

County Leitrim

Wetlands Field Survey 2023



Report prepared for Leitrim County Council

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November 2023



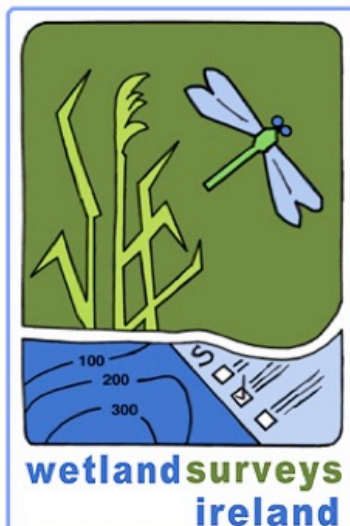
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Authors: Crushell, P., Crowley, W. , Vanmechelen, A., O'Sullivan, J. & Foss, P. J (2023) Title: **County Leitrim Wetlands Field Survey II 2023**. Report prepared for Leitrim County Council.

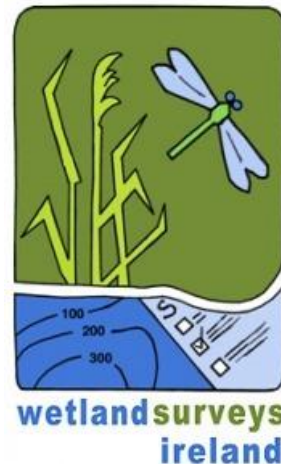
**The project is an action of the County Leitrim Heritage Plan 2020-2025
funded under the National Biodiversity Action Plan Fund 2025**

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Report cover images:

Top: Lough Adorn cNHA; Middle L to R: Leean, Belhavel Lough cNHA, Edentiny Ballinamore; Bottom: Cloonturk Lough, Co. Leitrim (Photos: County Leitrim Wetlands Field Survey 2023).

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County Leitrim Wetlands Field Survey II 2023

This project involved a field survey of thirty-three freshwater wetlands in County Leitrim, located across the entire county, with the aim of identifying the specific wetland habitats and ecological interest of each site. These sites had previously been identified as being of potential interest during the County Leitrim Wetland Survey 2019 project. The sites were selected for survey due to the potential occurrence of notable wetland habitats. This report presents the results of the 2023 field survey and includes detailed site descriptions and habitat maps for each of the wetlands surveyed.

Acknowledgements

The County Leitrim Wetlands Field Survey 2023 (LEWS2023) was made possible through the financial support of Leitrim County Council and The Heritage Council and Department of Housing, Local Government and Heritage. The project is an action of the County Leitrim Heritage Plan 2020-2025.

The authors wish to thank Sarah Malone, Heritage Officer with Leitrim County Council for help and advice during the project.

We also acknowledge the assistance of all those landowners who facilitated access to their land during this survey and provided valuable local information.

**The project is an action of the County Leitrim Heritage Plan 2020-2025
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Executive Summary

1. The aim of the Leitrim Wetlands Field Survey 2023 (LEWS 2023) was to undertake a field survey of a selection of wetland sites previously identified during the 2019 Counties Leitrim Wetland Survey project (Foss *et al.* 2019) for which little or no ecological information was available.
2. Thirty-three sites selected for survey included those that lie outside of designated areas but were deemed likely to contain habitats of biodiversity interest, located in the southern part of the county.
3. Field surveys were undertaken on all 33 sites comprising an area of 1,163.9ha. These were surveyed in detail and site descriptions, conservation evaluation and habitat maps were prepared.
4. For the sites surveyed in detail, habitats were classified and mapped according to the Guide to Habitats published by The Heritage Council (Fossitt 2000). Habitats that occur surrounding each wetland site were also recorded.
5. Detailed survey information on sites, including the habitats and species present, as well as threats and impacts to sites, was stored within a Leitrim Wetland Survey (LEWS) database.
6. The information collected from the survey was used to update the 2019 Leitrim Wetlands Map (LEWM) GIS dataset and site database. Site records were updated for each of the wetland sites surveyed in 2023.
7. The main findings to emerge from the 2023 wetlands survey is the identification of a number of important wetland sites (ranging from national to high local importance), including a turlough, transition mires, lake and reed swamps, active blanket bog, mesotrophic lakes, tall herb swamps and a number of remnant raised bog sites.
8. The results of the 2023 field survey suggests that many important wetland sites may remain unidentified throughout county Leitrim and further surveys will be required to improve our knowledge of the county's wetland heritage.
9. Despite the recognised importance and value of wetlands, survey results confirm that they continue to be threatened and lost due to land-use pressures. A series of recommendations are made with regards ensuring the future conservation of the rich wetland heritage of County Leitrim.

1 Introduction and Background

In 2019 Leitrim County Council funded the production of a county Leitrim wetland GIS dataset and associated site database holding information on all known and potential freshwater wetlands in county Leitrim (Foss et al. 2019).

The Leitrim Wetlands Map (LEWM) project in 2019 identified more than 388 areas of wetlands which were mapped in a digital dataset (LEWM GIS dataset). Of the sites mapped in the Leitrim Wetlands Map (LEWM) 2019 project in 235 still have no detailed background survey information.

The main aim of the current Leitrim Wetlands Field Survey 2023 (LEWS 2023) project was to carry out a survey of a selection of sites identified in the LEWM 2019 project for which there was little or no site survey information and assess their ecological status with the view of improving the knowledge of the wetland resource of County Leitrim.

The outputs of the Leitrim Wetlands Field Survey 2023 should assist Leitrim County Council in its obligations to protect the most important wetlands within the county and inform future conservation policies in relation to wetlands in county Leitrim.

1.1 Project summary

This LEWS 2023 project was undertaken between May and end of October 2023. Field surveys were completed during July 2023. The main elements project included:

- Over fifty potential survey sites were selected from the Leitrim Wetlands Map (LEWM) GIS dataset for survey in 2023 with the aim of surveying at least thirty sites. Sites considered representative of the more common wetland habitats within the county were included (see Table 1).
- Following the site selection process, field maps of the sites were prepared.
- A Wetland Survey Database (LEWS), to hold survey information on sites examined in detail, was created. This database was linked to the original County Leitrim Wetlands Map (LEWM) site database where core information on wetland sites is held. Once survey information was inputted to the LEWS survey database, a complete site report was produced from data held within the two related databases.
- Field surveys of thirty-three sites were undertaken during July 2023. Following the field survey, the ecological value of each site was assessed using an objective site evaluation scheme. Sites were subsequently ranked in terms of their local, national, or international conservation value (see Appendix 1).
- Information gathered during the field survey was used to populate the Wetland Survey Database (LEWS), prepare habitat maps, and update the Leitrim Wetlands Map (LEWM) GIS dataset.
- Individual site reports (which include site descriptions, habitat maps, and conservation recommendations) were prepared for each site surveyed. These site reports are included in Appendix 2 of this report.
- Digital copies of the updated Leitrim Wetlands Field Survey 2023 (LEWS 2023) GIS dataset and site database accompany this report.

2 Materials & Methods

2.1 Leitrim Wetlands Field Survey 2023 - Site Selection

At project commencement fifty-nine potential survey sites located across the county were selected from the Leitrim Wetlands Map GIS Dataset for survey. It was aimed to survey at least thirty of these sites with extra sites included in case of access issues etc. The selection of thirty survey sites was determined based on the budget and resources made available for the project. The final list of sites proposed for survey was considered representative of the more common wetland habitats within the county.

Sites selected for survey are listed in Table 1 below and a map showing their distribution throughout the county is presented in Figure 1.

2.2 Leitrim Wetlands Field Survey 2023 - Field Survey

The field survey was undertaken during June and July 2023. The following was recorded at each site:

- General ecological description of the site
- Photographic record of the site
- The habitats both within and immediately adjoining the wetland
- Habitat types listed under Annex I of the EU Habitats Directive
- Threats/damaging activities to the site
- Flora and fauna species observed

All site information was recorded using a standard field survey card on a GPS enabled field computer (see Foss et al. 2019 and Crushell et al, 2021 for details). The survey card was designed specifically for use on this survey.

Plant identification followed Webb et al. (1996), and species nomenclature follows Scannell & Synnott (1987). Searches for rare or protected species of plants (Curtis & McGough 1988) were not the focus of this study but where these were observed note was taken for inclusion in the database.

Mammals observed were recorded using nomenclature in Sterry (2004) and birds were identified using Ferguson-Lee et al. (1983). Any reptiles, amphibians or (readily identifiable) invertebrates were also noted.

Information on threats and damage on the site, and the severity of this was also noted and were marked in the GIS using target notes.

2.2.1 Consultation with Landowners

Where possible, landowners were consulted by calling to the nearest dwelling, and permission was sought for access to the site. Discussions with landowners typically included an explanation of the project often followed by an informal conversation about the particular wetland site and its past and recent management.

All landowners that were approached during the survey permitted access to their lands.

2.2.2 Habitat Classification

The habitats within each wetland visited and those immediately adjacent to the site were classified using Fossitt (2000) 'A Guide to Habitats in Ireland'. The habitat definitions and terminology used in this report follows this guide.

Guidance in determining whether or not a habitat type present within a wetland may correspond to an EU Annex I type was sought from a variety of sources including European Commission (2013), Fossitt (2000), Foss (2007), O'Neill *et al.* (2013), Perrin *et al.* (2013), and Corbett (2004).

2.2.3 Site Conservation Assessment & Evaluation

Each wetland surveyed in the field was assigned an evaluation rating. This evaluation was based on the criteria outlined in Appendix 1 (NRA 2009).

2.2.4 Survey Constraints

The presence of bulls, security fencing, high barbed wire fencing, high water levels, and wide deep drainage ditches hindered field work by preventing safe access to parts of some of the sites. Such areas were assessed using binoculars. Areas that were inaccessible were marked in the GIS using target notes.

The main purpose of the project is to create an inventory of wetlands within the county. In order to assess sites within the time and budgetary constraints of the project, surveys were normally confined to only those parts of the sites that appeared, from the aerial photography, to be of most interest. The level of information gathered at each site was sufficient to evaluate its ecological importance and wetland interest.

It was not possible to undertake full walkover surveys of all sites. Thus, an un-manned aerial vehicle (UAV) was used to further back up ground survey notes and reach parts of sites that were otherwise inaccessible.

2.3 *Leitrim Wetlands Field Survey Database – Structure and Content*

A Leitrim Wetland Survey (LEWS) database holds survey data on sites from the present survey. This database was connected to the existing County Leitrim Wetland Map site database (which holds general and descriptive site data recorded in various third party reports and datasets) via the unique site code assigned to each site. This database was created using Filemaker Pro software package which allows data export to Excel spreadsheets.

Fields used to store survey data in the LEWS database are detailed in Foss *et al.* (2019).

Initially the sites selected for survey had a site record created in the LEWS survey database. This updated version of the LEWS survey database (with the sites surveyed in 2023 added) was given the name Leitrim Wetland Map Version 1, and is included with this report as part of the final project deliverables.

2.4 *Leitrim Wetlands Field Survey (LEWS) – GIS Dataset*

The Leitrim Wetland Map (LEWM) GIS dataset created by Foss *et al.* (2019) (using ArcView 10.6 GIS software package on a Windows Operating System) was used throughout the LEWS 2023 for all site selection and mapping purposes.

See Foss *et al.* (2019) for further details on the structure and format of this LEWM GIS dataset.

All habitat maps produced during the LEWS 2023 project were added to this LEWM GIS dataset. In certain cases boundaries were also adjusted on sites based on field observations. The updated and revised version

of the LEWM GIS dataset was delivered at the end of the project to Leitrim County Council, dated November 2023. A set of GIS files relevant only to this individual survey (LEWS 2023) are also included with this report.

3 Results

3.1 Leitrim Wetlands Field Survey 2023

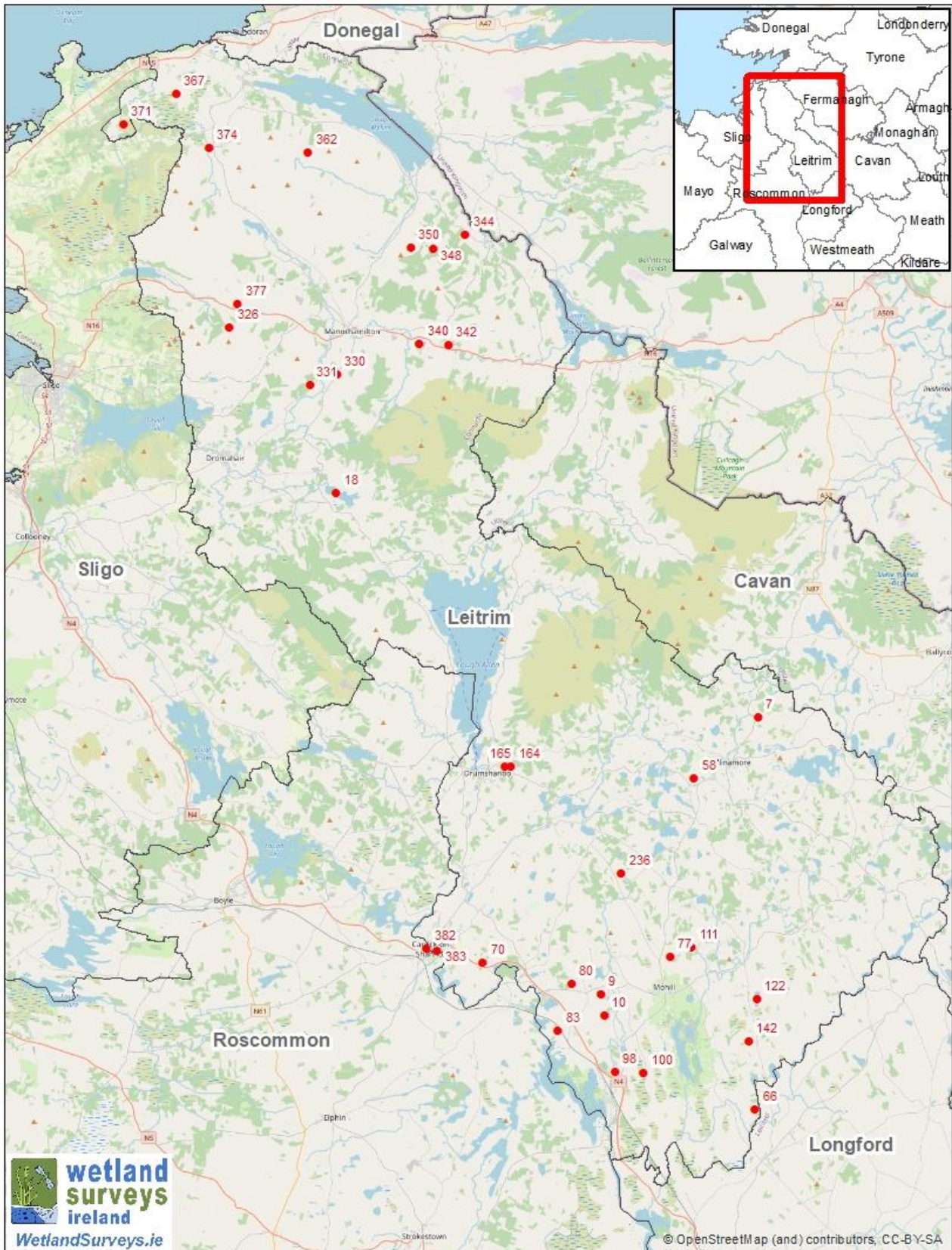
The thirty three sites visited during the field survey are listed in Table 1 and their locations are shown in Figure 1.

Section 3.2 below presents the summary findings of the survey in relation to the habitats recorded on each site. In addition, the ecological evaluation of sites is discussed.

A detailed report of each site (sorted according to site name) together with habitat maps are presented in Appendix 2 of this report.

Table 1: List of sites surveyed during the Leitrim Wetlands Field Survey 2023.

LEWS Site Code	LFWS Site Name	IG Easting	IG Northing
LE362	AGHAVOGHIL CUTOVER	585707	851130
LE142	ANNAGHMORE EAST BOG	614329	793482
LE18	BELHAVEL LOUGH cNHA	587548	829009
LE331	CLOONAQUIN LOUGH	585847	836070
LE10	CLOONFINNAN LOUGH cNHA	604950	795114
LE98	CLOONTURK LOUGH	605665	791499
LE371	CLOONTY BOG COMPLEX	573722	852947
LE342	CORNACLOY CUTOVER	594821	838650
LE111	CURRAUN LOUGH	610640	799570
LE367	DERRINLOUGHAN BOG	577173	854942
LE83	DERRYBRACK CUTOVER	601958	794153
LE165	DERRYHALLAGH LOUGH	598476	811260
LE377	DROMORE WETLAND	581143	841306
LE66	DRUMSHANBO SOUTH CUTOVER	614740	789085
LE58	EDENTINNY BALLINAMORE	610791	810548
LE236	FUNSHINAGH LOUGH	606074	804397
LE344	GORTNADERRARY LAKE	595942	845770
LE122	KEELDRA LOUGH	614868	796236
LE70	KILTYCARNEY LAKE	597081	798598
LE374	LARGYDONNELL LAKE	579306	851445
LE330	LARKFIELD LOUGH	587606	836708
LE326	LEEAN	580628	839792
LE350	LISDARUSH BOG COMPLEX	592400	844973
LE7	LOUGH ADORN cNHA	614948	814510
LE9	LOUGH ERRIL cNHA	604750	796513
LE80	MUCKLAGHAN LOUGH	602828	797190
LE340	MUNAKILL MORE LOUGH	592948	838698
LE348	RAHEELIN COOLDONNELL BOG	593847	844926
LE383	RIVER FRONT AMENITY PARK	594123	799338
LE382	RIVER SHANNON (LEITRIM)	593417	799503
LE100	ROOSKY LOUGH	607501	791446
LE164	ROSCUNNISH LOUGH	598892	811313
LE77	ROSHARRY	609248	798936



Legend

- LEWS2023 Site Locations

0 5 10 20 Kilometers



Figure 1: Location of sites selected for survey as part of the Leitrim Wetlands Field Survey 2023.

3.2 Wetland types recorded during LEWS Field Survey 2023

Thirty three sites were surveyed as part of the LEWS 2023. The habitats present (both wetland and non-wetland) within and surrounding each wetland site were recorded using Fossitt (2000) based on field survey observations. Summary descriptions of these wetland types, with examples of where they can be seen in County Leitrim is provided in Foss *et al.* (2019), while more detailed habitat descriptions with characteristic species is given in Fossitt (2000).

Wetland habitats recorded during the survey included a wide range of habitats of varying ecological importance. The most notable habitats that were encountered included; blanket bog, wet heath, mesotrophic lake, wet woodland, transition mire, reed swamp and a turlough site. Wetlands of lower ecological interest that were recorded during the survey included areas of dry cutover bog and reed swamp.

A summary description of each site surveyed is presented in Table 2 below. Further site details are presented in detailed site reports are presented in Appendix 2.

Table 2: Summary description of sites surveyed during the Leitrim Wetlands Field Survey 2023.

LEWS Site Code	LEWS Site Name	Survey site location	Site Description
LE7	LOUGH ADORN cNHA	Lough Adorn cNHA is a mesotrophic lake with reedswamp and transition mire located 2.5km to the north0east of Ballinamore, Co. Leitrim.	The lake has a high cover of <i>Nuphar lutea</i> , and the lake margin is surrounded by a narrow band of <i>Phragmites</i> reedswamp, which broadens out into a much larger area to the north of the lake. To the east of the lake the reedswamp also broadens out over a larger area, which is more species-rich with characteristics of transition mire. Wet grassland occurs almost to the lake edge in the west of the site. Parts of the grassland to the south appear to be cut for silage and are improved grassland. The lake is important for wintering waterbirds and the site is part of a larger site (Ballinamore Lakes) that is monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme.
LE9	LOUGH ERRIL cNHA	Lough Erril cNHA is a mesotrophic lake with transition mire and crannog located 6km north of Dromod.	Mesotrophic lake with frequent yellow water-lily fringed by reedswamp with transition mire also present. Several Red Listed snails (<i>Vertigo antivertigo</i> (Vulnerable), <i>V. substriata</i> (Near Threatened), <i>Pisidium pulchellum</i> (Endangered) and <i>Anisus vortex</i> (Vulnerable)) have been recorded here in the past according to NBDC records.
LE10	CLOONFINNAN LOUGH cNHA	Cloonfinnan Lough cNHA is a mesotrophic lake with poor fen/transition mire located 5km north of Dromod.	The site contains a mesotrophic lake fringed by reedswamp, with <i>Phragmites</i> or <i>Schoenoplectus</i> . There is an interesting transition in the south-west end of the site from wet heath/cutover bog mosaic to poor fen/transition mire (dominated by <i>Carex</i> spp., <i>Menyanthes trifoliata</i> and <i>Comarum palustre</i>) into tall herb swamp or reedswamp.
LE18	BELHAVEL LOUGH cNHA	Oligo-mesotrophic lake located 4km to the north west of Drumkeeran, Co. Leitrim.	Large lake surrounded by woodland and agricultural land. A narrow band of wet woodland and/or reedswamp occurs around most of the lake. In the east there is a relatively large area of transition

LEWS Site Code	LEWS Site Name	Survey site location	Site Description
			mire/reedwamp in a 'bay' of the lake. The lake is important for wintering waterbirds and the site is part of a larger site (North-West Leitrim Mountain Lakes) that is monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme.
LE58	EDENTINNY BALLINAMORE	Turlough located 2km to the south-west of Ballinamore, Co. Leitrim.	Turlough with good zonation. Floods in winter with little or no open water present after very dry summer spells. Much of the site is characterised by Carex dominated swamp, but there is good vegetation zonation present with fen, wet woodland and species-rich wet grassland also occurring also occurring.
LE66	DRUMSHANBO SOUTH CUTOVER	Remnant raised bog and cutover located 3km to the north-north-west of Drumlish.	Small area of remnant raised bog that is being actively cut for turf. The high bog is highly degraded being dry, Sphagnum-poor and dominated by heather. Cutover is variable with birch encroaching in several areas and patches of dry birch woodland present. There are some areas of cutover in the east of the site that are wetter with a moderate Sphagnum cover that are dominated by Eriophorum vaginatum. Several parallel drains delineating turf plots run parallel to each other right across the cutover.
LE70	KILTYCARNEY LAKE	Artificial lake in an abandoned former quarry site which has flooded located 2km east-south-east of Carrick on Shannon. Site is accessible from the N4.	Artificial lake in an abandoned former quarry site which has flooded. There are steep (3m) cliff faces into the lake on some sides. Charophytes are locally frequent and there is a very limited cover of Schoenoplectus lacustris.
LE77	ROSHARRY	Dry birch woodland located 2km north-north-east of Mohill.	Birch-willow woodland on peat with areas of scrub, wet grassland and a small area of marsh.
LE80	MUCKLAGHAN LOUGH	Mesotrophic lake with crannog located 7km to the north-north-west of Dromod.	Small circular lake with a muddy bottom. Narrow band of reed swamp occurring along the margins of most of the lake. Narrow strip of wet woodland separating lake from road in the west and narrow strip of wet grassland separating lake from conifer plantation in the east.
LE83	DERRYBRACK CUTOVER	Bog woodland and cutover located 5km to the north-west of Dromod adjacent to railway line.	Cutover bog with a variety of habitats after establishing. Most of the site is dominated by dry birch woodland with bramble and bracken dominating the understory. However, towards the north of the site, some of the woodland is wet and Sphagnum-rich with Molinia dominating the understory. There are also areas where typical raised bog vegetation has re-established as well as smaller areas of fen/flush vegetation dominated by Carex rostrata and Commarum palustre.
LE98	CLOONTURK LOUGH	Marsh and lake in the floodplain of the Eslin River, one km north of Dromod.	Meso to eutrophic lake along floodplain of Eslin River surrounded by reedbeds and marsh. In general the wider floodplain in the site is dominated by species-poor wet grassland with a fairly intensive drainage network draining to the river. In the west

LEWS Site Code	LEWS Site Name	Survey site location	Site Description
			of the site there are areas of remnant raised bog, cutover bog and dry bog woodland habitat.
LE100	ROOSKY LOUGH	Roosky Lough is an infilling lake located 3km north-east of Dromod.	Infilling lake. No open water remaining. Central area of former lake dominated by transition mire characterised by abundant <i>Carex</i> sp., <i>Comarum</i> , <i>Succisa</i> , <i>Equisetum fluviatile</i> , <i>Lychnis</i> and frequent <i>Holcus lanatus</i> , <i>Anthoxanthum</i> , <i>Iris</i> , <i>Valerian</i> and <i>Angelica</i> . Moss layer dominated by <i>Aulacomnium</i> with a low (10% cover) of <i>Sphagnum</i> (mainly <i>S. palustre</i> & <i>S. fallax</i>). Transition mire is surrounded by birch and willow scrub with wet willow dominated woodland to the north, dry birch woodland to the south and cutover bog to the west.
LE111	CURRAUN LOUGH	Mesotrophic lake located 3km north-west of Mohill.	Mesotrophic lake with a muddy bottom that has an abundance of yellow water-lily on the open water at the sub margins of the lake. Most of the lake is surrounded by a 10-20m band of reedbeds. There is little buffer around the lake apart from in the south where there is some scrub, marsh and wet grassland. Note that the Irish Damselfly (<i>Coenagrion lunulatum</i>), which is classed as Vulnerable on Irelands Red List (Nelson et al., 2011) has been recorded from here in the past.
LE122	KEELDRA LOUGH	Keeldra Lough is located 6km to the east-south-east of Mohill. The lake is used for recreation, and swimming facilities are located at the northern edge of the lake.	Mesotrophic lake with some reedbeds that was known to support a population of the Annex II species White clawed crayfish (NPWS, 2013). Lake has suffered in recent years from algal blooms caused by pollution. The lake is important for wintering waterbirds and these are monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme.
LE142	ANNAGHMORE EAST BOG	Remnant raised bog and woodland located 7km to the south-east of Mohill.	Remnant raised bog with birch and pine encroaching. The cover of <i>Cladonia portentosa</i> on the bog is very high. Cutover areas support non Annex bog woodland dominated by birch with <i>Molinia</i> and <i>Rubus</i> dominating the understory.
LE164	ROSCUNNISH LOUGH	Mesotrophic lake fringed with transition mire located 1km to the east of Drumshanbo, Co. Leitrim.	Mesotrophic lake with yellow water-lily growing abundantly on the sub-margins particularly in the north of the site. On the landward side of this there is a narrow band of reedswamp/transition mire (dominated by <i>Carex</i> spp., <i>Iris</i> , <i>Phalaris</i> and <i>Typha</i>) growing around most of the site and an area of wet willow dominated woodland in the north-east. The lake is connected to Derryhallagh Lough, which lies 250m to the west by a drainage channel and a stream connects the lake to the Aghagranis River in the north-east. Agricultural land surrounds the lake with a conifer plantation adjacent to the site in the north-east. The Swan Mussel (<i>Anodonta cygnea</i>), which is listed as Vulnerable on Ireland's Red List (Byrne et al., 2009) was recorded on site during the survey.
LE165	DERRYHALLAGH LOUGH	Mesotrophic lake fringed with transition mire located less than 1km to	Mesotrophic lake with yellow water-lily growing abundantly on the sub-margins. On the landward side of this there is a narrow band of

LEWS Site Code	LEWS Site Name	Survey site location	Site Description
		the east of Drumshanbo Co. Leitrim.	reedswamp/transition mire (with species such as <i>Mentha aquatica</i> , <i>Myosotis scorpioides</i> , <i>Galium palustre</i> , <i>Lychnis flos-cuculi</i> and <i>Typha</i>) growing around most of the site and willow scrub landward of that. The lake is connected to ROSCUNNISH Lough, which lies 250m to the east by a drainage channel.
LE236	FUNSHINAGH LOUGH	Mesotrophic lake located 4km to the south east of Keshcarrigan in south county Leitrim. Streams connect the lake with Scardaun Lough in the north and with Drumcollop Lough in the north-east. A stream exits the lake to the south, eventually meeting the Eslin River.	Mesotrophic lake supporting abundant yellow water-lily towards the edges of the open water and surrounded almost entirely by an extensive area of reed beds. Species-poor wet grassland to the east and willow scrub scattered amongst the reed beds in places. Note that the Irish Damselfly (<i>Coenagrion lunulatum</i>), which is classed as Vulnerable on Irelands Red List (Nelson et al., 2011) has been recorded from here in the past as well as the water beetle (<i>Hydroporus scalesianus</i>), which is classed as Vulnerable on the Red List (Foster et al., 2009).
LE326	LEEAN	Leean is an upland area, which includes some of the northern slopes of Leean Mountain and is located 7.5km west of Manorhamilton.	The site consists mainly of species rich grassland with some areas grading into wet heath. The grassland is a mosaic of dry calcareous, dry acidic and wet grassland. On the upper slopes where the soil is shallow and there is much exposed limestone rock, orchid-rich calcareous grassland dominates with species such as <i>Campanula rotundifolia</i> , <i>Primula vulgaris</i> , <i>Lotus corniculatus</i> and <i>Thymus polytrichus</i> . On the lower slopes where the soil is deeper wet grassland that is moderately species-rich dominates with species such as <i>Juncus acutiflorus</i> and <i>Cirsium palustre</i> with <i>Sphagnum</i> species and <i>Iris</i> in the wettest areas.
LE330	LARKFIELD LOUGH	Mesotrophic lake located 3km to the south-south-west of Manorhamilton. An outlet to the south of the site connects the lake to the Bonet River.	Mesotrophic lake with wet woodland to the west and wet grassland to the east. There's a narrow band of <i>Phragmites</i> reedswamp around the edges of the lake and yellow water-lily at the edge of the open water.
LE331	CLOONAQUIN LOUGH	Cloonquin Lough is located 4km to the south west of the town of Manorhamilton.	Mesotrophic lake surrounded by wet woodland, reedswamp and areas of transition mire. Area of blanket bog west of lake has been impacted on by past turf cutting. There are some areas of good <i>Sphagnum</i> cover and pools and other areas where scrub is encroaching. A stream exits to the south of the lake and joins the Bonet River.
LE340	MUNAKILL MORE LOUGH	Munakill More Lough is located 3.5km to the east of Manorhamilton. In close proximity to the N16.	Site consists of a large mesotrophic lake with minimal reedswamp areas at edge and only in parts. Algal growth was observed in parts of the lake during survey. The lake is important for wintering waterbirds and the site is part of a larger site (North-West Leitrim Mountain Lakes) that is monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme.
LE342	CORNACLOY CUTOVER	Cornacloy Cutover is	The site is dominated by cutover raised bog

LEWS Site Code	LEWS Site Name	Survey site location	Site Description
		located 5.5km to the east of Manorhamilton town.	separated into three sections by a road and former railway line. Most of the site is relatively dry and Sphagnum-poor, but small areas close to the centre of the site are wet, Sphagnum-rich and dominated by Eriophorum vaginatum. In some of the drier areas the cutover is dominated by birch scrub/woodland.
LE344	GORTNADERRARY LAKE	Gortnaderrary Lake marked as Lough Tiernan on the 6" maps is located 1.5km west of Kiltyclogher in Co. Leitrim.	The lake is in fact a turlough, which displays some good vegetation zonation. There are some inflowing streams to basin in the south-west and south-east, but no outflow. as water leaves appears to leave through submerged swallow hole. West of the lake the land rises up a slope. Towards the top of this is mainly scrub with clearings of wet grassland and adjacent to conifer plantations. Where the land levels out towards the bottom of the slope open blanket bog habitat with high Sphagnum cover occurs.
LE348	RAHEELIN COOLDONNELL BOG	Mosaic of blanket bog, wet heath and wet grassland located 6km to the north-east of Manorhamilton. Site is located adjacent to conifer plantations which are accessed by new hardcore gravel track. The Lattone River runs through the site.	Blanket bog with areas of cutover, wet heath and species-rich wet grassland. Wet heath in the west of the site occurring alongside species-rich wet grassland with abundant <i>Succisa pratensis</i> . East of the Lattone River blanket bog dominates in the south of the site with cutover bog in the north and wet grassland in the east.
LE350	LISDARUSH BOG COMPLEX	Mosaic of blanket bog/heath and grassland on Saddle Hill 5km to the north-east of Manorhamilton.	Heath particularly dry heath dominates towards the top of the hill with a mosaic of blanket bog and wet heath dominating on the more gradual north-eastern slopes and dry humid acid grassland dominating in mosaic with wet and dry heath and occasional exposed rock on the steeper north-western slopes. Cutover bog dominates towards the base of the hill in the east of the site.
LE362	AGHAVOGHIL CUTOVER	Aghavoghil Cutover is located 5.5km to the south- west of Kinlough, Co. Leitrim.	Large area of cutover blanket bog with areas of grassland communities. Area has been affected by past peat cutting and sheep grazing. The latter has resulted in areas with high levels peat erosion. Large areas of cutover bog have developed characteristics closer to that of grassland communities than that of cutover/blanket bog.
LE367	DERRINLOUGHAN BOG	Derrinloughan bog is situated 4km to the west of Kinlough, in the north of Co. Leitrim.	Cutover bog surrounded by wet grassland with some encroaching woodland/scrub. Good Sphagnum cover in some areas of old cutover. Areas of wet grassland were dominated by <i>Juncus effusus</i> . The wet woodland on site is being affected by <i>Rhododendron</i> infestation. A small patch of rich fen occurs west of the road that runs through the site.
LE371	CLOONTY BOG COMPLEX	Cloonty Bog Complex is located in the north west corner of Co. Leitrim 2.5km east of Cliffony,	The site is crossed centrally by a road and consists mainly of cutover raised bog and a large semi natural woodland which sits in the north-western half of the site and was already woodland at the

LEWS Site Code	LEWS Site Name	Survey site location	Site Description
		Co. Sligo. The bog straddles the border with County Sligo. The bog continues into county Sligo at the eastern edge of the site, where it appears to be more intact.	time of the 1840s OS map. The site has been heavily affected by mechanical turf removal and drainage. Scrub and invasive species are encroaching in many parts. Areas of wet grassland are also present.
LE374	LARGYDONNELL LAKE	Largydonnell Lake is located 4.5km to the south-west of Kinlough in County Leitrim.	The site consists of wet grassland, wet woodland, scrub and marsh occurring under the wood. A stream/river runs through the centre of the site. A concrete sluice system occurs at the western end of the site, which no longer appears to be operational.
LE377	DROMORE WETLAND	Dromore Wetland is located 7km west of the town of Manorhamilton, Co. Leitrim.	Area of cutover raised bog which has developed into a mosaic of wet grassland and scrub. Some wetter hollows with standing water include small areas of sedge rich transition mire or <i>Carex paniculata</i> reed swamp. The site is largely impacted by drainage channels within and around the wetland.
LE382	RIVER SHANNON (LEITRIM)	The site includes a 1 km section of River Shannon in Co. Leitrim running northwards from the bridge crossing the Shannon in Carrick-on-Shannon.	The site consists of a stretch of the River Shannon that runs northwards from the bridge in Carrick on Shannon. It includes the River Shannon as well as a marinas and wetland habitats in the riparian zone, mainly reed swamp, tall herb swamp, wet woodland and scrub.
LE383	RIVER FRONT AMENITY PARK	The site is comprised of the lower section of the River Shannon that runs through Carrick on Shannon town from Cumann na mBan Bridge south to Butler's Marina.	The site includes riparian habitats including reed swamp, wet woodland and amenity grassland, along the northern bank of the River Shannon. The site is managed for amenity and biodiversity. However, the eastern extent of the site has recently been drained.

3.3 Floral Observations

Floral observations and records made on the sites surveyed are included in the LEWS database. Plant species lists for each site surveyed are included in the site reports presented in Appendix 2.

The following record of problematic invasive alien species is of note:

Canadian pondweed (*Elodea canadensis*) – invasive species. Found at four sites in the lakes at LOUGH ERRIL cNHA, CLOONFINNAN LOUGH cNHA, CLOONTURK LOUGH and KEELDRA LOUGH. Recommendations are made in the site report to eradicate this invasive non-native species.

Rhododendron (*Rhododendron ponticum*) – found at three sites: ANNAGHMORE EAST BOG, DERRINLOUGHAN BOG and CLOONTY BOG COMPLEX. It is particularly abundant along the margins of woodland on DERRINLOUGHAN BOG. Recommendations are made in the site report to eradicate this invasive non-native species.

Japanese knotweed (*Fallopia japonica*) – found at CORNACLOY CUTOVER. Recommendations are made in the site report to eradicate this invasive non-native species.

Winter heliotrope (*Petasites fragrans*) – found at RIVER FRONT AMENITY PARK. Recommendations are made in the site report to eradicate this invasive non-native species.

3.4 Faunal Observations

Faunal observations and records made on the sites surveyed are included in the LEWS database. Species lists for each site surveyed are included in the site reports presented in Appendix 2.

The following species recorded during the survey are of note:



Shells of the Swan Mussel (*Anodonta cygnea*) listed as Vulnerable on Ireland's Red list by Byrne et al. (2009) were recorded on ROSCUNNISH LOUGH during the survey. This is a species of stagnant muddy or silty habitats in larger water bodies. Byrne et al. cite the main reason for its vulnerability in Ireland as being that its population is being severely impacted by the invasive species *Dreissena polymorpha*, the zebra mussel.

Plate 1: Swan Mussel (*Anodonta cygnea*) shell recorded at edge of lake on ROSCUNNISH LOUGH.

At several sites (LOUGH ERRIL cNHA, CLOONFINNAN LOUGH cNHA, ROOSKY LOUGH and RAHEELIN COOLDONNELL BOG) abundant suitable habitat for Marsh Fritillary (*Euphydryas aurinia*), an Annex II species of the EU Habitats Directive was also observed. However, survey time limitations and time of year were not conducive to allowing for a comprehensive search of suitable habitat for its larval webs during the surveys. Recommendations are made in the site report to undertake Marsh Fritillary survey on suitable habitat with abundant food plant during the appropriate time of the year (ideally September), and should future surveys identify significant resident or regularly occurring populations, then the conservation ranking of these sites may need to be reviewed.

3.5 Site Conservation Assessment

On completion of the LEWS 2023 field survey, each of the thirty three sites were reviewed and given a site conservation rating using the criteria presented in Appendix 1 (from NRA 2009). The site conservation rating for sites surveyed during 2023 is presented in Table 3 below.

Five sites were deemed to be of national conservation value due to the presence of extensive areas of high-quality transition mire and lake habitat at four of them (LOUGH ADORN cNHA, LOUGH ERRIL cNHA, CLOONFINNAN LOUGH cNHA and BELHAVEL LOUGH cNHA), and turlough habitat in one of them (GORTNADERRARY LAKE).



Plate 2: Mesotrophic lake fringed by reedswamp and transition mire habitat at CLOONFINNAN LOUGH cNHA.

Twelve sites (EDENTINNY BALLINAMORE, MUCKLAGHAN LOUGH, ROOSKY LOUGH, KEELDRA LOUGH, ROSCUNNISH LOUGH, DERRYHALLAGH LOUGH, LEEAN, MUNAKILL MORE LOUGH, RAHEELIN COOLDONNELL BOG, LISDARUSH BOG COMPLEX, AGHAVOGHIL CUTOVER and RIVER SHANNON (LEITRIM)) are of County conservation value (C+) due to the occurrence of good quality habitats including mesotrophic lakes, turlough, transition mire, wet heath, active blanket bog, tall herb swamps and wet woodland.

Twelve sites were deemed to be of local high local conservation value (C). The remaining four sites surveyed during the LEWS 2023 had a lower local conservation ranking.

Table 3: Conservation evaluation of sites surveyed during the LEWS 2023. Sites are ranked according to their conservation value.

