



10/29/2025

Stage 2 Appropriate Assessment,
Natura Impact Statement (NIS) for
proposed erection of a 3 bay slatted
ovine shed with dung-stead and all
ancillary works

Matthew Lang

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HABITAT DIRECTIVE APPROPRIATE ASSESSMENT Natura Impact Assessment (Stage 2)

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Proposed Development of a farm building (sheep shed), proposed 3 bay slatted sheep with dung-stead and ancillary works building at Castlerock, Co Sligo.

Client: Matthew Lang
Aclare
Co.Sligo

Site Location: Castlerock,
Dunmartin,
Aclare,
Co Sligo

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Report Ref: NIS Screening- Matthew Lang

Date: 29/10/2025

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1. Introduction

1.1 Foreword

Ms. Siobhan Ward, PgDip Environmental Protection, MSc Organic Agriculture, Consultant at Ward Agricultural & Environmental Consultants Ltd has been engaged by Matthew Lang to carry out a Natura Impact Statement (NIS) for the proposed development:

Proposed Application by Matthew Lang for Construction of:

- Proposed Development of a farm building 3 bay slatted shed, with dung-stead and ancillary works.

In accordance with Article 6(3) of the Habitats Directive, as transposed into Irish law by Regulation 42(1) and Part 5 of the European Communities (Birds and Natural Habitats) Regulations 2011 — 2015 (i.e. the "Habitats Regulations") and Part XAB of the Planning and Development Act, 2000 (as amended) (i.e. the "Planning and Development Act"), a Screening Report for Appropriate Assessment (AA) was prepared to assess whether it could or could not be ruled out, on the basis of objective information, that the project, either individually or in combination with other plans or projects, was likely to have a significant effect on any European Sites. This report has been prepared by an experienced Agricultural & Environmental Consultant with over 10 years professional experience to evaluate ecological receptors in the vicinity of the site.

The Screening Report for Appropriate Assessment was prepared by Ward Agricultural and Environmental Consultants Ltd and is provided under separate cover to this NIS. The Screening Report for Appropriate Assessment concluded, in view of best scientific knowledge and the conservation objectives of the European Sites occurring within the zone of influence of the project, that, in the absence of appropriate mitigation, it could not be ruled out at the screening stage that the project would not result in significant negative effects to 1 European site, River Moy Special Area of Conservation (SAC). The conclusion of the Screening Report was informed by a highly precautionary approach and adopted a worst-case scenario. Such an approach was adopted to ensure consistency with the extremely low threshold for triggering likely significant effects, as determined in both European and Irish case law and Section 177U of the Planning and Development Act. On the basis of that conclusion, it has been determined that AA is required in order to assess the implications of the project for those this European Site. In accordance with Section 177T of the Planning and Development Act, a NIS of the project has been prepared in order to assist the competent authority, in this case Sligo County Council, in carrying out its Appropriate Assessment. This NIS provides an examination, analysis and evaluation of the likely impacts from the project, both individually and in combination with other plans and projects, in view of best scientific knowledge and the conservation objectives of the European Sites concerned. It also prescribes appropriate mitigation to ensure that the project will not adversely affect the integrity of those sites identified as being at risk of likely significant effects. Finally, it provides complete, precise and definitive findings, which are capable of

removing all reasonable scientific doubt as to the absence of adverse effects on the integrity of the European sites concerned.

1.1 SUMMARY OF SCREENING REPORT FOR APPROPRIATE ASSESSMENT

The Screening Report identified seven European Sites as occurring within a 15km radius of the project site (Figure 1 shows the location of these sites with respect to the project site). No other sites at a greater distance than 15km were included during the screening as it was noted that any European Site at such a distance from the project site would not occur within its zone of influence and there would be no potential for any interactions between a European Site at such distances and the project. River Moy SAC is around 51m North, 110.80m South, and 195.68m West of the proposed development. The river Moy runs along the boundary of the holding.

Using the "Precautionary principal" the uncertainty that this pathway will have no direct or indirect effects on the Natura 2000 site, River Moy SAC, cannot be ruled out. This consideration was based on the distance between the project site and this European Site and, more importantly, the presence of one pathway that could connect the project site to this European Sites and their features of interest.

Site Name	Site code	Distance from development
River Moy SAC	002298	0.051m
OX Mountains Bogs SAC	002006	1.20km (upstream)
pNHA – Ox Mountains Bogs	002006	1.20km
Lough Nabrickkeagh Bog SAC	000634	2.2km (upstream)
pNHA Lough Nabrickkeagh Bog	000634	2.2km
Lough Hoe Bog SAC	000633	4.54km (upstream)
pNHA lough Hoe Bog	000633	4.54km
pNHA Cloongoonagh Bog	001657	6.92km (downstream)
pNHA Doocastle Turlough	000492	13.93km
Doocastle Turlough SAC	000492	
Turloughmore (Sligo) SAC	000637	9.99km
pNHA Turloughmore (Sligo)	000637	9.99km

Table 1: All SAC/pNHA sites within 15km of the site and distance from site to SAC

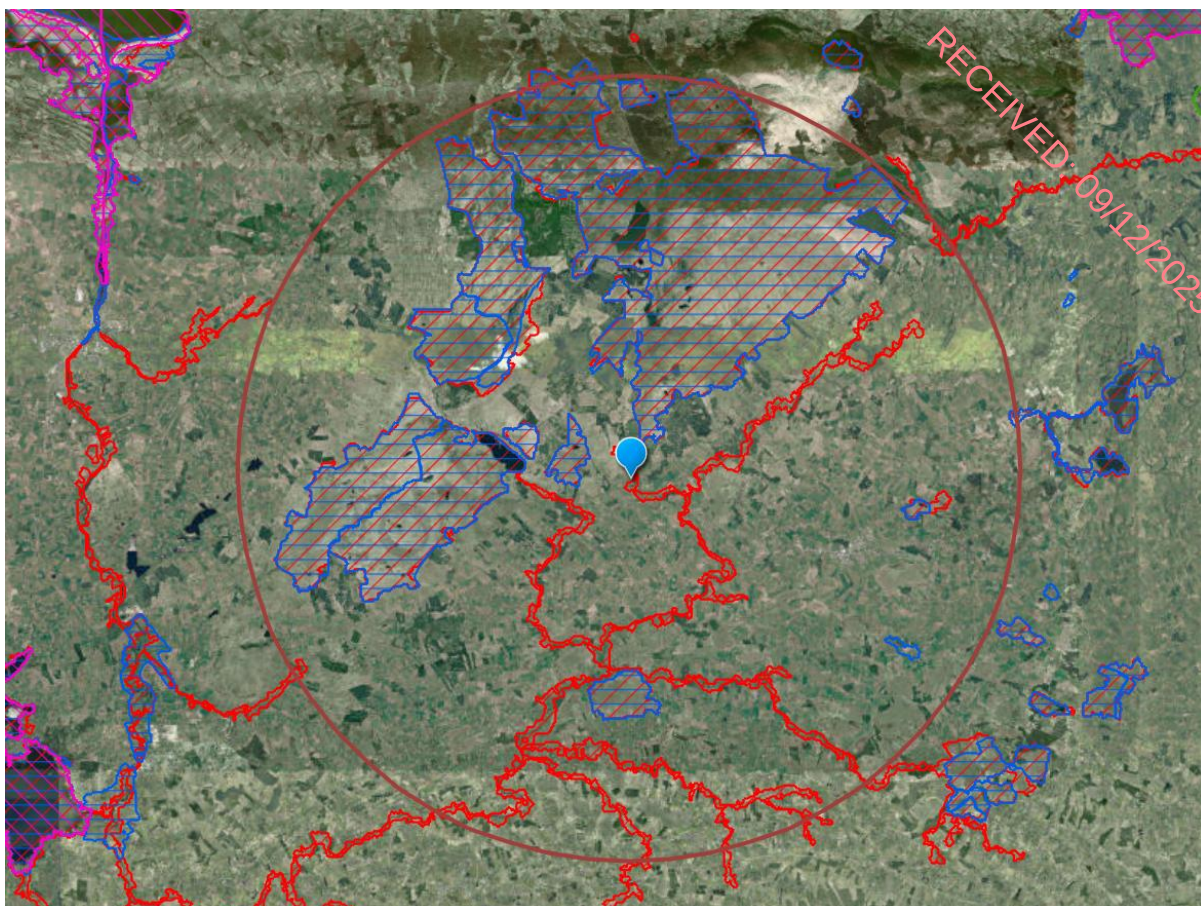


Figure 1. Site location and the 7 European sites with 15km of the project (Zone of influence)

One European Site, River Moy SAC, identified as occurring within the zone of influence of the project. The River Moy passes around 195m to the west of the proposed development as it flows in the SAC, which is also the length away from the proposed scheme. **There is therefore a potential for effects,** arising from the development, to have an impact on the designation features and/or conservation objectives of the Natura 2000 site.

