



Comhairle Chontae Liatroma
LEITRIM COUNTY COUNCIL
In partnership with
Carrick on Shannon Rowing Club



LOUGH RINN ROWING COURSE PROJECT



ECOLOGICAL IMPACT ASSESSMENT



DECEMBER 2014

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IN PARTNERSHIP WITH CARRICK ROWING CLUB
LOUGH RINN ROWING COURSE PROJECT
ECOLOGICAL IMPACT ASSESSMENT

1	INTRODUCTION	1
1.1	BACKGROUND.....	1
1.2	PROJECT DESCRIPTION	2
2	REGULATORY CONTEXT.....	7
3	METHODOLOGY	8
3.1	DESK STUDY	8
3.2	FIELD SURVEY	8
4	RECEIVING ENVIRONMENT	8
4.1	HABITATS	8
4.2	MAMMALS	8
4.3	BIRDS	9
4.4	AQUATIC INVERTEBRATE FAUNA.....	9
5	POTENTIAL IMPACTS	9
5.1	HABITATS	9
5.2	MAMMALS	9
5.3	BIRDS	10
5.4	AQUATIC INVERTEBRATE FAUNA.....	10
6	MITIGATION MEASURES	10
6.1	HABITATS	10
6.2	MAMMALS	11
6.3	BIRDS	11
6.4	AQUATIC INVERTEBRATE FAUNA.....	11
6.5	INVASIVE SPECIES	11
7	CONCLUSION	11
8	REFERENCES	12

APPENDIX A – LOUGH RINN pNHA SITE SYNOPSIS

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1 INTRODUCTION

1.1 Background

Leitrim County Council in partnership with Carrick-on-Shannon Rowing Club is seeking Part 8 planning approval to further develop associated changes to the Lough Rinn Rowing Course Facility. The facility is being further developed to host national and international events, and act as a training base for international teams in advance of major competitions.

The original facility was granted Part 8 Planning Approval in May 2012 for the following:

To develop a 2000 metre long rowing course on Lough Rinn with associated launching slips and starting pontoons. The works also included the extension of the existing service block at Lough Rinn caravan park, the extension of the existing carpark to incorporate additional caravan parking bays, the provision of a new grass carpark, the upgrading of the existing pathway along the shore, the construction of viewing stands, the upgrading of the existing sewerage treatment plant, and the construction of a boat trailer park with a storage shed.

This Part 8 Planning Application now seeks approval for the following:

Further develop the finish area of the Lough Rinn Rowing Course Facility with associated site development works.

These works will include the provision of a new trailer park/competition area; additional launch pontoons; provision of new access road to the finish area; provision of car parking at the finish area; create a new entrance to the finish area from Local Road LP-1053-2; construction of an Integrated Constructed Wetland for treatment of existing on-site foul sewerage; construction of a Finish Hut with access walkway and Viewing / Spectator Area within Lough Rinn; and landscaping to overall finish area shoreline.

A Screening for Appropriate Assessment was carried out for the Natura 2000 sites that may be impacted by the proposed development. Two Natura 2000 sites are within 15km of the proposed development, these sites are listed in Table 1. The Screening Report assesses any potential impacts the proposed development may have on the qualifying interests and conservation objectives of these sites. Please refer to **Figure 1 – Designated Areas**.

Site Code	Site Name	Distance of the Natura 2000 site from section of underground cable (at closest point)
002348	Clooneen Bog SAC	7km east of site
004101	Ballykenny to Fisherstown Bog SPA	9.5km northeast of the site

Table 1: Natura 2000 sites that may be impacted by the proposed underground cable

The proposed development is within Lough Rinn proposed Natural Heritage Area, pNHA. This report assess the potential impacts on Lough Rinn pNHA, and discusses mitigation measures to be used to minimise these potential impacts. Please refer to **Appendix A** for Lough Rinn pNHA site synopsis.

1.2 Project Description

The Lough Rinn Rowing Course Facility is located on Lough Rinn in the townlands of Rinn Td., Clooncoe Td., Clooncahir Td., Tawnagh More Td., and Tulcon Td., near Mohill, County Leitrim.

The nature and extent of this proposed development includes the following design elements:-

New Trailer Park/Competition Area

It is proposed to create a new trailer park / competition area to facilitate the temporary storage of rowing / canoe boats during training and competitions events. Rowing boats can measure up to 17m in length. Therefore, the new trailer park / competition area is required to accommodate numerous rowing team entries for National / International Events.