LEWS Site Code	Site Name	Site Wetland Conservation Ranking	Presence of EU Annex Habitats
LE7	LOUGH ADORN cNHA	B Rating: Nationally Important	Some of the transition mire, particularly that on the east of the lake may correspond to 7140 Transition mires and quaking bogs which is a habitat listed under Annex I of the EU Habitats Directive.
LE9	LOUGH ERRIL cNHA	B Rating: Nationally Important	Some of the areas of transition mire in the SW may correspond to EU Annex I habitat 7140 Transition Mires & Quaking Bogs.
LE10	CLOONFINNAN LOUGH cNHA	B Rating: Nationally Important	Some of the areas of transition mire in the SW is likely to correspond to EU Annex I habitat 7140 Transition Mires & Quaking Bogs. A small area of tall herb swamp adjacent to this may correspond to the 6430 Hydrophilous tall herb fringe communities.
LE18	BELHAVEL LOUGH cNHA	B Rating: Nationally Important	The transition mire is likely to correspond to the EU Annex 1 habitat 7140 Transition mires and quaking bogs. It's unclear whether the lake corresponds to the Annex habitat 3130 oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoetes-Nanojuncetea.
LE344	GORTNADERRARY LAKE	B Rating: Nationally Important	This site contains good example of 3180 Turlough which is a priority habitat listed under Annex I of the EU Habitats Directive. Parts of the blanket bog area to west of the lake have a high Sphagnum cover and may correspond to the EU Annex I habitat 7130 Blanket bog.
LE58	EDENTINNY BALLINAMORE	C+ Rating: County Conservation value	Much of this site likely corresponds to the priority habitat 3180 Turloughs and the wet woodland may correspond to the EU Annex I habitat 91E0 Alluvial forest with Alnus glutinosa and Fraxinus excelsior (Alno-padion, Alnion incanae, Salicion albae).
LE80	MUCKLAGHAN LOUGH	C+ Rating: County Conservation value	It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.
LE100	ROOSKY LOUGH	C+ Rating: County Conservation value	Some of the areas of transition mire within the site likely correspond to the EU Annex I habitat 7140 Transition Mires and Quaking Bogs.
LE122	KEELDRA LOUGH	C+ Rating: County Conservation value	It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.
LE164	ROSCUNNISH LOUGH	C+ Rating: County Conservation value	Some of the areas of transition mire around the edge of the lake likely correspond to the EU Annex I habitat 7140 Transition Mires and Quaking Bogs.
LE165	DERRYHALLAGH LOUGH	C+ Rating: County Conservation value	Some of the areas of transition mire around the edge of the lake likely correspond to the EU Annex I habitat 7140 Transition Mires and Quaking Bogs.
LE326	LEEAN	C+ Rating: County Conservation value	Some of the calcareous grassland on the site likely corresponds to the EU Annex 1 habitat semi-natural dry grasslands and scrubland facies

LEWS Site Code	Site Name	Site Wetland Conservation Ranking	Presence of EU Annex Habitats
			on calcareous substrates (Festuco-Brometea) (*important orchid sites) (6210).
LE340	MUNAKILL MORE LOUGH	C+ Rating: County Conservation value	It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.
LE348	RAHEELIN COOLDONNELL BOG	C+ Rating: County Conservation value	The small areas of wet heath in the west of the site may correspond to the Annex I habitat 4010 Northern Atlantic Wet Heaths. Parts of the site may also correspond to the EU Annex I habitat 7130 Blanket bog.
LE350	LISDARUSH BOG COMPLEX	C+ Rating: County Conservation value	This site contains examples of European Dry Heath (4030) in proximity to outcropping rock and 4010 Northern Atlantic wet heaths with <i>Erica tetralix</i> which are both habitats listed under Annex I of the EU Habitats Directive.
LE362	AGHAVOGHIL CUTOVER	C+ Rating: County Conservation value	A small area of a well grazed hillside may correspond to the Annex I habitat 4030 European dry heaths. Parts of the site may also correspond to the EU Annex I habitat 7130 Blanket bog.
LE382	RIVER SHANNON (LEITRIM)	C+ Rating: County Conservation value	The area of wet grassland in the north of the site may correspond to the EU Annex I habitat 6410 <i>Molinia</i> meadows and some of the tall herb vegetation along the margins of the river may correspond with 6430 Hydrophilous tall herb fringe communities.
LE83	DERRYBRACK CUTOVER	C Rating: Local conservation value (high value)	Although most of the birch woodland on the site is dry and is not the Annex 91D0 bog woodland, there were patches of wet Sphagnum-rich woodland in the north of the site that may correspond with this Annex habitat.
LE98	CLOONTURK LOUGH	C Rating: Local conservation value (high value)	It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.
LE111	CURRAUN LOUGH	C Rating: Local conservation value (high value)	It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.
LE142	ANNAGHMORE EAST BOG	C Rating: Local conservation value (high value)	It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.
LE236	FUNSHINAGH LOUGH	C Rating: Local conservation value (high value)	It is not thought any of the habitats present correspond to any of the habitats listed under Annex I of the EU Habitats Directive.
LE330	LARKFIELD LOUGH	C Rating: Local conservation value (high value)	It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.
LE331	CLOONAQUIN LOUGH	C Rating: Local conservation value (high value)	A small area of transition mire occurs next to the lake and this is likely to correspond to the EU Annex I habitat 7140 Transition Mires and Quaking Bogs. Some of the areas of blanket bog may correspond with the Annex habitat 7130 Blanket bog (active).
LE342	CORNACLOY CUTOVER	C Rating: Local conservation value (high value)	Small areas of the cutover have regenerated well and are dominated by <i>Eriophorum vaginatum</i> with close to a complete Sphagnum cover. These areas need a more detailed survey to assess whether they qualify as the priority habitat 7110

LEWS Site Code	Site Name	Site Wetland Conservation Ranking	Presence of EU Annex Habitats
			Active Raised Bog.
LE367	DERRINLOUGHAN BOG	C Rating: Local conservation value (high value)	It is considered that a small patch of habitat corresponds to 7230 Alkaline fen in north western part of the site.
LE371	CLOONTY BOG COMPLEX	C Rating: Local conservation value (high value)	A hydrological survey and modelling is necessary to ascertain whether parts of the site correspond to the Annex I habitat 7120 Degraded raised bogs still capable of regeneration.
LE377	DROMORE WETLAND	C Rating: Local conservation value (high value)	The following habitat present corresponds to an EU Habitats Directive Habitat: 7140 Transition mires and quaking bogs.
LE383	RIVER FRONT AMENITY PARK	C Rating: Local conservation value (high value)	It is not thought any of the habitats present correspond to any of the habitats listed under Annex I of the EU Habitats Directive.
LE66	DRUMSHANBO SOUTH CUTOVER	D Rating: Local conservation value (moderate value)	It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.
LE70	KILTYCARNEY LAKE	D Rating: Local conservation value (moderate value)	It is not thought any of the habitats present correspond to any of the habitats listed under Annex I of the EU Habitats Directive.
LE77	ROSHARRY	D Rating: Local conservation value (moderate value)	It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.
LE374	LARGYDONNELL LAKE	D Rating: Local conservation value (moderate value)	It is not thought any of the habitats present correspond to any of the habitats listed under Annex I of the EU Habitats Directive.

3.6 Threats and Damage to County Leitrim Wetlands

The majority of, if not all, Irish wetland sites, and by extension those in county Leitrim, have been subject to some degree of human impact, damage or modification from their natural state in the past, and continue to be threatened and decline in extent due to ongoing human activities (NPWS 2019; Foss & Crushell 2007; Foss 2007). A summary table of impacts and the wetland types most affected is presented in Table 4 below.

Wetlands, (bog, fen and marsh areas in particular) have historically been regarded as less productive than adjacent agricultural land and measures have been taken to 'improve' their value for agriculture. The principal method of land improvement usually involved one or more of the following; drainage, infill or soil redistribution, burning, and addition of nutrients. These activities were undertaken so as to facilitate the removal of peat, planting of trees, or the creation of new grazing areas, pasture or arable farmland.

Historical evidence indicates that peatlands or bogs, and by extension fens and other associated wetlands, were increasingly utilised by the growing population throughout Ireland. The removal of peat by this growing population resulted in many worked out bogs, which when abandoned became ideal locations for the formation of secondary wetland habitats (fen, marsh and wet woodland *inter alia*).

A more recent trend has been the use of wetlands as areas to dispose of building rubble, rubbish, and landfill materials (Foss & Crushell 2007; Monaghan County Council 2006).

Land conversion and drainage works are ongoing agricultural management techniques which affect the hydrology of wetland habitats.

The 2019 NPWS report on the conservation status of EU Habitat Directive sites in Ireland (NPWS 2019), many of which are wetlands, found that the conservation status of these habitats is far from satisfactory. In fact the overall assessment for inland wetland habitat types listed under the EU Habitats Directive found that only a single habitat was in favourable conservation status, while seven were ‘unfavourable - inadequate’ and twelve habitat types were deemed to have a ‘unfavourable – bad’ conservation status overall (see Figure 2). The trend for the majority of habitats also suggests that their conservation status is in decline during the period 2013-2019 (see Figure 2).

Included in the latter ‘unfavourable – bad’ conservation status category were habitats such as; oligotrophic and hard water lakes, raised bogs (active and degraded), blanket bogs, wet heath, transition mires, alkaline fens, tall herb swamps, and alluvial wet woodland. These habitats account for a significant part of the wetland habitat resource in county Leitrim.

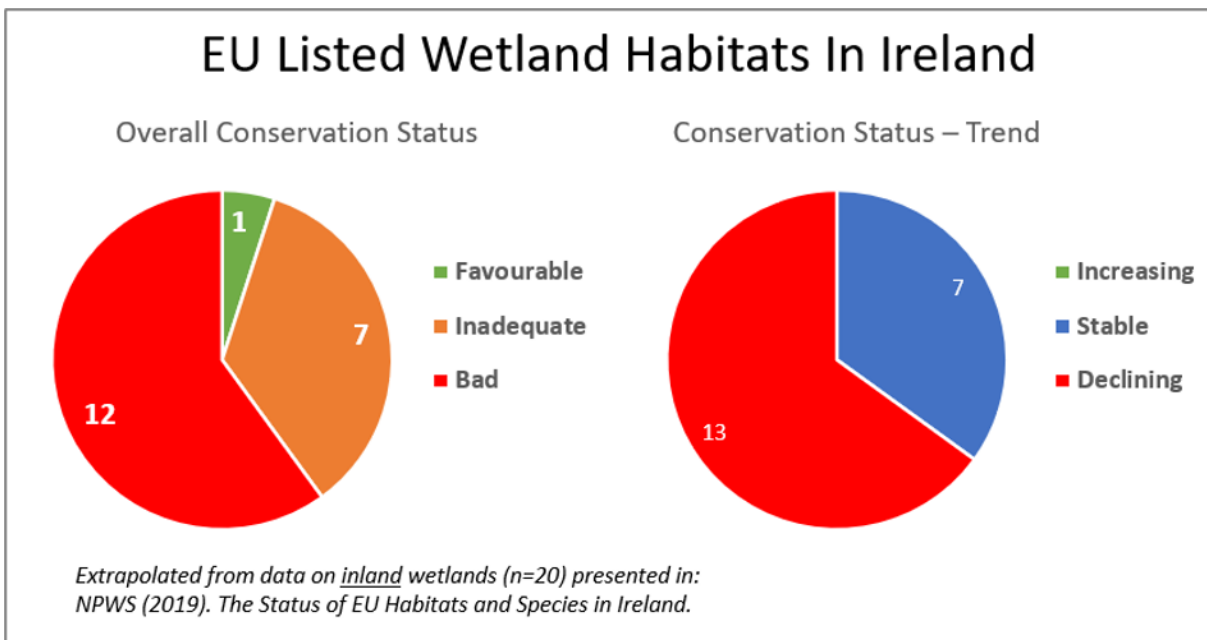


Figure 2: Summary of conservation status reported by NPWS (2019).

Table 4: Natura 2000 Impacts and Activities which are likely to have a negative effect on wetlands, and the wetland type most likely to be affected by these activities.

Natura 2000 Impacts and Activities Main Code	Impacts and Activities Category with brief description	Wetland habitat types most at threat or likely to be affected from Impacts and Activities
A	Agriculture <i>Including cultivation, fertilization abandonment, and over grazing</i>	Fens, Marsh, Raised bog, Wet heath, Reed swamp, Lake and Lake margins, Wet grassland, Wet woodland, Bog woodland, Rivers
B	Sylviculture, forestry <i>Including fertilisation, planting and re-planting, forestry practices</i>	Fens, Marsh, Raised bog, Wet heath, Reed swamp, Lake and Lake margins, Wet grassland, Wet woodland, Bog woodland, Turlough, Rivers
C	Mining, extraction of materials and energy production <i>Including quarry activities, turbary and peat removal</i>	Raised bog, Dystrophic lake, Bog woodland
D	Transportation and service corridors <i>Including road construction, power transmission</i>	All wetland types
E	Urbanisation, residential and commercial development <i>Including Urban and industrial development, discharges and waste disposal</i>	Fen, Bog, Marsh, Wet Grassland, Scrub
F	Biological resource use other than agriculture & forestry <i>Including leisure fishing, hunting</i>	Lake, Fen, Marsh, River, Bog
G	Human intrusions and disturbances <i>Including recreational facilities, outdoor leisure activities, littering, trampling overuse</i>	Bog, Fen, Marsh, Reed Swamp, Wet Grassland
H	Pollution <i>Including surface and groundwater water pollution, air pollution</i>	Oligotrophic Lake, River, Marsh, Fen
I	Invasive, other problematic species and genes <i>Including invasive species, genetic pollution</i>	Oligotrophic Lake, River, Marsh, Fen
J	Natural System modifications <i>Including landfill, drainage, drain maintenance, water abstraction, burning</i>	Fen, Marsh, Bog, Reed Swamp, Lake margins, Wet grassland, River
K	Natural biotic and abiotic processes (without catastrophes) <i>Including organic material accumulation</i>	Fen, Marsh, Bog, Wet woodland

During the course of the LEWS 2023, different types of damage to wetlands were noted, and an overall assessment of the severity was undertaken where information was available. This was undertaken on all sites surveyed as part of the study. The following scale for the severity of damage used was: Not serious; Serious; Very Serious, and Unknown.

The individual site reports presented in Appendix 2 describe all specific threats or damage and associated severity on each of the wetland sites surveyed. In many cases more than one damaging activity / threat was recorded on an individual site.

In summary, the main activities that are impacting on the conservation interest of wetlands in County Leitrim include; drainage, peat extraction (historic, recent, and on-going), diffuse water pollution, dumping, and invasive non-native species.

4 Conclusions and Recommendations

4.1 *Distribution and Extent of the Leitrim Wetland Resource*

The results of the LEWS 2023 shows that the main GIS layer which was developed for the identification of potential wetlands in Leitrim (Leitrim Wetland Study, Foss et al. 2019) is a useful tool in identifying wetlands of ecological importance in the county.

Of the thirty three identified in the LEWS project 2019 (Foss et al. 2019) which were surveyed during 2023, most supported wetland habitats of conservation significance.

There is a commitment in the recently published Climate Action Plan (Government of Ireland 2019) to 'upgrade habitat mapping systems to establish the baseline condition of wetlands'. This project is a step towards furthering that national commitment. It is recommended that further inventory work is required throughout the country to adequately address the deficit in baseline data on the extent and condition of wetland habitats.

4.2 *Site Designations*

It is recommended that all wetland sites which have been identified in this survey, and rated as C+ (of county importance) are forwarded to the National Parks and Wildlife Service (NPWS) for inclusion on their list of sites for survey and possible designation.

4.3 *Planning Controls*

Sites which are listed as being of county importance (C+), high local importance (C) and of moderate local importance (D) should be highlighted and included in any recommendations made under the County Biodiversity Action Plan or included in local area plans, county development plans or other planning strategies. Again, such recommendations for recognition and listing of sites should be made on a regular basis as further information on the wetland resource of county Leitrim becomes known.

It is recommended that council planners consult with the GIS layers, which indicate potential wetlands in county Leitrim, where a development could adversely affect a wetland – through water abstraction, infilling, drainage, etc.

In the event that an application is made that could potentially impact on these sites, a site visit should be conducted by a suitably qualified ecologist to determine the importance and sensitivity of the area.

It is recommended that council staff should be aware of a variety of issues regarding wetlands when assessing development proposals and planning applications. These include:

- The need for an appropriate buffer zone surrounding wetland sites
- The importance of hydrology in how wetland sites function and how indirect impacts on a wetland system can be caused by activities occurring at some distance from the wetland
- The cumulative effect of seemingly isolated losses of wetland habitats across the county
- The loss of wetland habitats as a result of fragmentation of sites and impacts on wetland hydrology
- The ecological value of wetland habitats adjacent to, and fringing lakes and ponds
- The ecological value of large areas of reed and tall sedge swamps, rivers and river flood plains in controlling and reducing the impacts of flooding events
- The wetland fauna, some of which are listed on Annex II of the Habitats Directive found in the county wetlands and the potential impacts on these species as well as their habitats
- The limited coverage provided in the initial NPWS NHA survey – this was never a comprehensive survey of the entire county – many sites of high nature conservation value remain undesignated
- The potential value of wetland sites which are outside statutory designated areas and the need for adoption of a precautionary approach when assessing applications that may impact on same.

4.4 Ongoing Maintenance of the County Leitrim Wetland Map Site Database

It is probable that additional third party survey information on wetland sites listed in the County Leitrim Wetland site database exists.

It is recommended that this site data is compiled within the database and that it is kept up to date where possible by collating data from additional surveys, EIS documents, etc. This work needs to be done concurrently with ongoing maintenance of the County Leitrim Wetland Survey GIS dataset and following the naming procedure described in Foss et al. 2019.

4.5 Ongoing Maintenance of the County Leitrim Wetland Map GIS Dataset

Coupled with ongoing updates of the County Leitrim Wetland survey and site database (Foss et al. 2019) it is recommended that the GIS layers are also regularly updated as new information becomes available.

4.6 Hydrological Assessment of Wetland Sites

A hydrological assessment of all sites which have been given a rating of C+ should be commissioned in order to assist in our understanding of the hydrological functioning of these wetlands.

4.7 Management and Restoration of Wetland Sites

Agricultural activities have the potential to adversely affect wetland habitats. Drainage, land reclamation, and enrichment from fertilizer application are among the agricultural activities that were recorded as damaging the integrity of wetland sites in County Leitrim during the current study. It is important that, through appropriate agri-environmental schemes, land management practices in the vicinity of wetland sites recognise the value and sensitivity of wetland ecosystems.

The importance of wetlands in the sequestration of carbon is increasingly recognised. The national Climate Action Plan (Government of Ireland 2019) calls for improved management of peatlands (and other wetlands) and soils. Measures and incentives to re-wet and restore wetland habitats in County Leitrim should be explored. Payment for Results Agri-environmental Schemes such as the successful Burren Programme and other projects (Pearl Mussel Programme, Hen Harrier Project, and RBAPS) provide a good template which could be adapted to targeting improved management of wetland habitats within an agricultural landscape.

4.8 Control of invasive species in wetland sites

It is important that the establishment and spread of invasive species within wetland sites is controlled as they have the potential to adversely affect the biodiversity interest of wetlands, cause serious nuisance and can be very costly and difficult to remove once they become established.

Typical species affecting wetlands include Rhododendron (*Rhododendron ponticum*), Japanese Knotweed (*Fallopia japonica*), Himalayan Balsam (*Impatiens glandulifera*), Fringed Water Lily (*Nymphoides peltata*), and Parrot's Feather (*Myriophyllum aquaticum*). It is recommended that all records of invasive species in County Leitrim are submitted to the Invasive Species Ireland database (<http://www.invasivespeciesireland.com/sighting/>) where advice on control and removal of species is available.

4.9 Local Authority Wetlands Policy

A review of the statutory provisions that govern the management of wetlands in County Leitrim (such as the Habitats Directive, Wildlife Act, Water Framework Directive, Environmental Liability Directive, Nitrates Directive, Planning Act, etc.) should be conducted and the role of the Local Authority in this regard should be examined. This review could be done in collaboration with other Local Authorities.

Increased co-ordination between agencies in their policy and operative approaches to wetlands need to be strengthened.

4.10 Water Framework Directive

As a member of the European Union, Ireland must, as of the 22nd December 2000 implement the Water Framework Directive (2000/60/EC). This directive provides a consolidated, strengthened framework for the protection and improvement of all of our waters - rivers, lakes, marine and ground waters, and of our water-dependent habitats and species. The aim of the Water Framework Directive is to prevent any deterioration in the existing status of our waters, including the protection of good and high status where it exists, and to ensure that all waters are restored to at least good status by 2015, or, at the latest, by 2027. The Directive was given legal effect in Ireland by the European Communities (Water Policy) Regulations 2003 (S.I. No. 722 of 2003). It applies to rivers, lakes, groundwater, and transitional coastal waters. The Directive requires that management plans be prepared on a river basin basis and specifies a structured method for developing these plans.

The objectives of the WFD are:

- to protect and enhance the status of aquatic ecosystems (and terrestrial ecosystems and wetlands directly dependent on aquatic ecosystems)
- to promote sustainable water use based on long-term protection of available water resources
- to provide for sufficient supply of good quality surface water and groundwater as needed for sustainable, balanced and equitable water use
- to provide for enhanced protection and improvement of the aquatic environment by reducing / phasing out of discharges, emissions etc.
- to contribute to mitigating the effects of floods and droughts
- to protect territorial and marine waters
- to establish a register of 'protected areas' e.g. areas designated for protection of habitats or species

Clearly the identification of wetland habitats in County Leitrim assists in fulfilling not only obligations under the EU Habitats Directive and the National Biodiversity Plan (Department of Culture, Heritage and the Gaeltacht 2017), but also in implementing the Water Framework Directive.

4.11 Public Information and Interpretation

Public awareness about the importance of wetlands in county Leitrim could be developed through a series of targeted measures. These could include:

- Specific events county-wide as part of 'biodiversity week' or 'heritage week' which take place annually. Similarly, World Wetlands Day provides an opportunity to hold public events relating to wetlands (further details are available from http://www.ramsar.org/wwd/wwd_index.htm)
- A series of school visits celebrating local wetlands – co-ordinated through the Heritage in Schools Scheme
- Public display boards and signage at popular wetland sites
- A workshop on wetland management for landowners and farmers

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Appendix 1

National Roads Authority (2009) Site Evaluation Criteria

Appendix 1: Site Evaluation Criteria

Modified from National Roads Authority (2009). Guidelines for Assessment of Ecological Impacts of National Roads Schemes.

Rating	Importance of Ecological Sites
A	<p>Internationally important</p> <p>Sites designated (or qualifying for designation) as SAC* or SPA* under the EU Habitats or Birds Directives.</p> <p>Undesignated sites containing good examples of Annex I <u>priority</u> habitats under the EU Habitats Directive.</p> <p>Sites designated (or qualifying for designation) as SAC* for salmonids or Annex II species under the EU Habitats Directives.</p> <p>Major salmon river fisheries.</p> <p>Major salmonid (salmon, trout or char) lake fisheries.</p>
B	<p>Nationally important</p> <ul style="list-style-type: none"> • Sites or waters designated or proposed as an NHA* or statutory Nature Reserves. • Undesignated sites containing good examples of Annex I habitats (under EU Habitats Directive). • Undesignated sites containing <u>significant numbers</u> of resident or regularly occurring populations of Annex II species under the EU Habitats Directive or Annex I species under the EU Birds Directive or species protected under the Wildlife (Amendment) Act 2000. • Major trout river fisheries. • Water bodies with major amenity fishery value. • Commercially important coarse fisheries.
C+	<p>County value</p> <p>Area of Special Amenity.</p> <p>Area subject to a Tree Preservation Order.</p> <p>Area of High Amenity, or equivalent, designated under the County Development Plan.</p> <p>Resident or regularly occurring populations (assessed to be important at the County level) of the following:</p> <ul style="list-style-type: none"> • Species of bird, listed in Annex I and/or referred to in Article 4(2) of the Birds Directive; • Species of animal and plants listed in Annex II and/or IV of the Habitats Directive; • Species protected under the Wildlife Acts; and/or • Species listed on the relevant Red Data list. <p>Site containing area or areas of the habitat types listed in Annex I of the Habitats Directive that do not fulfill the criteria for valuation as of International or National importance.</p> <p>County important populations of species, or viable areas of semi-natural habitats or natural heritage features identified in the National or Local BAP, if this has been prepared.</p> <p>Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.</p>
C	<p>High value, locally important</p> <p>Sites containing semi-natural habitat types with high biodiversity in a local context and a high degree of naturalness, or significant populations of locally rare species.</p> <p>Sites containing any resident or regularly occurring populations of Annex II species under the EU Habitats Directive or Annex I species under the EU Birds Directive.</p> <p>Small water bodies with known salmonid populations or with good potential salmonid habitat.</p> <p>Large water bodies with some coarse fisheries value.</p>
D	<p>Moderate value, locally important</p> <p>Sites containing some semi-natural habitat or locally important for wildlife.</p> <p>Small water bodies with some coarse fisheries value or some potential salmonid habitat.</p> <p>Any water body with unpolluted water (Q-value rating 4-5).</p>
E	<p>Low value, locally important</p> <p>Artificial or highly modified habitats with low species diversity and low wildlife value.</p> <p>Water bodies with no current fisheries value and no significant potential fisheries value.</p>
F	<p>Unknown Value</p> <p>Sites of possible ecological value which require further investigation at the optimum season to establish importance.</p> <p>Sites of possible fisheries value requiring further survey.</p>

* SAC = Special Area of Conservation, SPA = Special Protection Area, NHA = Natural Heritage Area

Appendix 2

Individual site reports from the Leitrim Wetlands Field Survey 2023

Appendix 2: Individual Site Reports from the Leitrim Wetlands Field Survey II 2023

Sites are listed in alphabetical order by site name

LEWS Site Name	LEWS Site Code	Page
AGHAVOGHIL CUTOVER	LE362	35
ANNAGHMORE EAST BOG	LE142	40
BELHAVEL LOUGH cNHA	LE18	45
CLOONAQUIN LOUGH	LE331	50
CLOONFINNAN LOUGH cNHA	LE10	56
CLOONTURK LOUGH	LE98	63
CLOONTY BOG COMPLEX	LE371	70
CORNACLOY CUTOVER	LE342	76
CURRAUN LOUGH	LE111	81
DERRINLOUGHAN BOG	LE367	86
DERRYBRACK CUTOVER	LE83	92
DERRYHALLAGH LOUGH	LE165	98
DROMORE WETLAND	LE377	103
DRUMSHANBO SOUTH CUTOVER	LE66	109
EDENTINNY BALLINAMORE	LE58	114
FUNSHINAGH LOUGH	LE236	119
GORTNADERRARY LAKE	LE344	124
KEELDRA LOUGH	LE122	130
KILTYCARNEY LAKE	LE70	135
LARGYDONNELL LAKE	LE374	140
LARKFIELD LOUGH	LE330	145
LEEAN	LE326	152
LISDARUSH BOG COMPLEX	LE350	155
LOUGH ADORN cNHA	LE7	160
LOUGH ERRIL cNHA	LE9	166
MUCKLAGHAN LOUGH	LE80	172
MUNAKILL MORE LOUGH	LE340	179
RAHEELIN COOLDONNELL BOG	LE348	182
RIVER FRONT AMENITY PARK	LE383	188
RIVER SHANNON (LEITRIM)	LE382	194
ROOSKY LOUGH	LE100	199
ROSCUNNISH LOUGH	LE164	205
ROSHARRY	LE77	210

Site Name: AGHAVOGHIL CUTOVER**Site Code:** LE362 **Area (ha):** 97.89 **Grid Ref:** 185752 351128 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

11/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:

AGHAVOGHIL

Solid Geology:

Marine shelf facies

Subsoil type:

BktPt

Substrate type:

Mineral Soil

Peat

Substrate stability:

Soft

River catchment:

Drowes

CORINE Habitats:

Peat bogs

Site Location

Aghavoghil Cutover is located 5.5km to the south-west of Kinlough, Co. Leitrim.

Site Description and Wetland Habitats Recorded

Large area of cutover blanket bog with areas of grassland communities. Area has been affected by past peat cutting and sheep grazing. The latter has resulted in areas with high levels peat erosion. Large areas of cutover bog have developed characteristics closer to that of grassland communities than that of cutover/blanket bog.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Cut blanket bog now degraded into wet heath. Anthoxanthum present with Juncus squarrosus abundant. Calluna cover is high but grows low due to sheep grazing.
N10	HABITAT	Mix of broad leaf and conifers along a river.
N2	HABITAT	Eroding blanket bog/cutover.
N3	HABITAT	Wet grassland dominated by Juncus.
N4	HABITAT	Loads of moss with abundances of Juncus squarrosus and sedges. Vaccinium myrtilus dominant also but very low.
N5	HABITAT	Peat removed all the way to the mineral layer.
N6	HABITAT	Cutover. Active turf cutting in this area.
N7	DAMAGE	Turf cutting ongoing.
N8	HABITAT	Juncus effusus abundant.
N9	HABITAT	Calluna more dominant here.

Management Recommendations following survey

Liaise with turf cutters with a view to ceasing turf cutting and consider destocking the hill to allow for heath to improve. Consider drain blocking and rewetting works to prevent further degradation of eroding peatland areas. Prevent further rubbish dumping.

Future Survey Recommendations

Survey to inform the potential for peatland restoration.

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

A small area of a well grazed hillside may correspond to the Annex I habitat 4030 European dry heaths. Parts of the site may also correspond to the EU Annex I habitat 7130 Blanket bog.

Main Fossitt habitats on site

BL3 Buildings and artificial surfaces

ED3 Recolonising bare ground

FW1 Eroding/upland rivers

FW4 Drainage ditches

GS3 Dry-humid acid grassland

GS4 Wet grassland

EU Habitats Directive habitats on site

4030 European dry heaths

7130 Blanket bog (*if active bog)

HH1 Dry siliceous heath
 PB2 Upland blanket bog
 PB4 Cutover bog
 PF2 Poor fen and flush
 WS1 Scrub

Fossitt habitats surrounding site

GS4 Wet grassland
 PB2 Upland blanket bog
 PB4 Cutover bog
 WD4 Conifer plantation

Landuse / Management Activity

Grazing - sheep
 Peat cutting (mechanical)

Frequency of use

4 Dominant (>50%)
 2 Occasional (5-20%)

Impacting Activity (EU code and title)

A04.02.02 non intensive sheep grazing
 C01.03.02 mechanical removal of peat

Intensity

B = medium
 B = medium

Impact

- 2 = irreparable negative influence
 - 2 = irreparable negative influence

Threats

A04.02.02 non intensive sheep grazing
 C01.03.02 mechanical removal of peat

Flora on site - Latin & English species name

Aulacomnium palustre

Calluna vulgaris

Carex echinata

Carex panicea

Carex pulicaris

Cladonia portentosa

Cladonia uncialis

Erica tetralix

Eriophorum angustifolium

Eriophorum vaginatum

Juncus bulbosus

Juncus effusus

Molinia caerulea

Potentilla erecta

Racomitrium lanuginosum

Sphagnum capillifolium subsp. rubellum

Sphagnum cuspidatum

Sphagnum denticulatum

Sphagnum palustre

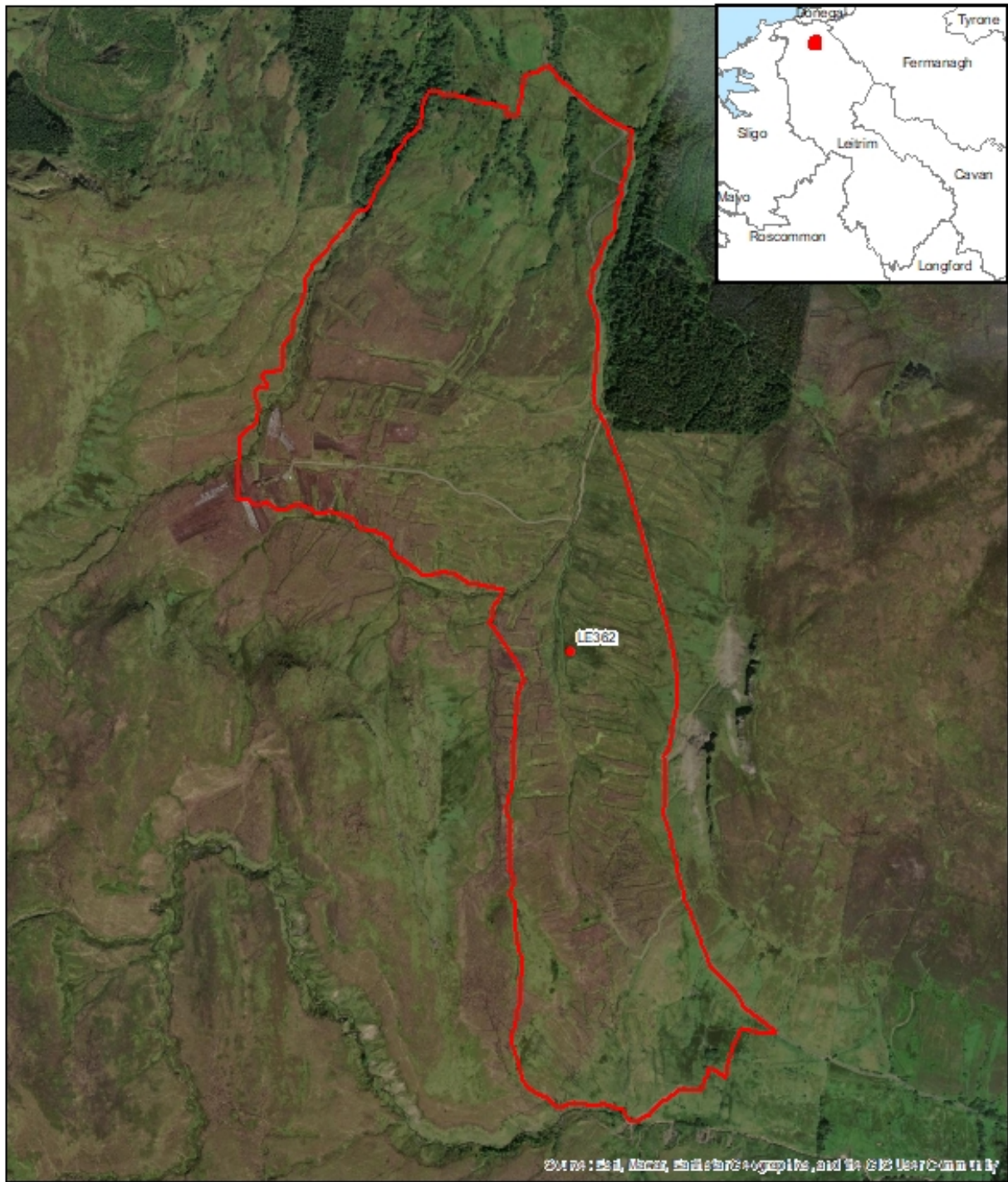
Sphagnum tenellum

Trichophorum cespitosum

Fauna on site - English and Latin species name

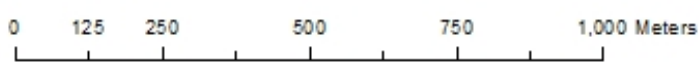
No faunal observations were made

Aerial Photograph showing location of the site

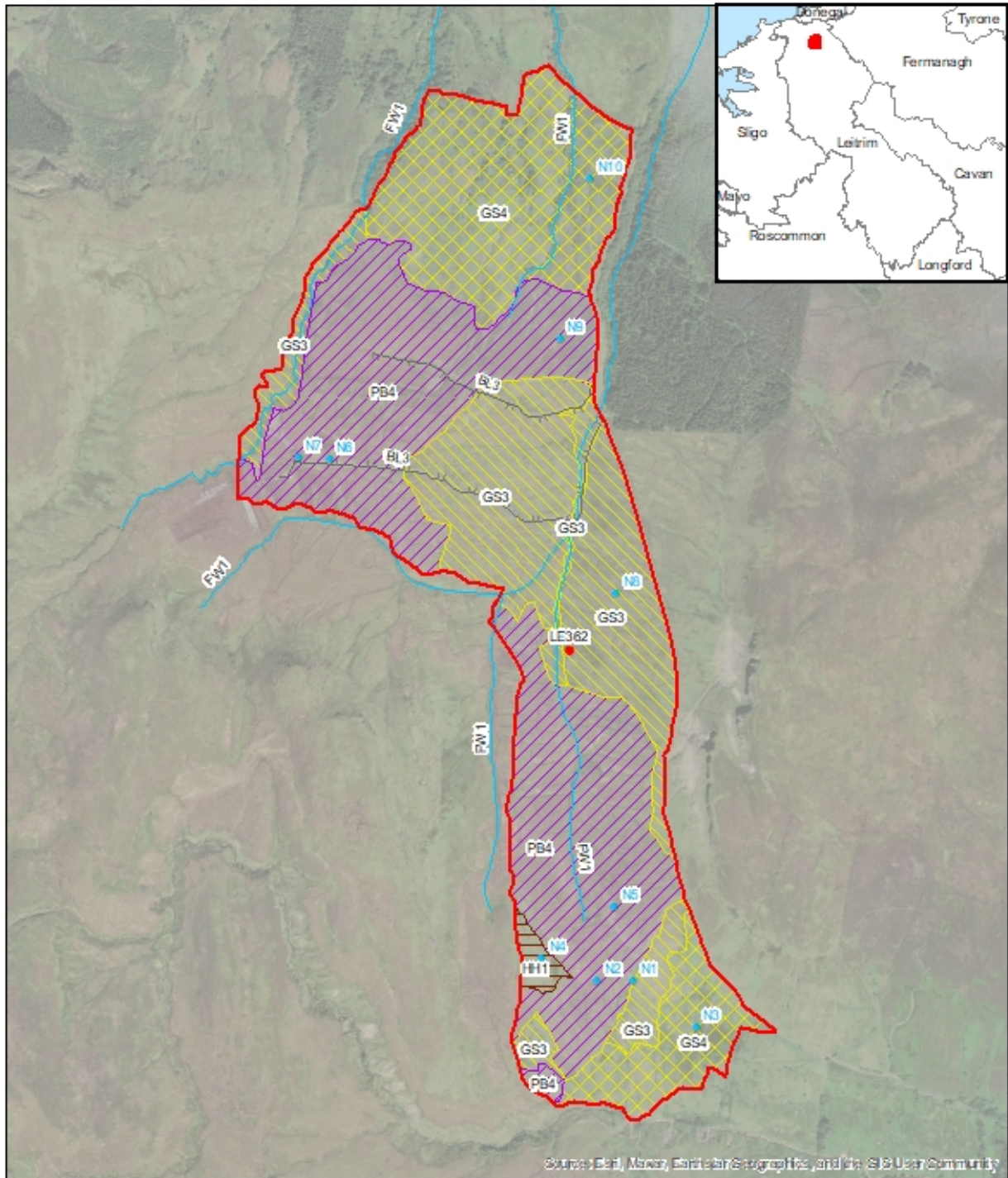


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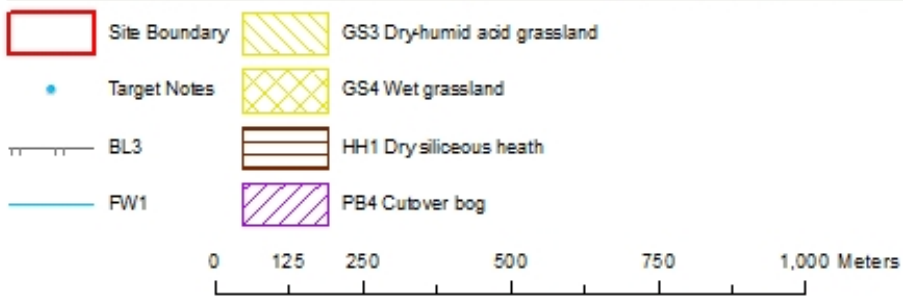
 Site Boundary



GIS Habitat map of the site



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Site Name: ANNAGHMORE EAST BOG**Site Code:** LE142 **Area (ha):** 5.57 **Grid Ref:** 214381 293468 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

William Crowley & Adam Vanmechelen

Date of wetland survey:

27/06/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

ANNAGHMORE

Solid Geology:

Peat

River catchment:

Shannon Upr

CORINE Habitats:

Pastures

Subsoil type:

Cut

Substrate stability:

Firm

Site Location

Remnant raised bog and woodland located 7km to the south-east of Mohill.

Site Description and Wetland Habitats Recorded

Remnant raised bog with birch and pine encroaching. The cover of *Cladonia portentosa* on the bog is very high. Cutover areas support non Annex bog woodland dominated by birch with *Molinia* and *Rubus* dominating the understory.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	WN7. Non Annex. Dry and birch dominated (c 8m). Understory dominated by <i>Molinia</i> . Good Sphagnum cover close to facebank mainly <i>S.palustre</i> but much lower further in from facebank and dominated by <i>Rubus</i> .
N2	GENERAL	HB edge. Old cutover dominated by dry WN7. 1-1.5m drop.
N3	INVASIVE	<i>Rhododendron</i> frequent at high bog edge.
N4	HABITAT	Remnant raised bog. Relatively dry with low Sphagnum cover (20-30%). Birch and pine encroaching.
N5	HABITAT	PB1 remnant raised bog. <i>Cladonia portentosa</i> cover very high (70%).
N6	HABITAT	WN7. Dry. Low Sphagnum cover (10%).

Management Recommendations following survey

Control/remove *Rhododendron*.

Future Survey Recommendations

None.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site	EU Habitats Directive habitats on site
BL3 Buildings and artificial surfaces	None noted
PB1 Raised bogs	
PB4 Cutover bog	
WN7 Bog woodland	
Fossitt habitats surrounding site	
BL3 Buildings and artificial surfaces	
GA1 Improved agricultural grassland	
GS4 Wet grassland	
WD4 Conifer plantation	
WL1 Hedgerows	
WS1 Scrub	

Landuse / Management Activity

None

Frequency of use

4 Dominant (>50%)

Impacting Activity (EU code and title)

I01 invasive non-native species

Intensity

C = low

Impact

- 1 = repairable negative influence

Threats

I01 invasive non-native species

J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name

Betula pubescens

Calluna vulgaris

Carex panicea

Cladonia portentosa

Erica tetralix

Eriophorum vaginatum

Hylocomium splendens

Hypnum jutlandicum

Ilex aquifolium

Molinia caerulea

Myrica gale

Narthecium ossifragum

Pinus sylvestris

Pseudoscleropodium purum

Racomitrium lanuginosum

Rhododendron ponticum

Rubus fruticosus agg.