1.2 SUMMARY OF SITE DESIGNATION RIVER MOY SAC.

River Moy has been designated as a SAC for the following features:

- Lowland hay meadows.
- Active raised bogs.
- Degraded raised bogs still capable of natural regeneration.
- Depressions on peat substrates of the Rhynchosporion
- Alkaline fens.
- Old sessile oak woods with Ilex and Blechnum in the British Isles.
- Alluvial forests with Alnus glutinosa and Fraxinus excelsior.
- White-clawed Crayfish.
- Sea Lamprey.
- Brook Lamprey.
- Salmon.
- Otter.

The SAC is of national importance as there is a priority habitat on the site under the Habitats Directive: **Active Raised Bog**

1.1.2 CONSERVATION OBJECTIVES

Conservation objectives for the SAC are:

- To restore the favourable conservation condition of Active raised bogs in River Moy SAC.
- The long-term aim for Degraded raised bogs still capable of natural regeneration is that its peat-forming capability is re-established; therefore, the conservation objective for this habitat is inherently linked to that of Active raised bogs.
- Depressions on peat substrates of the Rhynchosporion is an integral part of good quality Active raised bogs: therefore, the conservation objective for this habitat is inherently linked to that of Active raised bogs.
- To maintain the favourable conservation condition of Alkaline fens in River Moy SAC.
- To maintain the favourable conservation condition of Old sessile oak woods with Ilex and Blechnum in the British Isles in River Moy SAC.
- To maintain the favourable conservation condition of Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) in River Moy SAC.
- To maintain the favourable conservation condition of White-clawed Crayfish in River Moy SAC.
- To maintain the favourable conservation condition of Sea Lamprey in River Moy SAC. • To maintain the favourable conservation condition of Brook Lamprey in River Moy SAC.
- To maintain the favourable conservation condition of Salmon in River Moy SAC.
- To maintain the favourable conservation condition of Otter in River Moy SAC.

1.1.3 SITE VISIT

This assessment is a 50% desk-based exercise and a site visit was carried out in October 2025.

1.1.4 CURRENT MANAGEMENT

Land within the proposed development site is managed for agriculture. The site is located in the townland of Castlerock, 1.36km off the R294 from Mullanys Cross. The greater part of the site comprises agricultural grassland, There is an old barn on the site and the proposed new agriculture building is 50m in front of this. The site is surrounded by Willow, Alder and some dying Ash trees. There is a line of mature trees behind the site marking the south boundary of the site.

1.1.5 PROJECT DESCRIPTION

This application is for Planning Application for the Proposed Erection of an On-Farm 3 bay ovine shed with slatted tanks, a dung-stead Agricultural Access Laneway, and Hardstanding Areas, and Additional Landscaping and all ancillary works. The owner is planning to dry bed all his sheep and will have a maximum of 50 ewes. All the straw bedding will be composted on the dung-stead and all effluent will be diverted into the slatted tank. The FYM will be covered.

1.1.5.2. Surface water will be directed into the existing drainage system and will ultimately enter the River Moy. As this is a dry bedded shed and it is envisaged that the sheep will mainly be housed during lambing season, that there will be very little surface water on site.

2. DISCUSSION

2.2. The proposed project is directly connected with or necessary to the management of the Natura 2000 site.

2.3. The likely significance of effects of the proposed project on the Natura 2000 sites and their conservation objectives have been assessed taking into account the source-pathway-receptor model. The source is defined as the individual elements of the proposed project that have the potential to impact on a Natura 2000 site, its qualifying features and its conservation objectives. The pathway is defined as the means or route by which a source can migrate to the receptor. The receptor is defined as the Natura 2000 site and its qualifying features. Each element can exist independently; however, a potential impact is created where there is a linkage between the source, pathway and receptor.

2.4. A source of potential effects on biodiversity receptors may arise from the production of pollutants during construction, including silts, hydrocarbons and airborne emissions. The area under consideration is around 195.80m from the River Moy, which is part of the River Moy SAC, there is a small stream, a tributary of the River Moy running 110.65m south of the site, and the site is separated from the river by extensive agricultural grassland, and hedging. The river is not likely to be sufficiently remote from the proposed development to be insulated from pollutants that may be produced on the site during construction. The scheme will result in an increase in the area of impermeable ground at the site. Drainage during and following construction will use the existing stormwater infrastructure. Potential pollutants are therefore likely to be retained within the site or to be attenuated by dispersion or infiltration. Surface water directed into the existing drainage system will ultimately enter the River Moy. There are likely to be adverse impacts on

the River Moy as a result of construction of the project and therefore downstream effects on the River Moy SAC

2.5. Receptors that must be considered are both the habitat and species designation features of the Natura site. The distance of the proposed development from the EPS means that there are likely to be effects on any designated wetland habitats and species designation features arising from the scheme. There may be a significant change in water quality or volume discharging into the system and there will possibly change from the present position with regard to effects on the Natura sites and their conservation objectives.

2.6. A significant escape of pollutants may have an unknown, possibly toxic or sub-toxic, effect on the designation species, with impacts on the ability of the site to support those species that forage in the site. This effect would be contrary to the conservation objective of maintaining the range, timing and intensity of use of areas within the SAC, particularly the priority habitats Active Raised Bogs.

Name of Project or Plan.	Proposed Planning Application for the Proposed Erection of a 3 bay slatted ovine shed, dung-stead, Agricultural Access Laneway, and Hardstanding Areas, Ancillary Site Works and Additional Landscaping.
Project reference (Planning ref. etc.):	
Name and location of Natura 2000 site.	River Moy SAC
Natura 2000 site features:	• Lowland hay meadows. • Active raised bogs. • Degraded raised bogs still capable of natural regeneration. • Depressions on peat substrates of the Rhynchosporion. • Alkaline fens. • Old sessile oak woods with Ilex and Blechnum in the British Isles. • Alluvial forests with Alnus glutinosa and Fraxinus excelsior. • White-clawed Crayfish. • Sea Lamprey. • Brook Lamprey. • Salmon. • Otter.
Description of the Project or Plan. Size and scale; Land-take; Distance from Natura 2000 site or key features of the site; Resource requirements (water abstraction etc); Emission (disposal to land, water or air); Excavation requirements; Transportation requirements; Duration of construction, operation, decommissioning etc;	Description of Project: Construction of a 3 bay slatted ovine shed, dung-stead, Agricultural Access Laneway, and Hardstanding Areas, Ancillary Site Works and Additional Landscaping.

Other.	<u>Size and scale</u> The site covers approximately 0.25ha. <u>Land-take:</u> None <u>Distance from Natura 2000 site or key features of the site:</u> The proposed development is around 51m North, 195.65m West and 110.80m South of the SAC.
Is the proposal directly connected with or necessary to management of the site for conservation of N2K features? If yes proceed no further.	yes
Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Natura 2000 site.	Surface water bearing fugitive amounts of sediments and, potentially, hydrocarbons from the site will discharge into stormwater drains and ultimately into the River Moy which is connected to waters of the SAC. Any accidental discharge of wastewater may flow into the River Moy, which is connected to waters of the SAC.