The main elements of the works at the New Trailer Park/Competition Area comprise:-

- Removal of existing topsoil and importation of approximately 11,000m³ of granular material to a level of 41.0m above Ordnance Datum (i.e. above recorded lake flood level of 40.83m.O.D.);

-
- Construction of rock armour to shoreline of new trailer park / competition area to match existing rock armour on site;
 - Surfacing of Trailer Park/Competition Area with Macadam;
 - Associated site development works, services, kerbing, drainage and landscaping.

The design philosophy will be to match the finishes of the existing Trailer Park/Competition Area.

Additional Launch Pontoons

It is proposed to install 3 No. additional launch pontoons on the northern end of Lough Rinn. The launch pontoons will provide access to the lake and rowing course from the Trailer Parks / Competition Areas.

The main elements of the Additional Launch Pontoons will comprise:

- Floating – flexible when the water level changes and able to meet working levels in the lake. The structure shall be affixed to a concrete pier (concrete apron with retaining wall or similar structure) on the lake shore;
- Made of steel, plastic, or concrete. The surface to be slip resistant in any weather conditions;
- The pontoons are to be located away from any permanent structures or obstacles that could obstruct the smooth and safe embarkation and disembarkation of the boats;
- Each pontoon to be 6 metres wide, 20 metres long;
- The upper edge of the pontoons to be no more than 15 centimetres above the water level;
- Minimum of 16 metres of clear water between each pontoon.

The design philosophy for the launch pontoons will be to match the finish of the existing pontoon at the existing Trailer Park/Competition Area.

New Access Road to the Finish Area and Car Parking at the Finish Area

It is proposed to construct a 6m wide macadam access road from the existing slipway to the Finish Area. The road will provide access to designated parking areas for competitors and event organisers. In addition, the road will also provide a corridor through the facility for emergency services.

The main elements of the proposed works to the new Access Road to the Finish Area will comprise:

- Construction of 6m wide road, approximately 400m in length from the existing slipway to the Finish Area;
- Construction of car park to facilitate up to 22 No. vehicles and designated for event organisers and emergency services;
- Road build up to consist of imported hardcore sub-base with macadam surfacing;
- Lighting on low level poles directed inwards and downwards on the subject areas with controls such as timers and movement sensors to save money and minimise light pollution;
- Associated site development works, services, footpaths, kerbing, speed controls, drainage and landscaping.

In light of pedestrian traffic within the development, the design philosophy for the access road will be to limit the speed of vehicles with appropriate speed controls.

New entrance to the Finish Area from Local Road LP-1053-2

It is proposed to construct a new entrance to the Finish Area from Local Road LP-1053-2. The entrance and road will provide access to designated parking areas for event organisers and emergency services. It is proposed that a permanent lockable gate be erected at the new entrance to prevent unauthorised access.

The main elements of the proposed new entrance from Local Road LP-1053-2 will comprise:

- Create a new entrance from Local Road LP-1053-2 into the development Finish Area;
- Widen the area adjacent to the proposed entrance to facilitate sight lines and traffic movements;

-
- Provision of road signs and road markings in accordance with the 'Traffic Signs Manual' published by the Department of Transport;
 - Construction of 6m wide road, approximately 150m in length from the existing Local Road LP-1053-2 to the Finish Area;
 - Erection of permanent lockable gate at the new entrance to prevent unauthorised access;
 - Associated site development works, services, footpaths, kerbing, speed controls, drainage and landscaping.

The design philosophy for the entrance and road will be to provide access to designated parking areas for event organisers and emergency services.

Integrated Constructed Wetland for treatment of existing on-site foul sewerage

It is proposed to construct an Integrated Constructed Wetland (ICW) for treatment of existing on-site foul sewerage. The ICW will consist of an unlined free surface flow constructed wetland addressing the objectives of cleansing and managing water flow from the facility's wastewater sources, integrating the wetland infrastructure into the landscape and enhancing its biological diversity.

The ICW will replace the existing sewerage treatment on site. Upon commissioning of the ICW the existing sewerage treatment will be decommissioned and removed from site.

The main elements of the Integrated Constructed Wetland comprise:

- Pumping Station and Rising Main to pump untreated effluent to a holding tank within the ICW;
- Construction of an ICW consisting of series of interlinking ponds (up to 5 No.) equivalent to approximately 2,500m² in area. Overall area required for embankments, landscaping and associated works is estimated at approximately 5,000m² (1.2 acres);
- Decommissioning of existing sewerage treatment plant upon completion of the new proprietary Wastewater Treatment Unit.