Sphagnum capillifolium

Sphagnum magellanicum

Sphagnum palustre

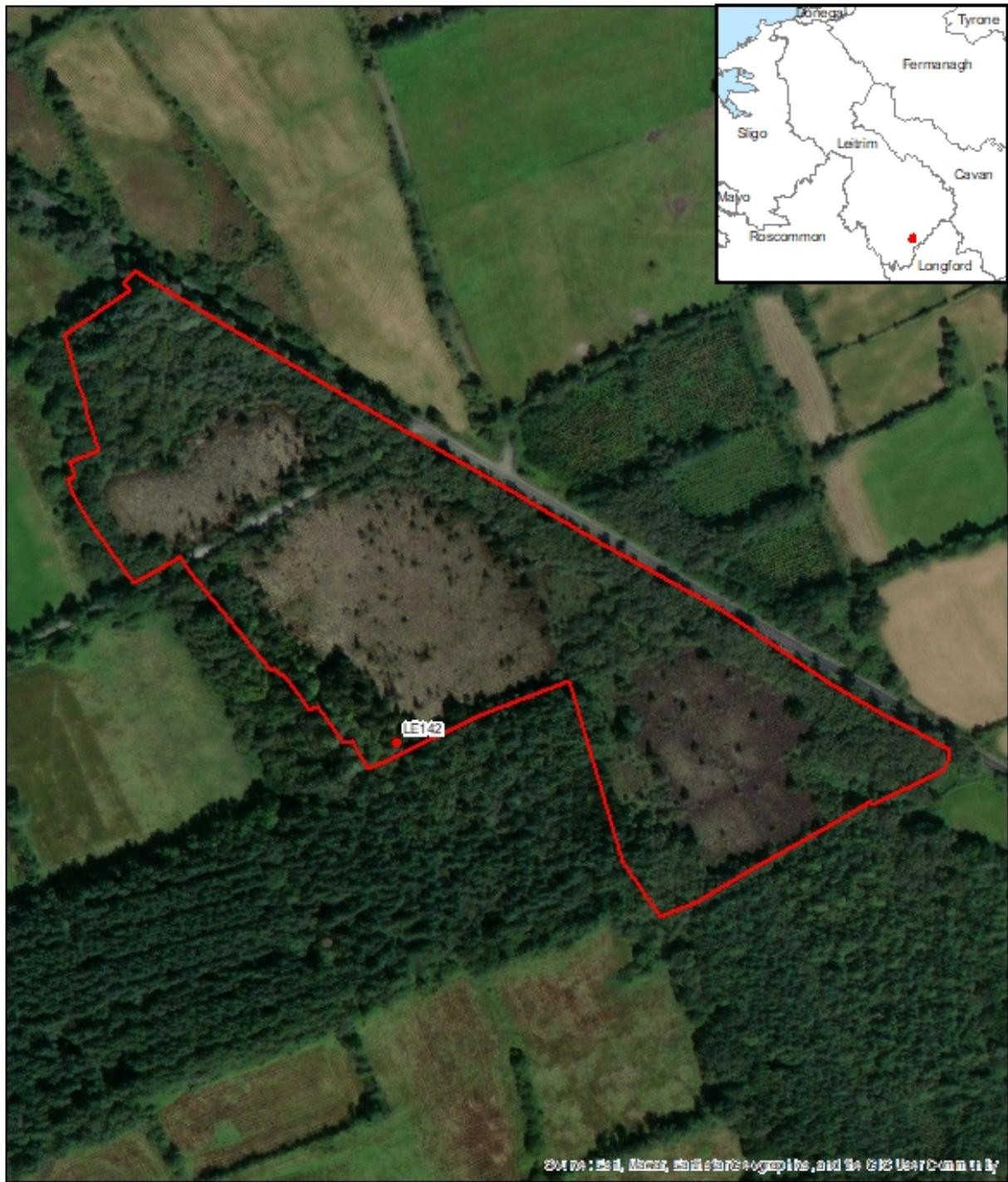
Sphagnum papillosum

Trichophorum cespitosum

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site

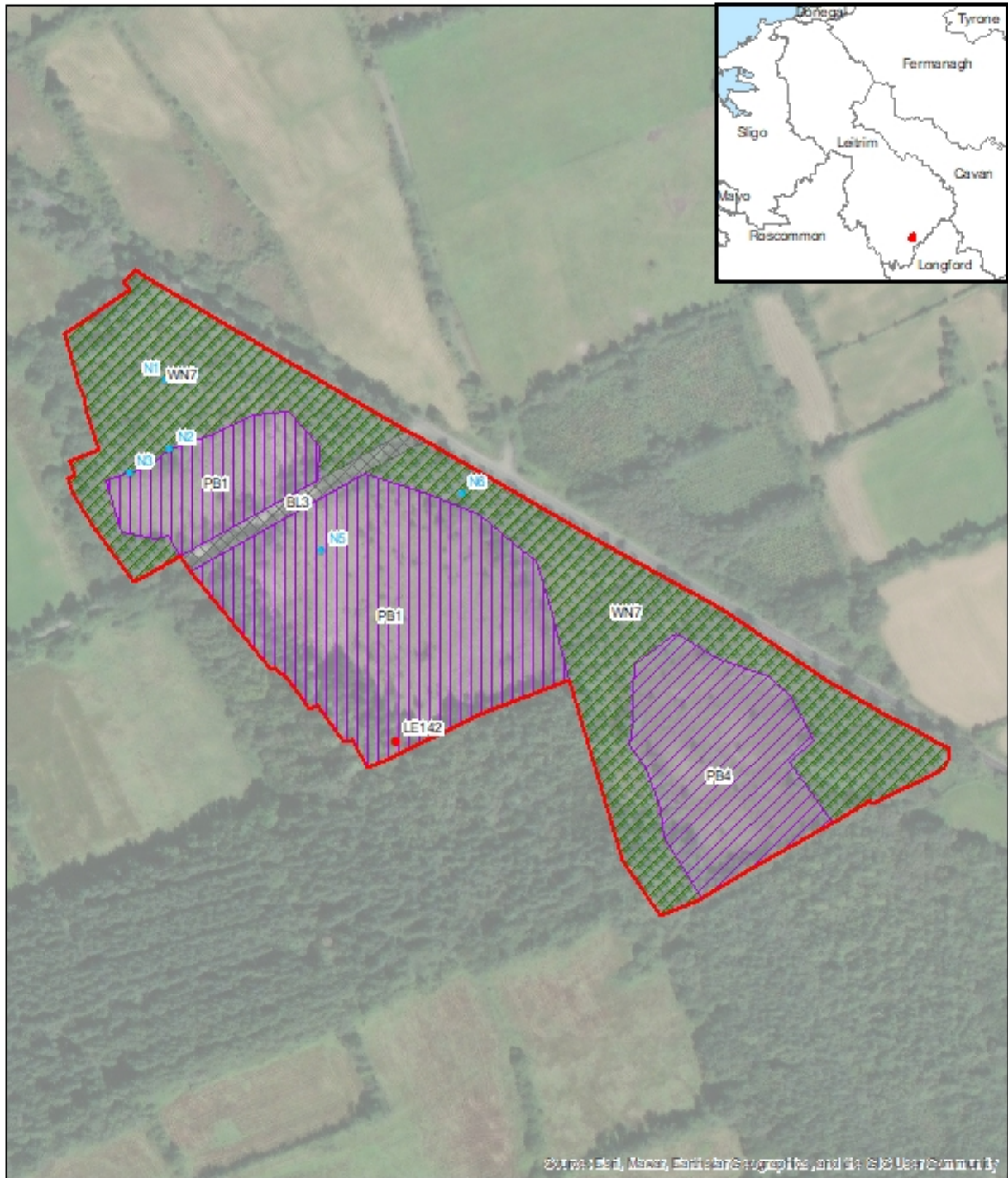


 Site Boundary

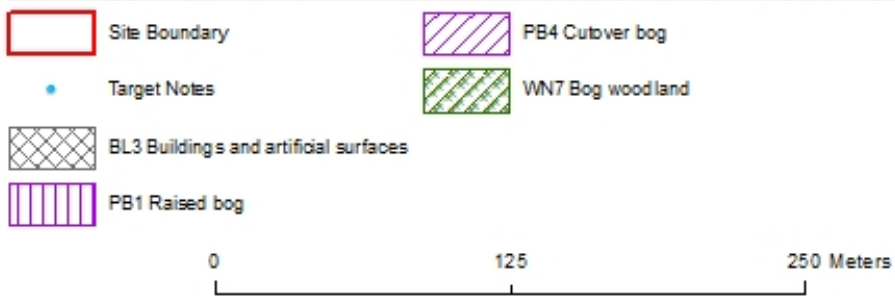
0 125 250 Meters



GIS Habitat map of the site



Source: Esri, Maxar, Earthstar, GeoEye, AeroGRID, IGN, and the GIS User Community



Site Name: BELHAVEL LOUGH cNHA**Site Code:** LE18 **Area (ha):** 128.79 **Grid Ref:** 187594 329002 **County:** LE**Site designation(s):**

cNHA
Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

10/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed fen survey recommended
Detailed lake survey recommended
Detailed Wetland Survey undertaken
Site previously mapped in GIS dataset
Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

B Rating: Nationally Important

Townland:

CORRASRA

Solid Geology:

LEITRIM GP; Visean

Subsoil type:

Water

Substrate type:

Mineral Soil
Peat

Substrate stability:

Firm

River catchment:

Garvogue

CORINE Habitats:

Water bodies

Site Location

Oligo-mesotrophic lake located 4km to the north west of Drumkeeran, Co. Leitrim.

Site Description and Wetland Habitats Recorded

Large lake surrounded by woodland and agricultural land. A narrow band of wet woodland and/or reedswamp occurs around most of the lake. In the east there is a relatively large area of transition mire/reedswamp in a 'bay' of the lake. The lake is important for wintering waterbirds and the site is part of a larger site (North-West Leitrim Mountain Lakes) that is monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Rocky substrate at this part of lake edge. Water is quite brown coloured.
N2	HABITAT	Lotus corniculatus dominated with abundant Prunella vulgaris. Filipendula and Juncus articulatus also frequent.
N3	HABITAT	Carex rostrata and Phalaris dominant.
N4	HABITAT	Dominated by reeds.

Management Recommendations following survey

Increase buffer zones (and fence them) around lake in an effort to reduce excess nutrient inputs from entering it,

Future Survey Recommendations

Undertake a detailed fen survey of the transition mire. Continue to monitor bird counts as part of the national monitoring scheme i-webs (Irish Wetland Bird Survey).

Landowner Information Comments

Homeowner adjacent to lake said fishing for pike and bream is common. Also noted that the water level fluctuates markedly with rain. Increases with rain and decreases significantly when there is none even during dry spells with little sun or high temperature.

Description of potential EU Habitats Directive Annex 1 habitats

The transition mire is likely to correspond to the EU Annex 1 habitat 7140 Transition mires and quaking bogs. It's unclear whether the lake corresponds to the Annex habitat 3130 oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea.

Main Fossitt habitats on site

BL3 Buildings and artificial surfaces

FL2 Acid oligotrophic lakes

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

GM1 Marsh

GS4 Wet grassland

PF3 Transition mire & quaking bog

WN6 Wet willow-alder-ash woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

GS4 Wet grassland

WD2 Mixed broadleaved/conifer woodland

WD4 Conifer plantation

WL1 Hedgerows

EU Habitats Directive habitats on site

3130 Oligotrophic to mesotrophic standing waters with

7140 Transition mires and quaking bogs

WL2 Treelines

WS1 Scrub

Landuse / Management Activity

Boating	2 Occasional (5-20%)
Fishing	2 Occasional (5-20%)
Grazing - cattle	2 Occasional (5-20%)
Grazing - horses	1 Rare (<5%)
Grazing - sheep	2 Occasional (5-20%)

Frequency of use**Impacting Activity (EU code and title)**

H01.05 diffuse pollution to surface waters due to

Intensity

C = low

Impact

- 1 = reparable negative influence

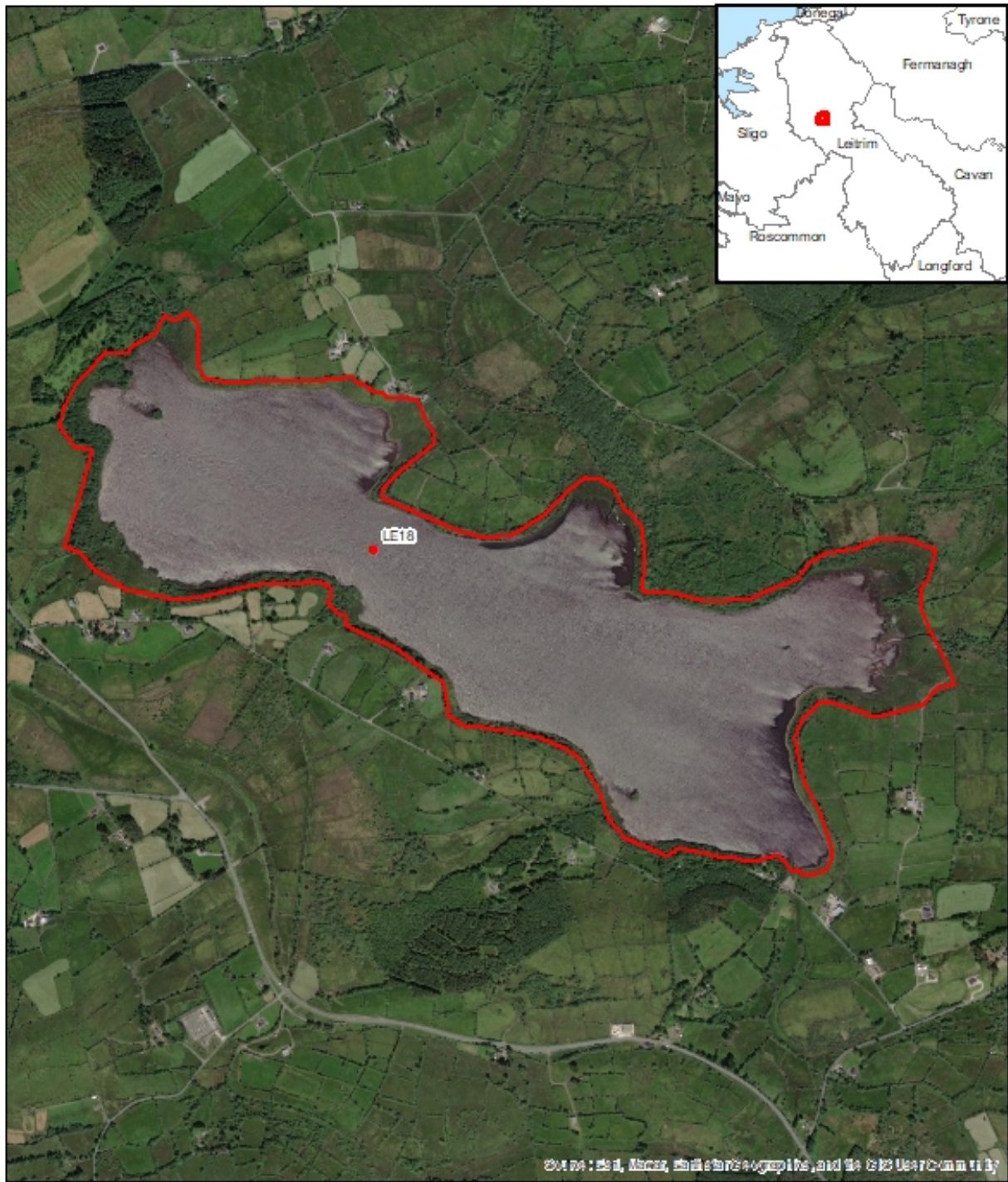
Threats

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

Flora on site - Latin & English species name*Angelica sylvestris**Caltha palustris**Carex rostrata**Cynosurus cristatus**Dactylorhiza sp.**Galium palustre**Holcus lanatus**Juncus articulatus**Juncus bulbosus**Juncus effusus**Littorella uniflora**Lotus corniculatus**Mentha aquatica**Myosotis scorpioides**Phalaris arundinacea**Potamogeton perfoliatus**Potentilla anserina**Ranunculus flammula**Rumex acetosella**Salix cinerea subsp. cinerea**Schoenoplectus lacustris***Fauna on site - English and Latin species name**

Common Frog

Aerial Photograph showing location of the site

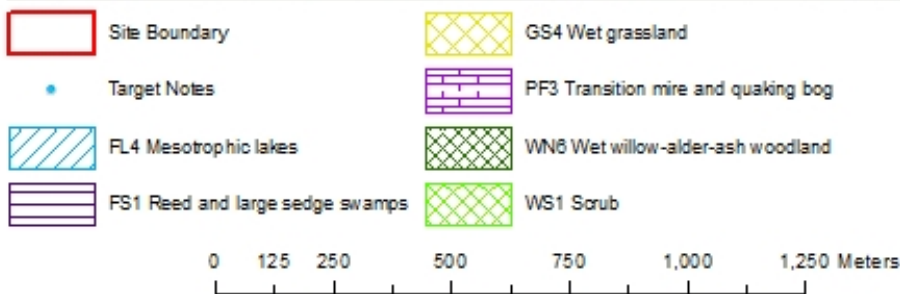
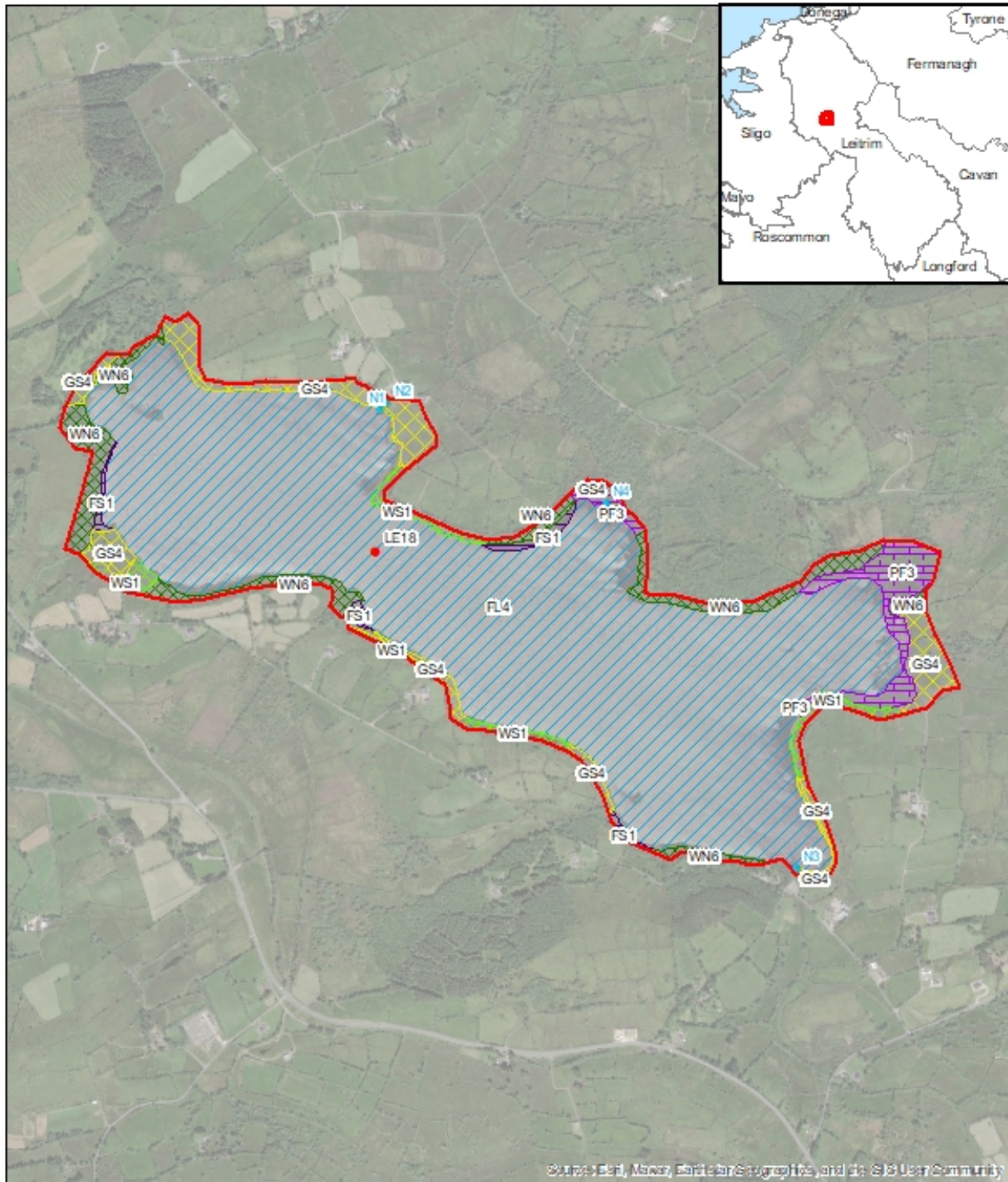


 Site Boundary

0 125 250 500 750 1,000 1,250 Meters



GIS Habitat map of the site



Site Name: CLOONAQUIN LOUGH**Site Code:** LE331 **Area (ha):** 19.70 **Grid Ref:** 185892 336065 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

11/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed fen survey recommended

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

CLOONAQUIN

Solid Geology:

Sliswood Division

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Soft

River catchment:

Garvogue

CORINE Habitats:

Natural grassland

Site Location

Cloonquin Lough is located 4km to the south west of the town of Manorhamilton.

Site Description and Wetland Habitats Recorded

Mesotrophic lake surrounded by wet woodland, reedswamp and areas of transition mire. Area of blanket bog west of lake has been impacted on by past turf cutting. There are some areas of good Sphagnum cover and pools and other areas where scrub is encroaching. A stream exits to the south of the lake and joins the Bonet River.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Wet heath/blanket bog. Molinia abundant. Good Sphagnum Cover. Myrica occurring abundantly in areas and Cladonia portentosa frequent.
N10	HABITAT	Oak birch holly woodland with very mature oak. Birch is growing intermittently.
N11	GENERAL	Ring fort.
N12	HABITAT	Wet grassland Juncus dominated.
N13	HABITAT	Conifer plantation with some birch.
N14	HABITAT	Conifer plantation of sitka spruce.
N2	HABITAT	Gorse scrub.
N3	HABITAT	Blanket bog with pools forming. Molinia abundant.
N4	HABITAT	Gorse and bracken scrub.
N5	DAMAGE	Previous cutting - has mostly infilled with Sphagnum.
N6	HABITAT	Birch and gorse scrub.
N7	HABITAT	Quaking transtion mire at edge of lake with Commarum, Sphagnum, Phragmites, Hydrocotyle and Menyanthes.
N8	HABITAT	Birch, holly, and willow woodland with some Sphagnum and lots of grasses closer to lake.
N9	GENERAL	Elevated area.

Management Recommendations following survey

None.

Future Survey Recommendations

A detailed fen survey of the transition mire is recommended.

Landowner Information Comments

Part Coillte owned.

Description of potential EU Habitats Directive Annex 1 habitats

A small area of transition mire occurs next to the lake and this is likely to correspond to the EU Annex I habitat 7140 Transition Mires and Quaking Bogs. Some of the areas of blanket bog may correspond with the Annex 1

habitat 7130 Blanket bog (active).

Main Fossitt habitats on site

FL4 Mesotrophic lakes
 FS1 Reed and large sedge swamps
 FW2 Depositing/lowland rivers
 FW4 Drainage ditches
 GS4 Wet grassland
 HH3 Wet heath
 PB3 Lowland blanket bog
 PB4 Cutover bog
 PF3 Transition mire & quaking bog
 WN1 Oak-birch-holly woodland
 WN6 Wet willow-alder-ash woodland
 WN7 Bog woodland
 WS1 Scrub

EU Habitats Directive habitats on site

7130 Blanket bog (*if active bog)
 7140 Transition mires and quaking bogs

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
 FW2 Depositing/lowland rivers
 FW4 Drainage ditches
 GA1 Improved agricultural grassland
 WD4 Conifer plantation
 WS1 Scrub

Landuse / Management Activity

Grazing - cattle

Frequency of use

2 Occasional (5-20%)

Impacting Activity (EU code and title)

H01.05 diffuse pollution to surface waters due to

Intensity

D = unknown

Impact

Unknown

Threats

B01.02 artificial planting on open ground (non-native trees)

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

Flora on site - Latin & English species name

Betula pubescens

Calluna vulgaris

Carex echinata

Carex panicea

Cladonia portentosa

Comarum palustre

Drosera rotundifolia

Equisetum fluviatile

Erica tetralix

Eriophorum angustifolium

Eriophorum vaginatum

Hydrocotyle vulgaris

Juncus articulatus

Juncus squarrosus

Lychnis flos-cuculi

Menyanthes trifoliata

Molinia caerulea

Myrica gale

Narthecium ossifragum

Nuphar lutea

Nymphaea alba

Odontoschisma sphenoclii

Oxalis acetosella

Phragmites australis

Pleurozia purpurea

Potentilla erecta

Pteridium aquilinum

Racomitrium lanuginosum

Ranunculus flammula

Rhynchospora alba

Sphagnum capillifolium subsp. *rubellum*

Sphagnum cuspidatum

Sphagnum fallax

Sphagnum magellanicum

Sphagnum papillosum

Sphagnum tenellum

Trichophorum cespitosum

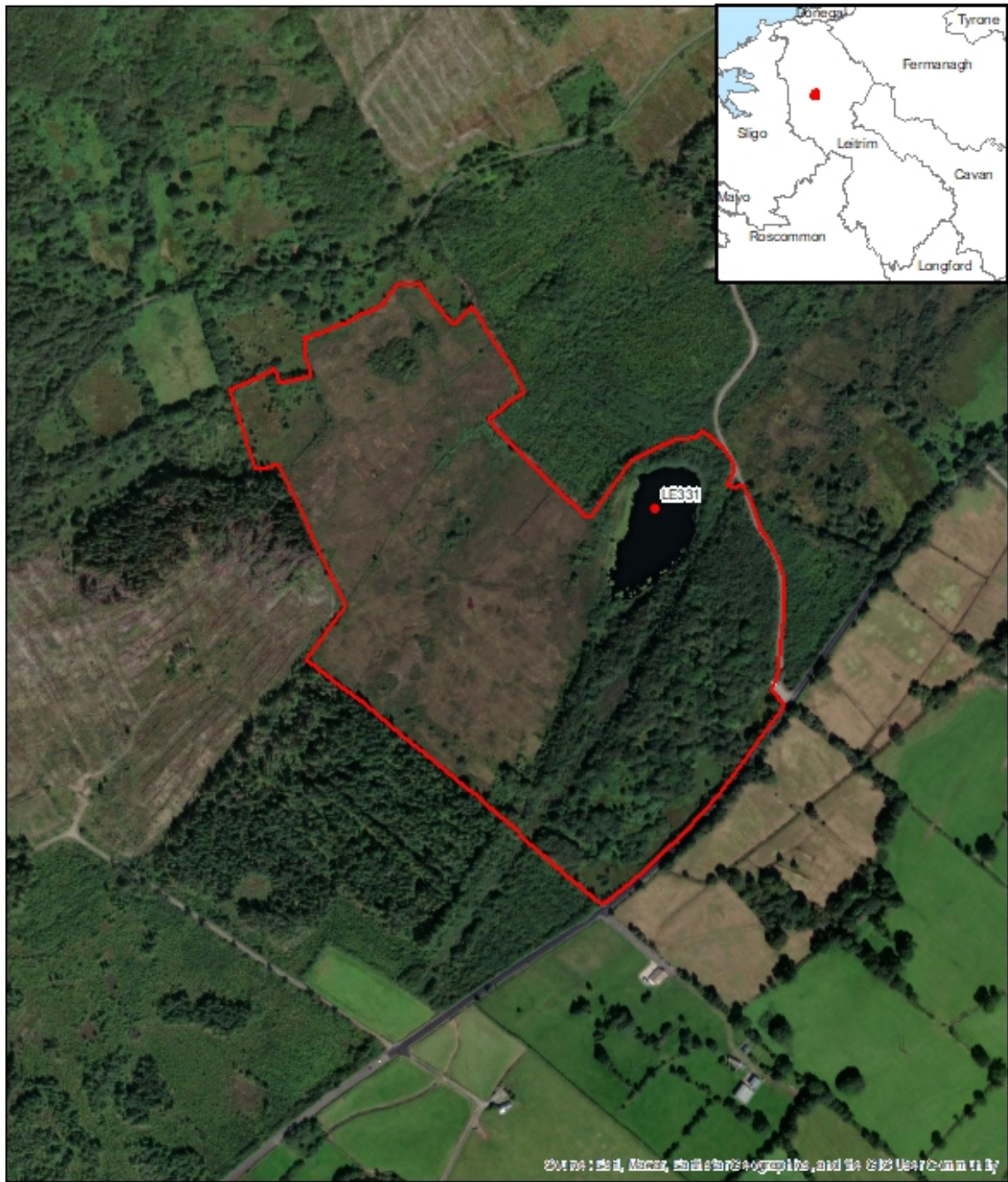
Ulex europaeus

Valeriana officinalis

Fauna on site - English and Latin species name

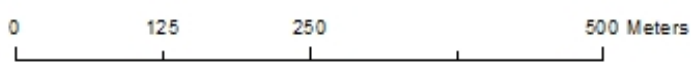
No faunal observations were made

Aerial Photograph showing location of the site

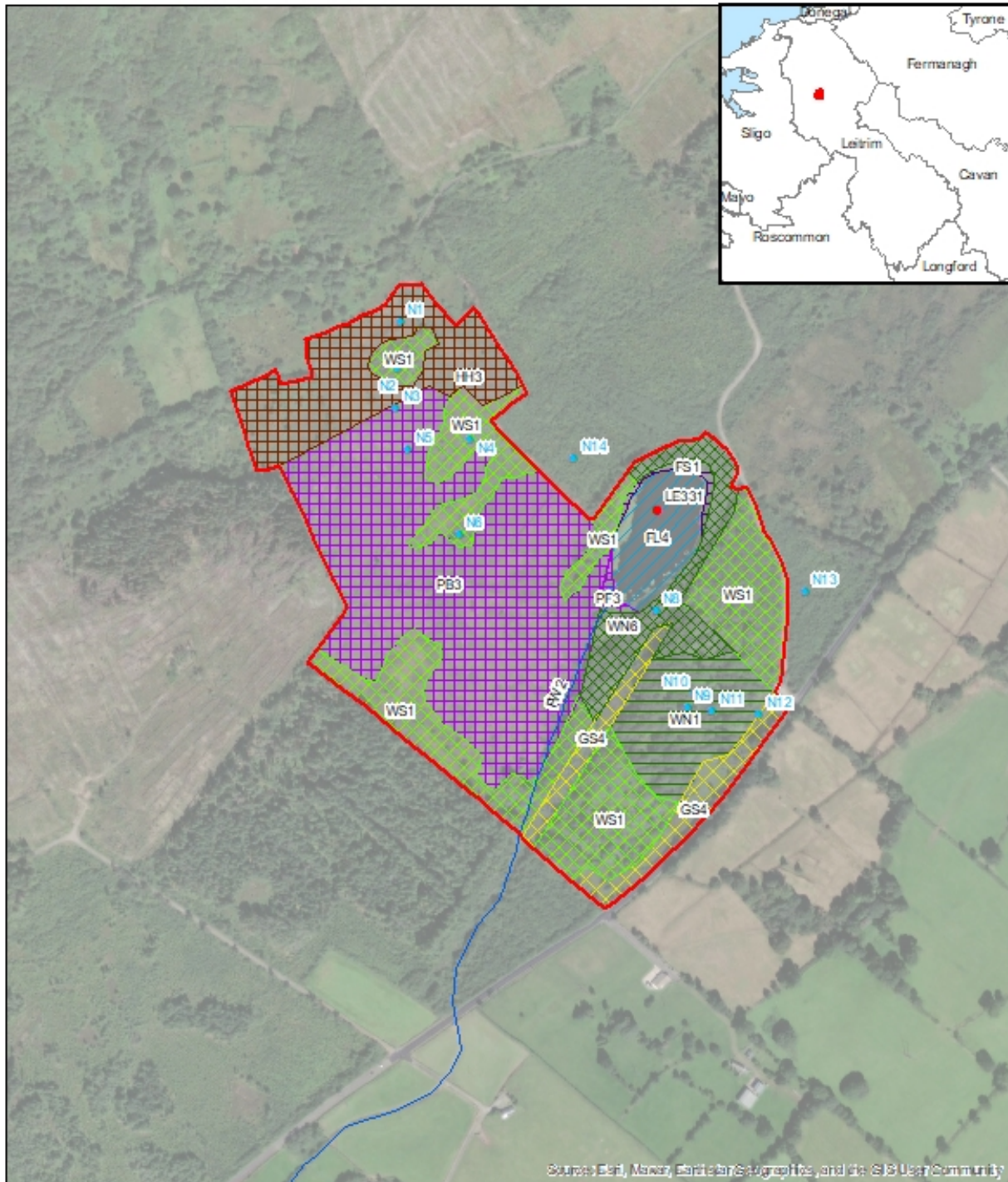


Source: Esri, Maxar, Earthstar, GeoEye, and the GIS User Community

 Site Boundary

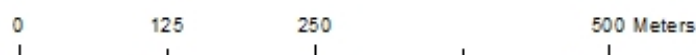


GIS Habitat map of the site



Source: Ecol, Moxey, Earthstar & Graphics, and the GIS User Community

- | | | |
|--------------------------------|---------------------------------|-------------------------------------|
| Site Boundary | PS1 Reed and large sedge swamps | PS3 Transition mire and quaking bog |
| Target Notes | GS4 Wet grassland | WN1 Oak-birch-holly woodland |
| FW2 Depositing/flowland rivers | HM3 Wet heath | WN6 Wet willow-elder-ash woodland |
| FL4 Mesotrophic lakes | PS3 Lowland blanket bog | WS1 Scrub |



Site Name: CLOONFINNAN LOUGH cNHA**Site Code:** LE10 **Area (ha):** 38.46 **Grid Ref:** 205000 295100 **County:** LE**Site designation(s):**cNHA
Undesignated site**Surveyed by:**

William Crowley & Adam Vanmechelen

Date of wetland survey:

27/06/2023

Survey Code:

LEWS2023

Site source information:Detailed fen survey recommended
Detailed Wetland Survey undertaken
Site previously mapped in GIS dataset
Site previously reported from literature
UAV survey undertaken**Wetland Present on the Site**

YES

Conservation ranking after survey:

B Rating: Nationally Important

Townland:

ESKER NORTH

Solid Geology:

Navan Group

Subsoil type:

Water

Substrate type:Mineral Soil
Peat**Substrate stability:**

Firm

River catchment:

Shannon Upr

CORINE Habitats:

Land principally occupied by

Site Location

Cloonfinnan Lough cNHA is a mesotrophic lake with poor fen/transition mire located 5km north of Dromod.

Site Description and Wetland Habitats Recorded

The site contains a mesotrophic lake fringed by reedswamp, with Phragmites or Schoenoplectus. There is an interesting transition in the south west end of the site from wet heath/cutover bog mosaic to poor fen/transition mire (dominated by Carex spp., Menyanthes trifoliata and Comarum palustre) into tall herb swamp or reedswamp.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	GENERAL	Amenity area used to launch boats and golf balls!!
N10	FAUNA	Family of Mute Swans. Two adults and five very young cygnets. Breeding site likely close-by.
N11	DAMAGE	Scrub removal has taken place here very recently.
N12	HABITAT	Schenoplectus dom reed bed.
N13	HABITAT	GS4 with calcareous influence. Holcus abundant with Trifolium repens; Leucanthemum, Centaurium erythraea, Prunella, Briza, Ranunculus acris, Juncus eff., J. inflexus, J. conglomeratus and Hypericum sp.
N14	DAMAGE	4 dead fish floating in lake.
N2	HABITAT	Tall-herb swamp with elements of reedswamp. Typha & Phragmites are freq-abund. Area is species rich with Menyanthes, Mentha, Equisetum, Schoenoplectus, Iris, Stachys, Rumex hydrolapathum. Mvosotis. Galium palustre. Epilobium hirsutum & Cicuta virosa.
N3	HABITAT	GS4 with Deschampsia and Cirsium palustre.
N4	HABITAT	Quaking mat dominated by Carex spp. Herb layer dominated by Comarum, Menyanthes, Equisetum fluviatile, Ranunculus flammula & Galium palustre. Calliergon spp. dominate bryophyte layer with Sphagnum subnitens. S. palustre and S. fallax at landward side.
N5	HABITAT	PF2 with characteristics of PF3. Juncus art., J. conglomeratus, Succisa, Anthoxanthum, Carex panicea, C. rostrata, C. demissa, Ranunculus flammula.
N6	HABITAT	Wet heath on old cutover with Carex binervis (f), Molinia (f), Calluna (f), Erica tetralix (f), P. erecta, Anthoxanthum, Dac. mac. Heathers cover 30%. Mosses dom by Hylocom and Rhytidium loreus with patchy Sphagnum cover
N7	MANAGEMENT	Cattle grazed.
N8	HABITAT	Very old cutover. Some remnant peat hags lie 50cm above this. Mosaic of wet heath and bog.
N9	HABITAT	High Sphagnum cover but dominated by Juncus effusus. Cattle grazed.

Management Recommendations following survey

Limit excess nutrients from entering the water. Avoid any drainage operations that may impact on the water levels of the lake. Survey for Canadian waterweed and if not present take measures to prevent it from entering lake.

Future Survey Recommendations

Undertake a vegetation survey of the transition from lake to reedswamp to tall herb swamp to transition more to wet heath in the south-west of the site including a detailed fen survey in area of poor fen/transition mire. Also consider a Marsh fritillary survey at a suitable time of the year.

Landowner Information Comments

Spoke with landowner to SW of lake who granted access. Nancy Whelan informed us of bird observations made on the lake. At the time of survey she noted two breeding pairs of Mute Swans (one of which we observed) and one of

Crested Grebe. Both these are on BirdWatch Ireland's amber list of Birds of Conservation Concern (Gilbert et al., 2021). Also noted Grey Herons and Moorhens.

Description of potential EU Habitats Directive Annex 1 habitats

Some of the areas of transition mire in the SW is likely to correspond to EU Annex I habitat 7140 Transition Mires & Quaking Bogs. A small area of tall herb swamp adjacent to this may correspond to the 6430 Hydrophilous tall herb fringe communities.

Main Fossitt habitats on site

FL4 Mesotrophic lakes
 FS1 Reed and large sedge swamps
 FS2 Tall herb swamps
 FW2 Depositing/lowland rivers
 FW4 Drainage ditches
 GS4 Wet grassland
 HH3 Wet heath
 PB1 Raised bogs
 PB4 Cutover bog
 PF2 Poor fen and flush
 PF3 Transition mire & quaking bog
 WN6 Wet willow-alder-ash woodland
 WS1 Scrub

EU Habitats Directive habitats on site

6430 Hydrophilous tall herb fringe communities of
 7140 Transition mires and quaking bogs

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
 FW2 Depositing/lowland rivers
 FW4 Drainage ditches
 GA1 Improved agricultural grassland
 WD4 Conifer plantation
 WL1 Hedgerows
 WL2 Treelines
 WS1 Scrub

Landuse / Management Activity

Boating	2 Occasional (5-20%)
Fishing	3 Frequent (21-50%)
Grazing - cattle	2 Occasional (5-20%)
Hunting/Shooting	2 Occasional (5-20%)

Frequency of use

Impacting Activity (EU code and title)

Impacting Activity (EU code and title)	Intensity	Impact
A04.02.01 non intensive cattle grazing	C = low	0 = neutral
A10.01 removal of hedges and copses or scrub	B = medium	- 1 = reparable negative influence
H01.05 diffuse pollution to surface waters due to	D = unknown	- 1 = reparable negative influence
J02.05 Modification of hydrographic functioning,	C = low	- 1 = reparable negative influence

Threats

H01.05 diffuse pollution to surface waters due to agricultural and forestry activities
 I01 invasive non-native species
 J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name

Agrostis canina

Alisma plantago-aquatica

Alnus glutinosa

Anthoxanthum odoratum

Aulacomnium palustre

Briza media

Calliergon cordifolium

Calliergonella cuspidata

Calluna vulgaris

Campylopus introflexus

Cardamine pratensis

Carex binervis

Carex demissa

Carex disticha

Carex echinata

Carex flacca

Carex leporina

Carex panicea

Carex rostrata

Centaurea nigra

Centaurium erythraea

Cerastium fontanum

Cicuta virosa

Cirsium palustre

Cirsium vulgare

Cladonia floerkeana

Cladonia portentosa

Comarum palustre

Cynosurus cristatus

Dactylorhiza maculata subsp. ericetorum

Danthonia decumbens

Deschampsia cespitosa

Eleocharis palustris

Elodea canadensis

Epilobium hirsutum

Epilobium palustre

Equisetum fluviatile

Equisetum palustre

Erica tetralix

Eriophorum angustifolium

Eriophorum vaginatum

Euphrasia officinalis agg.

Filipendula ulmaria

Galium palustre

Geranium robertianum

Holcus lanatus

Hydrocotyle vulgaris

Hylocomium splendens

Hypericum pulchrum

Hypericum tetrapterum

Juncus acutiflorus

Juncus articulatus

Juncus conglomeratus

Juncus inflexus

Lathyrus pratensis

Leucanthemum vulgare

Luzula multiflora

Lychnis flos-cuculi

Menyanthes trifoliata

Molinia caerulea

Myosotis scorpioides

Myrica gale

Narthecium ossifragum

Nuphar lutea

Odontoschisma sphenagnum

Phalaris arundinacea

Phragmites australis

Plantago lanceolata

Plantago major

Potentilla anserina

Fauna on site - English and Latin species name

Chaffinch

Common Blue Damselfly

Common frog

Great Crested Grebe

Grey Heron

Moorhen

Mute Swan

Tench

Willow warbler

Aerial Photograph showing location of the site

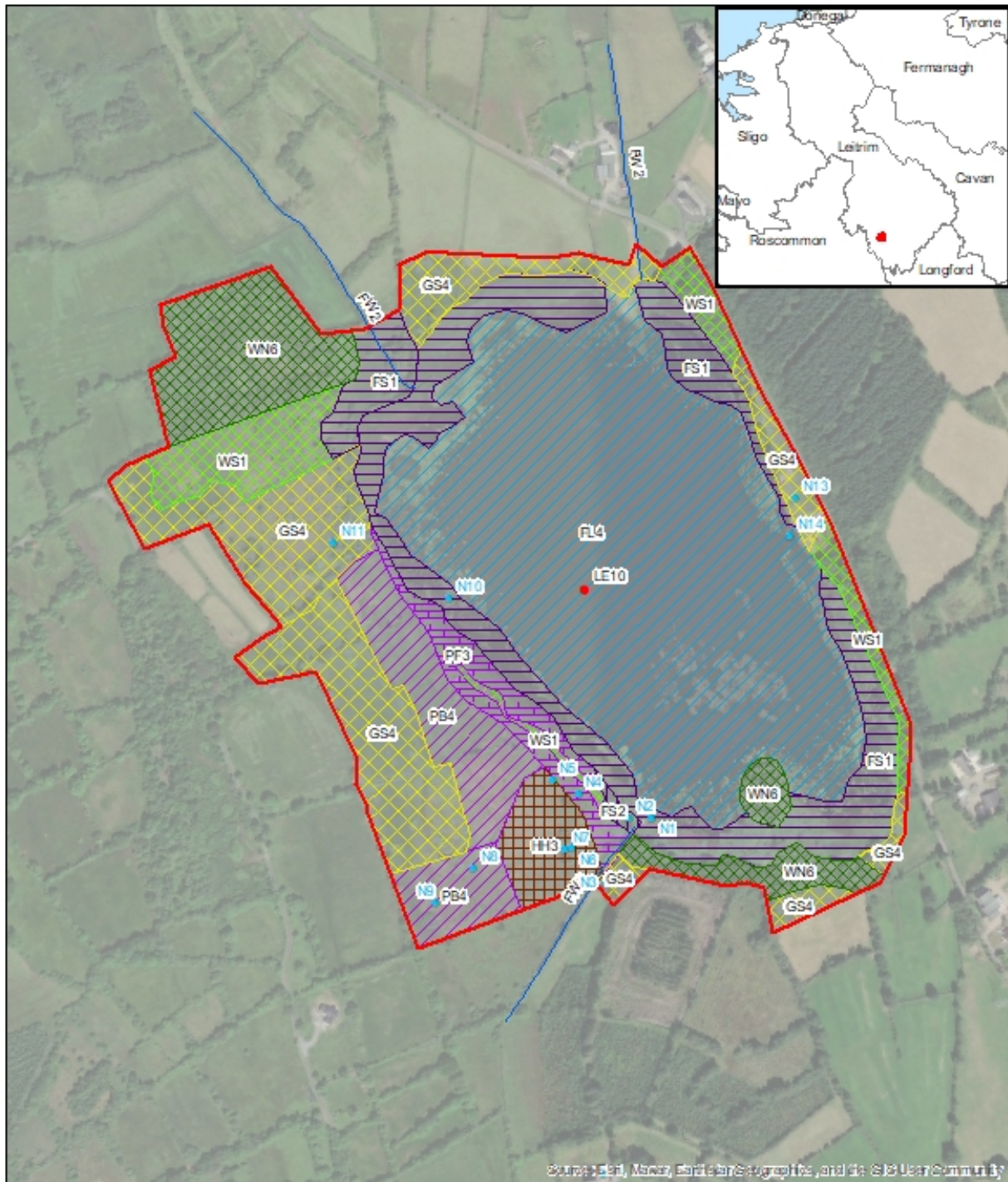


 Site Boundary

0 125 250 500 Meters



GIS Habitat map of the site



Source: Esri, Maxar, Earthstar, GeoEye, and the GIS User Community

- | | | |
|--------------------------------|---------------------------------|-------------------------------------|
| Site Boundary | FS1 Reed and large sedge swamps | PB4 Cutover bog |
| Target Notes | FS2 Salt-herb swamps | FS3 Transition mire and quaking bog |
| FW2 Depositing/flowland rivers | GS4 Wet grassland | WN6 Wet willow-elder-ash woodland |
| FL4 Mesotrophic lakes | HH3 Wet heath | WS1 Scrub |



Site Name: CLOONTURK LOUGH**Site Code:** LE98 **Area (ha):** 65.82 **Grid Ref:** 205715 291484 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

William Crowley & Adam Vanmechelen

Date of wetland survey:

26/06/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken
 Site previously mapped in GIS dataset
 Site previously reported from literature
 UAV survey undertaken

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

DRUMOD BEG

Solid Geology:

Navan Group

Subsoil type:

Water

Substrate type:

Mineral Soil
 Peat

Substrate stability:

Firm

River catchment:

Shannon Upr

CORINE Habitats:

Land principally occupied by

Site Location

Marsh and lake in the floodplain of the Eslin River, one km north of Dromod.