Table 2: Test Of likely significance – River Moy SAC

N2K Feature: Mention all features	Describe any likely direct or indirect effects to the N2K features arising as a result of: loss; reduction of habitat area; disturbance; habitat or species fragmentation; reduction in species density; changes in key indicators of conservation value (e.g. water quality, climate change).	*Effect Significant/Not Significant/Uncertain? Why?
• Lowland hay meadows. • Active raised bogs. • Degraded raised bogs still capable of natural regeneration. • Depressions on peat substrates of the Rhynchosporion. • Alkaline fens. • Old sessile oak woods with Ilex and	Surface water bearing fugitive amounts of sediments and, potentially, hydrocarbons from the site will discharge into stormwater drains and ultimately into the River Eigheagh, which is connected to waters of the SAC. Any accidental discharge of wastewater may flow into the River Eigheagh, which is connected to waters of the SAC.	Significance: The proposed development is 195.65m away from the SAC, but a small stream that flows directly into the SAC is 110.80 m away from the site. Dilution effects resulting from deposition and entrainment in riverine sediments upstream of the SAC and attenuation in flowing river waters of any escaped pollutants will likely prevent significant toxic effects on aquatic populations. A significant escape of pollutants may have an unknown, possibly toxic or subtoxic, effect on some aquatic species.
Blechnum in the British Isles. • Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>. • White-clawed Crayfish. • Sea Lamprey. • Brook Lamprey. • Salmon. • Otter.		

Active Raise Bogs (Priority habitat)	Pollutants derived from discharged stormwater have the potential to have impacts on riverine vegetation through toxic, sub-toxic and blanketing effects, resulting in changes in plant community structure and invertebrate population density, respectively.	Not Significant The proposed development is remote from Active Raised Bog habitats of the SAC where they are present. Dilution effects resulting from deposition and entrainment in riverine sediments upstream of the SAC and attenuation in flowing river waters of any escaped pollutants will likely prevent significant additional eutrophic effects on habitats in the SAC. It is unlikely that the conservation objective of maintaining the Active Raised Bog will be adversely affected by possible contamination events.
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Describe any potential effects on the Natura 2000 site as a whole in terms of: interference with the key relationships that define the structure or function of the site	Effect considered significant/non-significant: Finding of No significant effects Matrix
While the site is suitably removed from SAC, there is a stream 110 from the site the flows into the River Moy, part of the SAC. There is no visibly apparent connection between the sites with intervening agricultural fields and roads. There is likely to be significant impacts upon Annex I Habitats or Annex II Species.. The development site is roads and Agricultural structures. No habitats on site are listed as part of the qualifying interests of the SAC site. Possibility of indirect/indirect impacts from storm water drainage or wastewater as the steam is very close to the site.	Significant. The proposed development is remote from those parts of the SPA where the designation species are present, but the extent and intensity of any significant pollution is unknown. Possibility of indirect impacts from storm water drainage or wastewater as the steam is very close to the site.
Provide details of any other projects or plans that together with the project or plan being assessed could (directly or indirectly) affect the site.	Provide details of any likely in-combination effects and quantify their significance -
No other plans	Not significant. The development will not create a cumulative impact upon the Natura 2000 site in combination with any other plans or projects.

As the Stage 1 – Screening Report found that Possibility of indirect impacts from storm water drainage or wastewater or during the construction phase of the project could have a indirect significant effect on the River Moy SAC, a Stage 2 AA is recommended.

3. NEXT STEPS FOR THE PROJECT IN THE AA SCREEN PROCESS.

Stage 1 — Screening: This stage defines the proposed plan, establishes whether the proposed Plan is necessary for the conservation management of the European Site and assesses the likelihood of the plan to have a significant effect, alone or in combination with other plans or projects upon a European site.

Stage 2 — Appropriate Assessment: If a plan or project is likely to have a significant affect an Appropriate Assessment must be undertaken. In this stage the impact of the plan or project to the Conservation Objectives of the European Site is assessed. The outcome of this assessment will establish whether the plan will have an adverse effect upon the integrity of the European Site.

Stage 3 — Assessment of Alternative Solutions: If it is concluded that, subsequent to the implementation of mitigation measures, a plan has an adverse impact upon the integrity of a European Site it must be objectively concluded that no alternative solutions exist before the plan can proceed.

Stage 4 — Where no alternative solutions exist and where adverse impacts remain but imperative reasons of overriding public interest (IROPI) exist for the implementation of a plan or project an assessment of compensatory measures that will effectively offset the damage to the European Site will be necessary.

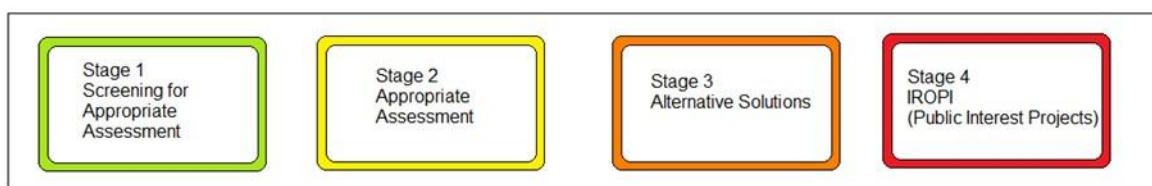


Figure 2: Stages of Appropriate Assessments

4. STAGE 2: APPROPRIATE ASSESSMENT.

The EC Guidance Assessment Criteria for a Stage Two Appropriate Assessment seeks the following information:

1. A description of the elements of the project that are likely to give rise to significant effects to the European site.
2. The setting out of the Conservations Objectives of the site.

3. A description of how the project will effect key species and key habitats.
4. A description of how the integrity of the site (determined by structure and function and conservation objectives) is likely to be affected by the project (e.g. loss of habitat, disturbance, disruption, chemical changes, hydrological changes etc).
5. A description of the mitigation measures that are to be introduced to avoid, reduce or remedy the adverse effects on the integrity of the European site.

This NIS addresses each of these items, but prior to doing so, the following sections provide a description of the product; a description at and surrounding the footprint of the project site and a brief description of the River Moy SAC.

5. PROJECT DESCRIPTION

5.1. OVERVIEW

The planning application comprises a 3 bay slatted ovine shed, dung-stead and ancillary works

Stages required in respect of the development:

1. Levelling of site to commence construction.
2. Groundworks and excavations.
3. Concrete pour foundations constructed.
4. Construction of building, including retaining wall.
5. Gravel fill to be imported to finish off driveways etc.
6. Planting of trees and hedging.
7. Widening of existing entrance to farmyard.