The design of the proposed ICW provides an integrated high quality appearance, combined with good landscaping and low maintenance properties.

Finish Hut with access walkway and Viewing / Spectator Area within Lough Rinn

It is proposed to construct a Finish Hut on the rowing course finish line (i.e. chainage 2,000m) to facilitate the hosting of National / International events. In order to host International events, the Finish Tower is required to be to World Rowing Federation, *Fédération Internationale des Sociétés d'Aviron* (FISA) regulations. The proposed Finish Hut will be located exactly on the finish line, approximately 27m from the racing lanes to provide the required un-obstructed views for event finishes.

In order to provide access to the Finish Hut, it is proposed to construct an access walkway with imported granular material. A proposed Viewing / Spectator Area will extend from the Finish Tower along the rowing course to cater for spectator viewing of rowing / canoeing events. Access to the Viewing / Spectator Area will be restricted to pedestrian traffic and authorised vehicular traffic for event organisers and emergency services.

The main elements of the Finish Hut, Access Walkway and Viewing / Spectator Area comprise:

- Finish Hut measuring approximately 4m x 3m on plan and approximately 2.65m high. The Finish Hut to be located 27m from the racing lanes and founded on an elevated and piled steel/concrete platform above recorded lake flood level of 40.83m.O.D. Access to the Finish Hut to be via an elevated steel walkway from the proposed Viewing / Spectator Area;
- Finish Hut external finish to be profiled metal sheeting, grey in colour, with glazed windows overlooking the finish line and racing lanes. Roof of Finish Hut to be used as lookout gantry for race control. Roof to incorporate edge handrailing and ladder for access.
- Importation and placement of approximately 11,500m³ of granular material to create proposed Access Walkway and Viewing / Spectator Area at a level of 41.3m above Ordnance Datum (i.e. above recorded lake flood level of 40.83m.O.D.). Proposed raised area to be protected by rock armour (rip-rap or similar construction), formed with an approximate slope of 1 in 3.
- Surfacing of Access Walkway and Viewing / Spectator Area with surface dressing;

- Associated site development works, services, kerbing, drainage and landscaping.

The design philosophy of the proposed new Finish Hut and ancillary items will be to provide for a high quality appearance, combined with good weathering and low maintenance properties.

Landscaping to overall Finish Area shoreline

In order to accommodate the proposed works and provide views onto the lake, it is proposed to selectively remove existing vegetation from the overall Finish Area shoreline (outlined red on the Planning Drawings). Upon completion, it is proposed to landscape the overall Finish Area with selected native species to create an area of high amenity value.

The landscaping philosophy for the Finish Area is to create a unique shared space that can be utilized by local communities and national organisations, and that benefit residents, visitors and athletes.

The main elements of proposed landscaping to the overall Finish Area will comprise:

- Selective removal of existing vegetation from the footprint of proposed infrastructure;
- Re-grading and re-shaping of existing topography to above flood level;
- Planting of selected native species into re-graded and re-shaped topography;
- Installation of public information signage;
- Installation of public amenity furniture (i.e. public benches, litter bins, etc.).

The landscaping philosophy for the Finish Area is to create a unique shared space that can be utilized by local communities and national organisations, and that benefit residents, visitors and athletes.

2 REGULATORY CONTEXT

The national statutory designation for wildlife protection areas is the Natural Heritage Area (NHA), designated under the Wildlife Act, 1976, and the Wildlife (Amendment) Act, 2000. A list of proposed Natural Heritage Areas was published on a non-statutory basis in 1995, but these have not since been statutorily proposed or designated. These NHA and pNHA sites are of significance for wildlife and habitats.

The Flora (Protection) Order, 1999 (SI 94/1999) also offers protection to listed flora species.

3 METHODOLOGY

3.1 Desk study

A desk study was carried out to collate the available information on the ecological environment. The National Parks and Wildlife Service (NPWS) database was consulted regarding designated conservation areas and records of rare and protected plant and animal species in the vicinity of the proposed development.

3.2 Field Survey

A visit to the proposed development site was carried out in November 2014. Species and habitats observed on the day were recorded. It should be noted that the site visit was carried out at a sub-optimal season for surveying field layer vegetation.