Site Description and Wetland Habitats Recorded

Meso to eutrophic lake along floodplain of Eslin River surrounded by reedbeds and marsh. In general the wider floodplain in the site is dominated by species-poor wet grassland with a fairly intensive drainage network draining to the river. In the west of the site there are areas of remnant raised bog, cutover bog and dry bog woodland habitat.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	FW2. 10m wide with yellow water-lily and Sagittaria sagittifolia.
N10	HABITAT	GS4 dominated by Juncus effusus.
N11	HABITAT	GM1 dominated by Filipendula with frequwnt Valerian.
N12	HABITAT	FS1 Phalaris arundinacea dominated.
N13	HABITAT	FS1 dominated by a mosaic of Eleocharis palustre dominated vegetation, Carex spp (C. versicaria and C. rostrata) and Iris/Phalaris dominated vegetation.
N14	HABITAT	Meso to eutrophic lake with abundant Hippuris vulgaris and yellow water-lily, pondweed fringed by Schenoplectus .
N15	HABITAT	Raised bog. Either remnant high bog or very old cutover. Dominated by Eriophorum vaginatum and Calluna vulgaris with 10-20% Sphagnum cover. Narthecium frequent.
N16	FAUNA	Irish hare.
N17	MANAGEMENT	Cattle grazed. Low intensity.
N18	MANAGEMENT	Cattle grazeing.
N2	HABITAT	FS1 dominated by Phalaris arundinacea.
N3	HABITAT	Marsh dominated by Filipendula with Iris, Holcus lanatus. Equisetum fluviatile and Juncus effusus.
N4	HABITAT	GS4 dominated by Juncus effusus with occasional Alopecurus and Carex ovalis towards marsh.
N5	HABITAT	Scrub dominated by Rubus futicosus.
N6	HABITAT	Line of 7-8m tall birch.

Management Recommendations following survey

Increase buffer zone around river and lake. Limit excess nutrients from entering the river/lake system. Avoid any drainage operations that may impact on the water levels of the site.

Future Survey Recommendations

None.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

BL3 Buildings and artificial surfaces

FL4 Mesotrophic lakes

FL5 Eutrophic lakes

FS1 Reed and large sedge swamps

FW2 Depositing/lowland rivers

FW4 Drainage ditches

GM1 Marsh

GS4 Wet grassland

HD1 Dense bracken

PB1 Raised bogs

PB4 Cutover bog

WL2 Treelines

WN7 Bog woodland

WS1 Scrub

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FW2 Depositing/lowland rivers

GA1 Improved agricultural grassland

WL1 Hedgerows

WS1 Scrub

Landuse / Management Activity

Grazing - cattle

Grazing - sheep

Frequency of use

2 Occasional (5-20%)

2 Occasional (5-20%)

Impacting Activity (EU code and title)

A04 grazing

H01.05 diffuse pollution to surface waters due to

H04.02 Nitrogen-input

J02.05 Modification of hydrographic functioning,

Intensity

B = medium

B = medium

C = low

B = medium

Impact

- 1 = reparable negative influence

- 1 = reparable negative influence

- 1 = reparable negative influence

- 1 = reparable negative influence

Threats

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

J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name*Agrostis stolonifera**Alisma plantago-aquatica**Alopecurus pratensis**Anthoxanthum odoratum**Apium nodiflorum**Aulacomnium palustre**Betula pubescens**Calliergonella cuspidata**Calluna vulgaris**Carex leporina**Carex nigra*

Carex rostrata

Carex vesicaria

Cirsium palustre

Cladonia portentosa

Comarum palustre

Crataegus monogyna

Dicranum scoparium

Digitalis purpurea

Drosera rotundifolia

Dryopteris carthusiana

Dryopteris dilatata

Eleocharis multicaulis

Eleocharis palustris

Elodea canadensis

Epilobium palustre

Erica tetralix

Eriophorum vaginatum

Festuca rubra

Filipendula ulmaria

Galium palustre

Hippuris vulgaris

Holcus lanatus

Hylocomium splendens

Hypnum jutlandicum

Iris pseudacorus

Juncus conglomeratus

Juncus effusus

Lathyrus pratensis

Lemna minor

Lythrum salicaria

Mentha aquatica

Molinia caerulea

Narthecium ossifragum

Nuphar lutea

Oenanthe aquatica

Persicaria amphibia

Phalaris arundinacea

Phragmites australis

Polytrichum commune

Potamogeton sp.

Potentilla anserina

Potentilla erecta

Pteridium aquilinum

Ranunculus acris

Ranunculus repens

Rhytidiadelphus squarrosus

Rorippa amphibia

Rubus fruticosus agg.

Rumex acetosa

Sagittaria sagittifolia

Salix alba

Salix cinerea subsp. cinerea

Salix sp.

Schoenoplectus lacustris

Sorbus aucuparia

Sphagnum capillifolium

Sphagnum cuspidatum

Sphagnum palustre

Sphagnum papillosum

Fauna on site - English and Latin species name

Black-tailed Skimmer Dragonfly

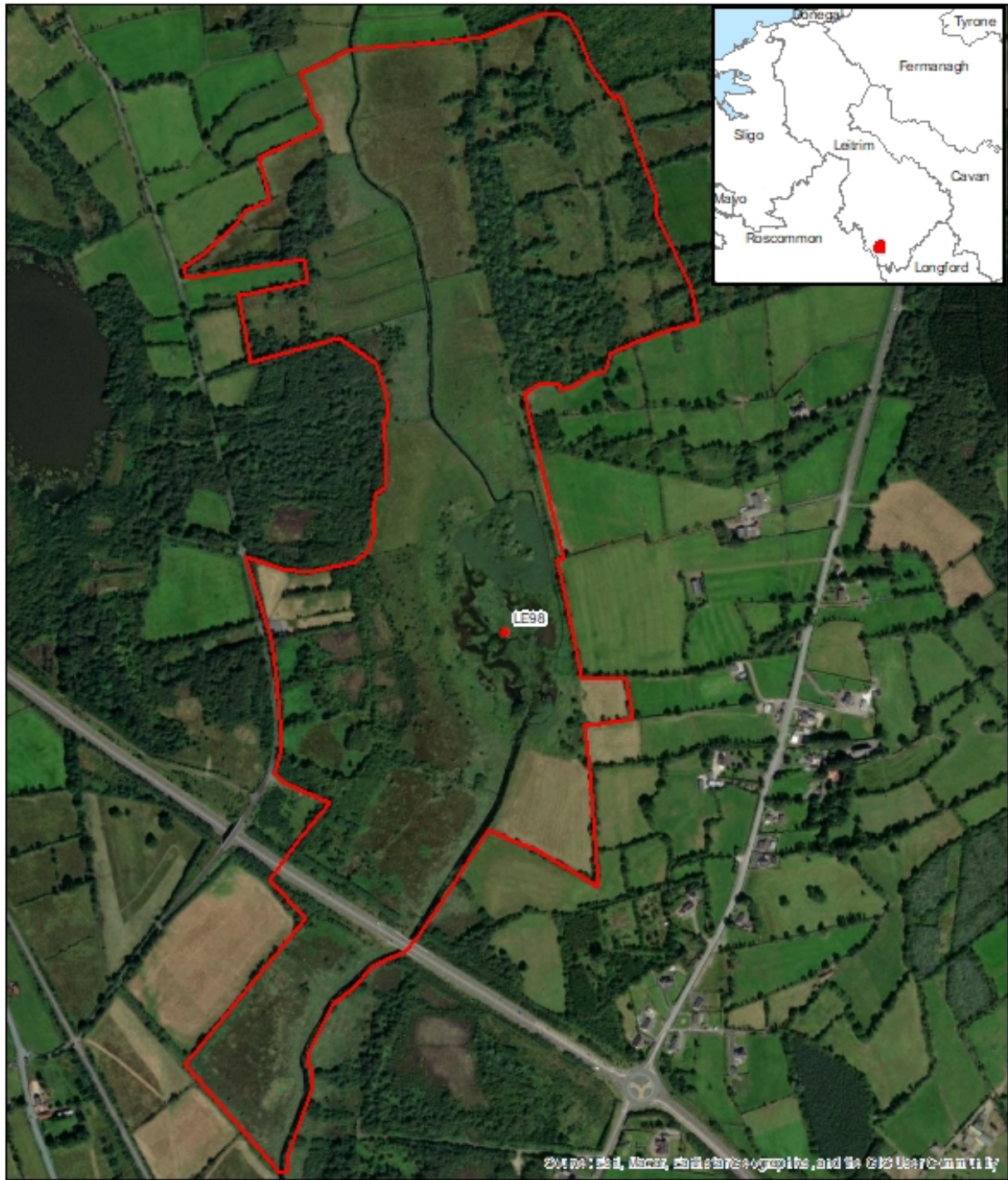
Blackcap

European stonechat

Irish hare

Peacock

Aerial Photograph showing location of the site

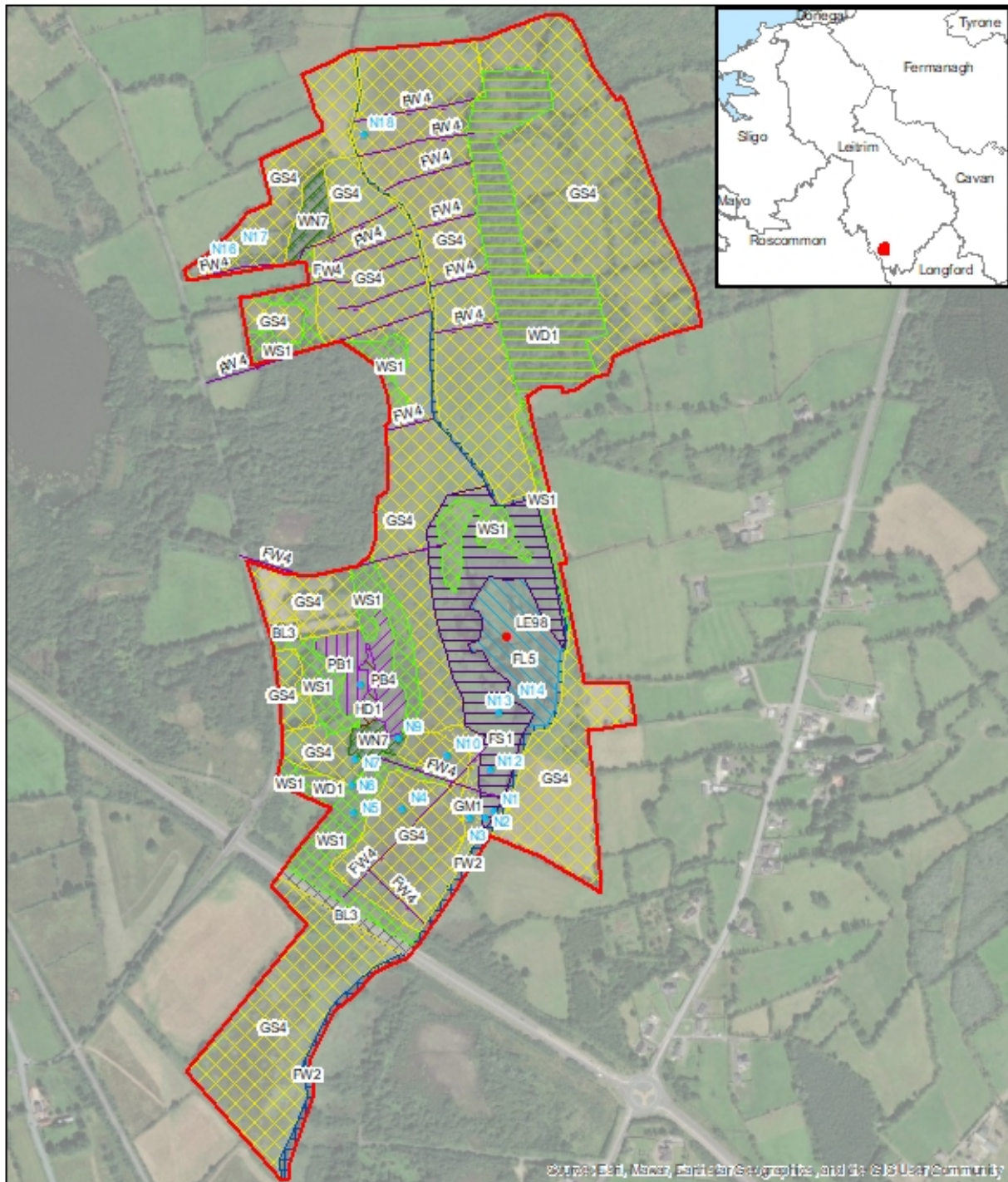


Source: Esri, Maxar, Earthstar, GeoEye, and the GIS User Community

 Site Boundary



GIS Habitat map of the site



Source: ESI, Moxey, Earthstar Geographics, and GIS User Community



Site Name: CLOONTY BOG COMPLEX**Site Code:** LE371 **Area (ha):** 140.32 **Grid Ref:** 173765 352946 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

05/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

CLOONTY

Solid Geology:

TYRONE GP; Visean

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Firm

River catchment:

Duff

CORINE Habitats:

Peat bogs

Site Location

Cloonty Bog Complex is located in the north west corner of Co. Leitrim 2.5km east of Cliffony, Co. Sligo. The bog straddles the border with County Sligo. The bog continues into county Sligo at the eastern edge of the site, where it appears to be more intact.

Site Description and Wetland Habitats Recorded

The site is crossed centrally by a road and consists mainly of cutover raised bog and a large semi natural woodland which sits in the north western half of the site and was already woodland at the time of the 1840s OS map. The site has been heavily affected by mechanical turf removal and drainage. Scrub and invasive species are encroaching in many parts. Areas of wet grassland are also present.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	INVASIVE	New Zealand flax.
N10	INVASIVE	Rhododendron, getting severe.
N11	HABITAT	Holcus lanatus dominant with some abundances of Juncus effusus.
N12	HABITAT	Wet grassland with Juncus effusus dominant.
N13	OWNERSHIP	Private dwelling.
N14	HABITAT	This woodland is present on 6 inch OSi maps.
N15	GENERAL	Potential for restoration if the drains are blocked.
N2	HABITAT	Most of the area is old cutover no longer used.
N3	HABITAT	Oak and beech dominated woodland with some birch.
N4	HABITAT	Hazel and birch dominated woodland.
N5	HABITAT	Juncus acutiflorus dominated.
N6	HABITAT	Some birch with dominant Molinia. Sphagnum cover is less than 20%.
N7	HYDROLOGY	Drain here 1.5m deep. Lots of running water.
N8	HYDROLOGY	1m deep drain. With a 5cm running water.
N9	FAUNA	Badger sett. Not currently in use.

Management Recommendations following survey

The control and removal of invasive species is a priority. A rhododendron management plan should be put in place.

Future Survey Recommendations

Establish extent of rhododendron and other invasive species. Establish potential for rewetting and drain blocking.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

A hydrological survey and modelling is necessary to ascertain whether parts of the site correspond to the Annex I habitat 7120 Degraded raised bogs still capable of regeneration.

Main Fossitt habitats on site

BL3 Buildings and artificial surfaces

FW2 Depositing/lowland rivers

FW4 Drainage ditches

GS4 Wet grassland

PB4 Cutover bog

WD1 (Mixed) broadleaved woodland

WD2 Mixed broadleaved/conifer woodland

WD4 Conifer plantation

WN2 Oak-ash-hazel woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GS4 Wet grassland

WS1 Scrub

EU Habitats Directive habitats on site

7120 Degraded raised bogs still capable of natural

Landuse / Management Activity

Grazing - sheep

Peat cutting (mechanical)

Frequency of use

2 Occasional (5-20%)

2 Occasional (5-20%)

Impacting Activity (EU code and title)

B02.06 thinning of tree layer

C01.03.02 mechanical removal of peat

I01 invasive non-native species

Intensity

C = low

B = medium

C = low

Impact

- 1 = reparable negative influence

- 2 = irreparable negative influence

- 1 = reparable negative influence

Threats

C01.03.02 mechanical removal of peat

I01 invasive non-native species

Flora on site - Latin & English species name*Betula pubescens**Calluna vulgaris**Carex panicea**Dactylorhiza sp.**Equisetum palustre**Erica tetralix**Eriophorum angustifolium**Eriophorum vaginatum**Fagus sylvatica**Geranium robertianum**Holcus lanatus**Ilex aquifolium**Juncus effusus**Lonicera periclymenum**Menyanthes trifoliata**Molinia caerulea**Myrica gale*

Narthecium ossifragum

Phormium tenax

Phragmites australis

Potentilla erecta

Pteridium aquilinum

Rhododendron ponticum

Rhynchospora alba

Rubus fruticosus agg.

Salix sp.

Sphagnum capillifolium

Sphagnum cuspidatum

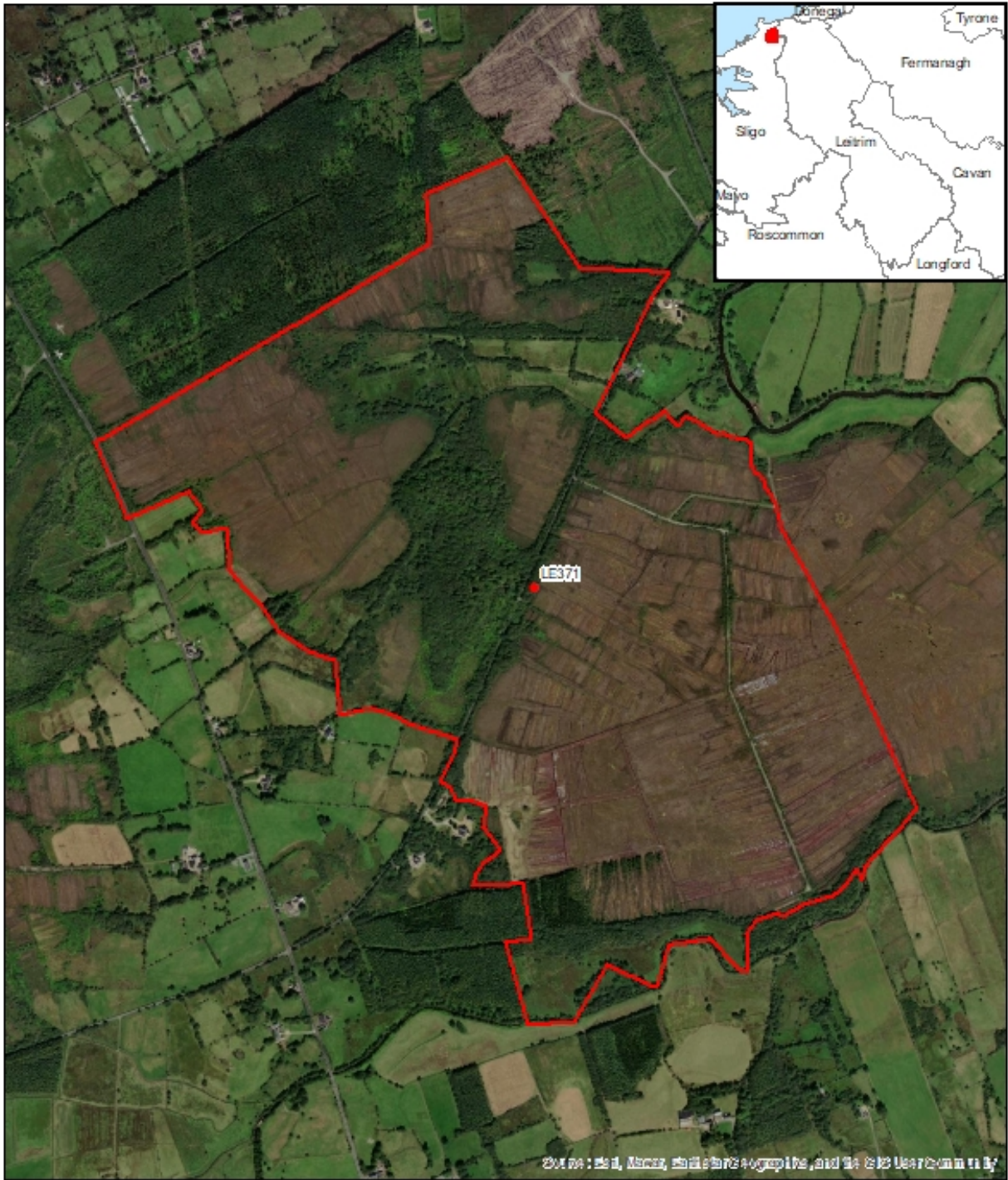
Sphagnum papillosum

Trichophorum cespitosum

Ulex europaeus

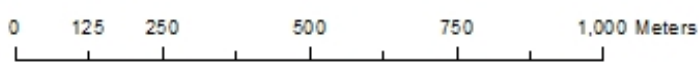
Fauna on site - English and Latin species nameNo faunal observations were made

Aerial Photograph showing location of the site

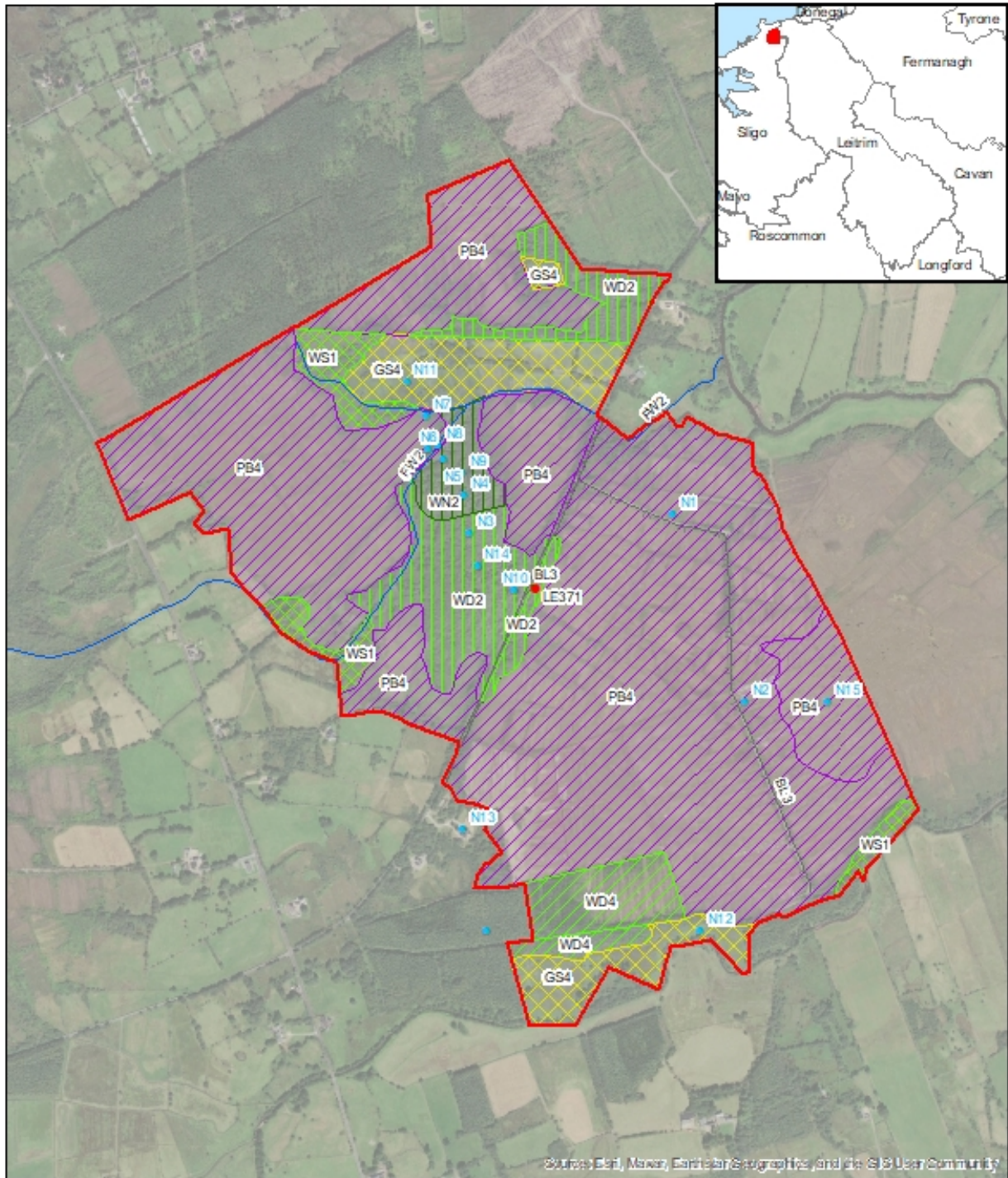


Source: Esri, DeLorme, GeoEye, (Geo), and the GIS User Community

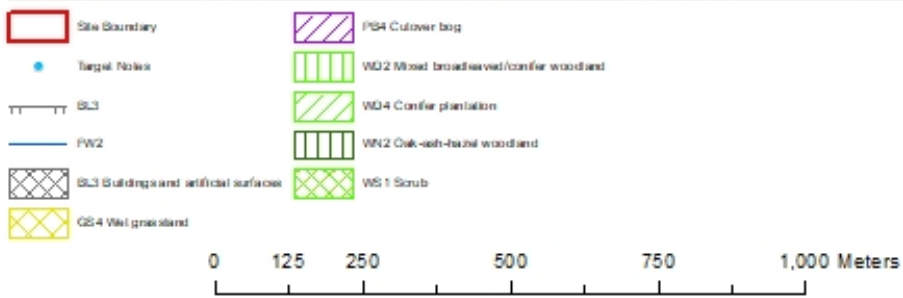
 Site Boundary



GIS Habitat map of the site



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Site Name: CORNACLOY CUTOVER**Site Code:** LE342 **Area (ha):** 15.87 **Grid Ref:** 194868 338646 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

06/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed cutover bog survey recommended

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

CORNACLOY (ED Munakill)

Solid Geology:

LEITRIM GP; Visean

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Soft

River catchment:

Erne

CORINE Habitats:

Transitional woodland scrub

Site Location

Cornacloy Cutover is located 5.5km to the east of Manorhamilton town.

Site Description and Wetland Habitats Recorded

The site is dominated by cutover raised bog separated into three sections by a road and former railway line. Most of the site is relatively dry and Sphagnum-poor, but small areas close to the centre of the site are wet, Sphagnum-rich and dominated by *Eriophorum vaginatum*. In some of the drier areas the cutover is dominated by birch scrub/woodland.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Molinia dominated cutover.
N2	HABITAT	Scrubby woodland along the road. Mostly <i>Salix</i> , <i>Sorbus</i> , and <i>Betula</i> .
N3	HABITAT	<i>Carex rostrata</i> dominated.
N4	HABITAT	Cutover with a poor to moderate cover of Sphagnum (20%) abundant <i>Cladonia</i> and some <i>Molinia</i> .
N5	HABITAT	Very wet. Sphagnum cover close to 100%. <i>E. vaginatum</i> & <i>E. angustifolium</i> dominant. Some low <i>Calluna</i> . Water level just below the surface. Needs a more detailed survey to assess whether this qualifies as Active Raised Bog.
N6	HABITAT	<i>Sphagnum rubellum</i> covers 90% of the ground.
N7	HABITAT	<i>Holcus</i> dominated grassland on stretch of former (dismantled) railway line. With <i>Ranunculus repens</i> and <i>Cirsium palustre</i> , <i>Juncus effusus</i> , and <i>Equisetum</i> spp.
N8	HABITAT	<i>Rubus</i> scrub and wet grassland dominated by <i>Juncus</i> around it. Some birch also present up to 8m.
N9	INVASIVE	Japanese knotweed.

Management Recommendations following survey

Put in place an eradication plan for Japanese knotweed within the site and in the surrounding area. Consider actions to raise water table such as blocking internal drains as this would likely enhance the quality of the bog.

Future Survey Recommendations

Future surveys should assess the extent of Japanese knotweed within the site and in the surrounding area. Potential hydrological survey to inform drain blocking and restoration works as blocking internal drains would likely enhance the quality of the bog and aid carbon sequestration. A more detailed survey of the Sphagnum-rich cutover areas noted during this survey using the methods outlined by Smith and Crowley (2020) is also recommended in order to assess whether these areas correspond to the Annex habitat Active Raised Bog.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

Small areas of the cutover have regenerated well and are dominated by *Eriophorum vaginatum* with close to a complete Sphagnum cover. These areas need a more detailed survey to assess whether they qualify as the priority habitat 7110 Active Raised Bog.

Main Fossitt habitats on site

BL3 Buildings and artificial surfaces
 FW4 Drainage ditches
 GS4 Wet grassland
 HD1 Dense bracken
 PB1 Raised bogs

EU Habitats Directive habitats on site

7110 *Active raised bogs

PB4 Cutover bog

WN7 Bog woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

GS4 Wet grassland

PB4 Cutover bog

WD4 Conifer plantation

WL1 Hedgerows

WL2 Treelines

WS1 Scrub

Landuse / Management Activity

None

Frequency of use

4 Dominant (>50%)

Impacting Activity (EU code and title)

I01 invasive non-native species

Intensity

B = medium

Impact

- 1 = reparable negative influence

J02.05 Modification of hydrographic functioning,

B = medium

- 1 = reparable negative influence

Threats

I01 invasive non-native species

J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name

Angelica sylvestris

Aulacomnium palustre

Betula pubescens

Calluna vulgaris

Carex panicea

Carex rostrata

Cladonia portentosa

Drosera rotundifolia

Erica tetralix

Eriophorum angustifolium

Eriophorum vaginatum

Fallopia japonica

Filipendula ulmaria

Galium palustre

Hylocomium splendens

Juncus squarrosus

Mentha aquatica

Molinia caerulea

Narthecium ossifragum

Polytrichum commune

Pteridium aquilinum

Rubus fruticosus agg.

Salix cinerea subsp. *cinerea*

Sphagnum capillifolium subsp. *rubellum*

Sphagnum magellanicum

Sphagnum papillosum

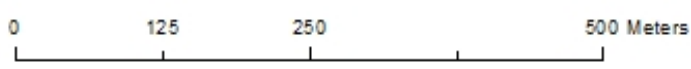
Succisa pratensis

Aerial Photograph showing location of the site

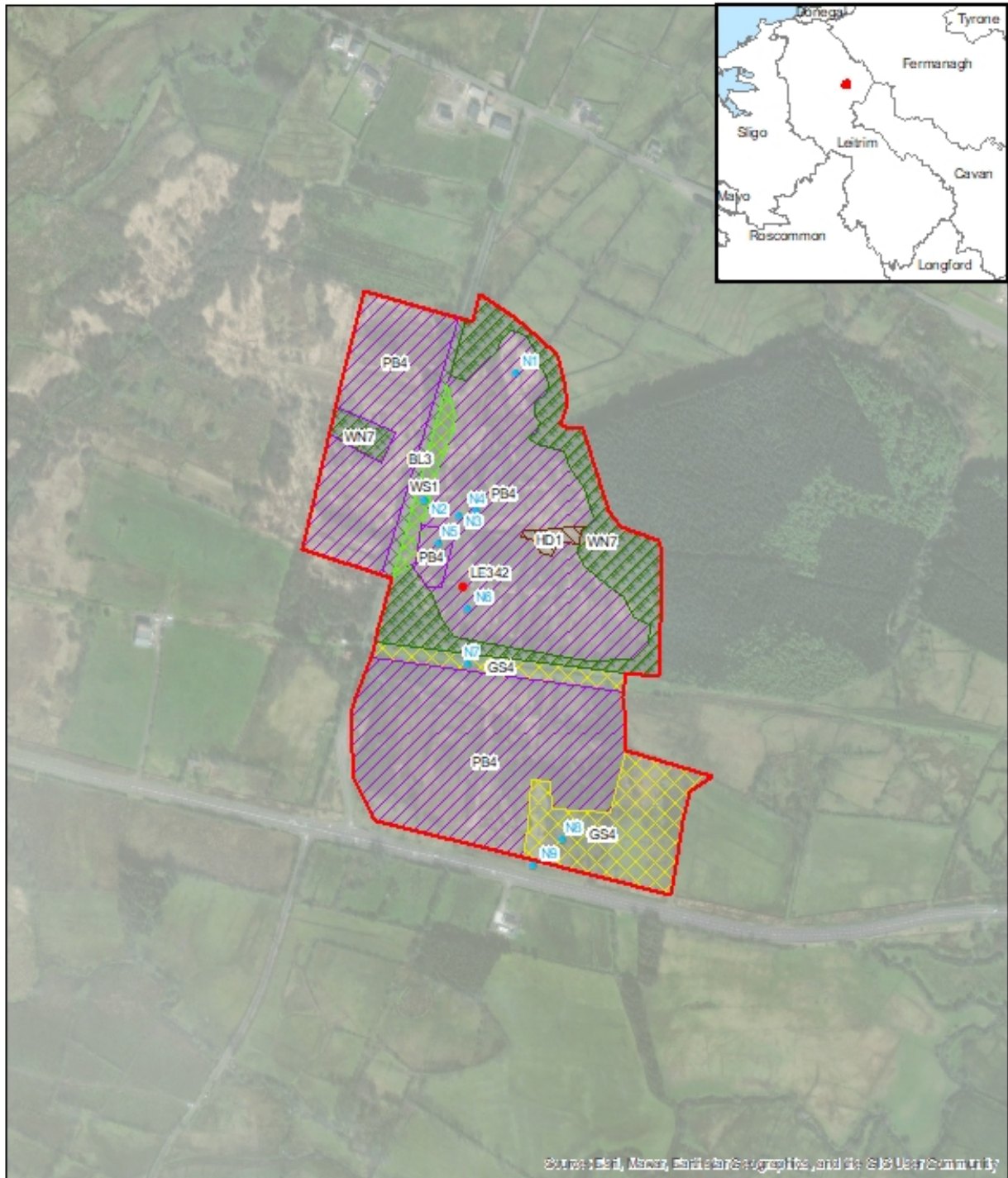


Source: Esri, DeLorme, Swire, GeoEye, IGN, AerGRID, GeoEye, and the GIS User Community


 Site Boundary

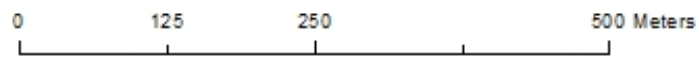


GIS Habitat map of the site



Source: Esri, Maxar, Earthstar, GeoEye, and GIS User Community

- | | |
|---|---|
|  Site Boundary |  HD1 Dense bracken |
|  Target Notes |  PB4 Cutover bog |
|  BL3 Buildings and artificial surfaces |  WN7 Bog woodland |
|  GS4 Wet grassland |  WS1 Scrub |



Site Name: CURRAUN LOUGH**Site Code:** LE111 **Area (ha):** 6.77 **Grid Ref:** 210691 299557 **County:** LE**Site designation(s):**SMR
Undesignated site**Surveyed by:**

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

13/07/2023

Survey Code:

LEWS2023

Site source information:Detailed Wetland Survey undertaken
Site previously mapped in GIS dataset
Site previously reported from literature
UAV survey undertaken**Wetland Present on the Site**

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

CURRAUN

Solid Geology:

Visean basinal limestone

Subsoil type:

Water

Substrate type:Mineral Soil
Peat**Substrate stability:****River catchment:**

Shannon Upr

CORINE Habitats:

Land principally occupied by

Site Location

Mesotrophic lake located 3km north-west of Mohill.

Site Description and Wetland Habitats Recorded

Mesotrophic lake with a muddy bottom that has an abundance of yellow water-lily on the open water at the sub margins of the lake. Most of the lake is surrounded by a 10-20m band of reedbeds. There is little buffer around the lake apart from in the south where there is some scrub, marsh and wet grassland. Note that the Irish Damselfly (*Coenagrion lunulatum*), which is classed as Vulnerable on Irelands Red List (Nelson et al., 2011) has been recorded from here in the past.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Lake has a muddy bottom. There is an abundance of yellow water-lily on the open water at the sub margins of the lake.
N2	FLORA	Large salix tree.
N3	DAMAGE	Large area of formerly open ground planted with conifers within the last ten years.
N4	HABITAT	Phalaris and Phragmites dominate in this area.
N5	DAMAGE	A band of scrub and reed vegetation at the edge of the lake has been removed from here for a length of ca 50m within the last couple of years.
N6	DAMAGE	Several hedgrows have been removed in this area within the last couple of years and it appears that the drains leading to the lake have also been worked on.
N7	DAMAGE	This area was planted with conifers within the last ten years.

Management Recommendations following survey

Increase buffer zones around lake (particularly in the west where a strip of scrub was removed in recent years) in an effort to reduce excess nutrient inputs from entering the lake.

Future Survey Recommendations

A dragonfly survey is recommended to establish whether the Irish damselfly (recorded here in 2002) still persists, and if so, to assess it's abundance at the site.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

ED2 Spoil and bare ground

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

FW2 Depositing/lowland rivers

FW4 Drainage ditches

GM1 Marsh

GS4 Wet grassland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FW4 Drainage ditches

EU Habitats Directive habitats on site

None noted

GA1 Improved agricultural grassland

WD4 Conifer plantation

WL1 Hedgerows

Landuse / Management Activity

Grazing - cattle

Frequency of use

2 Occasional (5-20%)

Grazing - sheep

2 Occasional (5-20%)

Impacting Activity (EU code and title)

A04.02.01 non intensive cattle grazing

Intensity

C = low

Impact

- 1 = reparable negative influence

A04.02.02 non intensive sheep grazing

C = low

- 1 = reparable negative influence

A10.01 removal of hedges and copses or scrub

B = medium

- 1 = reparable negative influence

B01.02 artificial planting on open ground (non-native)

B = medium

- 1 = reparable negative influence

H01.05 diffuse pollution to surface waters due to

B = medium

- 1 = reparable negative influence

J02.05 Modification of hydrographic functioning,

C = low

- 1 = reparable negative influence

Threats

A10.01 removal of hedges and copses or scrub

B01.02 artificial planting on open ground (non-native trees)

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

J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name*Filipendula ulmaria**Iris pseudacorus**Mentha aquatica**Menyanthes trifoliata**Myosotis scorpioides**Nuphar lutea**Phragmites australis**Potamogeton polygonifolius**Schoenoplectus lacustris**Stachys palustris**Typha latifolia***Fauna on site - English and Latin species name**

Common Bream

Pike

Aerial Photograph showing location of the site



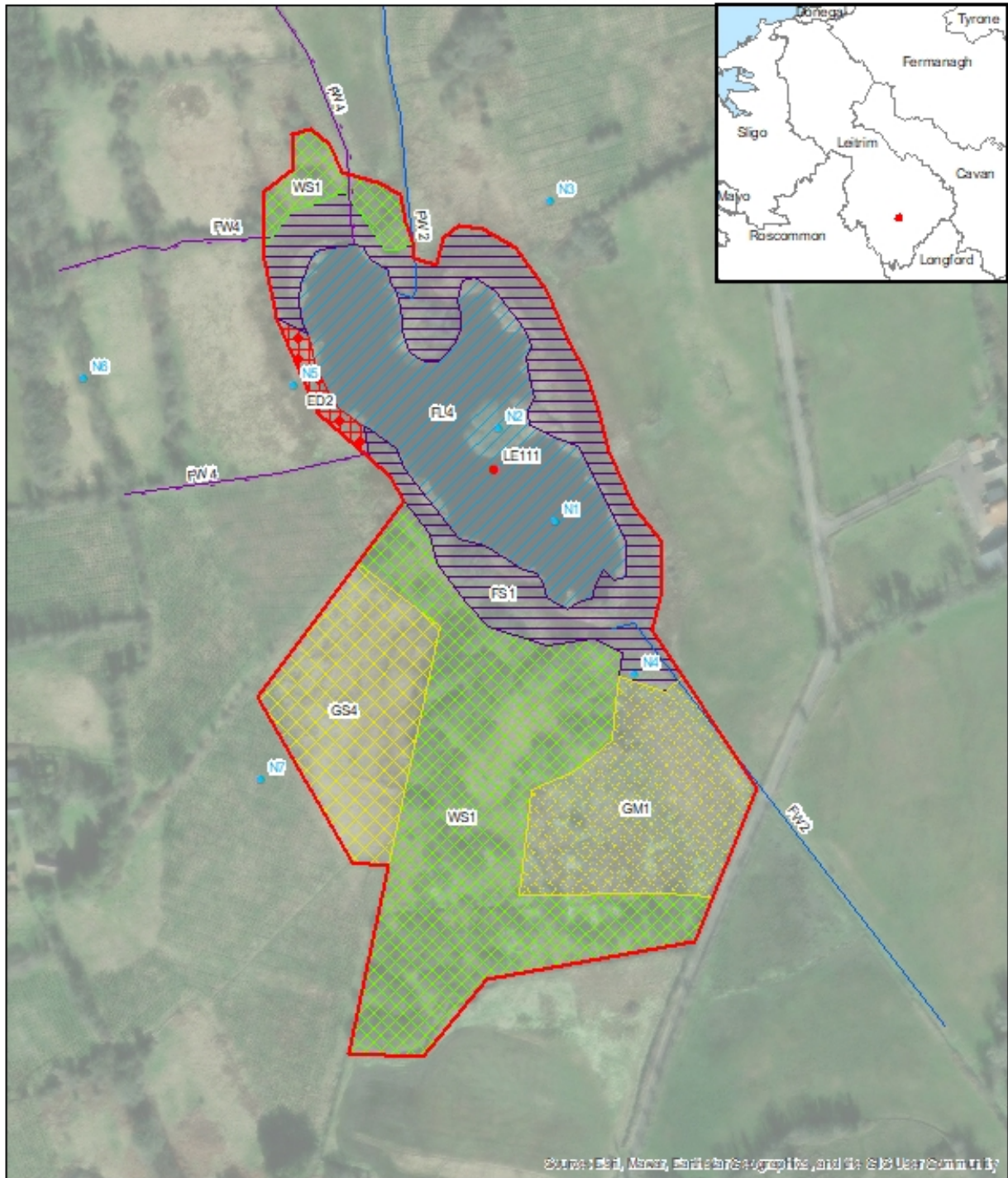
Source: Esri, DeLorme, GeoEye, Google, and the GIS User Community

 Site Boundary

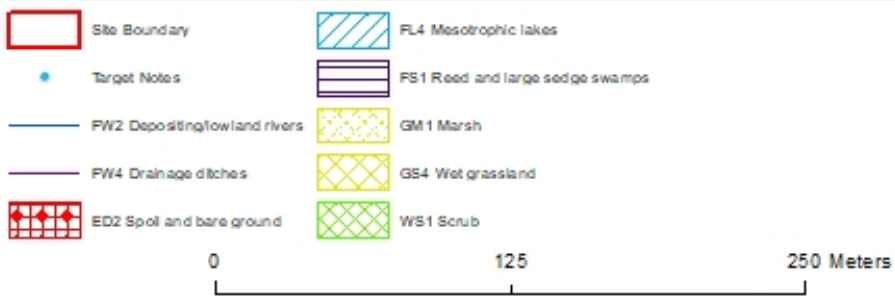
0 125 250 Meters



GIS Habitat map of the site



Source: OSI, Mazon, satellite imagery, and GIS User community



Site Name: DERRINLOUGHAN BOG**Site Code:** LE367 **Area (ha):** 71.89 **Grid Ref:** 177217 354941 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

05/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

DERRINLOUGHAN

Solid Geology:

TYRONE GP; Visean

Subsoil type:

Cut

Substrate type:

Mineral Soil

Peat

Substrate stability:

Firm

River catchment:

Duff

CORINE Habitats:

Peat bogs

Site Location

Derrinloughan bog is situated 4km to the west of Kinlough, in the north of Co. Leitrim.