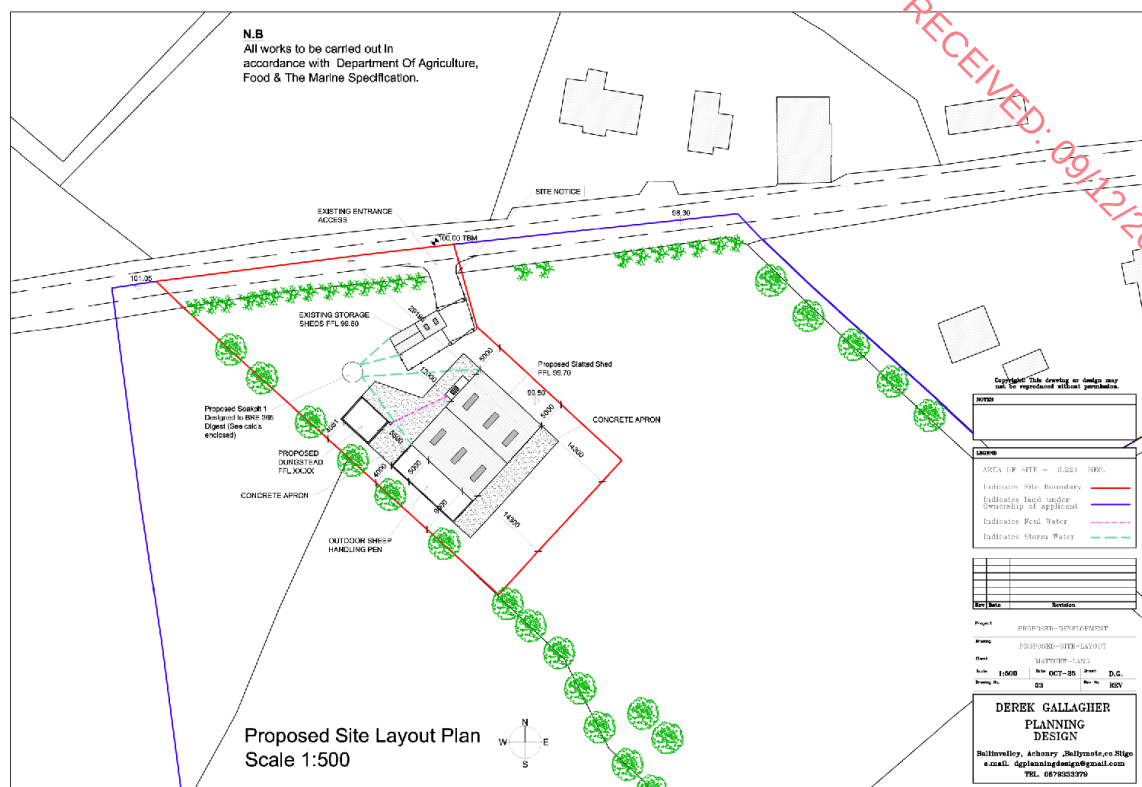


Figure 3: Layout of site

6. BASELINE DESCRIPTION

6.1. Description of site location

Site is 0.25ha in total, with an old barn approx. 50m from the proposed new shed. The new shed is a 3 bay slatted ovine unit with a dung-stead and a concrete apron. The greater part of the site is comprised of agricultural grassland. The soils on the site are classified as fine loamy drift with limestone. The site is located within the Moy_SC_010_34_16 SubCatchment which has an ecological status of good in water quality.

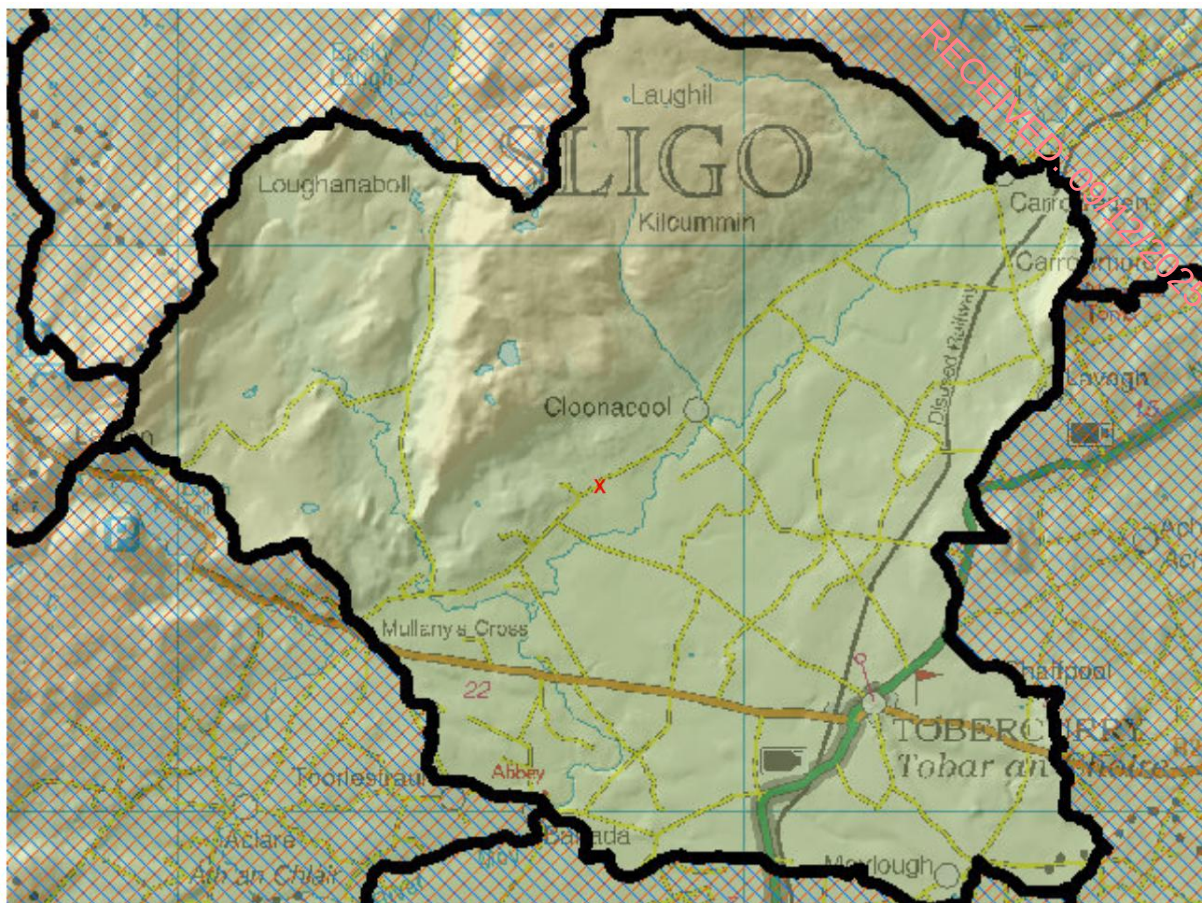


Figure 4: Sub-catchment map

6.2 Description of the River Moy SAC

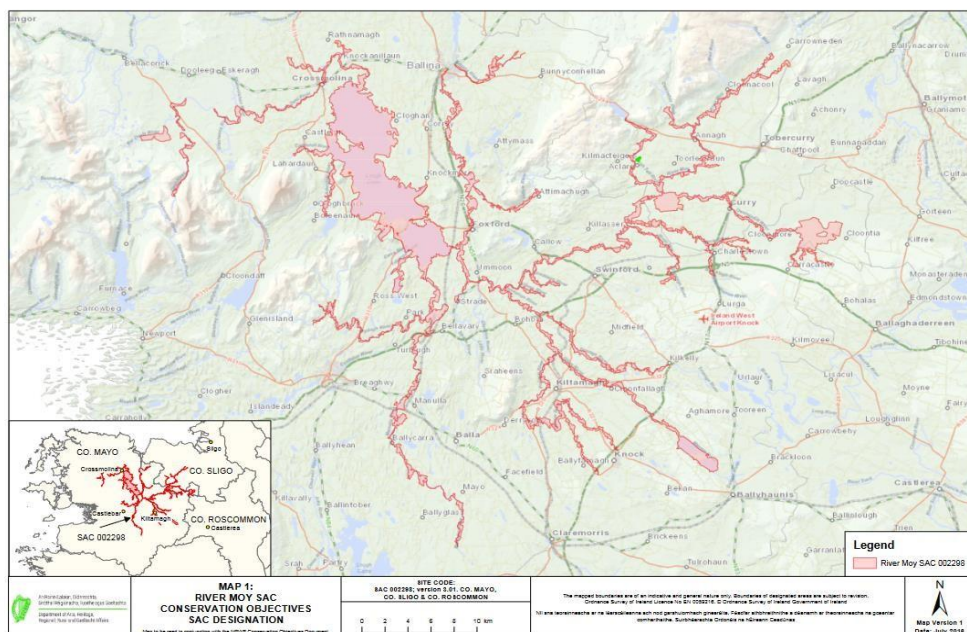


Figure 5: Map of the River Moy Sac.

(https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002298.pdf).

This site comprises almost the entire freshwater element of the Moy and its tributaries, including both Lough Conn and Lough Cullin. The system drains a catchment area of 805 km². Most of the site is in Co. Mayo though parts are in west Sligo and north Roscommon. The underlying geology is Carboniferous Limestone for the most part though Carboniferous Sandstone is present at the extreme west of the site with Dalradian Quartzites and schists at the south west. The river and its various tributaries rise in a number of locations some of which are upland areas.

dominated by blanket bog and heath. Throughout most of its course however the river flows through low-lying countryside where most of the adjoining land consists of agricultural grassland. The river eventually reaches the sea at Ballina where it flows into Killala Bay. To the west of Lough Cullin the river passes through areas where the bedrock is dominated by silicious rocks such as granite and here the character of the adjoining land changes to one where blanket bog and heath are important components of the landscape. In addition to river and lake habitats, the site contains adjoining habitats of ecological interest such as raised bogs, heath, wet grassland and deciduous woodland. Small pockets of conifer plantations, close to the lakes and along parts of the rivers, are included. Improved grassland is also included where it occurs along the river channels.

