that further contamination is limited.
- Notify the applicant immediately giving information on the location, type and extent of the spill so that they can take appropriate action and further investigate the incident to ensure it has been contained adequately.
- External consultants will inspect the site and ensure the necessary measures are in place to contain and clean up the spill and prevent further spillage from occurring.
- The applicant will notify the appropriate regulatory body such as Galway County Council if deemed necessary.

Temporary water crossings

Temporary watercourse crossing points are required along the proposed forestry road extensions. All watercourse crossings will comprise of standard log bridge crossings typically used in normal forestry operations. There are no instreams works proposed and machinery will not enter any watercourses during the construction phase of the Proposed Project.

The temporary log bridge crossings will be installed as follows:

- Ensure the construction of the bridge will not impede the water flow.
- Ensure bridging is able to cope with increases in water flow resulting from above normal rainfall.
- Ensure the movement of fish is not impeded.
- Ensure crossings points are constructed at right angles to the water flow.
- On sloping ground temporary bridges will be constructed in a 'Hump Back' fashion. This will reduce the risk of silt flowing down the wheel ruts and directly entering the stream/drain being crossed. However, it is of primary importance to ensure that there is no run-off to the stream on either side of the bridge. Consequently, any run-off must be diverted onto a buffer strip at a suitable point well above the stream.
- The machine track leading to the bridge must be very well brashed and tracks should not be allowed to develop that can act as water channels down to the stream.
- Bridging logs should be placed from top of bank to top of bank to ensure that the natural stream banks are left intact.

Clear felling Operations

The project will adhere to all best practice water protection measures, set out in the Forest Harvesting & the Environment Guidelines (DAFM, 2000) and Felling & Reforestation Standards (v. Oct. 2019). Mitigation measures will include:

Exclusion zones for machinery

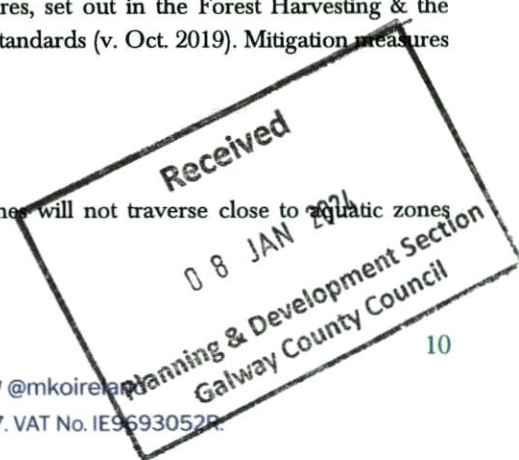
- Exclusion zones will be implemented, to ensure that machines will not traverse close to aquatic zones during forestry operations.

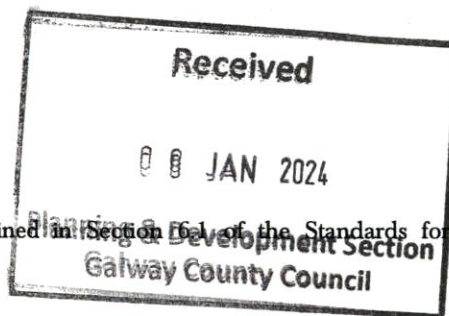


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- With respect to exclusion zones, measures outlined in Section 6.1 of the Standards for Felling & Reforestation, (DAFM, 2019), will be adhered to.

Silt and sediment control during felling and reforestation

- Barrier silt traps with geotextile and/or small logs will be deployed to control movement of silt/sediment, as specified in Section 7 of the Standards for Felling & Reforestation, (DAFM, 2019).

Extraction and removal of felled timber

- Extraction routes will be carefully designed to avoid soil disturbance and brash mats will be put in place to protect soils.
- Locate timber landing bays at least 50m from the nearest aquatic zone.
- All measures outlined in section 9 of the Standards for Felling & Reforestation (DAFM, 2019) will be adhered to.