Site Description and Wetland Habitats Recorded

Cutover bog surrounded by wet grassland with some encroaching woodland/scrub. Good Sphagnum cover in some areas of old cutover. Areas of wet grassland were dominated by *Juncus effusus*. The wet woodland on site is being affected by *Rhododendron* infestation. A small patch of rich fen occurs west of the road that runs through the site.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Wet grassland dominated by <i>Juncus effusus</i> .
N10	HABITAT	<i>Molinia</i> tussocks with moss. Very wet ground.
N11	HABITAT	Dominated by sedges with willow scrub intermittently spread throughout. <i>Molinia</i> , <i>Hypericum</i> , <i>Succisa</i> , <i>Anthoxanthum</i> , <i>Juncus acutiflorus</i> , <i>E. angustifolium</i> , <i>Mentha</i> , <i>Commarum</i> . <i>Juncus effusus</i> and <i>Betula</i> also present.
N12	HABITAT	Old cutover.
N13	HABITAT	<i>Molinia</i> dominated.
N14	HABITAT	Birch and willow woodland.
N15	INVASIVE	Dense <i>Rhododendron</i> .
N16	HABITAT	<i>Calluna</i> and <i>Molinia</i> dominated area.
N17	HABITAT	Wet grassland dominated by rushes.
N18	DAMAGE	Active cutting.
N19	HABITAT	Cutover bog.
N2	HABITAT	Wet grassland dominated by <i>Juncus effusus</i> .
N3	HABITAT	Wet grassland dominated by <i>Juncus effusus</i> .
N4	HABITAT	Wet grassland dominated by <i>Juncus effusus</i> .
N5	HABITAT	Wet grassland dominated by rushes.

Management Recommendations following survey

Rhododendron control and eradication is a priority. Liaise with turf cutters with a view to ceasing turf cutting. Potential for drain blocking and rewetting should be assessed.

Future Survey Recommendations

Survey to establish extent of *rhododendron* within site and inform control and eradication efforts. Survey to establish potential for rewetting of peat areas.

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

It is considered that a small patch of habitat corresponds to 7230 Alkaline fen in north western part of the site.

Main Fossitt habitats on site

BL3 Buildings and artificial surfaces

FW4 Drainage ditches

GA1 Improved agricultural grassland

GS4 Wet grassland

PB4 Cutover bog

PF1 Rich fen and flush

PF2 Poor fen and flush

WN7 Bog woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

GS4 Wet grassland

WL1 Hedgerows

WS1 Scrub

EU Habitats Directive habitats on site

7230 Alkaline fens

Landuse / Management Activity

Grazing - cattle

Peat cutting (mechanical)

Frequency of use

2 Occasional (5-20%)

2 Occasional (5-20%)

Impacting Activity (EU code and title)

C01.03 Peat extraction

I01 invasive non-native species

Intensity

B = medium

B = medium

Impact

- 2 = irreparable negative influence

- 1 = reparable negative influence

Threats

C01.03.02 mechanical removal of peat

I01 invasive non-native species

Flora on site - Latin & English species name*Aulacomnium palustre**Betula pubescens**Calluna vulgaris**Carex echinata**Carex panicea**Cladonia portentosa**Comarum palustre**Drosera rotundifolia**Erica tetralix**Eriophorum angustifolium**Eriophorum vaginatum**Holcus lanatus**Juncus acutiflorus**Juncus effusus**Mentha aquatica**Molinia caerulea**Myrica gale**Narthecium ossifragum*

Osmunda regalis

Polytrichum commune

Potentilla erecta

Racomitrium lanuginosum

Rhododendron ponticum

Rhynchospora alba

Rhytidiadelphus triquetrus

Salix sp.

Sorbus aucuparia

Sphagnum capillifolium

Sphagnum cuspidatum

Sphagnum magellanicum

Sphagnum tenellum

Succisa pratensis

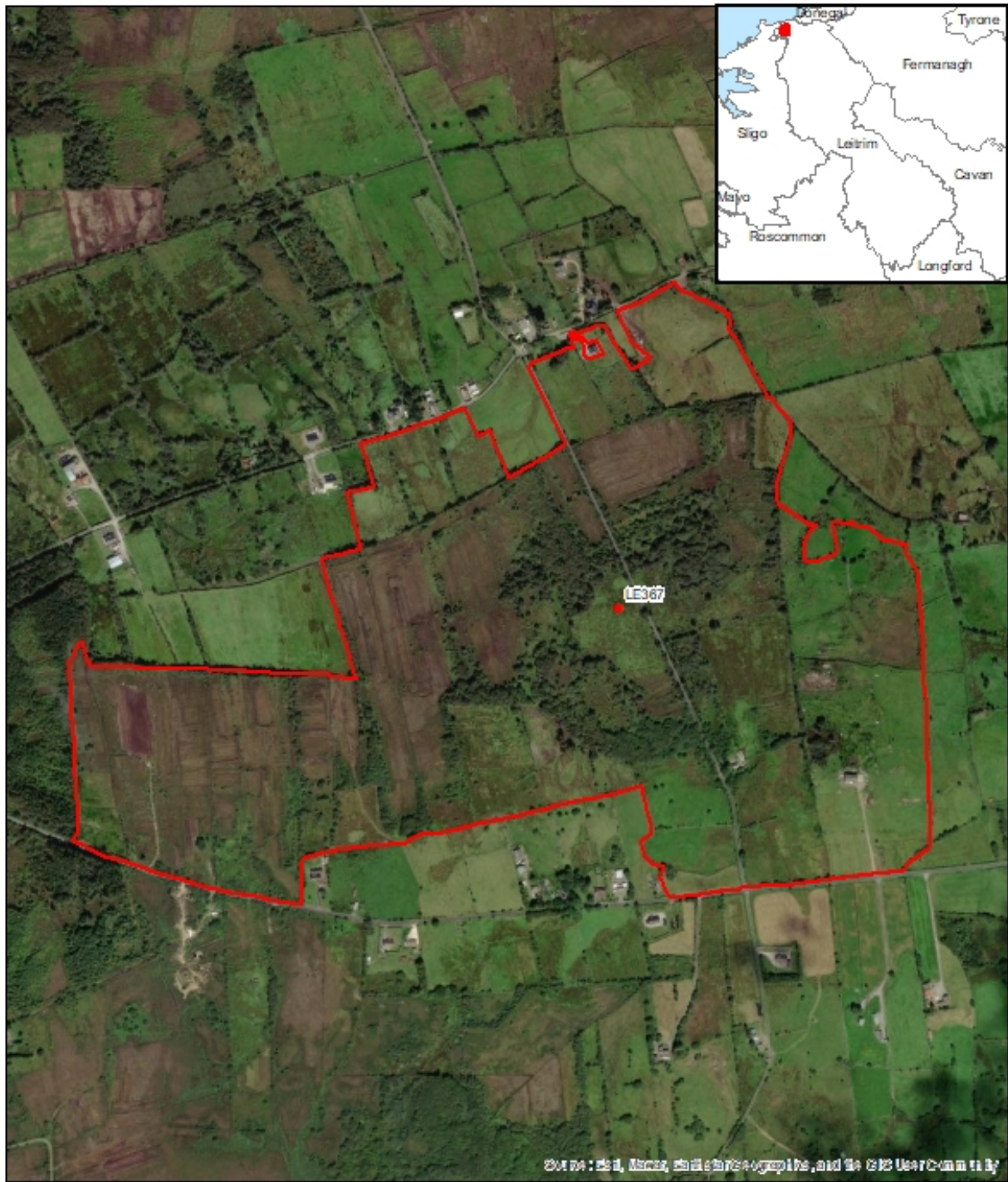
Trichophorum cespitosum

Ulex europaeus

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site

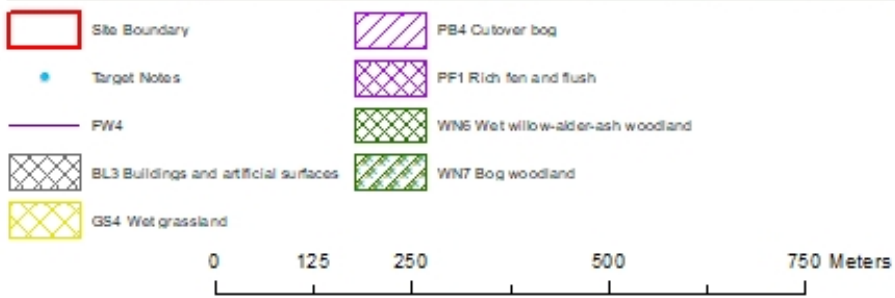
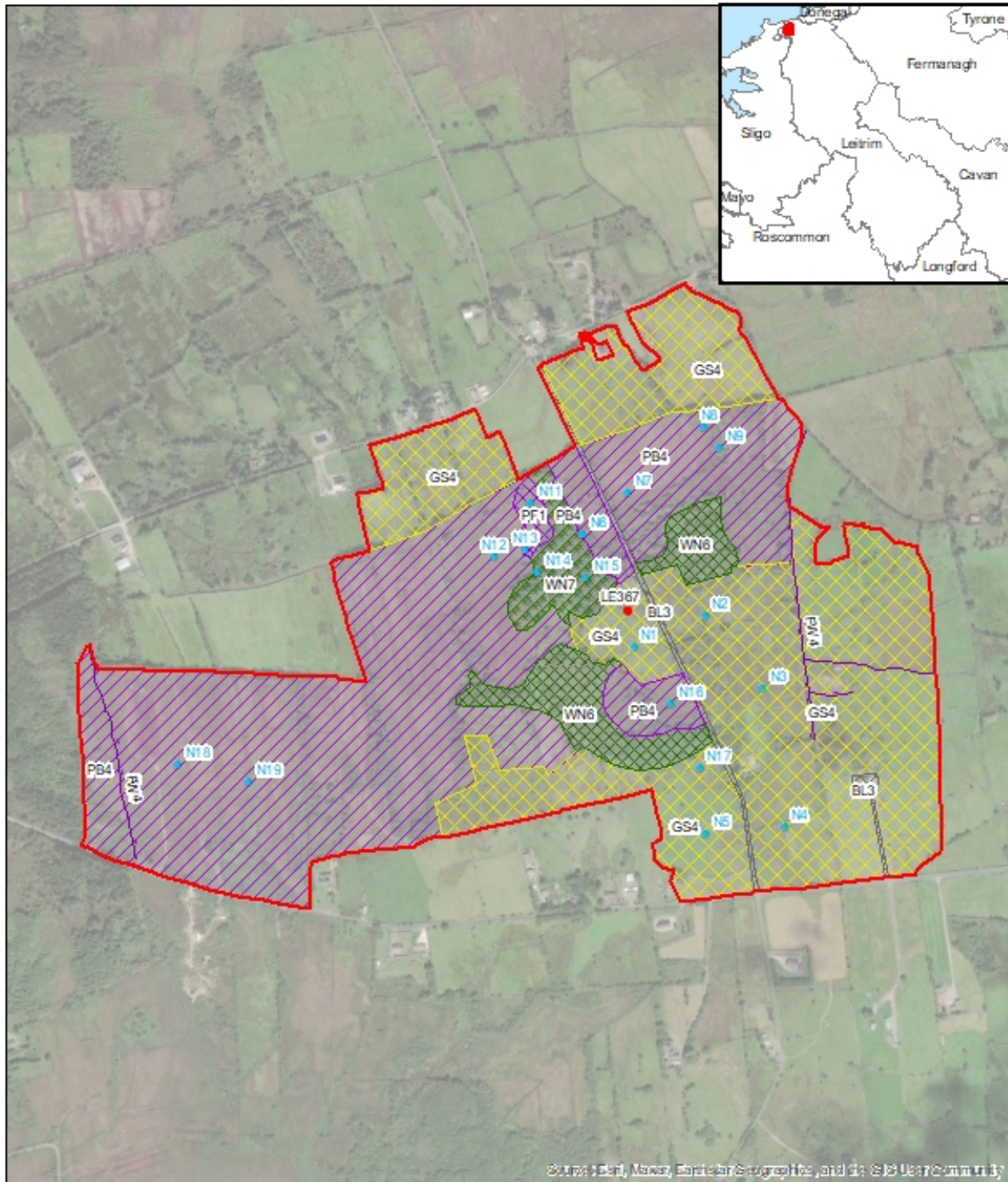


Source: Esri, DeLorme, Garmin, Bing Maps, and the GIS User Community

 Site Boundary



GIS Habitat map of the site



Site Name: DERRYBRACK CUTOVER**Site Code:** LE83 **Area (ha):** 18.59 **Grid Ref:** 202007 294139 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

14/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Detailed woodland survey recommended

Site previously mapped in GIS dataset

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

DERRYBRACK

Solid Geology:

Mid-Up Ordovician basic

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Firm

River catchment:

Shannon Upr

CORINE Habitats:

Pastures

Site Location

Bog woodland and cutover located 5km to the north-west of Dromod adjacent to railway line.

Site Description and Wetland Habitats Recorded

Cutover bog with a variety of habitats after establishing. Most of the site is dominated by dry birch woodland with bramble and bracken dominating the understory. However, towards the north of the site, some of the woodland is wet and Sphagnum-rich with Molinia dominating the understory. There are also areas where typical raised bog vegetation has re-established as well as smaller areas of fen/flush vegetation dominated by *Carex rostrata* and *Commarum palustre*.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	MANAGEMENT	Old bog track extends along the entire eastern boundary of the site, separating the site from the railway line.
N10	HABITAT	Birch trees with a high cover of Sphagnum growing on cutover. Potentially Annex bog woodland in places.
N11	HABITAT	Recently felled woodland now dominated by young birch, bracken, and <i>Epilobium</i> sp.
N2	HABITAT	Wet grassland dominated by <i>Juncus effusus</i> .
N3	DAMAGE	Some dumping of mainly metal objects has occurred here.
N4	HABITAT	Dry bog woodland with <i>Betula</i> dominating the tree layer and <i>Rubus</i> & <i>Pteridium</i> dominating the ground flora. Little or no Sphagnum.
N5	HABITAT	Quaky mat of Sphagnum with some Molinia, <i>Eriophorum</i> , and <i>Commarum</i> .
N6	HABITAT	Cutover regenerating again. Nice Sphagnum hummocks.
N7	HABITAT	<i>Carex rostrata</i> and <i>Commarum</i> dominate here. Sphagnum cover is very good at 50%.
N8	HABITAT	Low birch, sally and gorse growing with Molinia and lots of sphagnum palustre.
N9	HABITAT	Some conifers occur here within the birch woodland. Presumably originating from the felled plantation to the north.

Management Recommendations following survey

Once the drainage network on the site has been mapped, a number of key drains could be identified to block in order to raise the water table of the site and increase its conservation value.

Future Survey Recommendations

A detailed survey of the birch woodland on the site (particularly towards the north) is recommended with a view to establishing whether any of it corresponds with Annex bog woodland. A hydrological survey of the site is also recommended with a view to mapping the drainage system of the site which would aid restoration works.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

Although most of the birch woodland on the site is dry and is not the Annex 91D0 bog woodland, there were patches of wet Sphagnum-rich woodland in the north of the site that may correspond with this Annex habitat.

Main Fossitt habitats on site

FW4 Drainage ditches

GS4 Wet grassland

EU Habitats Directive habitats on site

91D0 *Bog woodland

HD1 Dense bracken

PB4 Cutover bog

PF2 Poor fen and flush

WN7 Bog woodland

WS1 Scrub

WS5 Recently-felled woodland

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FW4 Drainage ditches

GA1 Improved agricultural grassland

GS4 Wet grassland

WL1 Hedgerows

WL2 Treelines

WS1 Scrub

Landuse / Management Activity

Grazing - cattle

Legal dumping

Frequency of use

1 Rare (<5%)

1 Rare (<5%)

Impacting Activity (EU code and title)

A03.02 abandonment / lack of mowing

A04 grazing

B02.02 forestry clearance

J02.05 Modification of hydrographic functioning,

Intensity

C = low

C = low

C = low

C = low

Impact

0 = neutral

0 = neutral

- 1 = reparable negative influence

- 1 = reparable negative influence

Threats

J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name*Aulacomnium palustre**Betula pubescens**Calluna vulgaris**Carex echinata**Carex remota**Carex rostrata**Chamerion angustifolium**Cladonia portentosa**Comarum palustre**Epilobium palustre**Equisetum palustre**Erica tetralix**Eriophorum angustifolium**Eriophorum vaginatum**Geranium robertianum**Juncus effusus**Luzula multiflora**Lythrum salicaria**Molinia caerulea**Pinus contorta**Polytrichum commune**Potentilla erecta**Pteridium aquilinum*

Rhytidiadelphus triquetrus

Rubus fruticosus agg.

Salix cinerea subsp. *cinerea*

Sphagnum capillifolium subsp. *rubellum*

Sphagnum palustre

Sphagnum papillosum

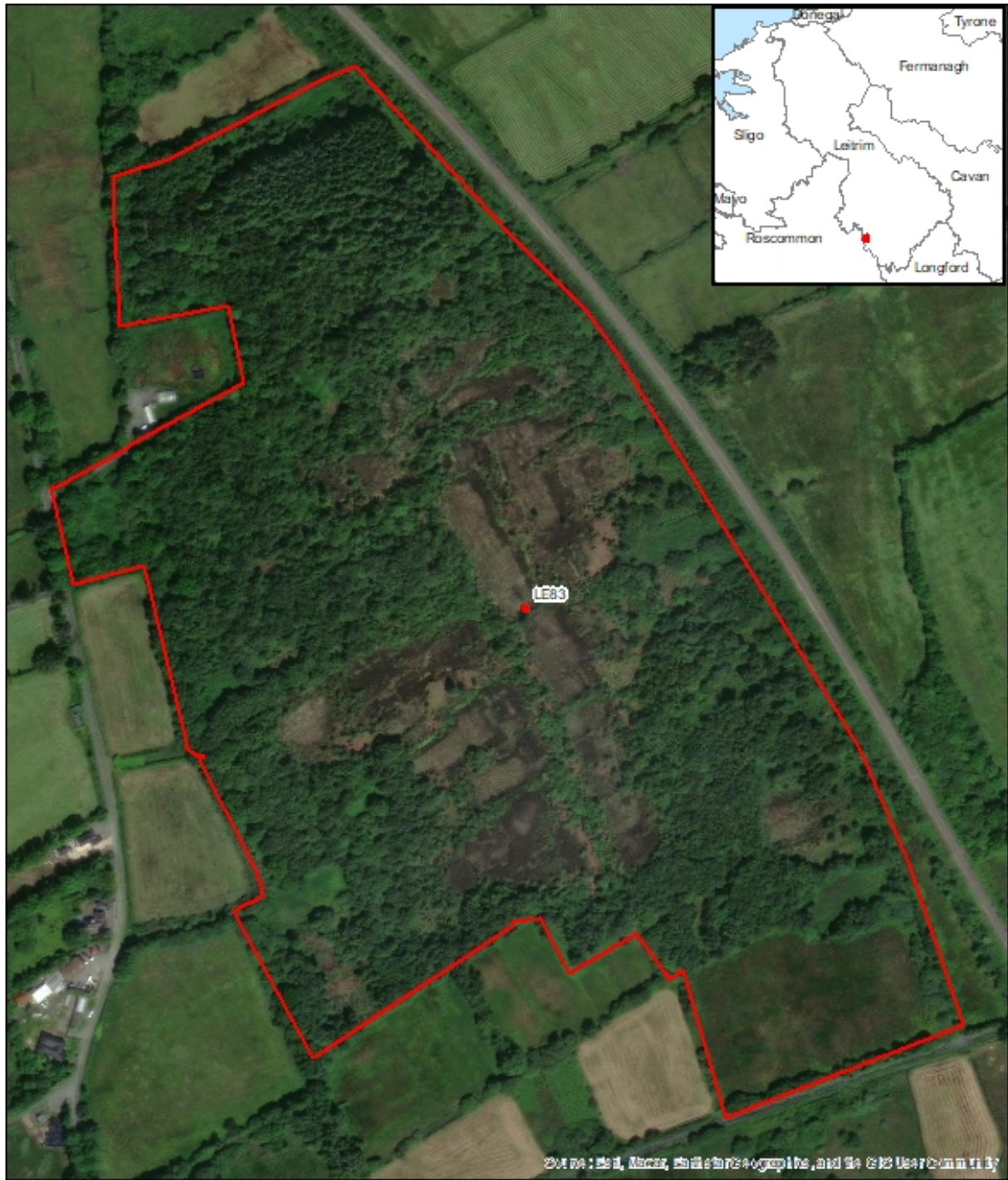
Succisa pratensis

Ulex europaeus

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



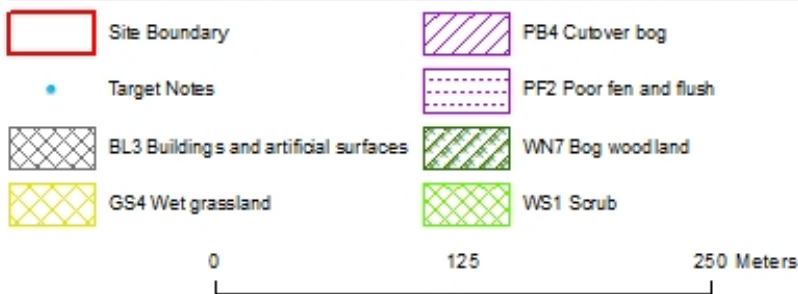
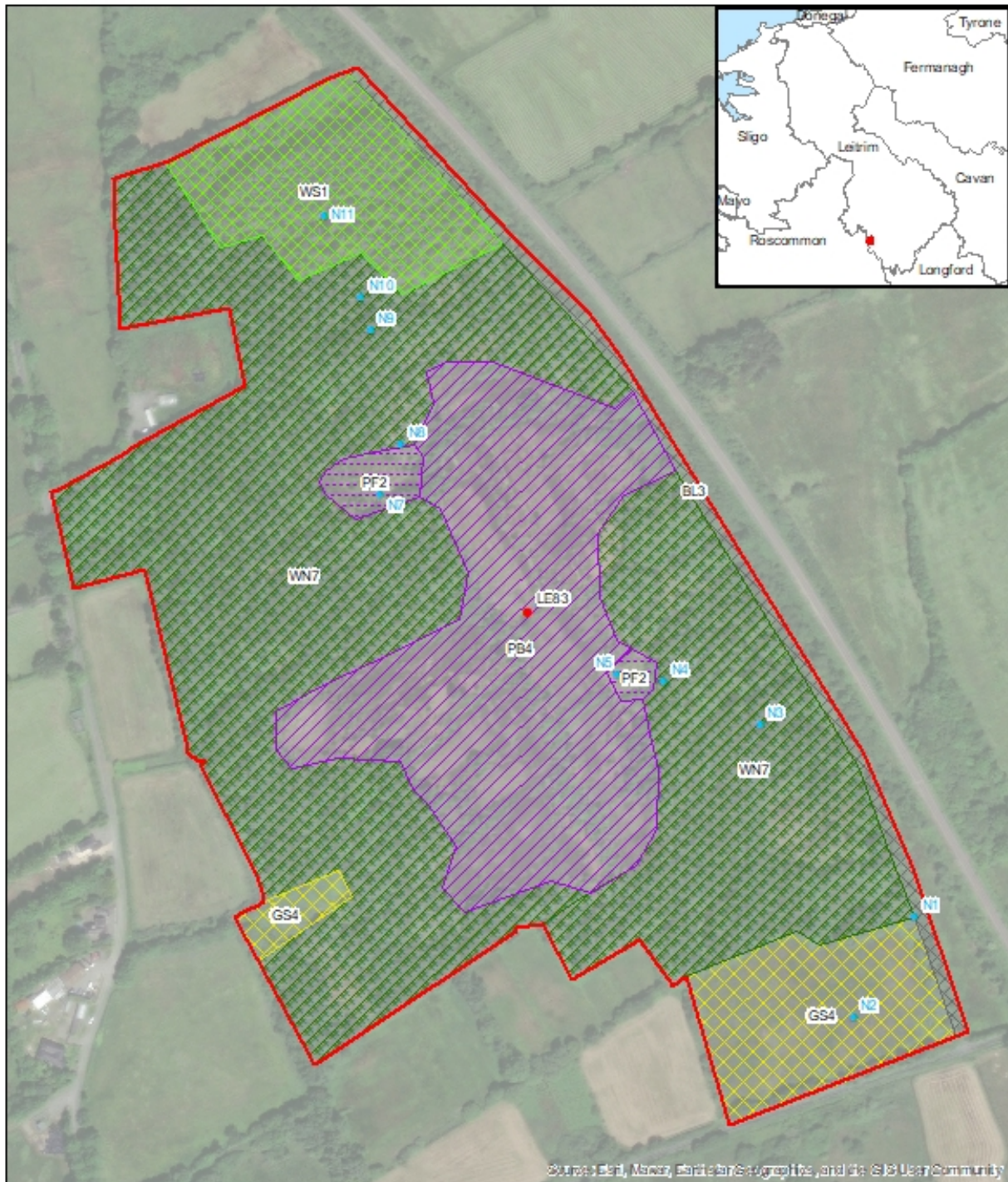
Source: Esri, Maxar, Earthstar, GeoEye, and the GIS User Community

 Site Boundary

0 125 250 Meters



GIS Habitat map of the site



Site Name: DERRYHALLAGH LOUGH**Site Code:** LE165 **Area (ha):** 4.55 **Grid Ref:** 198524 311250 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

12/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed fen survey recommended

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

UAV survey undertaken

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:

DERRYHALLAGH

Solid Geology:

Marine shelf facies

Subsoil type:

Water

Substrate type:

Clay

Mineral Soil

Substrate stability:

Soft

River catchment:

Shannon Upr

CORINE Habitats:

Land principally occupied by

Site Location

Mesotrophic lake fringed with transition mire located less than 1km to the east of Drumshanbo Co. Leitrim.

Site Description and Wetland Habitats Recorded

Mesotrophic lake with yellow water-lily growing abundantly on the sub-margins. On the landward side of this there is a narrow band of reedswamp/transition mire (with species such as *Mentha aquatica*, *Myosotis scorpioides*, *Galium palustre*, *Lychnis flos-cuculi* and *Typha*) growing around most of the site and willow scrub landward of that. The lake is connected to ROSCUNNISH Lough, which lies 250m to the east by a drainage channel.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Mesotrophic lake with yellow water-lily on the sub margins and a narrow strip of reedswamp/transition mire with species such as <i>Carex rostrata</i> , <i>Mentha</i> , and <i>Myosotis</i> on the margins.
N2	HABITAT	<i>Alnus</i> and <i>Salix</i> treeline.
N3	HABITAT	Wet grassland dominated by <i>Juncus effusus</i> .

Management Recommendations following survey

Increase buffer zone around lake in an effort to control/limit excess nutrients from entering the lake system.

Future Survey Recommendations

Undertake a detailed fen survey of the transition mire.

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

Some of the areas of transition mire around the edge of the lake likely correspond to the EU Annex I habitat 7140 Transition Mires and Quaking Bogs.

Main Fossitt habitats on site	EU Habitats Directive habitats on site
FL4 Mesotrophic lakes	7140 Transition mires and quaking bogs
FS1 Reed and large sedge swamps	
FS2 Tall herb swamps	
FW2 Depositing/lowland rivers	
FW4 Drainage ditches	
GS4 Wet grassland	
PF3 Transition mire & quaking bog	
WS1 Scrub	
Fossitt habitats surrounding site	
BL3 Buildings and artificial surfaces	
FW2 Depositing/lowland rivers	
FW4 Drainage ditches	
GA1 Improved agricultural grassland	
GS4 Wet grassland	
WL1 Hedgerows	
WL2 Treelines	
WS1 Scrub	

Landuse / Management Activity	Frequency of use	
Boating	1 Rare (<5%)	
Fishing	1 Rare (<5%)	
Grazing - cattle	2 Occasional (5-20%)	
Impacting Activity (EU code and title)	Intensity	Impact

A04.02.01 non intensive cattle grazing	C = low	+1= natural positive influence
H01.05 diffuse pollution to surface waters due to	B = medium	- 1 = reparable negative influence
J02.05 Modification of hydrographic functioning,	C = low	- 1 = reparable negative influence

Threats

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

J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name

Alnus glutinosa

Caltha palustris

Carex panicea

Carex rostrata

Cicuta virosa

Equisetum fluviatile

Filipendula ulmaria

Galium palustre

Iris pseudacorus

Lychnis flos-cuculi

Lycopus europaeus

Lythrum salicaria

Mentha aquatica

Myosotis scorpioides

Nuphar lutea

Phalaris arundinacea

Ranunculus repens

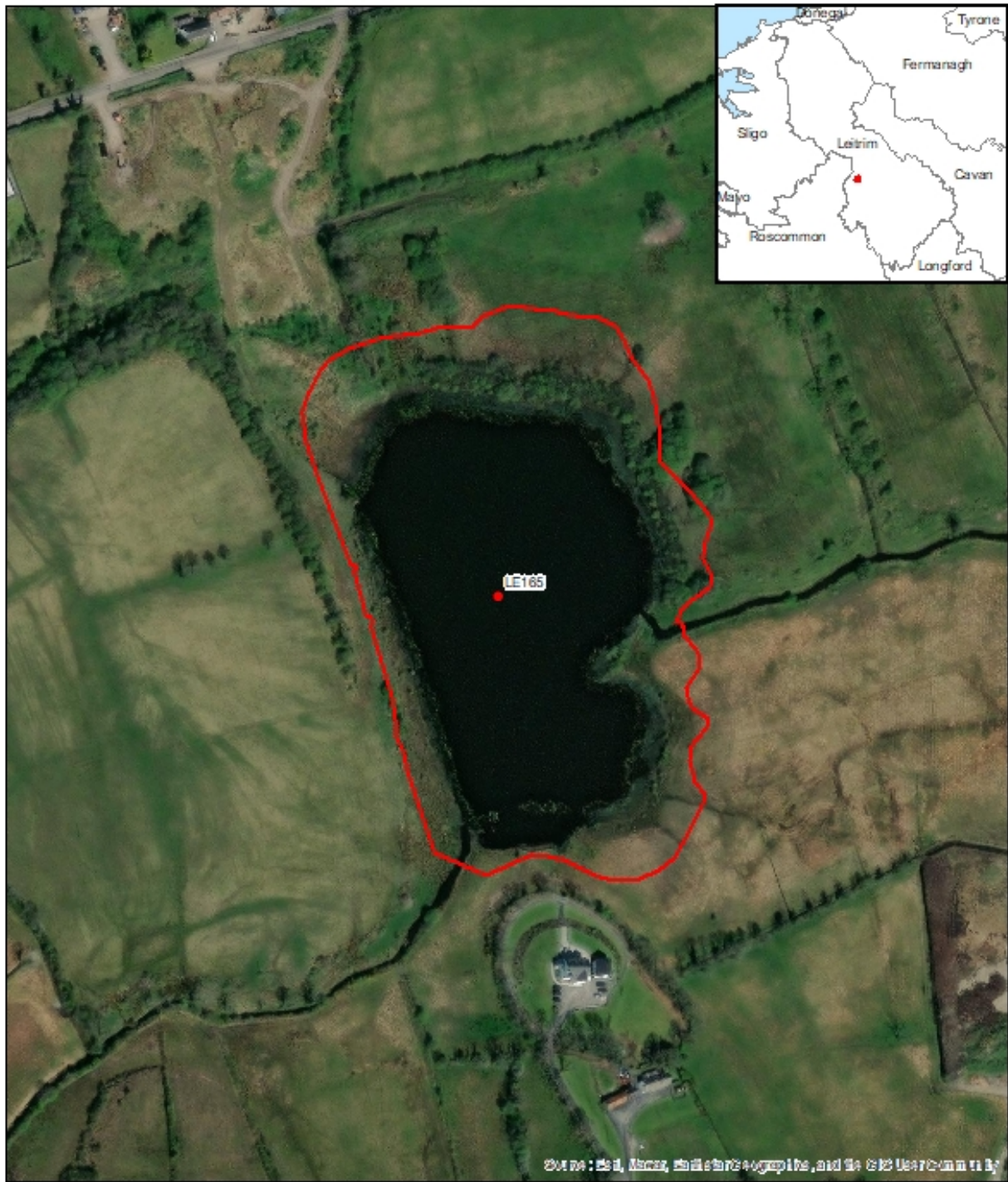
Salix sp.

Typha latifolia

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



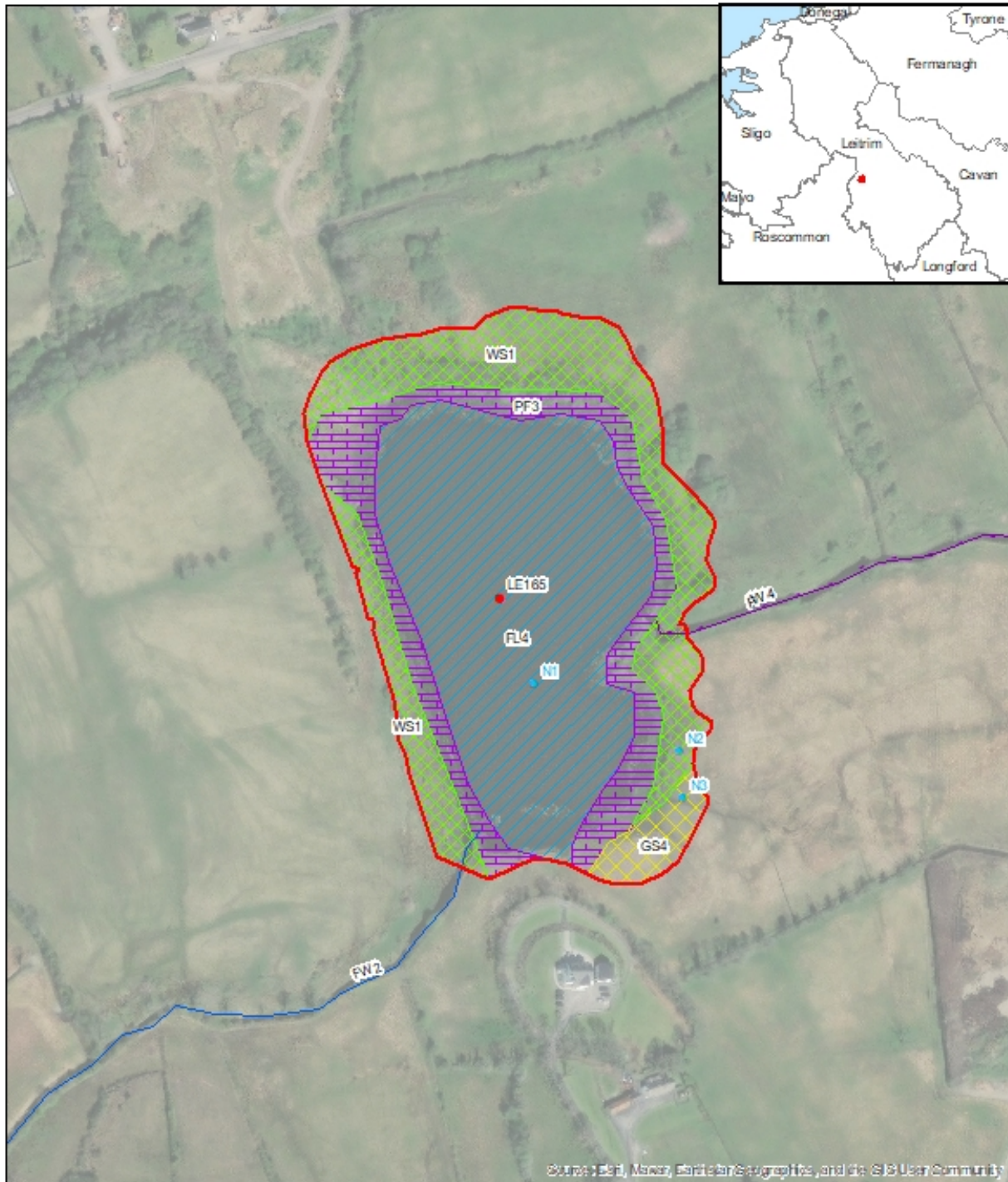
Source: Esri, Maxar, Earthstar, GeoEye, and the GIS User Community

 Site Boundary

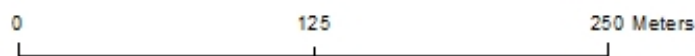
0 125 250 Meters



GIS Habitat map of the site



- Site Boundary
- FL4 Mesotrophic lakes
- Target Notes
- GS4 Wet grassland
- PF3 Transition mire and quaking bog
- WS1 Scrub
- FW2
- FW4



Site Name: DROMORE WETLAND**Site Code:** LE377 **Area (ha):** 5.84 **Grid Ref:** 181187 341302 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

10/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed fen survey recommended

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

DROMORE (Rosclagher By)

Solid Geology:

Marine shelf facies

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Firm

River catchment:

Garvogue

CORINE Habitats:

Land principally occupied by

Site Location

Dromore Wetland is located 7km west of the town of Manorhamilton, Co. Leitrim.

Site Description and Wetland Habitats Recorded

Area of cutover raised bog which has developed into a mosaic of wet grassland and scrub. Some wetter hollows with standing water include small areas of sedge rich transition mire or *Carex paniculata* reed swamp. The site is largely impacted by drainage channels within and around the wetland.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Abundant horsetails, <i>Filipendula</i> , and lots of false oat grass.
N10	HABITAT	Wet grassland dominated by <i>Juncus</i> .
N11	HABITAT	<i>Rubus</i> scrub with <i>Filipendula</i> and <i>Iris</i> growing in the drains.
N12	HABITAT	Wet grassland dominated by <i>Juncus effusus</i> .
N2	HABITAT	Sphagnum cover good, with abundant <i>Calluna</i> and <i>e.vaginatum</i> . Birch and <i>ulex</i> scrub encroaching.
N3	HABITAT	Abundant Sphagnum cover with <i>Betula</i> , <i>Juncus</i> and <i>Polytrichum commune</i> .
N4	HABITAT	Fen and flush. Abundant <i>Commarum palustre</i> , <i>Equisetum fluv</i> , <i>Caltha</i> and <i>Epilobium palustre</i> . In an area of old cutover. Very wet.
N5	HABITAT	<i>Betula</i> and <i>Salix</i> woodland. Undergrowth dominated by <i>Equisetum</i> , <i>Filipendula</i> and <i>Caltha</i> .
N6	HABITAT	Area dominated by <i>Carex rostrata</i> and <i>Equisetum</i> . Also abundant in <i>Filipendula</i> , <i>Succisa</i> , <i>Commarum</i> and <i>Juncus articulatus</i> . <i>Dactyloriza maculata</i> , <i>Valerian</i> and <i>Betula</i> also present.
N7	HABITAT	Cutover dominated by <i>Molinia</i> , <i>Calluna</i> and <i>Vaccinium myrtillis</i> .
N8	HABITAT	<i>Salix</i> scrub and <i>Rubus</i> scrub.
N9	HABITAT	Wet grassland.

Management Recommendations following survey

Consider blocking the internal drains of the site.

Future Survey Recommendations

Consider a hydrological survey to assess the impact that the drains are having on the site. Detailed fen survey to determine the quality of transition mire on the site.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

The following habitat present corresponds to an EU Habitats Directive Habitat: 7140 Transition mires and quaking bogs.

Main Fossitt habitats on site

FS1 Reed and large sedge swamps

FW2 Depositing/lowland rivers

FW4 Drainage ditches

EU Habitats Directive habitats on site

7140 Transition mires and quaking bogs

GM1 Marsh

GS4 Wet grassland

PB4 Cutover bog

PF2 Poor fen and flush

PF3 Transition mire & quaking bog

WN6 Wet willow-alder-ash woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

GS4 Wet grassland

WL1 Hedgerows

WL2 Treelines

Landuse / Management Activity

Grazing - unknown

Peat cutting (mechanical)

Frequency of use

1 Rare (<5%)

1 Rare (<5%)

Impacting Activity (EU code and title)

J02.05 Modification of hydrographic functioning,

Intensity

B = medium

Impact

- 1 = reparable negative influence

Threats

A03.02 abandonment / lack of mowing

Flora on site - Latin & English species name*Angelica sylvestris**Anthoxanthum odoratum**Arrhenatherum elatius**Betula pubescens**Calluna vulgaris**Carex lasiocarpa**Carex nigra**Carex paniculata**Carex rostrata**Cladonia portentosa**Comarum palustre**Dactylorhiza maculata subsp. ericetorum**Drosera rotundifolia**Equisetum fluviatile**Erica tetralix**Eriophorum vaginatum**Filipendula ulmaria**Galium palustre**Juncus articulatus**Juncus effusus**Lychnis flos-cuculi**Molinia caerulea**Narthecium ossifragum**Polytrichum commune**Potentilla erecta**Pteridium aquilinum*

Rubus fruticosus agg.

Salix sp.