4 RECEIVING ENVIRONMENT

Lough Rinn is a large linear lake situated 3 km south of Mohill and 5 km east of Dromod. It is part of the larger River Shannon catchment. The Cloon River flows into the lake on the north-east side, while the Rinn River drains the southern end, flowing into Lough Forbes.

4.1 Habitats

The area of shoreline on which the development is proposed contains wet woodlands, with species such as Alder (*Alnus glutinosa*), Willow (*Salix* spp), Hawthorn (*Crataegus monogyna*), Hazel (*Corylus avellana*), Ash (*Fraxinus excelsior*), with sporadic mature oak trees (*Quercus* spp). Field layer vegetation comprised Creeping Bent grass (*Agrostis stolonifera*), Bramble (*Rubus fruticosus* agg.), Meadowsweet (*Filipendula ulmaria*) and Marsh-bedstraw (*Galium palustre*).

Areas of disturbed ground were present to the north of the site close to the trailer park.

4.2 Mammals

Lough Rinn falls within two 10km grid squares, N09 and N19, as recorded on National Parks and Wildlife Services (NPWS) website mapviewer (<http://webgis.npws.ie/npwsviewer/>). Stoat (*Mustela ermine*) have been recorded within the N09 grid square, while Otter (*Lutra lutra*) have been recorded within the N19 grid square. No mammals were recorded during the site visit.

4.3 Birds

Lough Rinn is also of regional/local ornithological importance for Whooper Swan, Pochard, Tufted Duck, Curlew and small numbers of Teal, Mallard and Goldeneye. Greenland White-fronted Goose occasionally uses the lake as a roost site. Both Whooper Swan and Greenland White-fronted Goose are internationally important species that are listed on Annex I of the E.U. Birds Directive. Two Mallard were recorded during the site visit in November 2014.

Also recorded in the wet woodland on the shore of Lough Rinn were Blackbird, Robin and Wren.

4.4 Aquatic Invertebrate Fauna

A typical invertebrate fauna, including the Freshwater Mussel (*Anodonta* sp.) and several common aquatic invertebrates (*Bithynia* sp. *Limnaea* sp. and *Pisidium* sp.) was described during a survey of the aquatic fauna.

5 POTENTIAL IMPACTS

5.1 Habitats

The proposed development will require the construction works to be carried out on the western shore of Lough Rinn. Construction works can pose a threat to aquatic habitats and the species through the release of substances such as cement, grout, hydraulic fluids, hydrocarbons, etc. Suspended solids can also be generated during construction works in and around waterbodies.

Sections of wet woodland will be felled in order to accommodate the proposed development.

New wetland habitat will be created as part of the integrated constructed wetland for treatment of existing on-site foul sewerage.

5.2 Mammals

The proposed development will not have a significant impact on mammals known to occur within the study area. A temporary disturbance during the construction stage is envisaged. Otter, however, will continue to feed along the Cloon and Rinn Rivers. Although some wooded area will be felled, ample similar habitat is available in the surrounding area for Stoat to utilise.

A bat survey was not carried out to determine species type or their presence or absence. However, it is most likely that bats utilize the Lough and surrounding wooded areas for feeding.

5.3 Birds

A number of protected species utilise Lough Rinn and its environs, including Whooper Swan and Greenland White-fronted Goose. A serious pollution incident occurring as a result of construction works could have a direct, significant negative, short-term impact, depending on the timing of the event.

5.4 Aquatic Invertebrate Fauna

A serious pollution incident occurring as a result of construction works could have a direct, significant negative, short-term impact on aquatic invertebrate fauna, depending on the timing of the event.

6 MITIGATION MEASURES

Any potential negative impact that may result from the construction works related to this development will be mitigated through good environmental practice in relation to construction. This includes keeping construction substances, chemicals, fuels, etc. away from watercourses and in bunded areas to contain any accidental spillages. Machinery and plant will be well maintained to prevent leaks of fuels, oils, or hydraulic fluids. Spillage kits and staff trained in their use will be on-site at all times. The timing of works is important and, in line with the recommendations of Inland Fisheries Ireland, will be undertaken during dry weather over the summer months.

Silt fencing will be used around excavations on the Lough shore to minimize sediments entering the Lough.

All imported rock and stone to the site will be washed before leaving the quarry to minimize fine sediments entering the Lough.

6.1 Habitats

Where possible, mature oak trees will be retained and protected during construction. A dedicated tree survey will be carried out prior to construction to identify trees to be retained, trees to be sensitively moved and trees to be felled. Any existing trees in good condition that need to be moved should be sensitively removed, taking care not to damage the root system, stored carefully and then used for replanting purposes where possible.