Brash management

- Brash mats will be put in place to facilitate movement of machinery around the project area but will avoid proximity to relevant watercourses and aquatic zones as far as possible.
- Extraction racks will be aligned to the contour where possible, reducing the rate of water flow towards the receiving waters.
- Extra brash will be applied as required along extraction racks and at timber stacking areas, to accommodate higher levels of machine tracking, using extra lengths of timber to protect sensitive locations.
- No snedding (delimbing) will be carried out within environmental setbacks along aquatic zones/relevant watercourses.

Monitoring & Contingency Planning

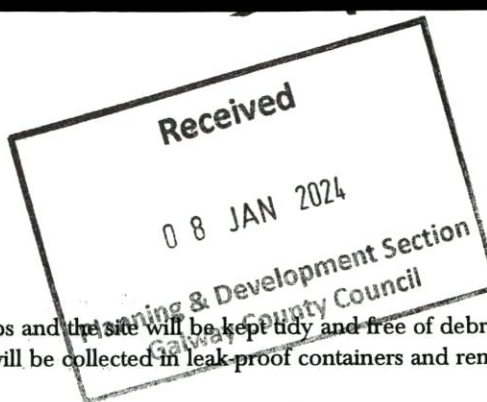
- Regular monitoring will take place within this site during the operation phase and contingency plans will be implemented in the event of unavoidable incident, e.g. as a result of heavy rainfall, as specified in Section 12 of the Standards for Felling & Reforestation, (DAFM, 2019).

Other Mitigation

- During felling and extraction, a minimum 10m exclusion zone will be applied along the edge of any aquatic zone on or adjoining site. Machine traffic and timber stacking will not be permitted within this zone. Trees within the reach of the harvester arm will be felled by harvester, and snedded and bunched outside the exclusion zone. Trees outside machine reach will be felled manually. Felled trees will be winched out of the exclusion zone where appropriate and safe to do so, or removed by extended harvester arm, for subsequent snedding and processing outside the exclusion zone avoiding mobilisation of soils. All other requirements relating to water exclusion zones, as set out in Section 6.1 of the Standards for Felling & Reforestation will be adhered to (DAFM, 2019).
- Regarding relevant watercourses, the same mitigations adopted for aquatic zones above will be applied for relevant watercourses”.

Throughout the construction phase of the Proposed Project, continuous turbidity monitoring of surface watercourse downstream of the proposed project site will be carried out. This will be completed with the installation of automated water quality probes which will record turbidity and other hydro-chemical parameters at regular intervals (typically every 15 minutes). These probes will be installed in natural watercourses downstream of work areas.





Waste Management

- All waste will be collected in skips and the site will be kept tidy and free of debris at all times.
- Waste oils and hydraulic fluids will be collected in leak-proof containers and removed from the site for disposal or recycling.
- All construction waste materials will be stored within the confines of the site, prior to removal from the site to a permitted waste facility.

Wastewater Disposal

A self-contained port-a-loo with an integrated waste holding tank will be used at the site compounds, maintained by the providing contractor, and removed from site on completion of the construction works; No foul water will be discharged on-site during the construction.

After implementation of best practice and preventive measures as described above, together with measures already incorporated in the project design, and the additional sub-compartment restoration plan provided in the RFI document, there is no potential for adverse effects on the Twelve Bens/Garraun Complex SAC due to deterioration of water quality. The measures ensure that the proposed works do not prevent or obstruct any of the QIs and SCIs from reaching favourable conservation status as per Article 1 of the EU Habitats Directive.

Operational phase

As a result of the change of land use, from commercial forestry to restored peatland and woodland habitats, existing pressures on water quality will be lessened as a result of the Proposed Project. Post construction phase of the Proposed Project, all forestry activities including felling, replanting, fertilizer application, and timber extraction will cease, reducing the potential for the runoff of pollutants into downstream watercourses. Additionally, the blocking of drains will reduce hydrological connectivity from the Proposed Project site to Twelve Bens/Garraun Complex, further reducing the potential for runoff of pollutants into the SAC.

Therefore, there is no potential for adverse effects on the integrity of the Twelve Bens/Garraun Complex SAC due to deterioration of water quality as a result of the operational phase of the Proposed Project.