Sphagnum capillifolium subsp. *rubellum*

Sphagnum fallax

Sphagnum palustre

Sphagnum squarrosum

Stachys palustris

Succisa pratensis

Ulex europaeus

Urtica dioica

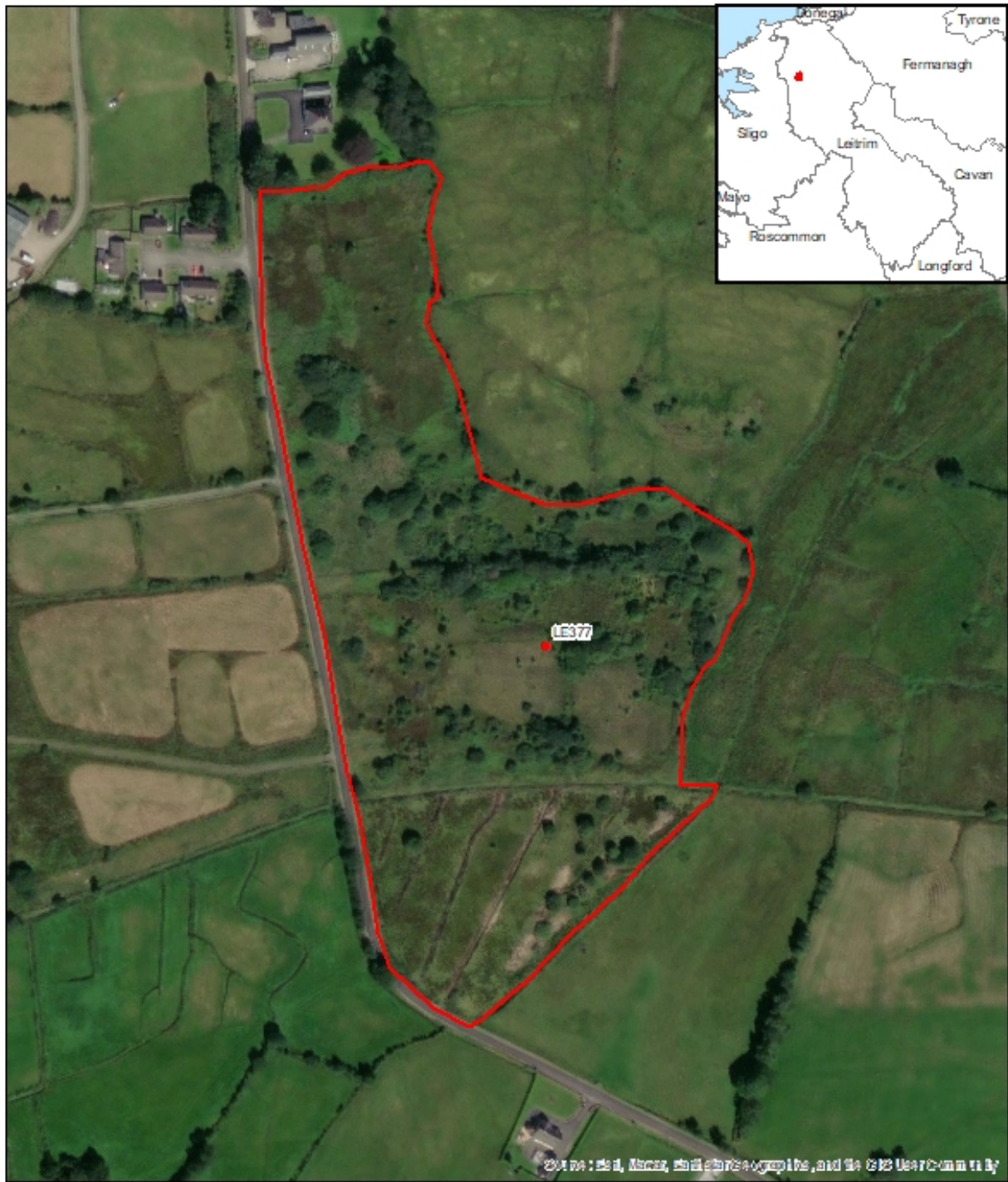
Vaccinium myrtillus

Valeriana officinalis

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site

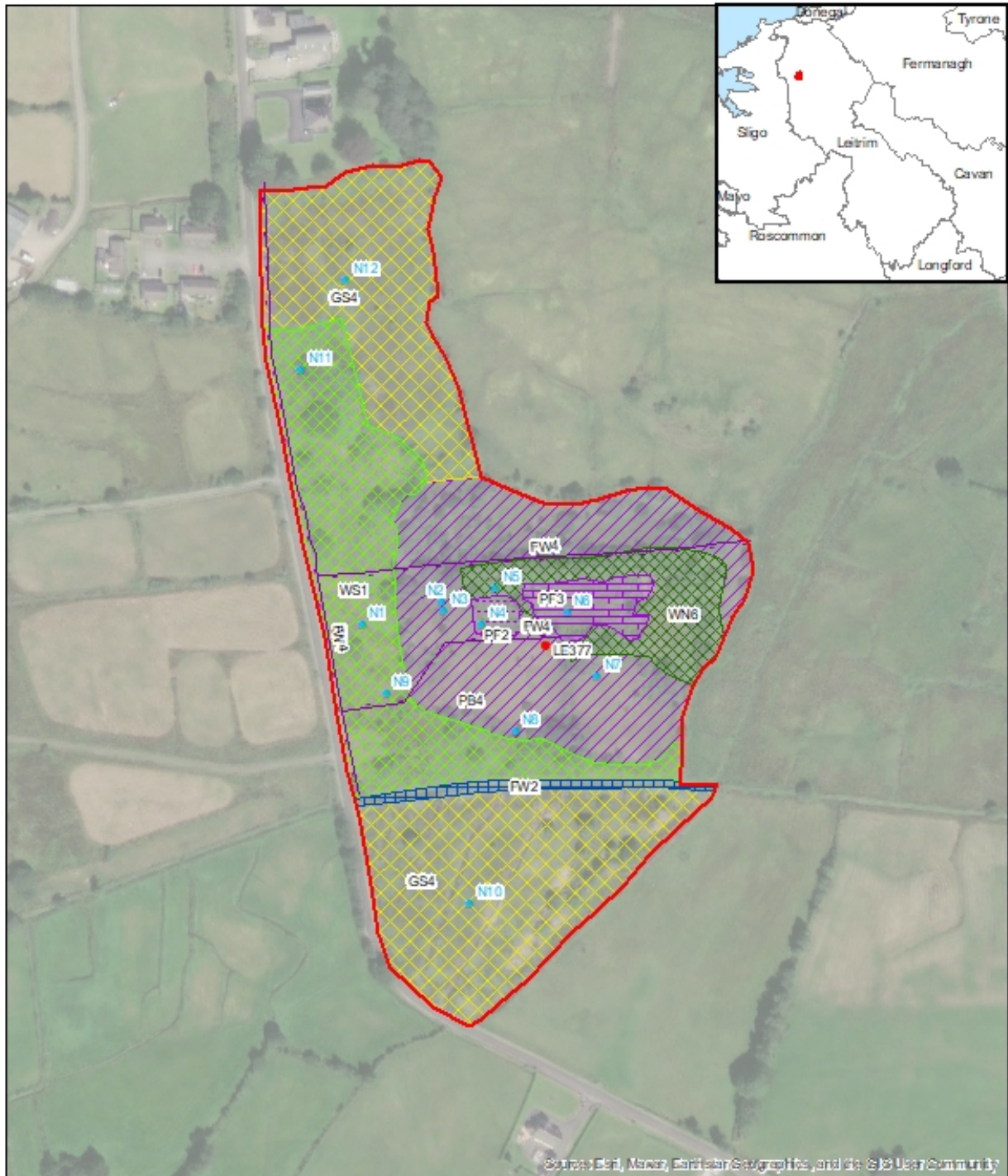


 Site Boundary

0 125 250 Meters



GIS Habitat map of the site



Site Name: DRUMSHANBO SOUTH CUTOVER**Site Code:** LE66 **Area (ha):** 20.96 **Grid Ref:** 214792 289070 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

14/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Wetland Present on the Site

YES

Conservation ranking after survey:

D Rating: Local conservation value (moderate value)

Townland:

DRUMSHANBO SOUTH

Solid Geology:

COURCEYAN "basal clastics"

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Firm

River catchment:

Shannon Upr

CORINE Habitats:

Peat bogs

Site Location

Remnant raised bog and cutover located 3km to the north-north-west of Drumlish.

Site Description and Wetland Habitats Recorded

Small area of remnant raised bog that is being actively cut for turf. The high bog is highly degraded being dry, Sphagnum-poor and dominated by heather. Cutover is variable with birch encroaching in several areas and patches of dry birch woodland present. There are some areas of cutover in the east of the site that are wetter with a moderate Sphagnum cover that are dominated by *Eriophorum vaginatum*. Several parallel drains delineating turf plots run parallel to each other right across the cutover.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Raised bog in very poor condition. Dry and Sphagnum poor.
N2	DAMAGE	Active turf cutting.
N3	HABITAT	Wet grassland dominated by <i>Juncus acutiflorus</i> and <i>J. effusus</i> .
N4	HABITAT	Cutover bog with moderate Sphagnum cover here. <i>Eriophorum vaginatum</i> dominates with <i>Molinia</i> abundant and birch spreading.
N5	HABITAT	Dry bog woodland. <i>Rubus</i> dominated. With <i>Betula</i> (some mature) growing.

Management Recommendations following survey

Liaise with turf cutters with a view to stopping turf cutting. Consider blocking the parallel drains on the cutover that delineate turf plots as they will improve the condition of the bog.

Future Survey Recommendations

None.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

FW4 Drainage ditches

FW4 Drainage ditches

GS4 Wet grassland

HD1 Dense bracken

PB1 Raised bogs

PB4 Cutover bog

WN7 Bog woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

GS4 Wet grassland

WD4 Conifer plantation

WS1 Scrub

EU Habitats Directive habitats on site

None noted

Landuse / Management Activity

Peat cutting (mechanical)

Frequency of use

3 Frequent (21-50%)

Impacting Activity (EU code and title)	Intensity	Impact
C01.03.02 mechanical removal of peat	B = medium	- 2 = irreparable negative influence
J02.05 Modification of hydrographic functioning,	B = medium	- 2 = irreparable negative influence

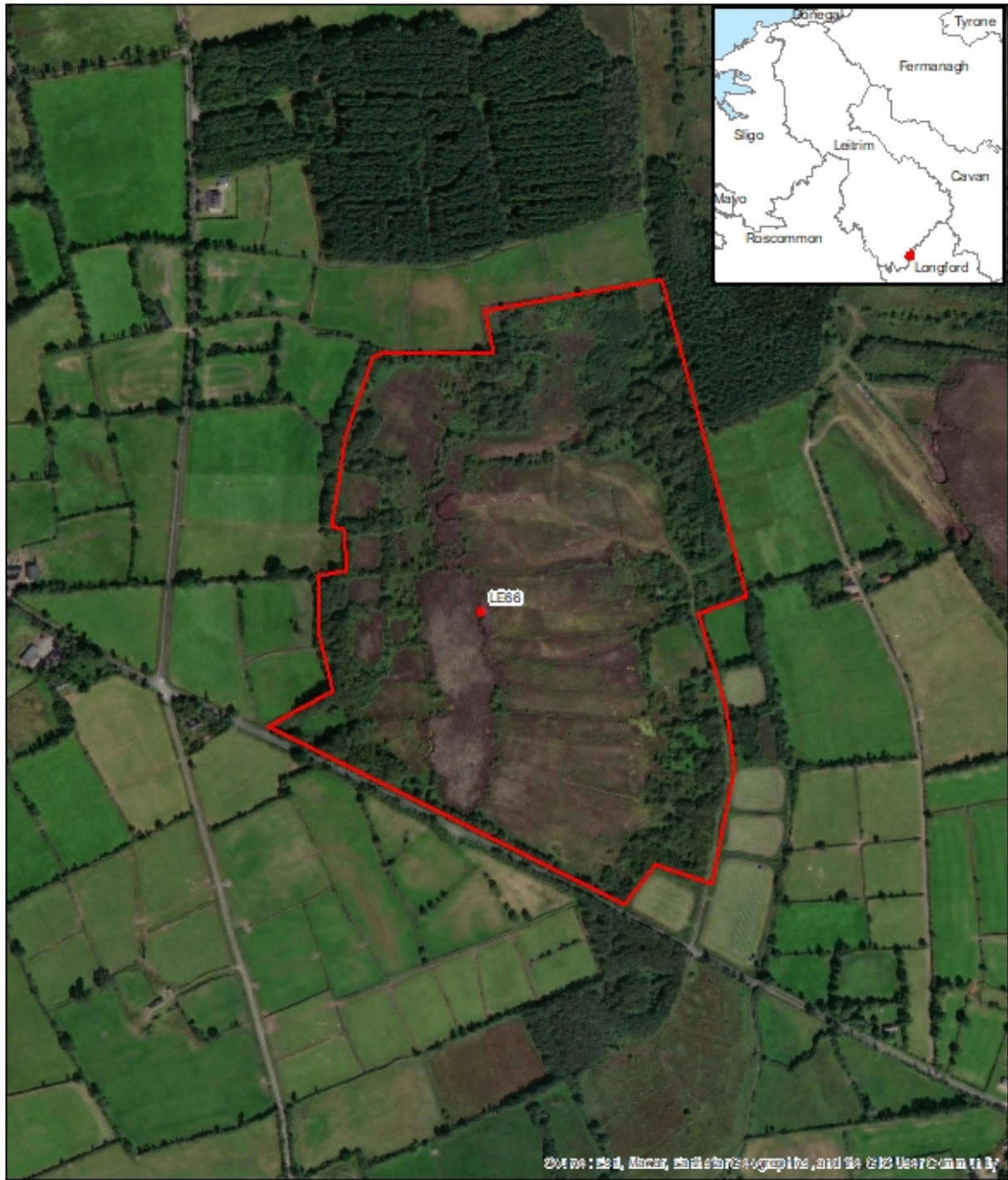
Threats

C01.03.02 mechanical removal of peat
 J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name*Andromeda polifolia**Betula pubescens**Calluna vulgaris**Carex panicea**Cladonia portentosa**Cladonia uncialis**Comarum palustre**Drosera rotundifolia**Erica tetralix**Eriophorum angustifolium**Eriophorum vaginatum**Juncus effusus**Molinia caerulea**Narthecium ossifragum**Potamogeton sp.**Pteridium aquilinum**Rhynchospora alba**Rubus fruticosus agg.**Sphagnum capillifolium subsp. rubellum**Sphagnum cuspidatum**Sphagnum magellanicum**Sphagnum papillosum**Succisa pratensis**Trichophorum cespitosum***Fauna on site - English and Latin species name**

No faunal observations were made

Aerial Photograph showing location of the site

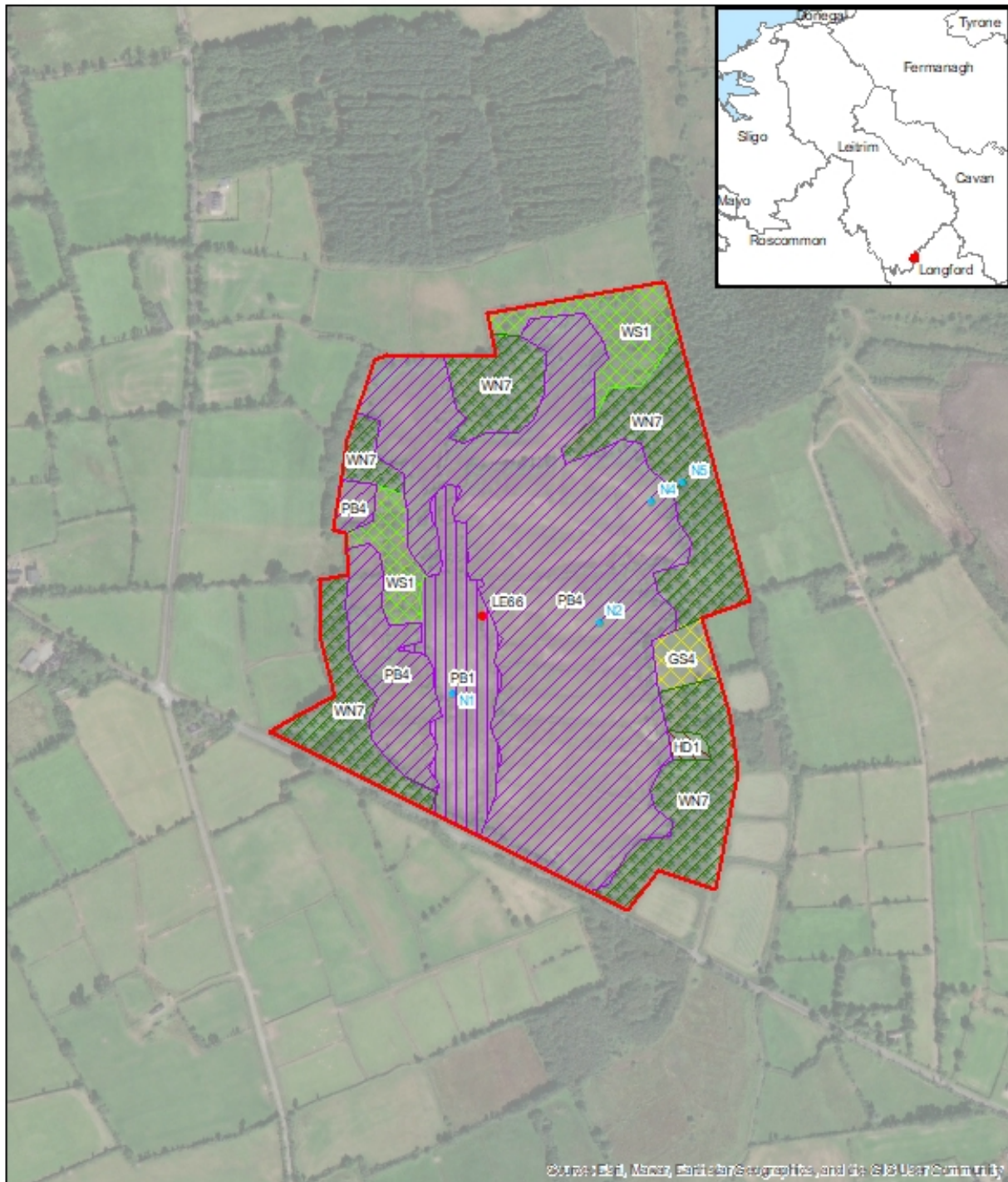


 Site Boundary

0 125 250 500 Meters

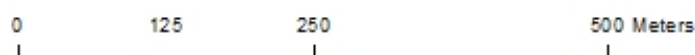


GIS Habitat map of the site



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

- | | | | |
|---|-------------------|---|------------------|
|  | Site Boundary |  | PB1 Raised bog |
|  | Target Notes |  | PB4 Cutover bog |
|  | GS4 Wet grassland |  | WN7 Bog woodland |
|  | HD1 Dense bracken |  | WS1 Scrub |



Site Name: EDENTINNY BALLINAMORE**Site Code:** LE58 **Area (ha):** 14.91 **Grid Ref:** 210842 310538 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

13/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken
 Site previously mapped in GIS dataset
 Site previously reported from literature
 UAV survey undertaken

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:ARDRUM
CREEVY**Solid Geology:**

Marine shelf facies

Subsoil type:

FenPt

Substrate type:

Mineral Soil

Substrate stability:

Firm

River catchment:

Erne

CORINE Habitats:

Pastures

Site Location

Turlough located 2km to the south-west of Ballinamore, Co. Leitrim.

Site Description and Wetland Habitats Recorded

Turlough with good zonation. Floods in winter with little or no open water present after very dry summer spells. Much of the site is characterised by Carex dominated swamp, but there is good vegetation zonation present with fen, wet woodland and species-rich wet grassland also occurring also occurring.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Open water with Equisetum fluviatile.
N2	HABITAT	Sedge dominated.
N3	GENERAL	Nice levels of zonation. Tree layer, herb, layer, reed grass layer, sedge layer, pond weed layer and open water.
N4	HABITAT	Wet grassland dominated by Juncus.
N5	HABITAT	Improved wet grassland.
N6	HABITAT	Improved grassland.

Management Recommendations following survey

Continue current management. Appears to be little nutrient enrichment in the area at present.

Future Survey Recommendations

Detailed vegetation survey of turlough and woodland areas.

Landowner Information Comments

Landowner resides in the United States.

Description of potential EU Habitats Directive Annex 1 habitats

Much of this site likely corresponds to the priority habitat 3180 Turloughs and the wet woodland may correspond to the EU Annex I habitat 91E0 Alluvial forest with Alnus glutinosa and Fraxinus excelsior (Alno-padion, Alnion incanae, Salicion albae).

Main Fossitt habitats on site

FL6 Turloughs
 FS1 Reed and large sedge swamps
 FW4 Drainage ditches
 GS4 Wet grassland
 WL2 Treelines
 WN6 Wet willow-alder-ash woodland
 WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
 FW2 Depositing/lowland rivers
 GA1 Improved agricultural grassland
 GS4 Wet grassland
 WL1 Hedgerows
 WL2 Treelines
 WN6 Wet willow-alder-ash woodland
 WS1 Scrub

EU Habitats Directive habitats on site

3180 *Turloughs
 91E0 *Alluvial forests with Alnus glutinosa and

Landuse / Management Activity

Grazing - cattle

Frequency of use

1 Rare (<5%)

Grazing - sheep

1 Rare (<5%)

Impacting Activity (EU code and title)

H01.05 diffuse pollution to surface waters due to

Intensity

C = low

Impact

- 1 = reparable negative influence

Threats

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

Flora on site - Latin & English species name*Angelica sylvestris**Caltha palustris**Carex acuta**Carex acutiformis**Carex leporina**Carex nigra**Carex vesicaria**Centaurea nigra**Cirsium dissectum**Comarum palustre**Eleocharis palustris**Equisetum fluviatile**Filipendula ulmaria**Iris pseudacorus**Juncus acutiflorus**Juncus conglomeratus**Lychnis flos-cuculi**Lythrum salicaria**Mentha aquatica**Persicaria amphibia**Phalaris arundinacea**Plantago lanceolata**Potentilla anserina**Rubus fruticosus agg.**Salix sp.**Stellaria graminea**Valeriana officinalis**Veronica scutellata**Vicia cracca***Fauna on site - English and Latin species name**

Common Frog

Aerial Photograph showing location of the site

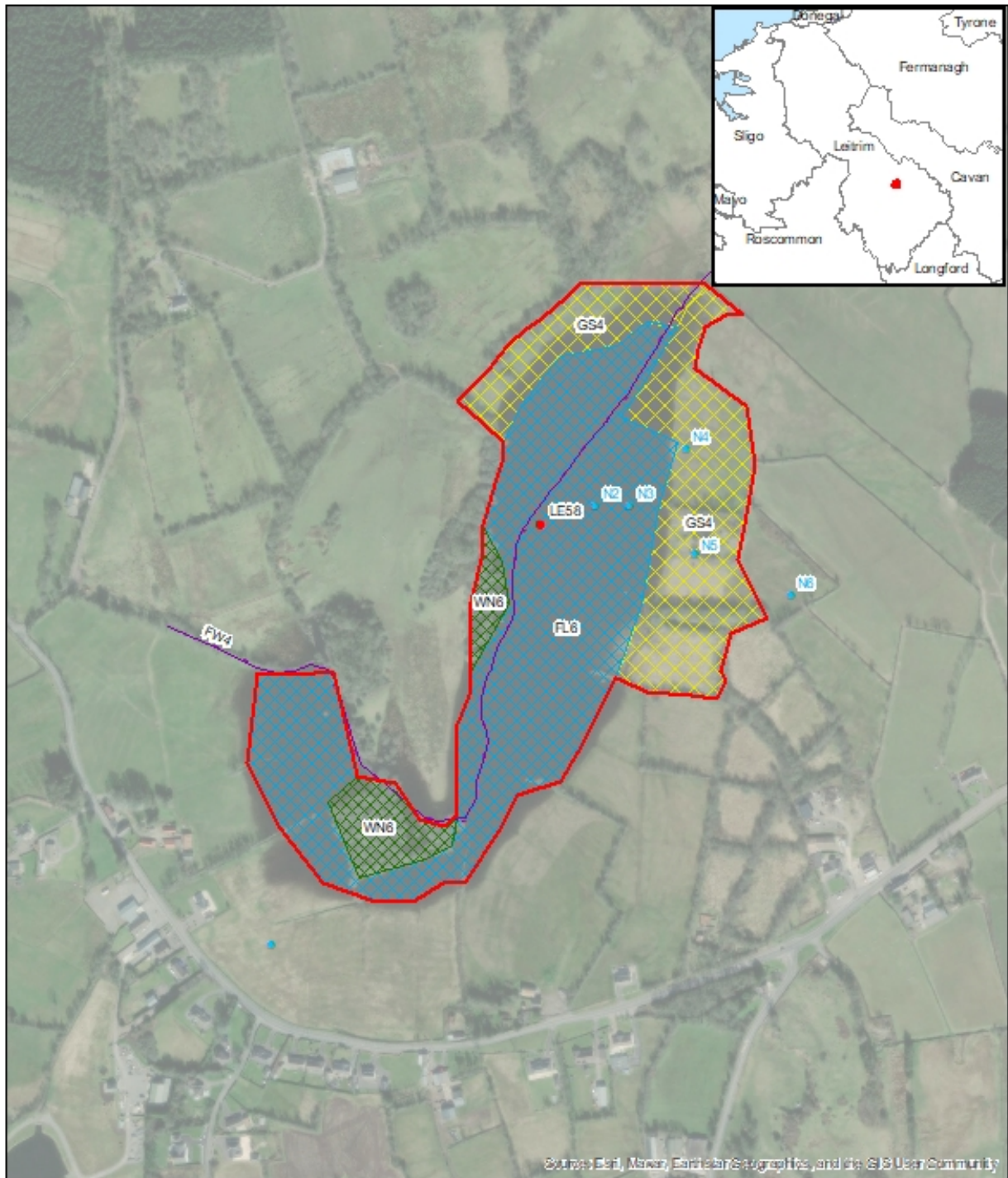


 Site Boundary

0 125 250 500 Meters

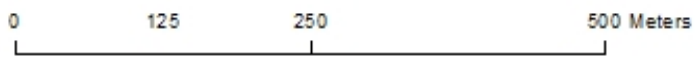


GIS Habitat map of the site



Source: Edr, Mawr, Earthstar Geographics, and the GIS User Community

- Site Boundary
- GS4 Wet grassland
- Target Notes
- WN6 Wet willow-alder-ash woodland
- FW4 Drainage ditches
- FL6 Turloughs



Site Name: FUNSHINAGH LOUGH**Site Code:** LE236 **Area (ha):** 7.03 **Grid Ref:** 206124 304385 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

13/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

FUNSHINAGH

Solid Geology:

Marine shelf facies

Subsoil type:

Cut

Substrate type:

Mineral Soil

Peat

Substrate stability:

Soft

River catchment:

Shannon Upr

CORINE Habitats:

Land principally occupied by

Site Location

Mesotrophic lake located 4km to the south east of Keshcarrigan in south county Leitrim. Streams connect the lake with Scardaun Lough in the north and with Drumcollop Lough in the north-east. A stream exits the lake to the south, eventually meeting the Eslin River.

Site Description and Wetland Habitats Recorded

Mesotrophic lake supporting abundant yellow water-lily towards the edges of the open water and surrounded almost entirely by an extensive area of reed beds. Species-poor wet grassland to the east and willow scrub scattered amongst the reed beds in places. Note that the Irish Damselfly (*Coenagrion lunulatum*), which is classed as Vulnerable on Irelands Red List (Nelson et al., 2011) has been recorded from here in the past as well as the water beetle (*Hydroporus scalesianus*), which is classed as Vulnerable on the Red List (Foster et al., 2009).

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Open water with abundances of yellow pond lily.
N2	HABITAT	Reed bed dominated by Phragmites with Menyanthes growing closer to the open water.
N3	HABITAT	Wet grassland dominated by Juncus effusus.
N4	HABITAT	Willow trees and scrub surrounded by FS1.

Management Recommendations following survey

Current grazing regime seems to have a positive influence on wet grassland. Potentially exclude animals from wetter areas including reed beds and only graze during summer months.

Future Survey Recommendations

A dragonfly survey is recommended to establish whether the Irish damselfly (recorded here in 2002) still persists, and if so< to assess it's abundance at the site. Also a water beetle survey to establish whether the *Hydroporus scalesianus* (recorded here in 2005) still persists.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought any of the habitats present correspond to any of the habitats listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

FL4 Mesotrophic lakes
 FS1 Reed and large sedge swamps
 FW2 Depositing/lowland rivers
 FW4 Drainage ditches
 GS4 Wet grassland
 WS1 Scrub

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
 FW4 Drainage ditches
 GA Improved Grassland
 GS4 Wet grassland
 WL1 Hedgerows
 WL2 Treelines
 WS1 Scrub

Grazing - cattle

2 Occasional (5-20%)

Impacting Activity (EU code and title)**Intensity****Impact**

A04.01.01 intensive cattle grazing

C = low

+1= natural positive influence

H01.05 diffuse pollution to surface waters due to

B = medium

- 1 = reparable negative influence

Threats

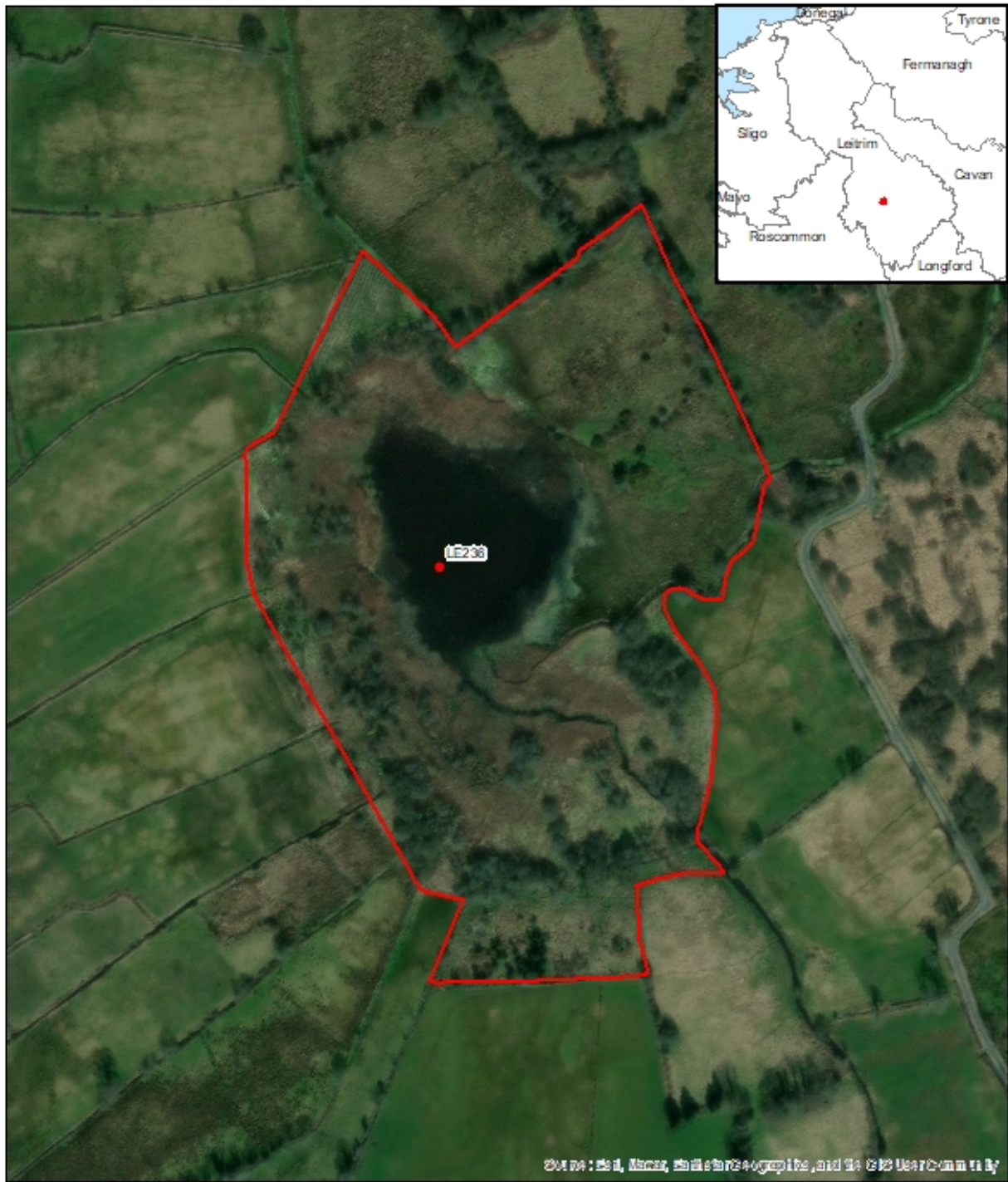
H01.05 diffuse pollution to surface waters due to agricultural and forestry activities

J02.06.01 surface water abstractions for agriculture

Flora on site - Latin & English species name*Alnus glutinosa**Comarum palustre**Crataegus monogyna**Equisetum fluviatile**Hydrocotyle vulgaris**Iris pseudacorus**Juncus effusus**Lychnis flos-cuculi**Mentha aquatica**Menyanthes trifoliata**Myosotis scorpioides**Nuphar lutea**Phalaris arundinacea**Phragmites australis**Ranunculus flammula**Ranunculus repens**Salix sp.**Schoenoplectus lacustris**Sparganium erectum**Typha latifolia**Ulex europaeus**Urtica dioica***Fauna on site - English and Latin species name**

Mute Swan

Aerial Photograph showing location of the site



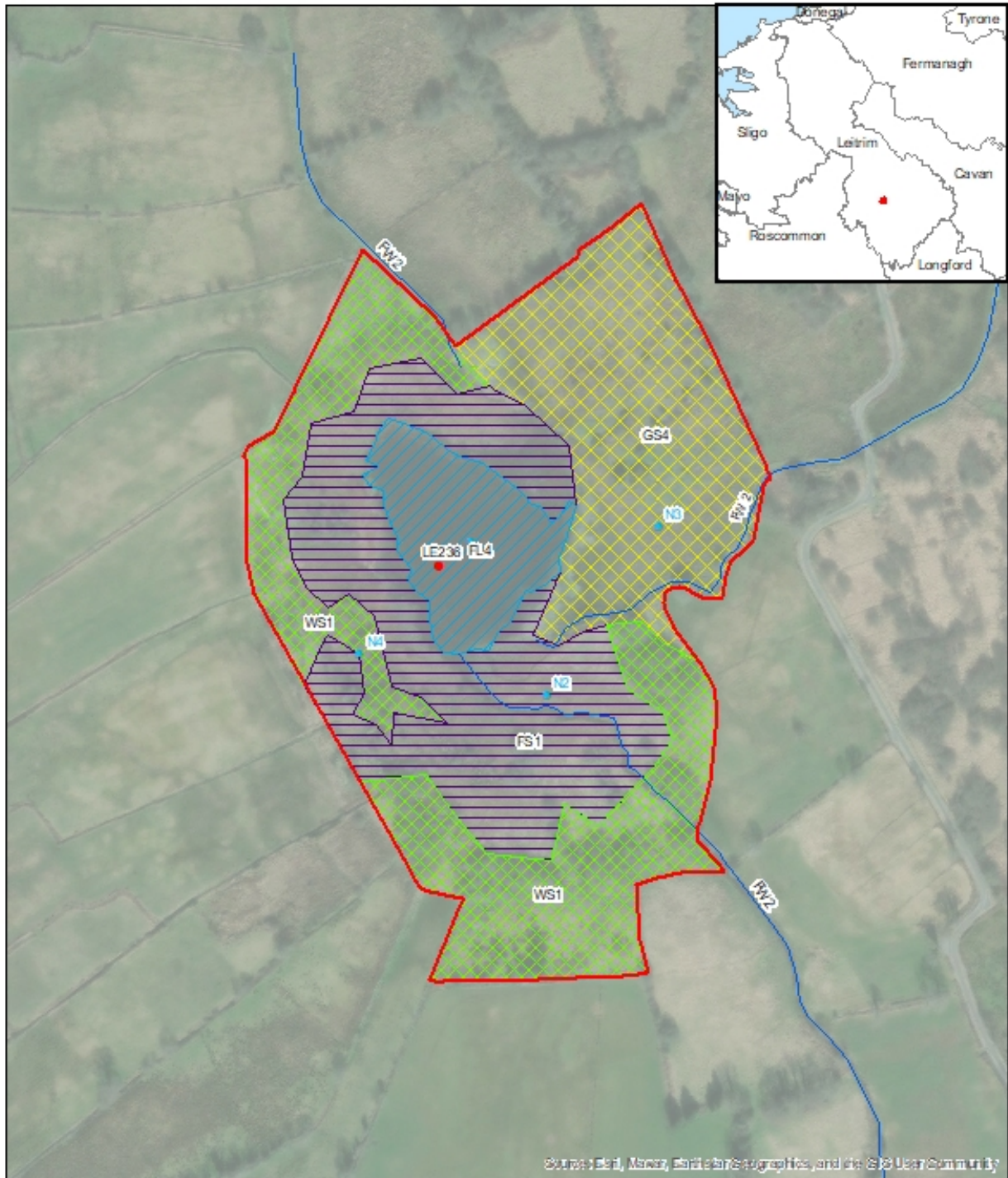
Source: Esri, DeLorme, Garmin, GeoEye, IGN, GeoEye, and the GIS User Community

 Site Boundary

0 125 250 Meters



GIS Habitat map of the site



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Site Name: GORTNADERRARY LAKE**Site Code:** LE344 **Area (ha):** 18.18 **Grid Ref:** 195990 345767 **County:** LE**Site designation(s):**SMR
Undesignated site**Surveyed by:**

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

11/07/2023

Survey Code:

LEWS2023

Site source information:Detailed turlough survey recommended
Detailed Wetland Survey undertaken
Site previously mapped in GIS dataset
Site previously reported from literature**Wetland Present on the Site**

YES

Conservation ranking after survey:

B Rating: Nationally Important

Townland:

GORTNADERRARY

Solid Geology:

LEITRIM GP; Visean

Subsoil type:

TNCSSs

Substrate type:Clay
Peat**Substrate stability:**

Firm

River catchment:

Drowes

CORINE Habitats:

Land principally occupied by

Site Location

Gortnaderrary Lake marked as Lough Tiernan on the 6" maps is located 1.5km west of Kiltyclogher in Co. Leitrim.

Site Description and Wetland Habitats Recorded

The lake is in fact a turlough, which displays some good vegetation zonation. There are some inflowing streams to basin in the south-west and south-east, but no outflow. as water leaves appears to leave through submerged swallow hole. West of the lake the land rises up a slope. Towards the top of this is mainly scrub with clearings of wet grassland and adjacent to conifer plantations. Where the land levels out towards the bottom of the slope open blanket bog habitat with high Sphagnum cover occurs.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Wet grassland dominated with Juncus effusus
N10	HABITAT	Turlough 2 -3 levels of zonation.Floods and drains very quickly.
N11	HYDROLOGY	Fast flowing stream leading to turlough.
N12	HYDROLOGY	Swallow hole.
N13	HABITAT	Alder and pine treeline.
N14	HABITAT	Birch, alder and willow.
N15	HYDROLOGY	Narrow river.
N16	HABITAT	Wet grassland dominated by Juncus.
N17	HABITAT	Wet grassland. Dominated by Juncus. Looks nice.
N2	HABITAT	Scrub dominated by Salix, Betula, Ulex and rubus.
N3	HABITAT	Wet grassland dominated by Juncus articulatus. Molinia is fr @quent.
N4	HABITAT	Some Sphagnum occurring here (mainly S. fallax and S. papilloum), dominated by Molinia, low Calluna and Erica growing. Anthoxanthum abundant, Luzula fr @quent, Carex echinata and C. panicea frequent. Polytrichum commune frequent throughout
N5	HYDROLOGY	Steep slope, lots of water coming down into the lake and bog.
N6	HABITAT	Blanket bog. High Sphagnum cover, low Molinia, abundant Tricophorum.
N7	HYDROLOGY	Large drain.

Management Recommendations following survey

Consider drain blocking on the blanket bog section of the site.

Future Survey Recommendations

Detailed turlough survey recommended as site displays good zonation. Survey to establish swallow hole hydrological connectivity also recommended as well as drain survey in blanket bog area to aid restoration. 125

Landowner Information Comments

Landowner indicated that the lake supports a large eel population.

Description of potential EU Habitats Directive Annex 1 habitats

This site contains good example of 3180 Turlough which is a priority habitat listed under Annex I of the EU Habitats Directive. Parts of the blanket bog area to west of the lake have a high Sphagnum cover and may correspond to the EU Annex I habitat 7130 Blanket bog.

Main Fossitt habitats on site

BL1 Stone walls and other stonework
 FL6 Turloughs
 FW1 Eroding/upland rivers
 GS4 Wet grassland
 PB3 Lowland blanket bog
 PB4 Cutover bog
 WL2 Treelines
 WS1 Scrub

EU Habitats Directive habitats on site

3180 *Turloughs
 7130 Blanket bog (*if active bog)

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
 GA1 Improved agricultural grassland
 GS4 Wet grassland
 WD4 Conifer plantation
 WL2 Treelines
 WS5 Recently-felled woodland

Landuse / Management Activity

Grazing - cattle
 Grazing - sheep

Frequency of use

3 Frequent (21-50%)
 3 Frequent (21-50%)

Impacting Activity (EU code and title)

A04.02.01 non intensive cattle grazing
 A04.02.02 non intensive sheep grazing

Intensity

B = medium
 C = low

Impact

0 = neutral
 0 = neutral

Threats

B01.02 artificial planting on open ground (non-native trees)

Flora on site - Latin & English species name

Alisma plantago-aquatica

Alnus glutinosa

Anthoxanthum odoratum

Betula pubescens

Calluna vulgaris

Carex echinata

Carex nigra

Carex panicea

Cirsium dissectum

Cladonia portentosa

Comarum palustre

Digitalis purpurea

Drosera rotundifolia

Eleocharis palustris

Equisetum fluviatile

Erica tetralix

Eriophorum angustifolium

Eriophorum vaginatum

Galium palustre

Hydrocotyle vulgaris

Juncus articulatus

Juncus conglomeratus

Juncus effusus

Juncus inflexus

Lotus corniculatus

Luzula multiflora

Molinia caerulea

Myrica gale

Narthecium ossifragum

Persicaria amphibia

Polygala vulgaris

Polytrichum commune

Potentilla erecta

Prunella vulgaris

Rhynchospora alba

Rubus fruticosus agg.