This extensive site contains good examples of the Annex 1 habitats active raised bog, degraded raised bog, Rhynchosporion vegetation, alkaline fen, lowland hay meadows, alluvial woodland and old oak woodlands. The raised bog areas present constitute the most north-westerly examples of raised bog in Ireland, with the most important examples occurring at Derrynabrock and Tawnaghbeg. Alkaline fen is particularly well developed at Mannin and Island Lakes, an excellent example of old oak woodland is to be found just east of Pontoon along the shores of Loughs Conn and Cullin. This represents one of the largest stands of oak woodland in western Ireland. Water quality of the river channels is generally good and the majority is classified as unpolluted. Species-rich lowland hay meadows are found in the river floodplain adjacent to the River Moy in the stretches approximately 5km both north and south from Foxford town, including westward to the eastern shores of Lough Cullin. The open waters of Loughs Conn and Cullin are moderately hard with relatively low colour and good transparency. Lough Conn, with a surface of 50km², is classified as a mesotrophic system, while Lough Cullin (surface of 11 km²) is classified as an oligotrophic system. The rivers and lakes support important populations of *Lutra lutra*, *Austropotamobius pallipes*, *Lampetra planeri* and *Petromyzon marinus*. The Moy system is one of the most important in Ireland for *Salmo salar* and is an internationally renowned fishery. It also has important stocks of *Salmo trutta*. Lough Conn supports a nationally important population of *Anser albifrons flavirostris* and has regionally important numbers of *Cygnus cygnus* and *Pluvialis apricaria* (all Annex I Bird Directive species). The lakes support a range of other wintering waterfowl, notably nationally important populations of *Aythya fuligula* and

Bucephala clangula. Lough Conn /Cullin represents one of only 4 breeding sites in Ireland for *Melanitta nigra*, which in Ireland is at the south-west end of its European range. The population, however, has seriously declined in recent years. A range of mammals listed in the Red Data Book occur within the site, including *Martes martes* and *Myotis daubentonii*. At least five Red Data Book plant species occur, including *Cephalanthera longifolia* and *Spiranthes romanzoffiana*.

The site is a Special Area of Conservation (SAC) under the E.U. Birds Directive, of special conservation interest for the following habitats and species:

- Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*).
- Active raised bogs.
- Degraded raised bogs still capable of natural regeneration.
- Depressions on peat substrates of the Rhynchosporion.
- Alkaline fens.
- Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, *Alnion incanae*, *Salicion albae*).
- *Austroptamobius pallipes* (White-clawed Crayfish).
- *Petromyzon marinus* (Sea Lamprey).
- *Lampetra planeri* (Brook Lamprey).
- *Salmo salar* (Salmon).
- *Lutra lutra* (Otter).

This is an important site for Active Raised Bogs, a priority habitat under the Habitats Directive.

6.3. DOCUMENTED THREATS AND PRESSURES.

A review of the NPWS Natura 2000 Return form for this SAC indicates that there are 5 threats or pressures of a high impact identified as negatively affecting the conservation status of this SAC

A02.01 - Agricultural intensification.

H01.05 - Diffuse pollution to surface waters due to agricultural and forestry activities.

B05 - Use of fertilizers (forestry).

B01 - Forest planting on open ground.

I01 - Invasive non-native species

For medium impact threats and pressures have been identified and these are as follows:

C01.03 - Peat extraction.

D04.02 - aerodrome, heliport.

Of these threats and pressures none are relevant to the project.

6.4. CONSERVATION OBJECTIVES.

The site specific Conservation Objectives for the River Moy SAC aim to maintain the favourable conservation status of its special conservation interest. The site specific Conservation Objectives for these species & habitats occurring within the zone of influence of the project are outline below:

- To restore the favourable conservation condition of Active raised bogs in River Moy SAC. The long-term aim for Degraded raised bogs still capable of natural regeneration is that its peat-forming capability is re-established; the conservation objective for this habitat is inherently linked to that of Active raised bogs. Depressions on peat substrates of the Rhynchosporion is an integral part of good quality Active raised bogs.

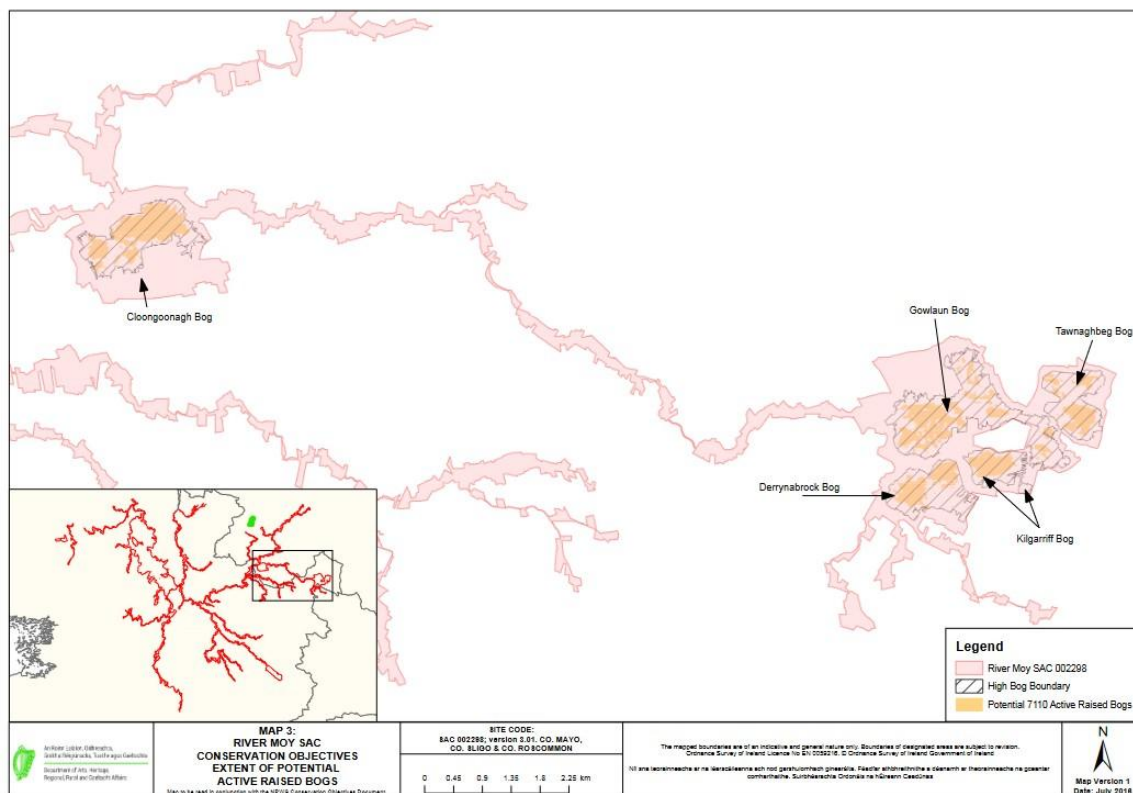


Figure 6: Active raised Bog in the River Moy SAC. (https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002298.pdf).

- To maintain the favourable conservation condition of Alkaline fens in River Moy SAC.
- To maintain the favourable conservation condition of Old sessile oak woods with Ilex and Blechnum in the British Isles in River Moy SAC.

- To maintain the favourable conservation condition of Alluvial forests with *Alnus lutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) in Moy SAC.