6.2 Mammals

Construction works will be carried out in a sensitive manner using good environmental practice. The dedicated tree survey will include an examination of trees to identify any potential bat roosts. Should any roosts be found these trees will not be felled.

6.3 Birds

Construction works should commence during the summer season, where possible, so as to minimize any disturbance to the Annex I bird species that frequent the Lough in winter months.

6.4 Aquatic Invertebrate Fauna

Sedimentation in the lough will be minimized by using good environmental practices during construction, including silt fencing and clean imported stone.

Chemicals and fuels will be stored away from watercourses and in bunded areas to contain any accidental spillages. Machinery and plant will be well maintained to prevent leaks of fuels, oils, or hydraulic fluids. Spillage kits and staff trained in their use will be on-site at all times.

6.5 Invasive species

In order to prevent the spread of invasive species to or from Lough Rinn, any equipment, machinery, plant, etc., required to enter Lough Rinn will be steam-cleaned prior to moving into the site and again before leaving the site. All traces of soil and plant matter will be removed. This includes from footwear and clothing. It may be appropriate to use disinfectant to prevent the spread of diseases such as crayfish plague or other fish diseases.

7 CONCLUSION

It can be concluded that, provided best practice construction methods and mitigation measures are implemented and adhered to during the construction phase of the development and that the rowing facility is operated in an environmentally friendly manner, no impacts to Lough Rinn pNHA are envisaged.

8 REFERENCES

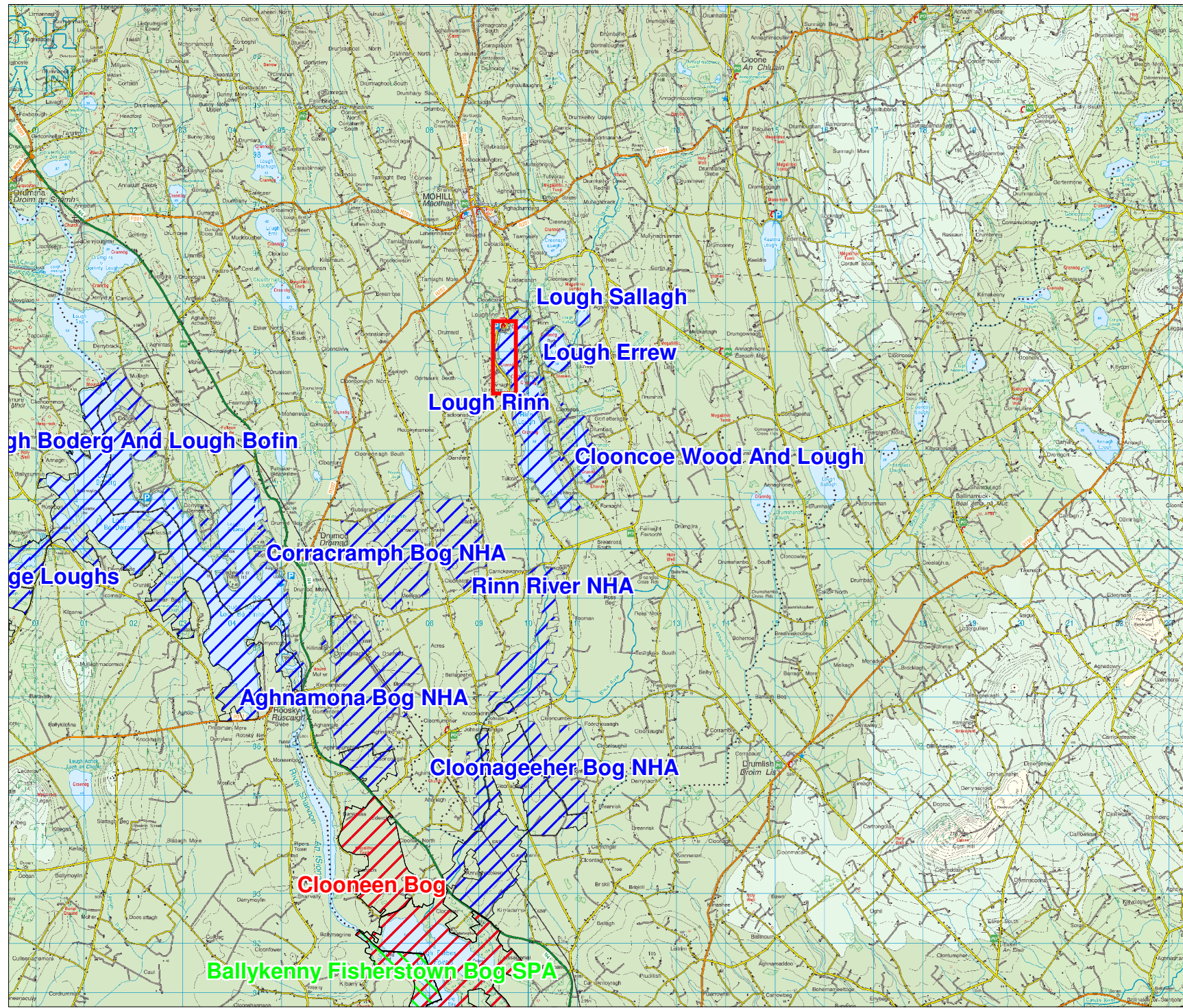
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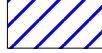