Salix cinerea subsp. *cinerea*

Sphagnum capillifolium subsp. *rubellum*

Sphagnum cuspidatum

Sphagnum fallax

Sphagnum squarrosum

Succisa pratensis

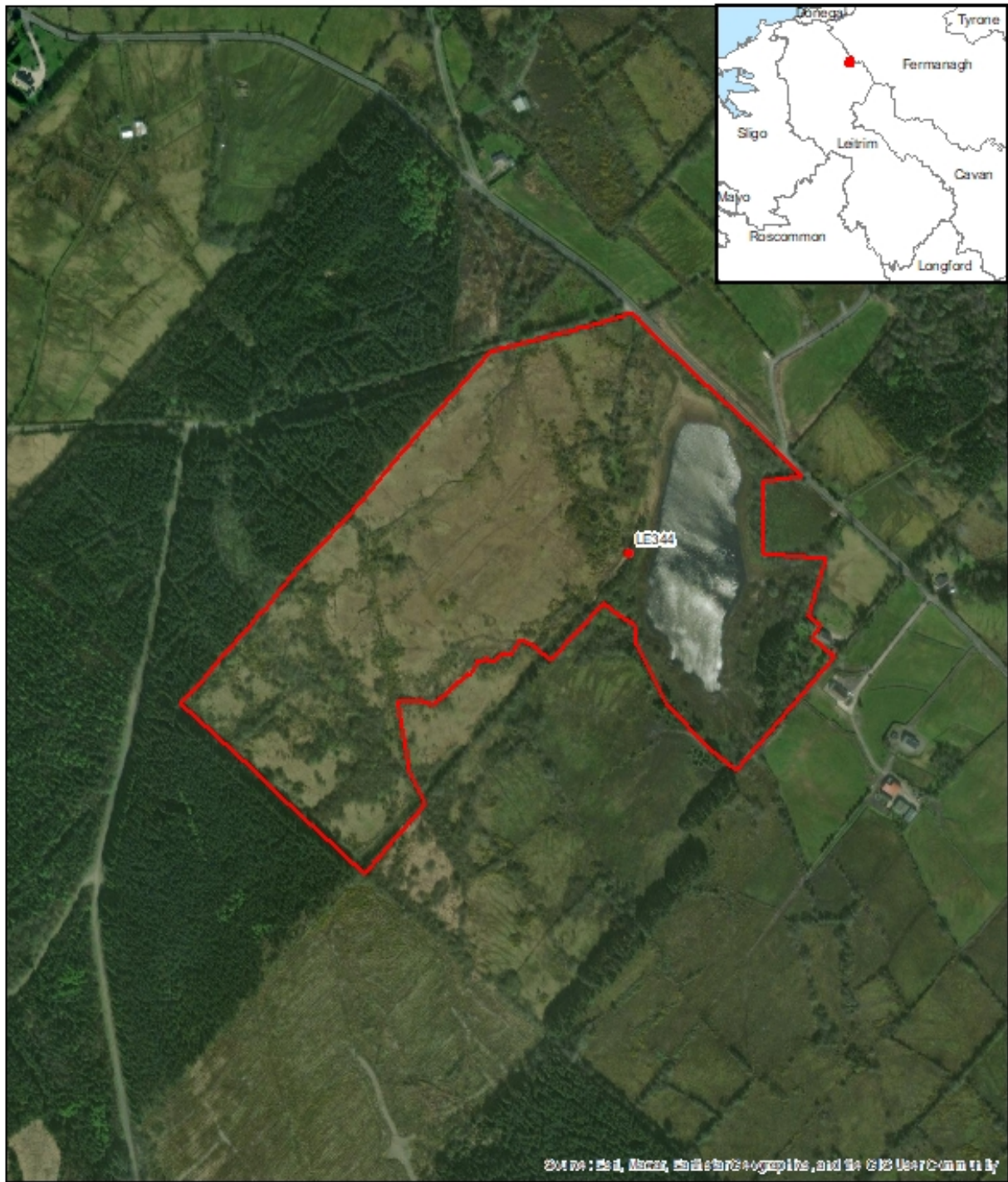
Ulex europaeus

Veronica scutellata

Fauna on site - English and Latin species name

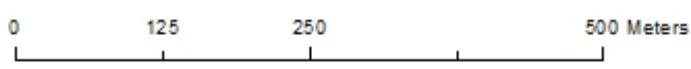
Common Frog

Aerial Photograph showing location of the site

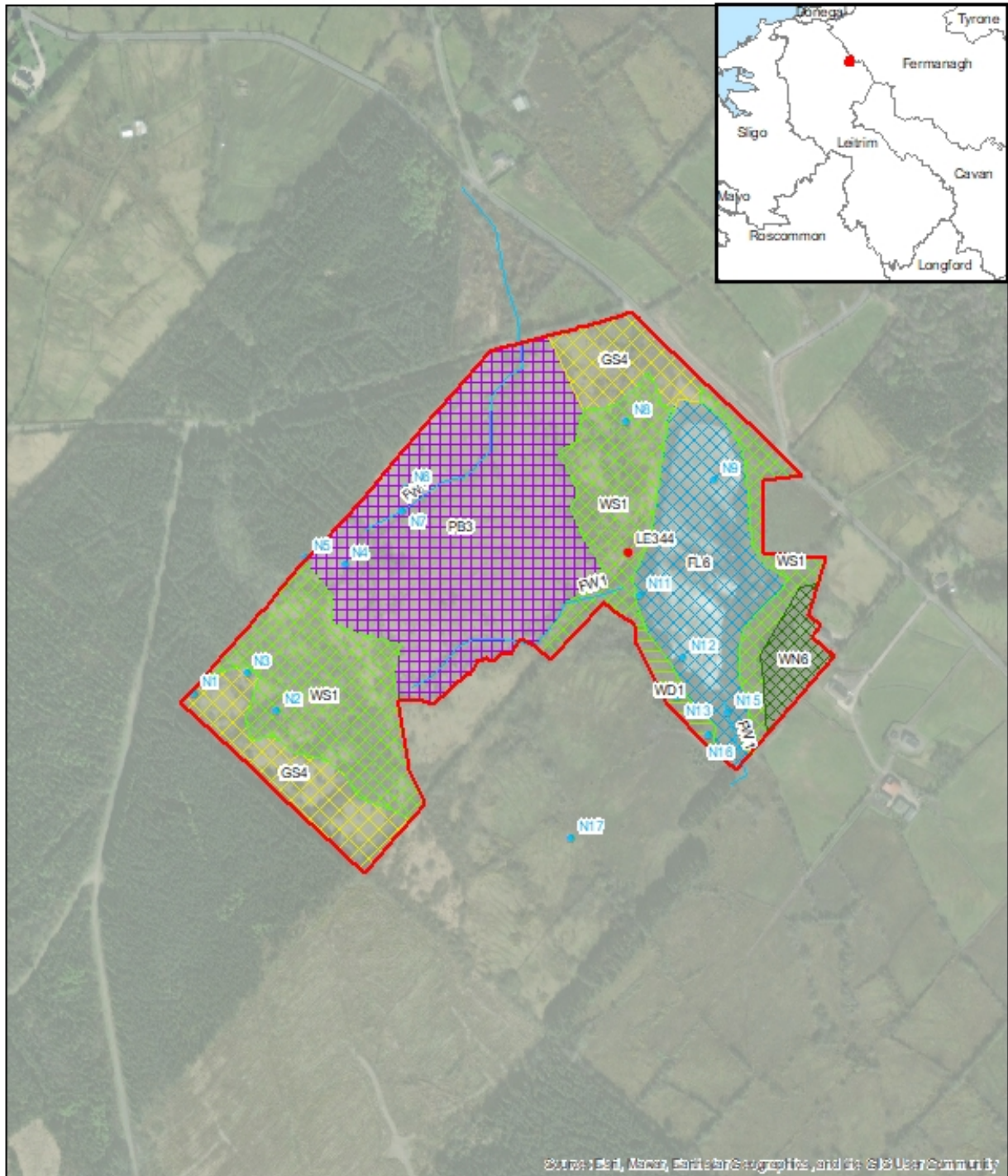


Source: Esri, Maxar, Earthstar, GeoEye, and the GIS User Community

 Site Boundary



GIS Habitat map of the site



Source: Esri, Maxar, Earthstar, GeoEye, AeroGRID, IGN, and the GIS User Community

- | | | | |
|---|---------------------------|---|-----------------------------------|
|  | Site Boundary |  | PB3 Lowland blanket bog |
|  | Target Notes |  | WD1 (Mixed) broadleaved woodland |
|  | PW1 Eroding/upland rivers |  | WN6 Wet willow-alder-ash woodland |
|  | FL6 Turboughs |  | WS1 Scrub |
|  | GS4 Wet grassland | | |



Site Name: KEELDRA LOUGH**Site Code:** LE122 **Area (ha):** 32.74 **Grid Ref:** 214920 296223 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

William Crowley & Adam Vanmechelen

Date of wetland survey:

27/06/2023

Survey Code:

LEWS2023

Site source information:

Additional Survey may be required

Limited site inspection only

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:

KEELDRA

Solid Geology:

Derryveen Formation

Subsoil type:

Water

Substrate type:

Loose Rock

Silt

Substrate stability:**River catchment:**

Shannon Upr

CORINE Habitats:

Water bodies

Site Location

Keeldra Lough is located 6km to the east-south-east of Mohill. The lake is used for recreation, and swimming facilities are located at the northern edge of the lake.

Site Description and Wetland Habitats Recorded

Mesotrophic lake with some reedbeds that was known to support a population of the Annex II species White clawed crayfish (NPWS, 2013). Lake has suffered in recent years from algal blooms caused by pollution. The lake is important for wintering waterbirds and these are monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	INVASIVE	Elodea canadensis.
N2	HABITAT	Wildflower meadow. GS4 dominated by Holcus with Trifolium pratensis, T.repens, Prunella, Filipendula, Cirsium palustre, Lathyrus pratense, Potentilla anserina, Ranunculus repens. Juncus articulatus. J.conglomeratus & Centaurea niora.
N3	MANAGEMENT	Sitting area.
N4	HABITAT	GS4 Species-poor. Juncus effusus abundant.

Management Recommendations following survey

Increase buffer zone around lake, Limit excess nutrients from entering the lake system. Control of the invasive species, Canadian waterweed.

Future Survey Recommendations

Survey to assess population of White clawed crayfish an Annex II species on the EU Habitats Directive, which has been reported from the lake in the past. Continue to monitor bird counts as part of the national monitoring scheme i-webs (Irish Wetland Bird Survey).

Landowner Information Comments

Site is actively managed by Inland fisheries Ireland and Leitrim County Council.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

BL3 Buildings and artificial surfaces

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

FW2 Depositing/lowland rivers

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FW2 Depositing/lowland rivers

FW4 Drainage ditches

GA1 Improved agricultural grassland

GS2 Dry meadows and grassy verges

GS4 Wet grassland

PB1 Raised bogs

PB4 Cutover bog

WD4 Conifer plantation

WL1 Hedgerows

WS1 Scrub

Amenity Management	3 Frequent (21-50%)
Conservation Management	2 Occasional (5-20%)

Impacting Activity (EU code and title)	Intensity	Impact
H01.05 diffuse pollution to surface waters due to	D = unknown	- 1 = reparable negative influence
I01 invasive non-native species	B = medium	- 1 = reparable negative influence

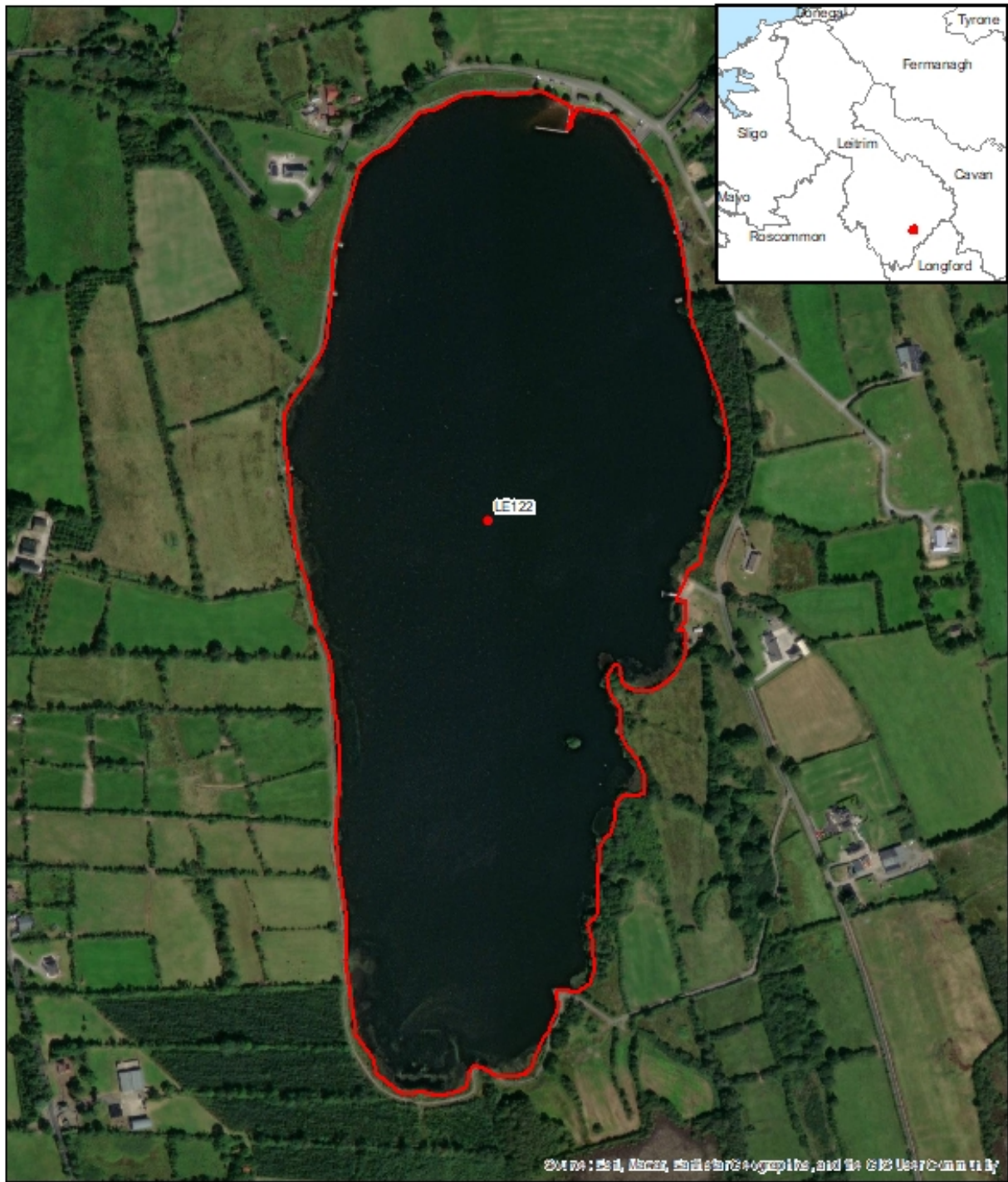
Threats

H01.05 diffuse pollution to surface waters due to agricultural and forestry activities
I01 invasive non-native species

Flora on site - Latin & English species name*Carex rostrata**Eleocharis palustris**Elodea canadensis**Epilobium hirsutum**Equisetum fluviatile**Littorella uniflora**Lycopus europaeus**Potamogeton natans**Potamogeton perfoliatus**Schoenoplectus lacustris**Typha latifolia**Valeriana officinalis***Fauna on site - English and Latin species name**

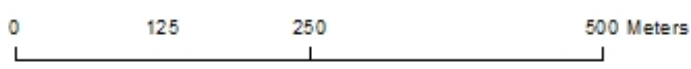
Rudd

Aerial Photograph showing location of the site

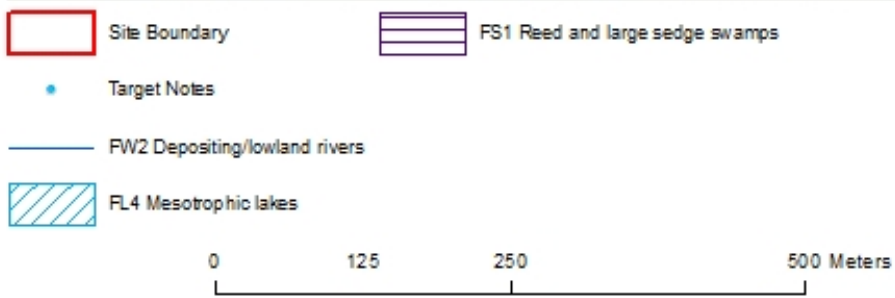
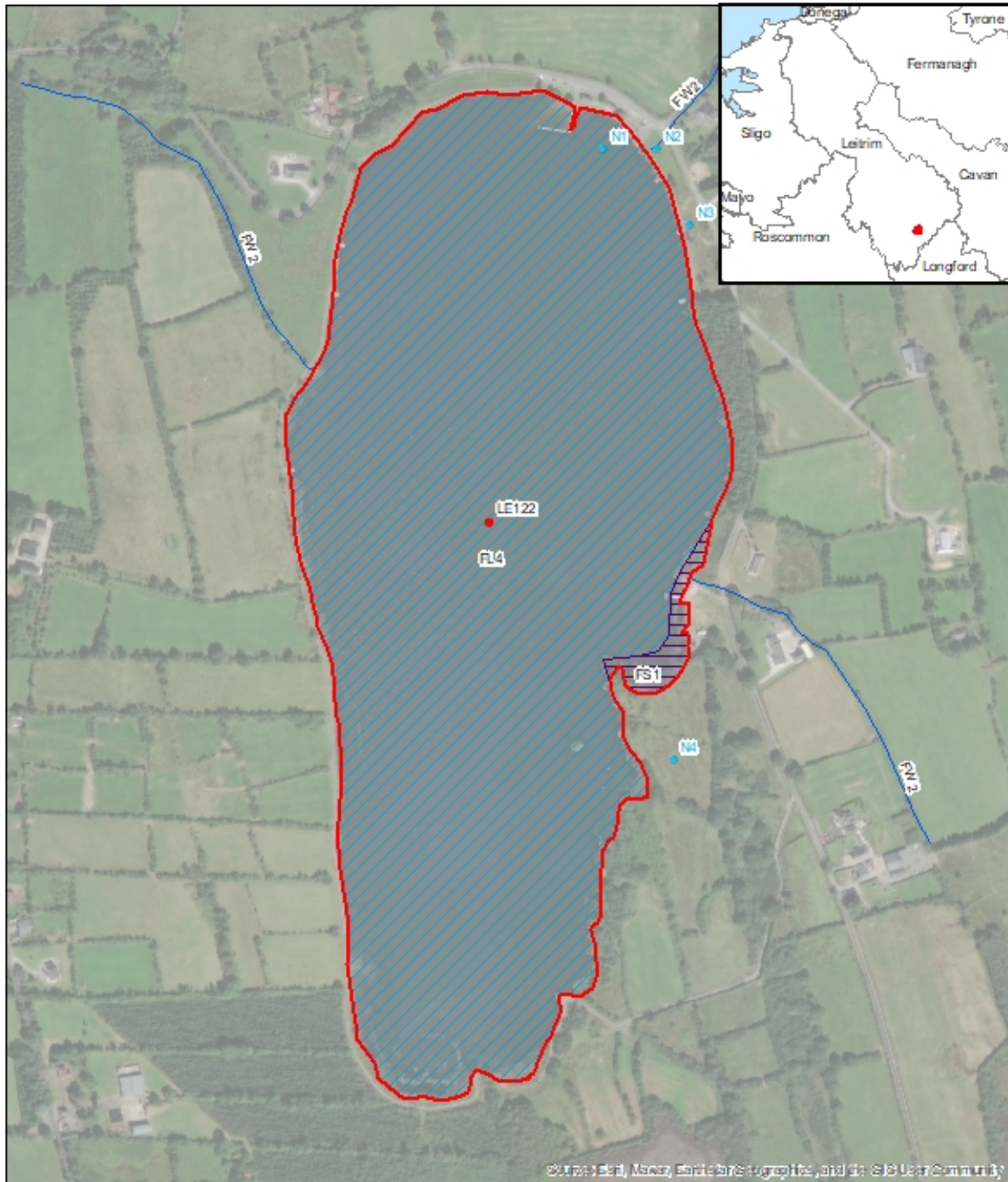


© 2023: Esri, DeLorme, Garmin, Bing Maps, and the GIS User Community

 Site Boundary



GIS Habitat map of the site



Site Name: KILTYCARNEY LAKE**Site Code:** LE70 **Area (ha):** 1.62 **Grid Ref:** 197129 298585 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

12/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

UAV survey undertaken

Wetland Present on the Site

YES

Conservation ranking after survey:

D Rating: Local conservation value (moderate value)

Townland:

KILTYCARNEY

Solid Geology:

Bedrock

River catchment:

Shannon Upr

CORINE Habitats:

Pastures

Subsoil type:

Made

Substrate stability:

Very firm

Site Location

Artificial lake in an abandoned former quarry site which has flooded located 2km east-south-east of Carrick on Shannon. Site is accessible from the N4.

Site Description and Wetland Habitats Recorded

Artificial lake in an abandoned former quarry site which has flooded. There are steep (3m) cliff faces into the lake on some sides. Charophytes are locally frequent and there is a very limited cover of *Schoenoplectus lacustris*.

Target Notes - (see *Habitat Map* for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Artificial lake in a flooded former quarry. Charophytes frequent.

Management Recommendations following survey

None.

Future Survey Recommendations

None.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought any of the habitats present correspond to any of the habitats listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

FL8 Other artificial lakes and ponds

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

ED1 Exposed sand, gravel or till

ED3 Recolonising bare ground

GA1 Improved agricultural grassland

WD4 Conifer plantation

WL1 Hedgerows

WS1 Scrub

Landuse / Management Activity

None

Frequency of use

4 Dominant (>50%)

Impacting Activity (EU code and title)

H01.05 diffuse pollution to surface waters due to

Intensity

B = medium

Impact

- 1 = reparable negative influence

Threats

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

Flora on site - Latin & English species name

Alisma plantago-aquatica

Chara spp.

Equisetum telmateia

Iris pseudacorus

Lythrum salicaria

Mentha aquatica

Potamogeton natans

Potamogeton sp.

Rubus fruticosus agg.

Salix sp.

Schoenoplectus lacustris

Tussilago farfara

Typha latifolia

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site

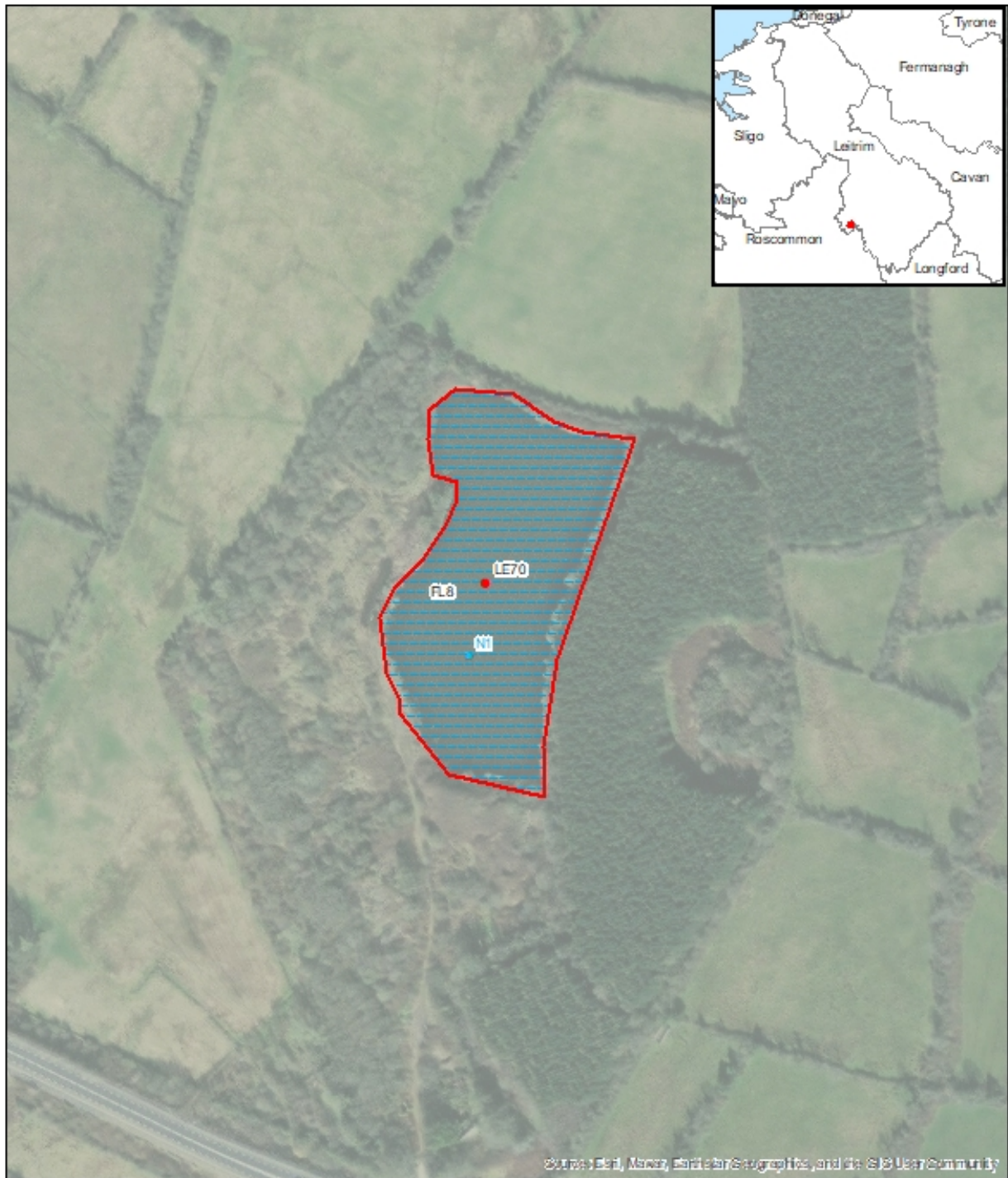





 Site Boundary

0 125 250 Meters



GIS Habitat map of the site



-  Site Boundary
-  Target Notes
-  FL8 Other artificial lakes and ponds

0 125 250 Meters



Site Name: LARGYDONNELL LAKE**Site Code:** LE374**Area (ha):** 5.78**Grid Ref:** 179350 351443**County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

11/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

D Rating: Local conservation value (moderate value)

Townland:

LARGYDONNELL

Solid Geology:

TYRONE GP; Visean

Subsoil type:

Cut

Substrate type:

Mineral Soil

Substrate stability:

Firm

River catchment:

Duff

CORINE Habitats:

Pastures

Site Location

Largydonnell Lake is located 4.5km to the south-west of Kinlough in County Leitrim.

Site Description and Wetland Habitats Recorded

The site consists of wet grassland, wet woodland, scrub and marsh occurring under the wood. A stream/river runs through the centre of the site. A concrete sluice system occurs at the western end of the site, which no longer appears to be operational.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Wet grassland dominated by Juncus and Iris.
N2	HABITAT	Dominated by Juncus, Equisetum and Filipendula.
N3	HABITAT	This area is dominated by thistles.
N4	HABITAT	Willow and alder scrub with wet grassland growing underneath.
N5	HABITAT	Willow and alder treelines Rubus dominating the understory.
N6	HABITAT	Wet grassland and Rubus scrub but mature alnus and hawthorn is growing also.
N7	OWNERSHIP	Concrete sand/silt trap structure on river where it joins larger river. Put in to catch silt coming from mountain as it was considered this silt was blocking river and causing flooding downstream.
N8	HYDROLOGY	Concrete sand trap. Erected in 1950s unused and hasn't been maintained. River is dredged by local man to prevent flooding his house. Nearly flooded September 2022. Barrier to fish and wildlife.

Management Recommendations following survey

Silt trap/sluice appears to be non functional. Consider removal.

Future Survey Recommendations

Assess the impacts of the silt trap/sluice on fish and other wildlife. Hydrological survey of site and surrounding area to inform flood management plan.

Landowner Information Comments

Sheep graze the site for the majority of the year. Landowners complain of flooding issues in the general area.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought any of the habitats present correspond to any of the habitats listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

BL1 Stone walls and other stonework

FW2 Depositing/lowland rivers

GM1 Marsh

GS4 Wet grassland

WN6 Wet willow-alder-ash woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

WD4 Conifer plantation

WL1 Hedgerows

EU Habitats Directive habitats on site

None noted

Landuse / Management Activity

Grazing - sheep

Frequency of use

3 Frequent (21-50%)

Impacting Activity (EU code and title)

A04.02.02 non intensive sheep grazing

Intensity

B = medium

Impact

0 = neutral

J02.05.02 modifying structures of inland water courses

B = medium

- 1 = reparable negative influence

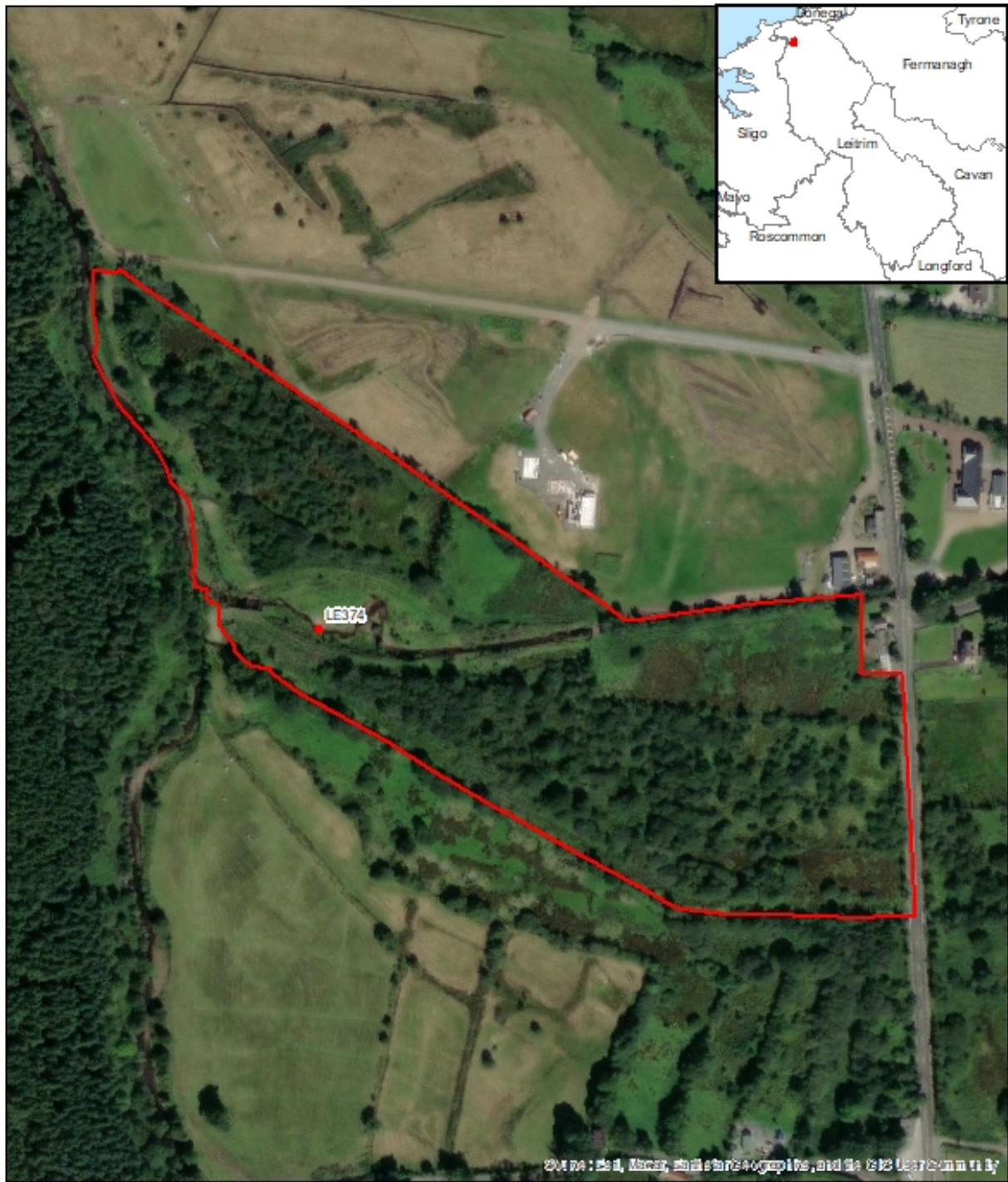
Threats

J02.05.02 modifying structures of inland water courses

Flora on site - Latin & English species name*Alnus glutinosa**Anagallis tenella**Arctium minus**Carex remota**Chara spp.**Cirsium arvense**Cirsium dissectum**Cirsium vulgare**Crataegus monogyna**Dactylorhiza maculata subsp. ericetorum**Equisetum fluviatile**Equisetum palustre**Filipendula ulmaria**Fraxinus excelsior**Iris pseudacorus**Juncus effusus**Juncus inflexus**Lathyrus pratensis**Leucanthemum vulgare**Lychnis flos-cuculi**Mentha aquatica**Plantago lanceolata**Potentilla anserina**Ranunculus repens**Rubus fruticosus agg.**Salix aurita**Salix cinerea subsp. cinerea**Sparganium erectum**Stellaria graminea**Ulex europaeus**Urtica dioica**Veronica sp.***Fauna on site - English and Latin species name**

Grey Heron

Aerial Photograph showing location of the site

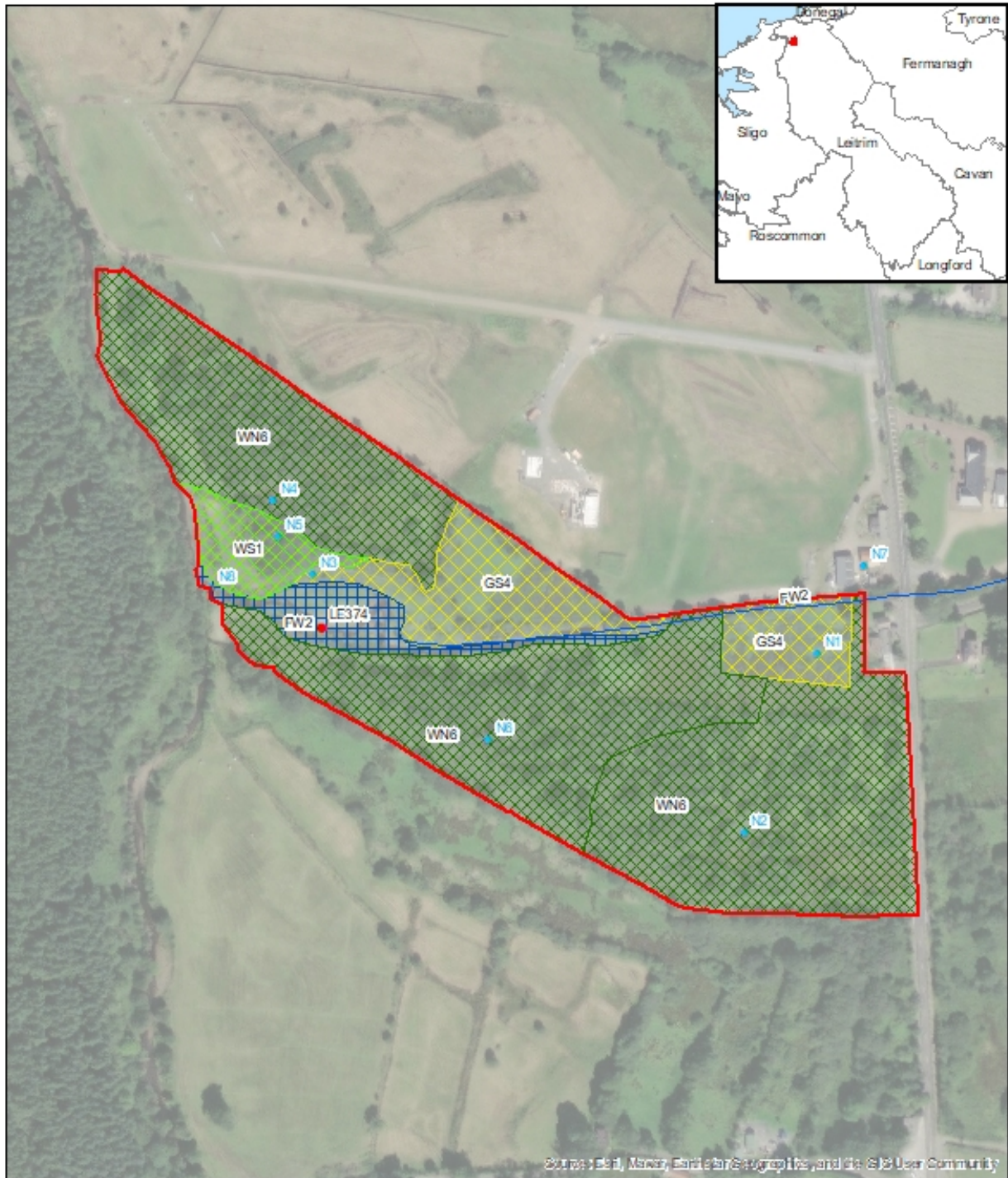


 Site Boundary

0 125 250 Meters



GIS Habitat map of the site



Source: Esri, Maxar, Earthstar, Swire, GeoEye, AeroGRID, IGN, and the GIS User Community



Site Name: LARKFIELD LOUGH**Site Code:** LE330**Area (ha):** 0.68**Grid Ref:** 187652 336703**County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

06/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

CLOONLOGHER

Solid Geology:Peat
Silt**Subsoil type:**

Cut

Substrate type:**Substrate stability:**

Soft

River catchment:

Garvogue

CORINE Habitats:

Peat bogs

Site Location

Mesotrophic lake located 3km to the south-south-west of Manorhamilton. An outlet to the south of the site connects the lake to the Bonet River.

Site Description and Wetland Habitats Recorded

Mesotrophic lake with wet woodland to the west and wet grassland to the east. There's a narrow band of Phragmites reedswamp around the edges of the lake and yellow water-lily at the edge of the open water.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Open water with yellow water lily on the outskirts of the lake. Mesotrophic lake with a narrow band of Phragmites reedswamp around the edges and yellow water-lily at the edge of the open water.
N2	HYDROLOGY	Water colour is quite clear. Substratum could not be accessed.
N3	Management	Wet grassland is grazed by sheep and there is poaching in some areas. Animals have access to woodland surrounding lake but don't seem to be excessively grazing or poaching in or around lake.

Management Recommendations following survey

Increase buffer zone around lake particularly in the east of the site, Limit excess nutrients from entering the lake system.

Future Survey Recommendations

None.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

WN6 Wet willow-alder-ash woodland

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FW4 Drainage ditches

GA1 Improved agricultural grassland

GS4 Wet grassland

WD4 Conifer plantation

WL1 Hedgerows

WL2 Treelines

WS1 Scrub

EU Habitats Directive habitats on site

None noted

Landuse / Management Activity

Grazing - sheep

Grazing - unknown

Frequency of use

2 Occasional (5-20%)

2 Occasional (5-20%)

Impacting Activity (EU code and title)

A04 grazing

H01.05 diffuse pollution to surface waters due to

Intensity

C = low

C = low

Impact

0 = neutral

- 1 = reparable negative influence

Threats

hH01.05 diffuse pollution to surface waters due to agricultural and forestry activities

Flora on site - Latin & English species name

Caltha palustris

Equisetum fluviatile

Filipendula ulmaria

Iris pseudacorus

Nuphar lutea

Nymphaea alba

Phragmites australis

Rubus fruticosus agg.

Salix sp.

Sparganium erectum

Urtica dioica

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



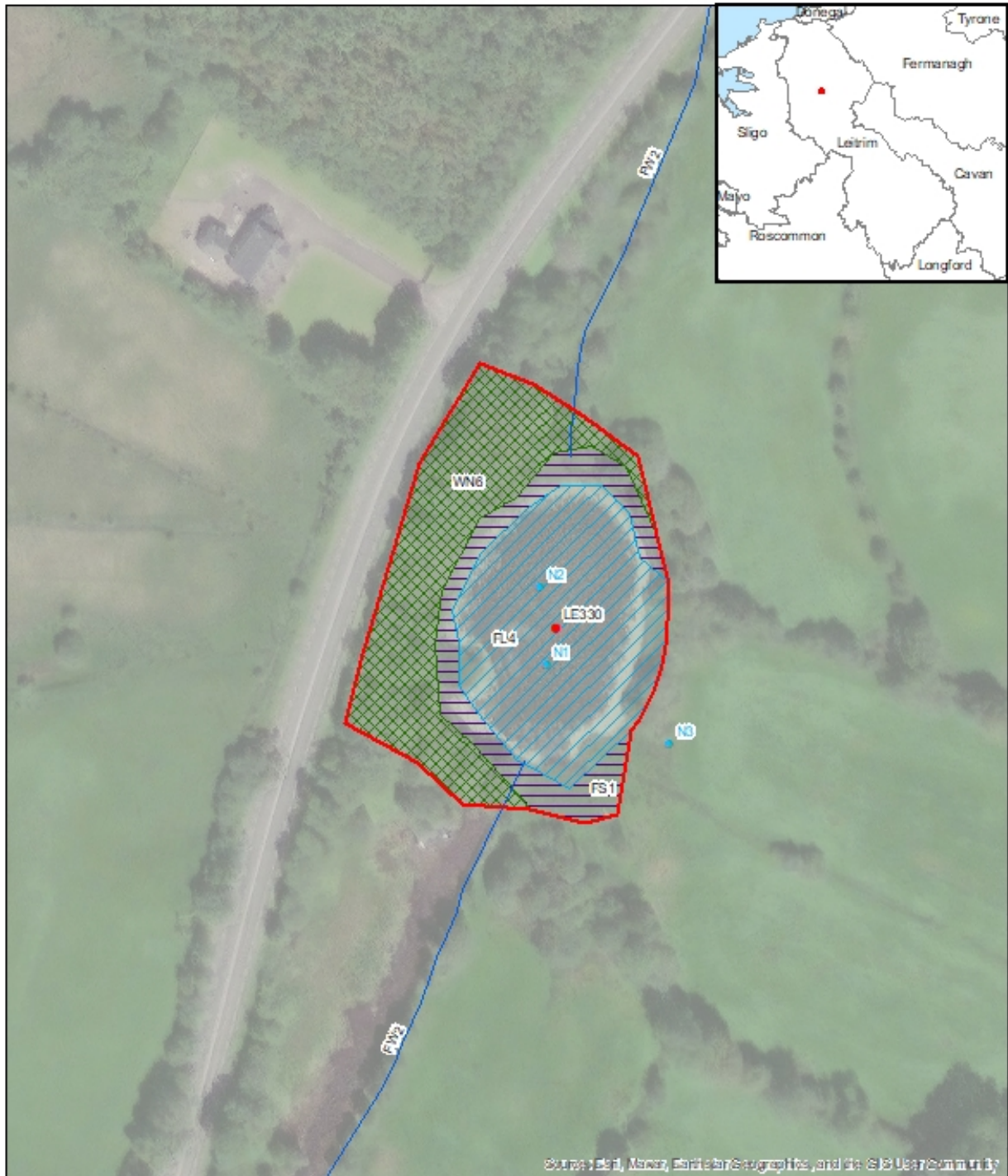
Source: Esri, DeLorme, GeoEye, IGN, AerGRID, AIRPHOTO, IGN, and the GIS User Community

 Site Boundary

0 65 130 Meters



GIS Habitat map of the site



- Site Boundary
- Target Notes
- FW2 Depositing/lowland rivers
- FL4 Mesotrophic lakes
- FS1 Reed and large sedge swamps
- WN6 Wet willow-alder-ash woodland



Site Name: LEEAN**Site Code:** LE326 **Area (ha):** 27.33 **Grid Ref:** 180672 339788 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

10/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed grassland survey recommended
 Detailed Wetland Survey undertaken
 Site previously mapped in GIS dataset
 Site previously reported from literature
 UAV survey undertaken

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:

LEEAN

Solid Geology:

Marine shelf facies

Subsoil type:

BktPt

Substrate type:

Mineral Soil
 Peat

Substrate stability:

Firm

River catchment:

Drumcliff

CORINE Habitats:

Land principally occupied by

Site Location

Leean is an upland area, which includes some of the northern slopes of Leean Mountain and is located 7.5km west of Manorhamilton.

Site Description and Wetland Habitats Recorded

The site consists mainly of species rich grassland with some areas grading into wet heath. The grassland is a mosaic of dry calcareous, dry acidic and wet grassland. On the upper slopes where the soil is shallow and there is much exposed limestone rock, orchid-rich calcareous grassland dominates with species such as *Campanula rotundifolia*, *Primula vulgaris*, *Lotus corniculatus* and *Thymus polytrichus*. On the lower slopes where the soil is deeper wet grassland that is moderately species-rich dominates with species such as *Juncus acutiflorus* and *Cirsium palustre* with *Sphagnum* species and *Iris* in the wettest areas.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Wet grassland dominated by <i>Juncus</i> but species-rich.
N2	HABITAT	Wet grassland that is being grazed. Abundant <i>Juncus effusus</i> but relatively species-rich.
N3	HABITAT	Wet heath with abundant amounts of <i>Juncus squarrosus</i> .
N4	HABITAT	Wet grassland dominated by <i>Juncus effusus</i> and <i>Cirsium palustre</i> .