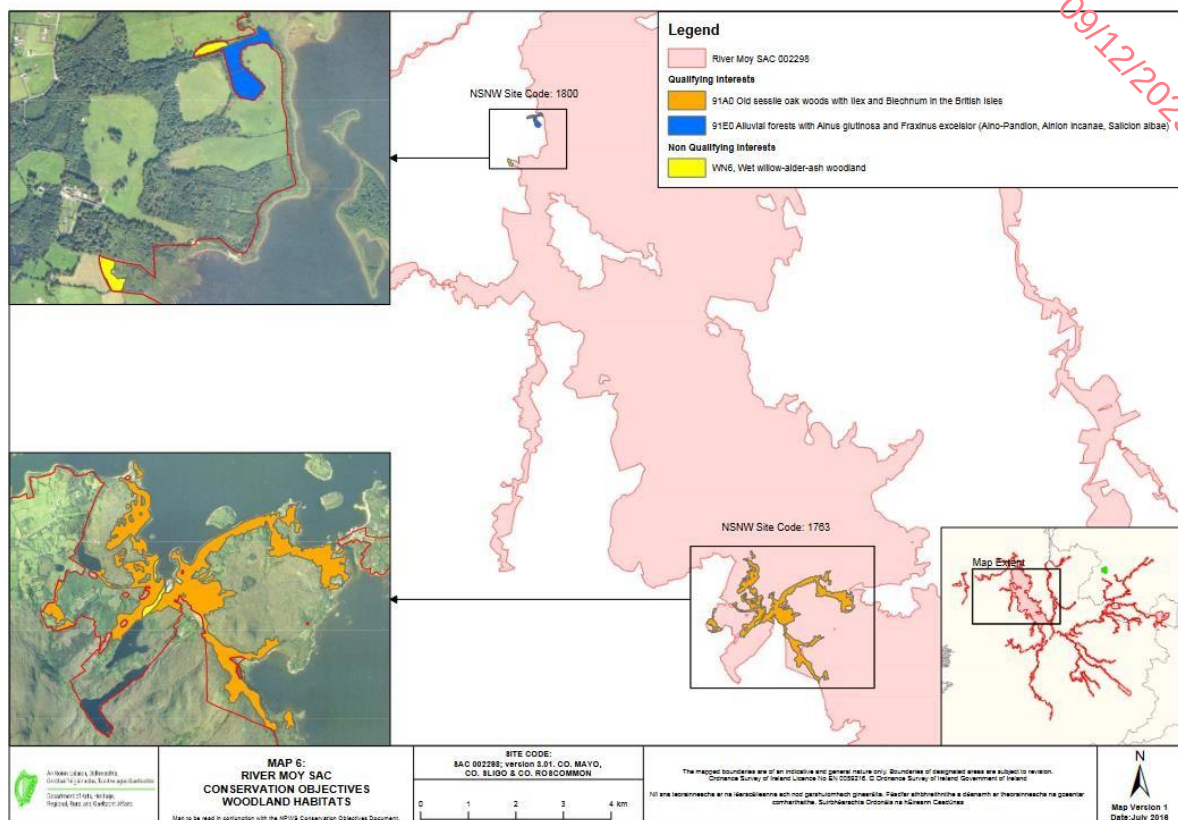


Figure 7: Woodland Habitats in the SAC. (https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002298.pdf).

- To maintain the favourable conservation condition of Sea Lamprey in River Moy SAC.
- To maintain the favourable conservation condition of Brook Lamprey in River Moy SAC.
- To maintain the favourable conservation condition of Salmon in River Moy SAC.
- To maintain the favourable conservation condition of White-clawed Crayfish in River Moy SAC.

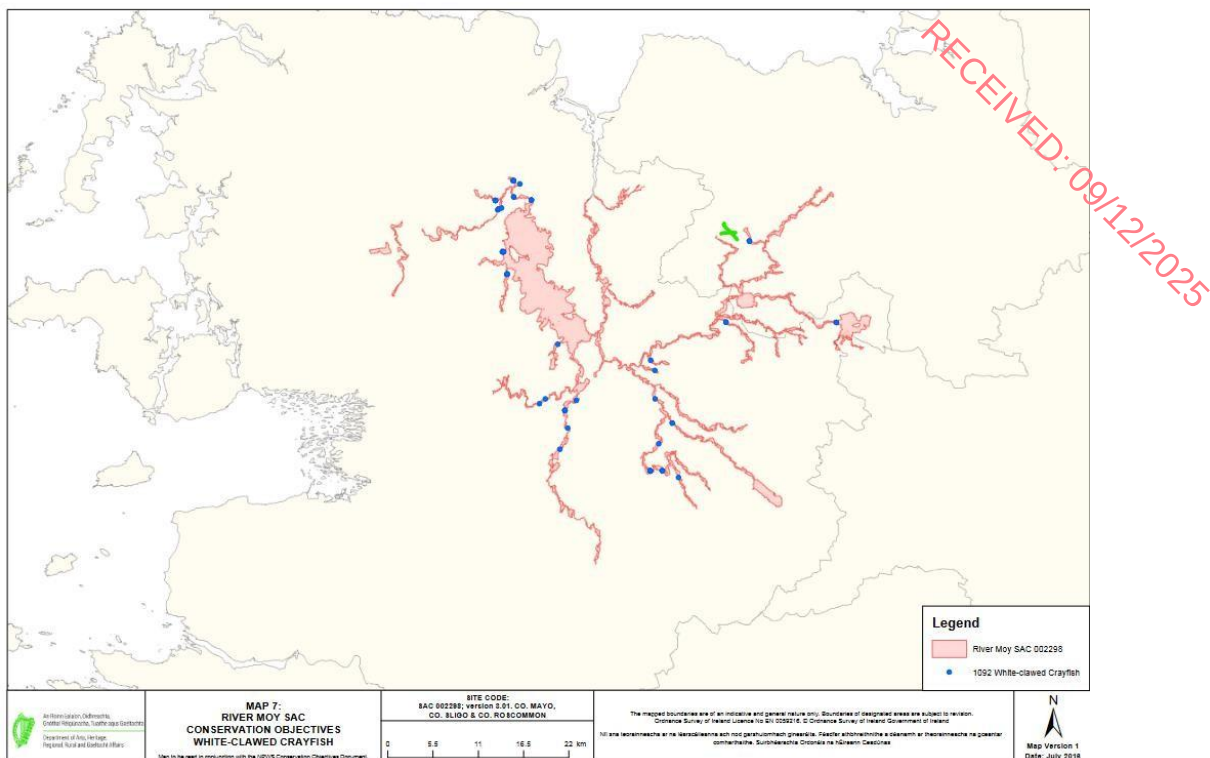


Figure 8: White tailed Crayfish habitats in the SAC.

(https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002298.pdf).

- To maintain the favourable conservation condition of Otter in River Moy SAC.

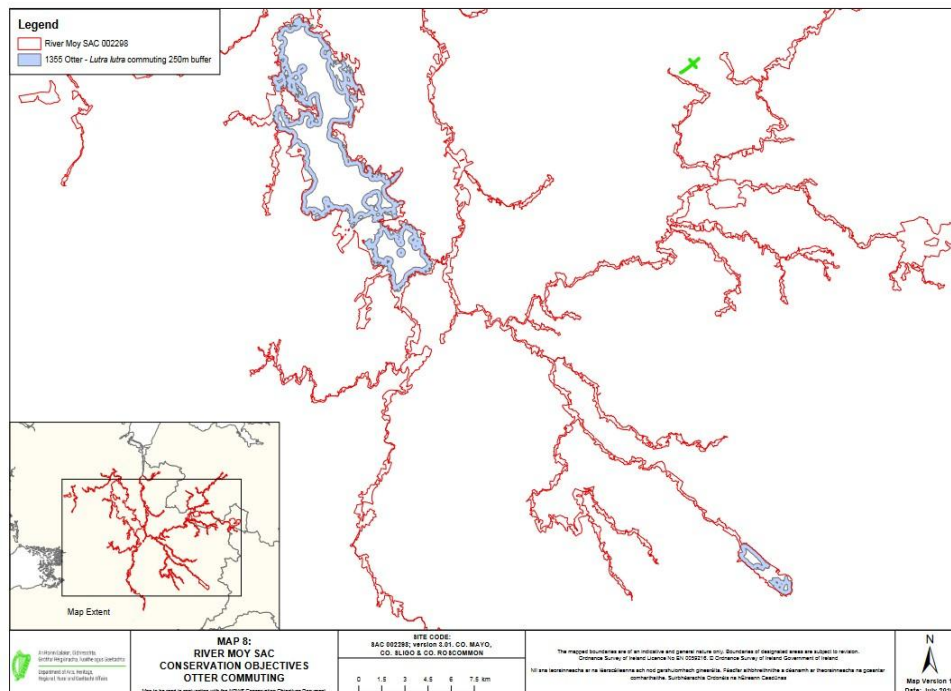


Figure 9: Otter habitats and commuting in the SAC.