Connemara Bog Complex SAC [002034]

Potential pathways for effect on the QIs associated with the Connemara Bog Complex SAC include the following:

- Indirect effect via habitat loss/degradation to aquatic receptors

Indirect Effects via Deterioration in Water Quality

Taking a precautionary approach, and in the absence of best practice and mitigation, a potential pathway for indirect effects on the below listed QIs of Connemara Bog Complex SAC [002034] was identified in the form of deterioration of water quality arising from runoff of pollutants and nutrients during felling and construction activities associated with the Proposed Project:

- [1106] Salmon *Salmo salar*
- [1355] Otter *Lutra lutra*
- [3110] Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)
- [3130] Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea*
- [3160] Natural dystrophic lakes and ponds
- [3260] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation
- [1833] Slender Naiad *Najas flexilis*



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Construction

The Proposed Project will include the felling of approx. 348 hectares of conifer plantation within 20 harvest blocks, habitat restoration and enhancement, upgrading of existing roads and construction of new temporary access roads, temporary water crossings, the resurfacing of an existing car park and perimeter fencing, each of which create the potential for pollution in various forms, i.e. the generation of suspended solids and the potential for spillage of fuels associated with the refueling of felling and construction machinery. There is also a risk of surface water runoff from bare soil and soil storage areas during restoration works.

Taking a precautionary approach, the release of suspended solids or spillage of fuels during construction and felling activities of the Proposed Project could potentially affect the water quality of downstream European Sites.

Mitigations

Whilst Sections 5.1.1.3.1 of the submitted NIS has provided mitigations against potential pathways for impacts on water quality, these have been repeated above with slight amendments to remove any ambiguity in their implementation. In addition, Chapter 8; Hydrology and Hydrogeology of the submitted EIAR gives comprehensive detail on mitigation by avoidance and mitigation by design.

Furthermore, in response to the RFI, a Best practice Operational Guidelines for Blanket Bog Restoration in Ireland has been prepared (Appendix 7 of the RFI document) by Coillte and includes a 'Decision matrix for selecting the Forest to bog restoration option'. These guidelines have informed the sub-compartment restoration plan which has been included in the RFI document, detailing the restoration options and mitigations to be used for each of the sub-compartment of the Proposed Project site. The restoration options and mitigations have been allocated to each sub-compartment based on the sensitivity of that section and is detailed in each in relevant drawing in the restoration plan.

After implementation of best practice and preventive measures as described in the NIS, together with measures already incorporated in the project design, and the additional sub-compartment restoration plan provided in the RFI document, there is no potential for adverse effects on the Connemara Bog Complex SAC due to deterioration of water quality. The measures ensure that the proposed works do not prevent or obstruct any of the QIs and SCIs from reaching favourable conservation status as per Article 1 of the EU Habitats Directive.

Operational phase

As a result of the change of land use, from commercial forestry to restored peatland and woodland habitats, existing pressures on water quality will be lessened as a result of the Proposed Project. Post construction phase of the Proposed Project, all forestry activities including felling, replanting, fertilizer application, and timber extraction will cease, reducing the potential for the runoff of pollutants into downstream watercourses. Additionally, the blocking of drains will reduce hydrological connectivity from the Proposed Project site to Connemara Bog Complex SAC [002034], further reducing the potential for runoff of pollutants into the SAC.

Therefore, there is no potential for adverse effects on the integrity of Connemara Bog Complex SAC [002034] due to deterioration of water quality as a result of the construction or operational phase of the Proposed Project.

Connemara Bog Complex SPA [004181]

Potential pathways for effect on the SCIs associated with the twelves Bens/Garraun Complex SAC include the following:

- Direct ex-situ effects on SCIs via habitat loss/degradation
- Direct ex-situ effects on SCIs via habitat disturbance

Habitat loss

The works are located entirely outside of the Connemara Bog Complex SPA. There will be no loss of supporting habitat for any of the SCI species within the SPA.