NOTES

Figured dimensions only to be taken from this drawing
All dimensions to be checked on site.

All Maps are Referenced to Irish National Grid (I.N.G.)
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Key to Map Features

-  Special Protection Area (SPA)
-  Special Area of Conservation (SAC)
-  Natural Heritage Area (NHA and pNHA)
-  Developemtn Area

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LEITRIM COUNTY COUNCIL

Client Representative:



JENNINGS O'DONOVAN
CONSULTING ENGINEERS

Project:

Lough Rinn
Rowing Course Facility

Stage:

Screening for
Appropriate Assessment

Drawing Title:

Figure 1 - Designated Areas

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Scales:	NTS		
Drawing No.	Figure 1	Revision:	

APPENDIX A

LOUGH RINN pNHA SITE SYNOPSIS

SITE SYNOPSIS

SITE NAME: LOUGH RINN

SITE CODE: 001417

Lough Rinn is a large linear lake situated 3 km south of Mohill and 5 km east of Dromod. It is part of the larger River Shannon catchment. The Cloon River flows into the lake on the north-east side, while the Rinn River drains the southern end, flowing into Lough Forbes.

One of the largest lakes in the area, Lough Rinn is also one of the few lakes in Co. Leitrim which is underlain by limestone and has a partially calcareous source. The lakeshore is very rocky for the most part and the flora reflects base enrichment with plant species such as Quaking Grass (*Briza media*), Glaucous Sedge (*Carex flacca*), Purging Flax (*Linum catharticum*) and a moss, *Pseudoscleropodium purum*, mixed in with more calcifuge species such as Mat-grass (*Nardus stricta*) and Heath Grass (*Danthonia decumbens*). The more silty areas close to the shore are colonised by Common Reed (*Phragmites australis*). Much of the open water is colonised by extensive rafts of Common Club-rush (*Schoenoplectus lacustris*) with some floating Yellow Water-lily (*Nuphar lutea*). There are also areas of species-rich wet grassland and several freshwater marshes on the lakeshore with a notable abundance of Bladder Sedge (*Carex vesicaria*). Semi-natural deciduous woodland is present on the perimeter of the site with a narrow band of wet woodland occurring closer to the shore.

Lough Rinn is also of regional/local ornithological importance for Whooper Swan (23 birds, peak number in 3 counts over 1 season in 1993), Pochard (60 birds in 1993), Tufted Duck (25 birds in 1993), Curlew (50 birds in 1993) and small numbers of Teal, Mallard and Goldeneye. Greenland White-fronted Goose (110 birds maximum in 1992/1993) occasionally uses the lake as a roost site. Both Whooper Swan and Greenland White-fronted Goose are internationally important species that are listed on Annex I of the E.U. Birds Directive.

A typical invertebrate fauna, including the Freshwater Mussel (*Anodonta* sp.) and several common aquatic invertebrates (*Bithynia* sp. *Limnaea* sp. and *Pisidium* sp.) was described during a survey of the aquatic fauna.

The lake occasionally suffers algal blooms, and nutrient enrichment is a contemporary process that should be controlled. Generally, however, the lake appears to still be relatively unpolluted and undisturbed in comparison to other lakes in the region.

This site is of interest as it supports regionally important numbers of birds and contains good examples of marsh and lakeshore vegetation. The juxtaposition of calcicole flora with more typical calcifuge species is of particular interest.

17.4.2009