(https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO002298.pdf).

7. CONSIDERATION OF POLLUTION IMPACTS TO EUROPEAN SITES.

7.1. Surface water runoff

The potential impacts that may arise as a result of surface water runoff relate to the discharge of contaminated surface water from the project site during the construction phase and operation phase to the River Moy SAC. The discharge of any contaminated surface water from the project site to the estuary, the tributary of the River Moy to the SAC will, in the absence of suitable safeguards, have the potential to result in pollution in the River Moy SAC. The potential for such discharges to result in a localised deterioration of water quality and negative impacts to the status habitats, species, flora and fauna of the SAC is examined in this section.

The source of potential contaminated surface water runoff during the construction phase will include earthworks associated with vegetation stripping and excavations. Earthworks will denude surfaces and have the potential to generate silt-laden surface water runoff from the project site. Potentially contaminating materials such as oils, fuels, lubricants, other construction-related solutions and cement-based products will be used on site during the construction phase and the potential will exist for the accidental emission of such material via surface water runoff to the River Moy.

The significance of the impact of the uncontrolled release of contaminants from the project site to the River Moy SAC and its priority habitats and associated flora and fauna will depend upon the frequency of the release and the concentration of contaminating materials in surface water discharging from the site and the sensitivity and/or resilience of the habitat types occurring at and in the vicinity of the surface water pathway outfall. The volume of surface water runoff draining from the project site will represent a miniscule fraction of the overall volume of water within the Moy catchment and draining to the Moy SAC. As such, the low volumes of runoff are likely to be rapidly diluted and distributed within this river waterbody. In a worst-case scenario the ongoing discharge of waters with high concentrations of contaminating substances could over time lead to the deposition of such contaminants in the habitats in the immediate vicinity of the River Moy outfall. The toxic effect of contaminants released to the SAC on feeding, growth, development and reproduction are known to cascade and bioaccumulate throughout the food chain affecting fauna, fish, as well as bird species that rely on such habitats (Ferrando, 2015).

The exposure of fauna, including birds and mammals, to such contaminants can result in disturbance and stress effects. Upon detection of such contaminants species may simply move away from the affected area, with the potential to result in a decline in the distribution of bird species within the SAC. Such an effect would have the potential to undermine the conservation status of wetland habitats occurring downstream of the project site within the SAC. It should be emphasis that the likelihood of this happening on a regular basis is minimum. It is during the construction phase that this is more likely to occur.

8.0. DESCRIPTION OF HOW THE PROJECT COULD AFFECT KEY HABITATS AND SPECIES.

A NIS is required to assess the potential for impacts to the integrity of a European Site, with respect to the site's structure and function and its Conservation Objectives. The structural and functional elements of a European Site to maintain the favourable conservation status of qualifying features of interest are embedded into the list of detailed site-specific conservation objectives (SSCOs) for each of the site's interest features. As such a European Sites' SSCOs represent the parameters against which a project's potential to adversely affect the integrity of a European Sites should be considered.

Table 3 lists the Conservation Objectives attributes and targets for each of special conservation interests of the River Moy SAC and examines the potential for the project to result in adverse effects to these attributes and targets. It is noted that the appraisal outlined in Table 4 has been completed without any regard to the mitigation measures that will be implemented as part of the project. These mitigation measures are considered later in Section 8 below.

Attribute No.	Attribute	Target	Consideration of likely significant effects
1. Active Raised Bogs Priority Habitat	Habitat area	Restore area of active raised bog to 132.4ha, subject to natural processes	The discharge of polluted storm water or the accidental spillage of feedstock to the local stream and downstream to the River Moy SAC will have the potential to undermine water quality of the river. Adverse effects to water quality of the river, will in turn have the potential to undermine the habitats, flora, and fauna of the SAC. Such adverse effects could, over time, result in a decline in the long-term population trend supported by the sections of the SAC surrounding the project site and discharge locations.
2. Alkaline fens	Habitat area	Area stable or increasing, subject to natural processes	For reasons outlined for Attribute No. 1 and in Section 4 above, the discharge of inadequately treated and contaminated storm water will have the potential to undermine the targets for this attribute.
3. Old sessile oak woods with Ilex and Blechnum in the British Isles	Habitat area	Area stable or increasing, subject to natural processes	For reasons outlined for Attribute No. 1 and in Section 4 above, the discharge of inadequately treated and contaminated storm water will have the potential to undermine the targets for this attribute.

4. Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i>	Habitat area	Area stable or increasing, subject to natural processes	For reasons outlined for Attribute No. 1 and in Section 4 above, the discharge of inadequately treated and contaminated storm water will have the potential to undermine the targets for this attribute.
5. White-clawed Crayfish <i>Austropotamobius pallipes</i>	Distribution Occurrence Found in Moy Tributaries	No reduction from baseline. Juveniles and/or females with eggs in all occupied tributaries. No alien crayfish species	The discharge of polluted storm water or the accidental spillage of feedstock to the local stream and downstream to the River Moy SAC will have the potential to undermine water quality of the river. Adverse effects to water quality of the river, will in turn have the potential to undermine the habitats, flora, and fauna of the SAC. Such adverse effects could, over time, result in a decline in the long-term population trend supported by the sections of the SAC surrounding the project site and discharge locations.
6. Sea Lamprey <i>Petromyzon marinus</i>	Distribution: extent of anadromy	Greater than 75% of main stem length of rivers accessible from estuary.	The adjacent Killala Bay/Moy Estuary SAC (site code: 000485) encompasses the estuarine elements of sea lamprey habitat. It is high unlikely that harm will be caused to this habitat by the project.
7. Brook Lamprey <i>Lampetra planeri</i>	Distribution:	Access to all watercourses down to first order streams. Mean catchment juvenile density of brook/river lamprey at least 2/m ² . No decline in extent and distribution of spawning beds	Silting habitat is essential for larval lamprey. Juveniles burrow in areas of fine sediment in still water. Sediment from the ground works in the site preparation has to potential to effect these spawning beds.
8. Salmon <i>Salmo salar</i>	Distribution: extent of anadromy	100% of river channels down to second order accessible from estuary	At least Q4 at all sites sampled by EPA. The sample point closest to the site is measure Q5, the project is unlikely to change the Q status
9. Otter <i>Lutra lutra</i>	Distribution. Extent of terrestrial habitat	No significant decline. Area mapped and calculated as 1068.8ha	As seen from the Otter distribution map, it is highly unlikely that the project will affect the otter habitat.

Table 3: Conservation Objectives attributes and targets

8.1. A DESCRIPTION OF HOW THE INTEGRITY OF THE SITE IS LIKE TO BE AFFECTED BY THE PROJECT.

EU Guidelines (2001) recommend as part of a Stage 2 Appropriate Assessment that a checklist of site integrity is carried out (see Table 7.1). This aids in establishing the nature of potential adverse effects to the integrity of the European Sites, as defined by the conservation objectives of special conservation interests occurring within the zone of influence of the project.

Conservation Objectives	
Does the Project have the potential to:	
Cause delays in progress towards achieving the conservation objectives Of the site	Yes. In the absence of mitigation, the project will have the potential to contribute to water quality perturbations downstream in the River Moy SAC and undermine the status of bog habitats and their role in supporting special conservation interest of the SAC.
Interrupt progress towards achieving the conservation Objectives of the site	Yes. See response to first question above.
Disrupt those factors that help to maintain the favourable conditions of the site	Yes. See response to first question above.
Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site.	Yes. See response to first question above.
Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem?	Yes. See response to first question above.
Change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site?	Yes. The discharge of potentially contaminated surface water from the project site to qualifying habitats and their communities could contribute to a localised effect to the keystone fauna communities occurring downstream of the Project.
Interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)?	Yes. The discharge of potentially contaminated surface water from the project site could result in a decrease in the diversity of key fauna communities supported by habitats occurring in the SAC
Reduce the area of key habitats?	Yes. The prolonged discharge of potentially contaminated surface water runoff from the project site to the River Moy section of the River Moy SAC could contribute to a reduction in the extent of key communities supported by habitats and undermine the status of these habitats for special conservation interest of the SAC
Reduce the population of key species?	Yes. See response to questions above.
Change the balance between key species?	Yes.
Reduce diversity of the site?	Yes. See response to the question above.
Result in fragmentation?	No
Result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding, etc.)?	Yes. Any prolonged discharge of polluted surface water runoff from the project site to qualifying habitats will have the potential to result in the reduction of key communities supported by these habitats.