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Planning & Development Section
Galway County Council

The proposed development site is located within 2.15 km of Connemara Bog Complex SPA. This is within the core foraging range for merlin and golden plover, both of which are SCI species of the SPA. The Bird Report which has been prepared in response to the RFI from GCC details targeted surveys for merlin and golden plover. While merlin were recorded flying into a wooded islet in the northern section of Derryclare Lough, outside the Proposed Project site boundary, no golden plover were recorded during the surveys undertaken. No indications of breeding golden plover, or any other SCI of the SPA were recorded.

Nonetheless, the Proposed Project site provides potential suitable foraging habitat for both merlin and golden plover, i.e. blanket bog and heath but no works are proposed within any peatland habitat. However, taking an extremely precautionary approach, there is potential for loss of foraging habitat for these species as a result of the inadvertent encroachment of machinery into peatland habitats. Therefore, the following measures will be implemented during the construction phase of the Proposed Project to avoid the inadvertent encroachment of machinery into peatland habitat and the potential loss of this habitat.

- Designated site access tracks and extraction routes will be established prior to the construction phase of the Proposed Project. Machinery will use only these marked tracks/routes for entry and exit of the site.
- Where peatland habitat is adjacent to the footprint of the Proposed Project, fencing will be erected between the works area and this habitat to ensure no machinery encroaches.
- All machinery operators will be made aware of the sensitive nature of peatland habitats by the site manager.

The Proposed Project involves measures to restore and rehabilitate approximately 281 ha of blanket bog and wet heath habitat that is currently planted with conifer plantation. This will have an overall positive effect on the peatland habitats within the site. As merlin and golden plover are known to forage on upland peatland habitats, there is potential for the Proposed Project to result in increased foraging habitat for these species outside of the SPA.

The Proposed Project will include the felling of approx. 343 hectares of conifer plantation within 20 harvest blocks. Merlin were recorded flying into a wooded islet in the northern section of Derryclare Lough, outside the Proposed Project site boundary. From a precautionary perspective, conifer plantation within the proposed development site has potential to provide suitable nesting habitat for this SCI. Although the development site is located outside the boundaries of the SPA, taking an extremely precautionary approach, there is potential for the felling activities associated with the proposed development to result in loss of ex-situ merlin nesting habitat if undertaken in the absence of best practice and mitigation.

Following a precautionary approach, pre-commencement surveys for each felling block will be carried out to identify whether merlin are nesting within. This will be undertaken within the merlin breeding season (1st March to 31st August inclusive) prior to the commencement of felling. Should active nests be identified, an exclusion zone of 500m will be established until the end of the breeding season.

Disturbance

Activities associated with the Proposed Project include the felling of conifer plantations, habitat restoration and enhancement, upgrading of existing road and construction of new temporary access roads, temporary water crossings, the resurfacing of an existing carpark and fencing. These activities all require the use of heavy machinery and increased anthropogenic activity. There is, therefore, potential for the Proposed Project to result in ex-situ disturbance to SCIs of the SPA which utilise habitats within the Proposed Project site. These include merlin and golden plover.

Although no golden plover were recorded during the targeted breeding bird surveys or any other survey, peatland habitats within the Proposed Project site potentially provide suitable foraging habitat for this species. However, these sections of peatlands are delineated by woodlands and this species favours more open habitats. Therefore, no pathway for significant effects on populations of golden plover outside the boundary of Connemara Bog Complex SPA was identified as a result of ex-situ disturbance arising from the construction or



operational phases of the Proposed Project, due to the abundance of more favourable habitat in the wider environment.

Merlin are known to forage within open peatland habitat adjacent to conifer plantations and three individuals were recorded during the targeted breeding bird surveys undertaken in 2023. However, no indications of breeding merlin were recorded within the Proposed Project site. Considering there are no indications of breeding merlin within the Proposed Project site, and the abundance of suitable foraging habitat for merlin in the wider environment, no pathway for significant effects on populations of merlin outside the boundary of Connemara Bog Complex SPA was identified as a result of ex-situ disturbance arising from the construction or operational phases of the Proposed Project.