Table 4: Check list of site integrity

9. A DESCRIPTION AND EVALUATION OF MITIGATION MEASURES.

Section 4 above has provided an examination of the elements that were identified during the screening of the project as requiring further consideration. This examination has found that the project will not result in a significant adverse impact to the status of habitats, or species. Nevertheless, targeted mitigation measures that will further eliminate the potential for the project to discharge contaminated surface water from the project site to the SAC are detailed in this Section.

9.1. CONSTRUCTION PHASE MEASURES TO PROTECT SURFACE WATER.

The following measures will be implemented during the construction phase of the project to minimise the potential for surface water contamination:

- The civil engineering contractor engaged to construct the proposed development will provide a method statement for all earthworks. This statement will be reviewed by suitably qualified and competent persons and will include the mitigation measures outlined in this report.
- Prior to the commencement of any earthworks, the work corridor will be pegged and machinery will be restricted to movement within a specified working corridor to avoid soil contamination and compaction over the greater site area.
- No bedrock will be removed from the site, any rock removed from the foundation excavations will be reused on site.
- Bedrock, if encountered will be exposed for a short-term period only during the construction phase prior to foundation pouring.
- The underlying bedrock at the proposed location is close to the surface. To ensure the aquifer is protected during the proposed development works, the bedrock at the proposed development site will be sealed or lined by laying a proprietary geosynthetic clay liner where infrastructure is to be provided directly on top of bedrock or where the thickness of the sub-formation overburden is less than 0.6m.
- Drainage and associated pollution control measures should be implemented on site before the main body of construction activity commences. Where possible drainage control should be installed during seasonally dry ground conditions.
- On site re-fuelling of machinery at the Proposed Development Site will be carried out within a specific designated area. All site machinery will also carry fuel absorbent material and pads in the event of any accidental spillages. There shall not be any refuelling within a 20m buffer of the main land drain on site. Measures such as drip trays and fuel absorbent mats will be used during all refuelling operations.

- Fuels stored at the Proposed Development Site will be minimised. Any storage areas will be bunded appropriately for the fuel storage volume for the time period of the construction.
- Any groundwater seepage/ingress that may be encountered in the weathered bedrock/mineral subsoil should be intercepted by an interceptor drain and diverted to the constructed drainage system for pollution control attenuation prior to discharge.
- All construction plant will be regularly inspected for leaks and fitness for purpose.
- An emergency plan for the construction phase to deal with accidental spillages will be drafted and contained within an Environmental Management Plan developed for the construction phase of the project. Spill kits will be available to deal with accidental spillages at the Proposed Development Site.
- Temporary storage of any spoil or other similar loose material that could potentially be washed out by rain will be located in areas where release of suspended solids into the land drain is not possible.
- Silt fences will be placed down-gradient of all construction areas. Silt fences are effective at removing heavy settleable solids. This will act to prevent entry to the land drain of sand and gravel sized sediment, released from excavation of mineral sub-soils of glacial and glaciofluvial origin, and entrained in surface water run-off. Inspection and maintenance of these structures during construction phase is critical to their functioning to stated purpose. They will remain in place throughout the construction phase. The silt fences will be installed in line with CIRIA guidance. The presence of the silt fence will prevent the discharge of silt-laden surface water runoff to the Eighnagh stream and the hydrological pathway connecting the project site to the River Moy
- Silt bags will be used where small to medium volumes of water need to be pumped from excavations. As water is pumped through the bag, most of the sediment is retained by the geotextile fabric allowing filtered water to pass through. Silt bags will be used with natural vegetation filters geotextile fabric allowing filtered water to pass through. Silt bags will be used with natural vegetation filters.
- The works programme will also take account of weather forecasts and predicted rainfall in particular. Large excavations and movements of soil/subsoil or vegetation stripping will be suspended or scaled back if heavy rain is forecast. The extent to which works will be scaled back or suspended will relate directly to the amount of rainfall forecast. Using the safe threshold rainfall values detailed following will allow work to be safely controlled (from a water quality perspective) in the event of forecasting of an impending high intensity rainfall event. Works will be suspended if

forecasting suggests any of the following is likely to occur: - mm/hr (i.e. high intensity local rainfall events); - >25 mm in any 24 hour period (heavy frontal rainfall lasting most of the day); or, - >half the monthly average rainfall in any 7 days duration. Prior to works being suspended, the following control measures should be completed:

1. Secure all open excavations;
2. Provide temporary or emergency drainage to prevent back-up of surface run-off;
3. Avoid working during heavy rainfall and a suitable duration after heavy events to ensure drainage systems are not overloaded.

9.2. OPERATION PHASE.

The operation phase mitigation measures to be implemented for the project that are of relevance to this NIS and the River Moy SAC relate to those measures that will manage surface water runoff. The following measures will be implemented during the operation phase to manage surface water runoff:

- Dedicated covered and drained hardstanding area for material deliveries and storage with drainage linked to the foul sewer.
- Specific designated areas for oil storage and refuelling within the proposed site. Storage tanks will comply with current legislation and be bunded, with bunds to be sized to 110% of the tank.
- On site re-fuelling of machinery at the Proposed Development Site will be carried out within a specific designated area.
- An emergency plan for the operational phase to address accidental spillages will be drafted and contained within an Environmental Management Plan developed for the operational phase of the project. Spill kits will be available to deal with accidental spillages at the Proposed Development Site.
- A Sustainable Urban Drainage System (SUDS) will be designed and incorporated into the sites' drainage layout. The design will capture stormwater runoff during major rainfall events, and release the excess water gradually, preventing downstream flooding.

10. EVALUATION OF MEASURES.

The examination of the project and its potential to result in adverse effects to the River Moy SAC has found that in the event of the discharge of contaminated surface water runoff from the proposed On Farm site during the construction phase or operation phase, such runoff will have the potential to result in negative effects to the habitats and species occurring in the River Moy SAC. Mitigation measures have been outlined above that will aim to eliminate the potential for the project to result in the emission of contaminated surface water runoff and its discharge downstream into the River Moy. The mitigation measures outlined to manage and treat surface water runoff are in line with best practice methods for managing surface water runoff at construction sites and during the operation phase of project. These measures have undergone extensive and rigorous monitoring for their effectiveness at development sites where they have previously been applied to ensure adverse environmental impacts are avoided. The results of this monitoring and the recommendation of these measures as standard best practice guidelines is based upon their high degree of success in ensuring negative environmental impacts are avoided.

11.0 CONCLUSION.

This NIS presents an analysis of the potential for the project to result in adverse impacts to the River Moy SAC. An evaluation of the potential impact of discharges of surface drainage waters, generated during the construction phase and operation phase has been completed.

During the evaluation of potential impacts associated with the discharge of surface drainage waters it was found that, in the absence of mitigation measures, the potential will exist for contaminants to be released from the project site to the River Moy SAC. In the absence of mitigation measures the potential exists for the project to result in the emission of nutrient enriched and otherwise polluted surface water runoff to the River Moy SAC.

Mitigation measures have been outlined in this NIS that aim to eliminate the potential for the construction phase or operation phase of the project to release nutrient enriched or otherwise contaminated surface water from the project site to the River Moy SAC.

With the implementation of these measures, the potential for the release of such emissions to the estuary will be avoided.

Based upon the information provided in this NIS, it is the considered view of its the authors that it can be concluded by Sligo County Council that the project, alone or in-combination with other plans or

projects, will not result in significant adverse effects to the integrity and conservation status of European Sites in view of their Conservation Objectives and on the basis of best scientific evidence and there is no reasonable scientific doubt as to that conclusion.

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