However, taking the precautionary approach, the following best practice mitigation measures will be adhered to during the construction phase of the Proposed Project:

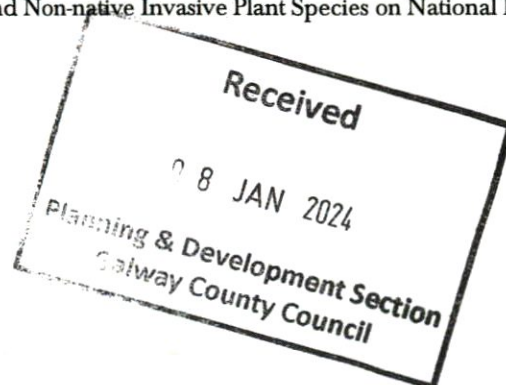
- Disturbance limitation measures will be adhered to, which include the following:
 - All construction plant and equipment to be used on-site will be modern equipment and will comply with the European Communities (Construction Plant and Equipment) (Permissible Noise Levels) Regulations 1998, and any subsequent amendments.
 - Plant machinery will be turned off when not in use. Machines, which are used intermittently, will be shut down during those periods when they are not in use.
 - Operating machinery will be restricted to the Proposed Project site boundary.
 - It is expected that works will occur during normal working hours which will be agreed with the local authority in consultation with the appointed contractor prior to works commencing.
 - Light spills during construction works will be minimised where possible thus reducing the effect on areas outside the Proposed Project, and consequently on fauna of conservation value including otter.

Vegetation Control/Invasive Species

The Third Schedule invasive species *Rhododendron ponticum* was recorded throughout the site. The Derryclare management and maintenance plan, which has been provided in Section 4.6 of the response to the RFI document, sets out detailed and phased management of this species, as well as for conifer reseedling. Additionally, best practices procedures listed below will be implemented to ensure there is no further spread of this invasive species.

Best practice measures in relation to invasive species are described below:

- Good construction site hygiene will be employed to prevent introduction of problematic invasive alien plant species (e.g. Japanese knotweed, *Rhododendron*, Giant Rhubarb etc.) by thoroughly washing forestry works machinery prior to entering the site.
- Where any soil or construction stone is required on the site, this will be sourced from a stock that has been screened for the presence of any invasive species and where it is confirmed that none are present.
- The treatment and control of invasive alien species will follow guidelines issued by the National Roads Authority – The Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads (NRA 2010).



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Updated ASSESSMENT OF RESIDUAL ADVERSE EFFECTS

In light of the additional information that has been prepared in response to the RFI from GCC, and the amended impact assessment above, this section provides an updated assessment of residual adverse effects on European Sites, as a result of the Proposed Project.

The potential for adverse effects on each of the individual Qualifying Interests (QIs) and Special Conservation Interests (SCIs) that were identified as being at risk of potential effects in the submitted NIS were assessed in Section 6 of the NIS, in view of the Conservation Objectives of those habitats and species.

In light of the additional information provided as part of the RFI response, including more details on the project description regards felling and habitat restoration, and targeted surveys for birds, aquatic receptors, and mammals, and the mitigations and best practices already provided in the submitted NIS, it can be concluded, in view of best scientific knowledge and based on objective information, that the Proposed Project will not adversely affect the QIs/SCIs of any European Site.

Updated Conclusions

The conclusion of the submitted NIS stated the following:

'This NIS has provided an assessment of all potential direct or indirect adverse effects on European Sites whether considered individually or in combination with other plans and projects.

Where the potential for any adverse effect on any European Site has been identified, the pathway by which any such effect may occur has been robustly blocked through the use of avoidance, appropriate design and mitigation measures as set out within this report and its appendices. The measures ensure that the construction and operation of the Proposed Project does not adversely affect the integrity of European sites.

Therefore, it can be objectively concluded that the Proposed Project, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site.'

In light of additional information detailed in this addendum to the submitted NIS, as well as the amended impact assessment and assessment of residual adverse effects, it has been determined that there is no requirement for amendments to above conclusion of the submitted NIS.