Management Recommendations following survey

Continue current management.

Future Survey Recommendations

A detailed grassland survey is recommended to assess the extent of Annex grassland on the site.

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

Some of the calcareous grassland on the site likely corresponds to the EU Annex 1 habitat semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometea*) (*important orchid sites) (6210).

Main Fossitt habitats on site

BL1 Stone walls and other stonework
 ER2 Exposed calcareous rock
 FW1 Eroding/upland rivers
 GS1 Dry calcareous and neutral grassland
 GS3 Dry-humid acid grassland
 GS4 Wet grassland
 HH3 Wet heath

EU Habitats Directive habitats on site

6210 Semi-natural dry grasslands and scrubland

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
 GS4 Wet grassland
 WD4 Conifer plantation
 WL1 Hedgerows

Landuse / Management Activity

Grazing - sheep

Frequency of use

4 Dominant (>50%)

Impacting Activity (EU code and title)

A04.02.02 non intensive sheep grazing

Intensity

B = medium

Impact

+1= natural positive influence

Threats

X No threats or pressures

Flora on site - Latin & English species name

Anthoxanthum odoratum

Anthyllis vulneraria

Calluna vulgaris

Campanula rotundifolia

Cardamine pratensis

Carex echinata

Carex leporina

Carex panicea

Carex pulicaris

Carex rostrata

Cirsium dissectum

Cirsium palustre

Climacium dendroides

Crataegus monogyna

Dactylorhiza sp.

Festuca ovina

Holcus lanatus

Iris pseudacorus

Juncus acutiflorus

Juncus articulatus

Juncus conglomeratus

Juncus inflexus

Juncus squarrosus

Leucanthemum vulgare

Lotus corniculatus

Luzula multiflora

Oxalis acetosella

Potentilla erecta

Primula vulgaris

Prunella vulgaris

Racomitrium lanuginosum

Ranunculus repens

Sphagnum fallax

Sphagnum palustre

Trifolium repens

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site

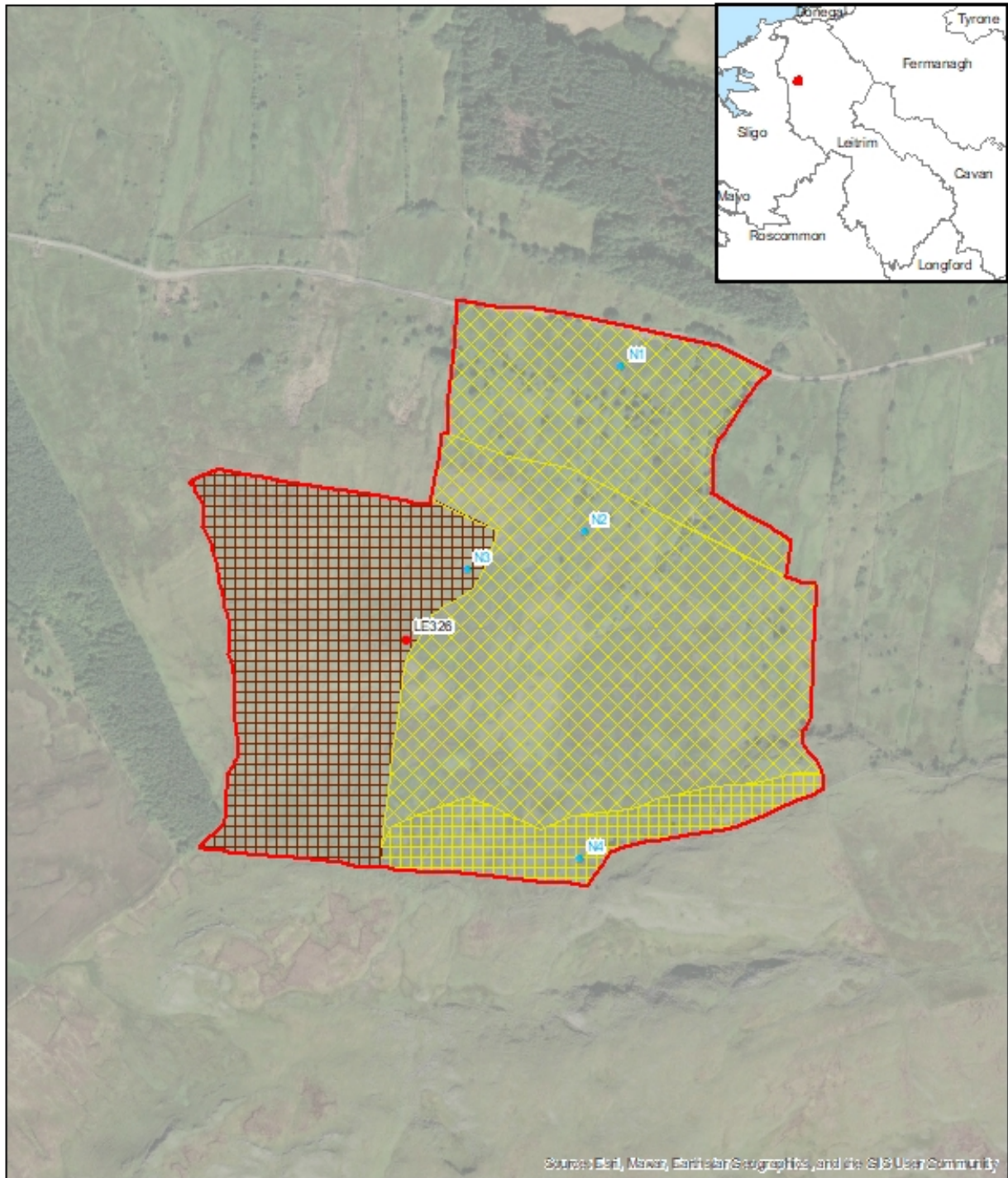


 Site Boundary

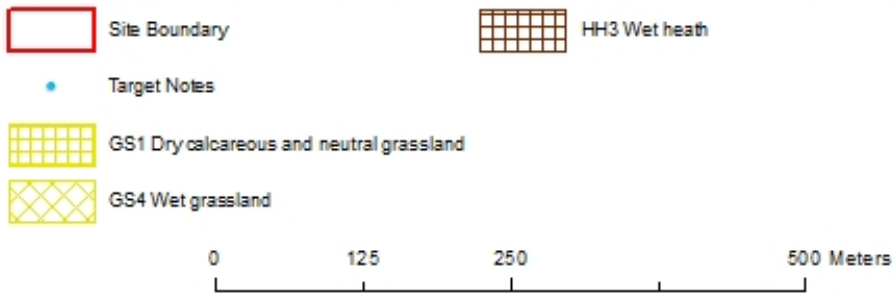
0 125 250 500 Meters



GIS Habitat map of the site



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Site Name: LISDARUSH BOG COMPLEX**Site Code:** LE350 **Area (ha):** 202.45 **Grid Ref:** 192447 344970 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

05/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:

LISDARUSH

Solid Geology:

Marine shelf facies

Subsoil type:

BktPt

Substrate type:

Mineral Soil

Peat

Substrate stability:

Soft

River catchment:

Drowes

CORINE Habitats:

Peat bogs

Site Location

Mosaic of blanket bog/heath and grassland on Saddle Hill 5km to the north-east of Manorhamilton.

Site Description and Wetland Habitats Recorded

Heath particularly dry heath dominates towards the top of the hill with a mosaic of blanket bog and wet heath dominating on the more gradual north-eastern slopes and dry humid acid grassland dominating in mosaic with wet and dry heath and occasional exposed rock on the steeper north-western slopes. Cutover bog dominates towards the base of the hill in the east of the site.

Target Notes - (see *Habitat Map for location of Target Notes*)

No.	Category	Comment
N1	HABITAT	Cutover/degraded blanket bog.
N2	HABITAT	The majority of this area is old cutover bog. Some turf is still being actively cut.
N3	HABITAT	Blanket bog.
N4	HYDROLOGY	Swallow holes.
N5	HABITAT	Wet heath.
N6	HABITAT	Calluna dominated with billberry. Little sphagnum cover.
N7	HABITAT	Mosaic of grassland and dry heath. Cannot determine whether it's calcareous or siliceous.

Management Recommendations following survey

Liaise with turf cutters with a view to ceasing turf cutting. Assess stocking levels and exclude from sensitive peatland areas. Consider restoration works for areas of cutover.

Future Survey Recommendations

Hydrological survey to investigate swallow holes and the impact of past turf cutting and adjacent conifer plantations on the hydrological functioning of the peatland.

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

This site contains examples of European Dry Heath (4030) in proximity to outcropping rock and 4010 Northern Atlantic wet heaths with *Erica tetralix* which are both habitats listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

BL1 Stone walls and other stonework
 BL3 Buildings and artificial surfaces
 FW4 Drainage ditches
 GS3 Dry-humid acid grassland
 GS4 Wet grassland
 HH2 Dry calcareous heath
 HH3 Wet heath
 PB2 Upland blanket bog
 PB4 Cutover bog
 WD4 Conifer plantation
 WS1 Scrub

EU Habitats Directive habitats on site

4010 Northern Atlantic wet heaths with *Erica tetralix*
 4030 European dry heaths

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
 GA1 Improved agricultural grassland
 HH3 Wet heath
 PB4 Cutover bog
 WD4 Conifer plantation
 WL1 Hedgerows
 WS1 Scrub

Landuse / Management Activity

Grazing - unknown

Peat cutting (mechanical)

Frequency of use

2 Occasional (5-20%)

2 Occasional (5-20%)

Impacting Activity (EU code and title)

A04.02.02 non intensive sheep grazing

C01.03.02 mechanical removal of peat

Intensity

D = unknown

B = medium

Impact

- 1 = reparable negative influence

- 2 = irreparable negative influence

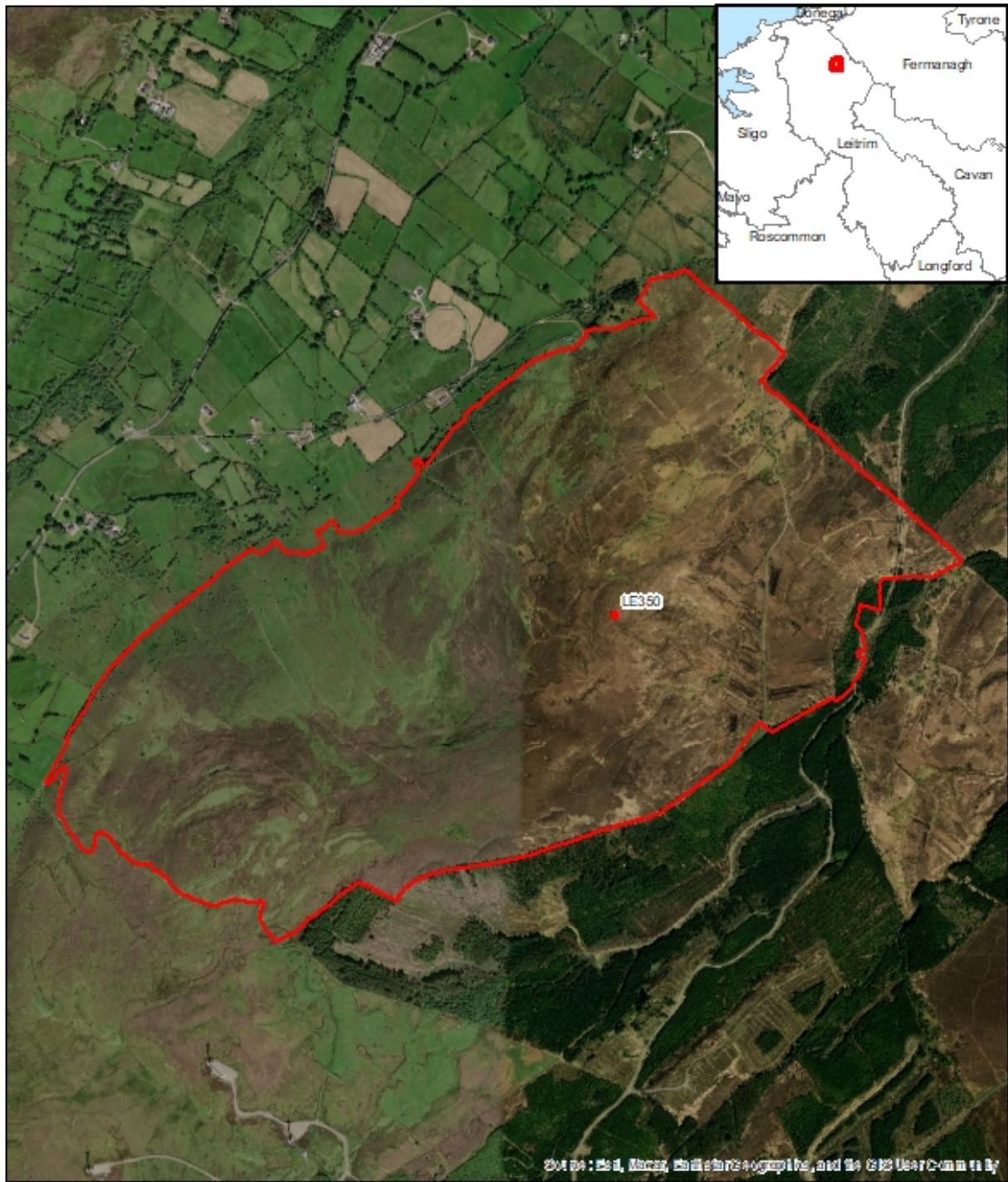
Threats

C01.03.02 mechanical removal of peat

Flora on site - Latin & English species name*Aulacomnium palustre**Calluna vulgaris**Cardamine pratensis**Carex echinata**Carex panicea**Cirsium palustre**Erica tetralix**Eriophorum angustifolium**Eriophorum vaginatum**Holcus lanatus**Polygala serpyllifolia**Potentilla erecta**Racomitrium lanuginosum**Rhytidiadelphus squarrosus**Rumex acetosa**Sphagnum capillifolium subsp. rubellum**Thymus polytrichus**Trichophorum cespitosum**Trifolium repens**Vaccinium myrtillus***Fauna on site - English and Latin species name**

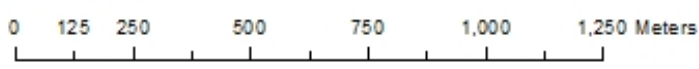
No faunal observations were made

Aerial Photograph showing location of the site

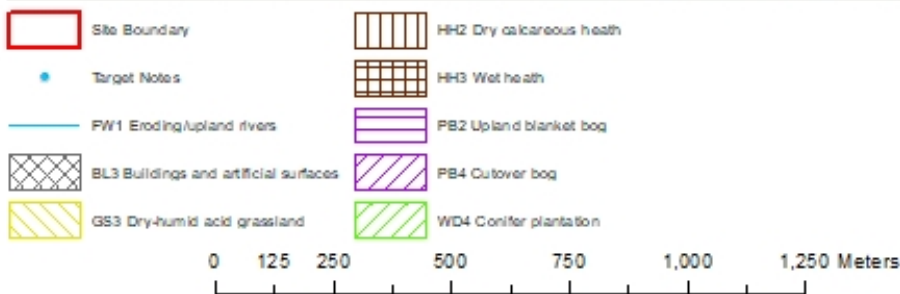
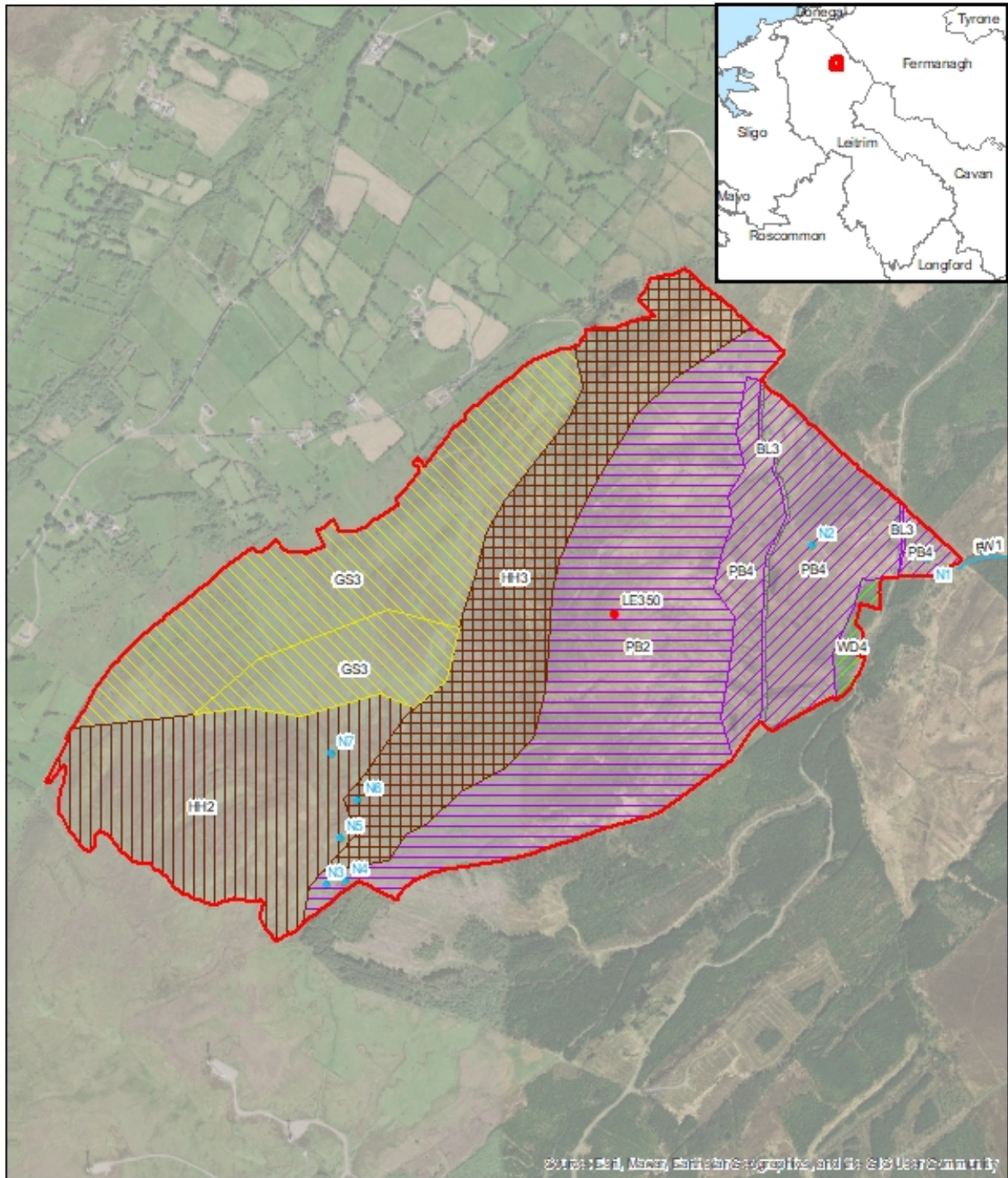


Source: Esri, DeLorme, GeoEye, Google, and the GIS User Community

 Site Boundary



GIS Habitat map of the site



Site Name: LOUGH ADORN cNHA**Site Code:** LE7 **Area (ha):** 20.01 **Grid Ref:** 215000 314500 **County:** LE**Site designation(s):**

cNHA
Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

13/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed fen survey recommended
Detailed Wetland Survey undertaken
Site previously mapped in GIS dataset
Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

B Rating: Nationally Important

Townland:

KILTYCREEVAGH

Solid Geology:

Marine shelf facies

Subsoil type:

Cut

Substrate type:

Mineral Soil
Peat

Substrate stability:

Firm

River catchment:

Erne

CORINE Habitats:

Land principally occupied by

Site Location

Lough Adorn cNHA is a mesotrophic lake with reedswamp and transition mire located 2.5km to the north0east of Ballinamore, Co. Leitrim.

Site Description and Wetland Habitats Recorded

The lake has a high cover of *Nuphar lutea*, and the lake margin is surrounded by a narrow band of *Phragmites* reedswamp, which broadens out into a much larger area to the north of the lake. To the east of the lake the reedswamp also broadens out over a larger area, which is more species-rich with characteristics of transition mire. Wet grassland occurs almost to the lake edge in the west of the site. Parts of the grassland to the south appear to be cut for silage and are improved grassland. The lake is important for wintering waterbirds and the site is part of a larger site (Ballinamore Lakes) that is monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Nice meadow water table is high.
N2	HABITAT	Wet grassland dominated by <i>Juncus effusus</i> , good amount of species.
N3	HABITAT	Meso trophic lake with yellow water on the sub margins and reed swamp on the margins.
N4	HABITAT	Wet grassland that is relatively species-rich and could be included within the site.
N5	HYDROLOGY	Water table 30-40cm below ground here.
N6	HABITAT	Species-rich with <i>Phragmites</i> . Parts are possibly transition mire.
N7	HABITAT	Reed swamp.

Management Recommendations following survey

Increase buffer zones around lake in an effort to reduce excess nutrient inputs from entering it, particularly around the western edge where the buffer to wet grassland is currently very narrow.

Future Survey Recommendations

Undertake a detailed fen survey of the transition mire. Continue to monitor bird counts as part of the national monitoring scheme i-webs (Irish Wetland Bird Survey).

Landowner Information Comments

Landowner explained that curlew and corncrake used to use the area up until 15 - 20 years ago and that a large part of the reed bed was burned in the past.

Description of potential EU Habitats Directive Annex 1 habitats

Some of the transition mire, particularly that on the east of the lake may correspond to 7140 Transition mires and quaking bogs which is a habitat listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

FL4 Mesotrophic lakes
 FS1 Reed and large sedge swamps
 FW2 Depositing/lowland rivers
 FW4 Drainage ditches
 GA1 Improved agricultural grassland
 GS4 Wet grassland
 PF3 Transition mire & quaking bog
 WD4 Conifer plantation

EU Habitats Directive habitats on site

7140 Transition mires and quaking bogs

WL1 Hedgerows

WN6 Wet willow-alder-ash woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

GS4 Wet grassland

WD4 Conifer plantation

WL1 Hedgerows

WL2 Treelines

Landuse / Management Activity

Grazing - cattle

Grazing - sheep

Frequency of use

2 Occasional (5-20%)

2 Occasional (5-20%)

Impacting Activity (EU code and title)

H01.05 diffuse pollution to surface waters due to

J01.01 burning down

J02.05 Modification of hydrographic functioning,

Intensity

C = low

C = low

B = medium

Impact

- 1 = reparable negative influence

- 1 = reparable negative influence

- 1 = reparable negative influence

Threats

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

J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name

Alisma plantago-aquatica

Angelica sylvestris

Anthoxanthum odoratum

Arrhenatherum elatius

Caltha palustris

Carex disticha

Carex leporina

Carex panicea

Carex rostrata

Carex vesicaria

Centaurea nigra

Cicuta virosa

Comarum palustre

Cynosurus cristatus

Equisetum fluviatile

Equisetum palustre

Filipendula ulmaria

Galium palustre

Holcus lanatus

Hypericum sp.

Juncus acutiflorus

Juncus articulatus

Juncus effusus

Lemna minor

Leucanthemum vulgare

Lychnis flos-cuculi

Lycopus europaeus

Lysimachia vulgaris

Lythrum salicaria

Menyanthes trifoliata

Myosotis scorpioides

Nuphar lutea

Odontites vernus

Phalaris arundinacea

Phleum pratense

Phragmites australis

Plantago major

Potentilla anserina

Prunella vulgaris

Ranunculus flammula

Rhinanthus minor

Salix sp.

Sparganium emersum

Stachys palustris

Trifolium pratense

Valeriana officinalis

Vicia cracca

Fauna on site - English and Latin species name

Butterflies

Common Frog

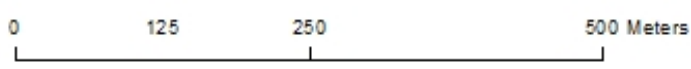
Dragon and Damselflies

Aerial Photograph showing location of the site

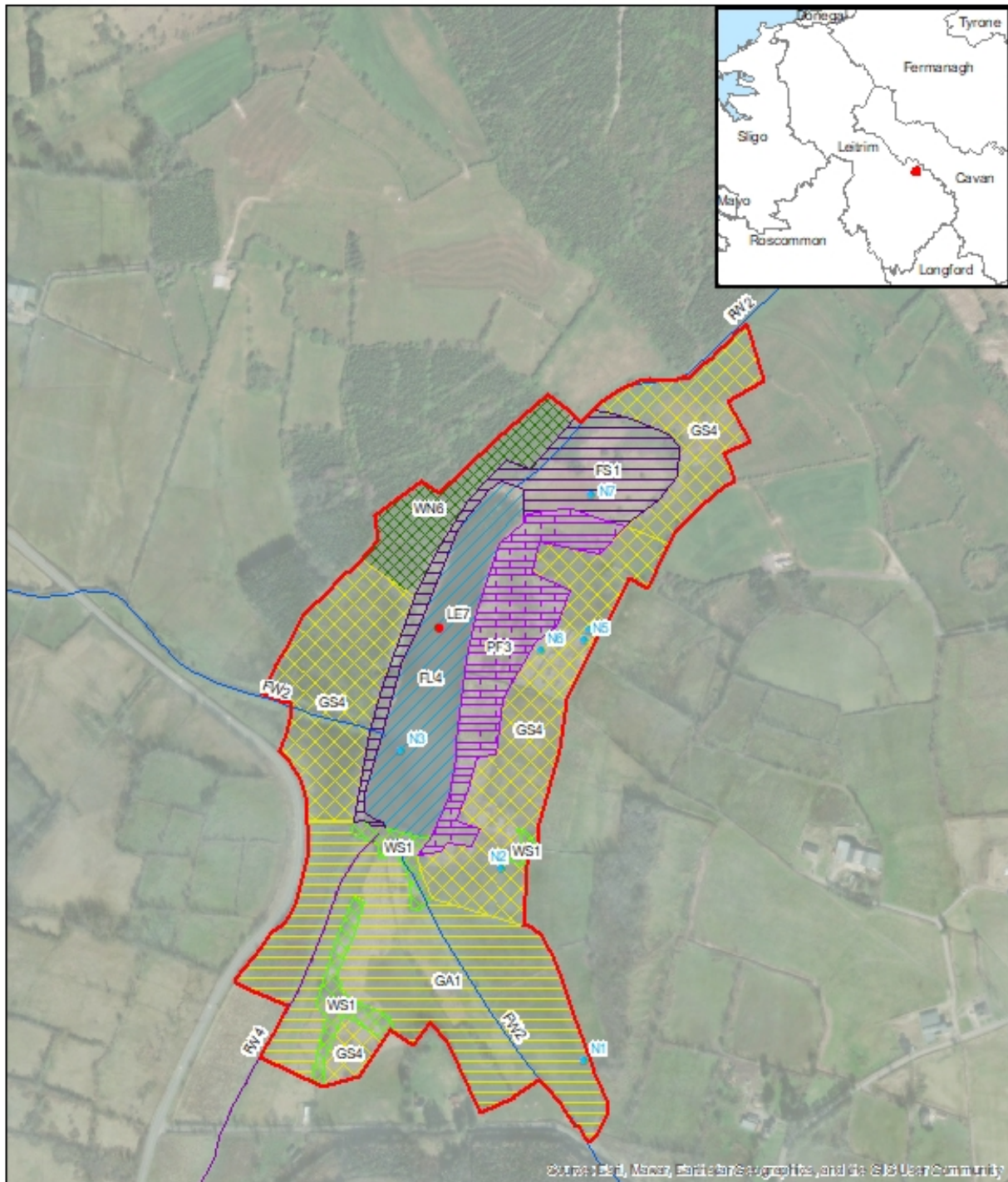


Source: Esri, DeLorme, GeoEye, Google, and the GIS User Community

 Site Boundary



GIS Habitat map of the site



Site Name: LOUGH ERRIL cNHA**Site Code:** LE9**Area (ha):** 48.36**Grid Ref:** 204800 296500**County:** LE**Site designation(s):**

cNHA
SMR
Undesignated site

Surveyed by:

William Crowley & Adam Vanmechelen

Date of wetland survey:

26/06/2023

Survey Code:

LEWS2023

Site source information:

Detailed fen survey recommended
Further Survey Recommended (Invertebrates)
Limited site inspection only
Site previously mapped in GIS dataset
Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

B Rating: Nationally Important

Townland:

SHOALMORE

Solid Geology:

Navan Group

Substrate type:

Mineral Soil
Peat

Subsoil type:

Water

Substrate stability:

Some quaking

River catchment:

Shannon Upr

CORINE Habitats:

Water bodies

Site Location

Lough Erril cNHA is a mesotrophic lake with transition mire and crannog located 6km north of Dromod.

Site Description and Wetland Habitats Recorded

Mesotrophic lake with frequent yellow water-lily fringed by reedswamp with transition mire also present. Several Red Listed snails (*Vertigo antivertigo* (Vulnerable), *V. substriata* (Near Threatened), *Pisidium pulchellum* (Endangered) and *Anisus vortex* (Vulnerable)) have been recorded here in the past according to NBDC records.

Target Notes - (see *Habitat Map for location of Target Notes*)

No.	Category	Comment
N1	HABITAT	Species-rich wet grassland with calcareous influence. Dominated by <i>Juncus acutiflorus</i> , <i>Briza media</i> , <i>Cirsium palustre</i> , <i>Leucanthemum vulgare</i> , <i>Prunella vulgaris</i> and <i>Succisa pratensis</i> .
N2	HABITAT	FS1 <i>Phragmites australis</i> dominated with <i>Sparganium erectum</i> , <i>Typha latifolia</i> , <i>Equisetum fluviatile</i> and <i>Mentha aquatica</i> .
N3	INVASIVE	<i>Elodea canadensis</i> abundant in the shallow water.
N4	HABITAT	FL4 with frequent yellow water lily backed by reed swamp.

Management Recommendations following survey

Increase buffer zones around lake in an effort to reduce excess nutrient inputs from entering it. Control/removal of the invasive species, Canadian waterweed.

Future Survey Recommendations

Undertake a detailed fen survey of transition mire. Also consider a Marsh fritillary survey at a suitable time of the year. A survey of the snail assemblages is also recommended as a number of red data listed species were recorded in the past.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

Some of the areas of transition mire in the SW may correspond to EU Annex I habitat 7140 Transition Mires & Quaking Bogs.

Main Fossitt habitats on site

BL3 Buildings and artificial surfaces

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

FW2 Depositing/lowland rivers

GM1 Marsh

GS4 Wet grassland

PF3 Transition mire & quaking bog

WL1 Hedgerows

WN6 Wet willow-alder-ash woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FW2 Depositing/lowland rivers

GA1 Improved agricultural grassland

GS4 Wet grassland

WD4 Conifer plantation

WL1 Hedgerows

WS1 Scrub

EU Habitats Directive habitats on site

7140 Transition mires and quaking bogs

Landuse / Management Activity

Fishing

Frequency of use

3 Frequent (21-50%)

Grazing - cattle

2 Occasional (5-20%)

Impacting Activity (EU code and title)

A04.02.01 non intensive cattle grazing

Intensity

C = low

Impact

0 = neutral

H01.05 diffuse pollution to surface waters due to

D = unknown

- 1 = reparable negative influence

I01 invasive non-native species

B = medium

- 1 = reparable negative influence

Threats

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

I01 invasive non-native species

J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name*Anthoxanthum odoratum**Briza media**Carex demissa**Carex diandra**Carex panicea**Carex rostrata**Centaurea nigra**Cerastium fontanum**Cirsium dissectum**Cirsium palustre**Comarum palustre**Cynosurus cristatus**Dactylorhiza maculata subsp. ericetorum**Danthonia decumbens**Elodea canadensis**Epilobium palustre**Equisetum fluviatile**Euphrasia officinalis agg.**Filipendula ulmaria**Galium palustre**Holcus lanatus**Hydrocotyle vulgaris**Iris pseudacorus**Juncus acutiflorus**Juncus articulatus**Juncus conglomeratus**Lathyrus pratensis**Leucanthemum vulgare**Lychnis flos-cuculi**Mentha aquatica**Menyanthes trifoliata**Molinia caerulea**Nuphar lutea**Phalaris arundinacea**Phragmites australis**Plantago lanceolata**Potentilla anserina*

Prunella vulgaris

Ranunculus flammula

Ranunculus repens

Rhinanthus minor

Rhytidadelphus squarrosus

Schoenoplectus lacustris

Schoenus nigricans

Scorpidium revolvens

Sparganium erectum

Succisa pratensis

Trifolium pratense

Trifolium repens

Typha latifolia

Fauna on site - English and Latin species name

Common Blue Damselfly

Meadow brown

Mute Swan

Aerial Photograph showing location of the site

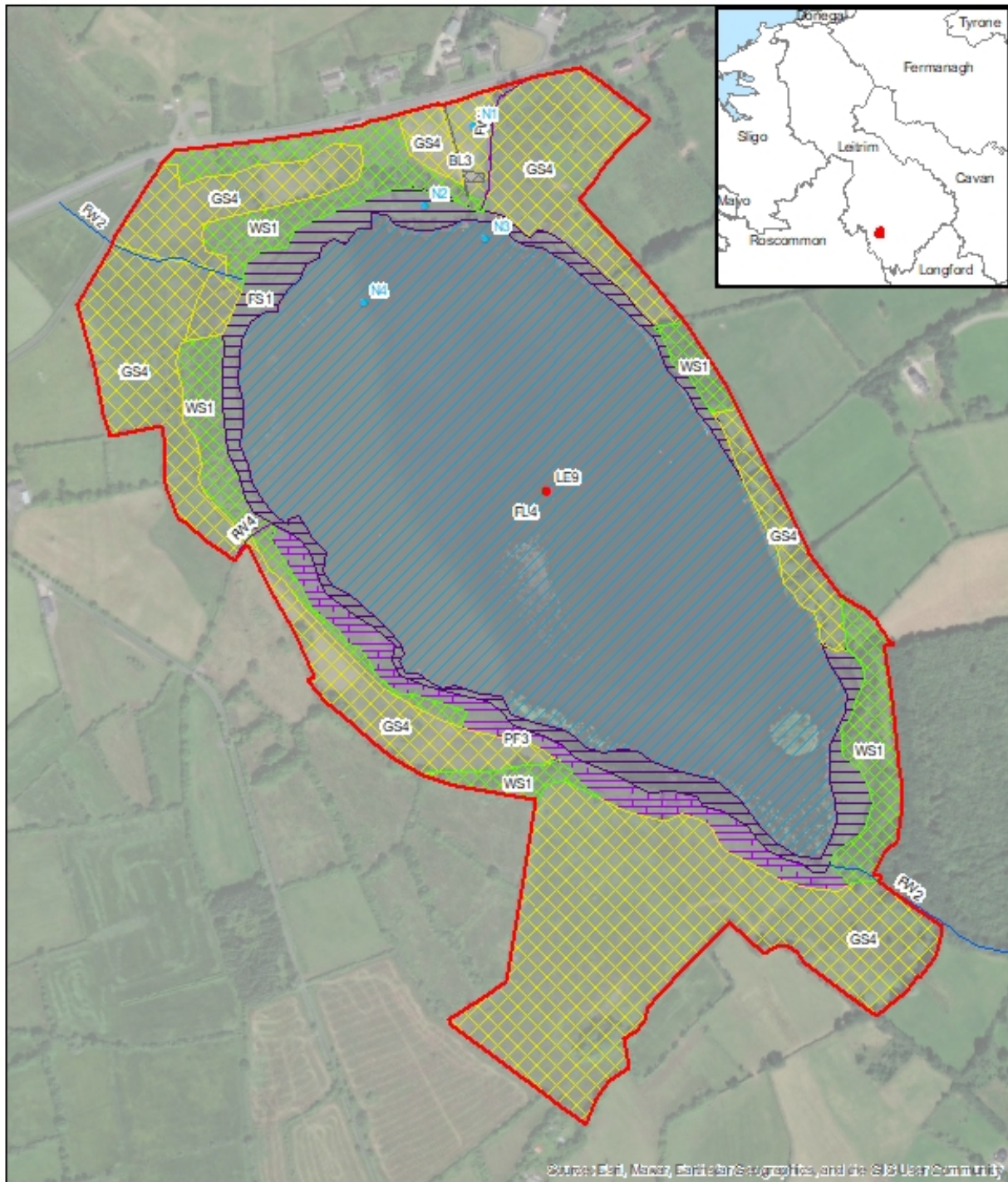


 Site Boundary

0 125 250 500 Meters



GIS Habitat map of the site



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



Site Name: MUCKLAGHAN LOUGH**Site Code:** LE80 **Area (ha):** 15.91 **Grid Ref:** 202877 297177 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

12/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:

ANNADUFF GLEBE

Solid Geology:

Marine shelf facies

Subsoil type:

Water

Substrate type:

Mineral Soil

Peat

Substrate stability:**River catchment:**

Shannon Upr

CORINE Habitats:

Pastures

Site Location

Mesotrophic lake with crannog located 7km to the north-north-west of Dromod.

Site Description and Wetland Habitats Recorded

Small circular lake with a muddy bottom. Narrow band of reed swamp occurring along the margins of most of the lake. Narrow strip of wet woodland separating lake from road in the west and narrow strip of wet grassland separating lake from conifer plantation in the east.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	DAMAGE	A narrow strip of woodland has been removed here from the northern shore of the lake in recent years.
N2	HABITAT	Mesotrophic lake.
N3	INVASIVE	Zebra mussels.
N4	DAMAGE	Large area to the east of the lake planted with conifer plantation in recent years (c. 5 years) with the plantation coming to within 30-50m of the lake.

Management Recommendations following survey

Recommend that measures be taken to eradicate invasive zebra mussels from the lake. Increase buffer zones around lake (particularly in the north where a strip of woodland was removed in recent years) in an effort to reduce excess nutrient inputs from entering the lake.

Future Survey Recommendations

None.

Landowner Information Comments

Landowners did not want the area advertised online as they say that it is a dangerous lake to swim in and they would like to keep the fish stocks high. Also informed us that the zebra mussel has been recorded in the lake and that there area algal blooms in summer during warm periods.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

GS4 Wet grassland

WN6 Wet willow-alder-ash woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

WD4 Conifer plantation

WL1 Hedgerows

EU Habitats Directive habitats on site

None noted

Landuse / Management Activity

Fishing

Frequency of use

2 Occasional (5-20%)

Impacting Activity (EU code and title)

A10.01 removal of hedges and copses or scrub

H01.05 diffuse pollution to surface waters due to

I01 invasive non-native species

Intensity

C = low

B = medium

B = medium

Impact

- 1 = reparable negative influence

- 1 = reparable negative influence

- 1 = reparable negative influence

Threats

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

Flora on site - Latin & English species name*Carex remota**Climacium dendroides**Equisetum fluviatile**Iris pseudacorus**Nuphar lutea**Schoenoplectus lacustris**Typha latifolia***Fauna on site - English and Latin species name**

Common Bream

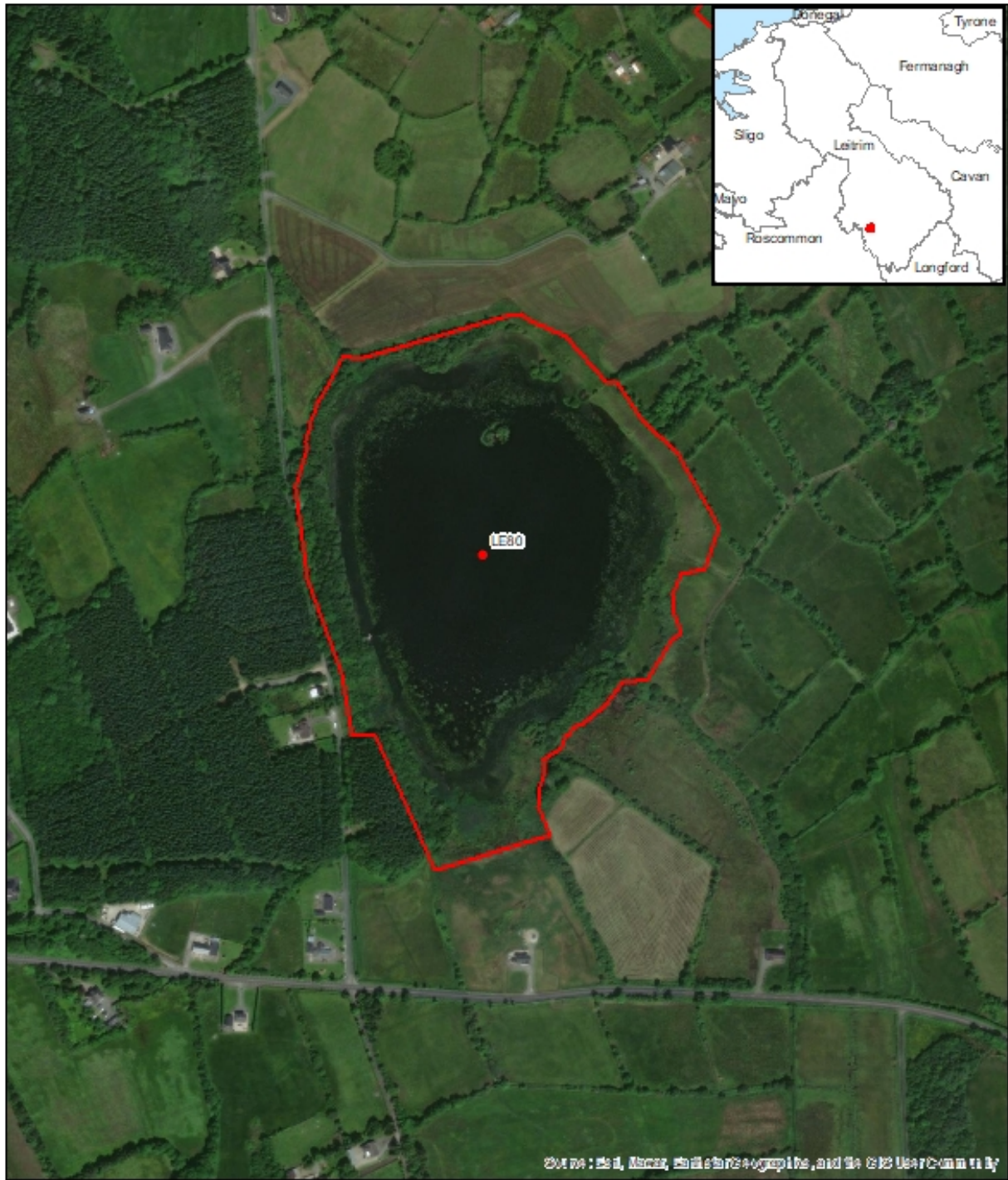
Grey Heron

Pike

Roach

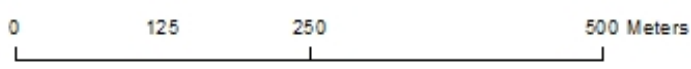
Sparrowhawk

Aerial Photograph showing location of the site

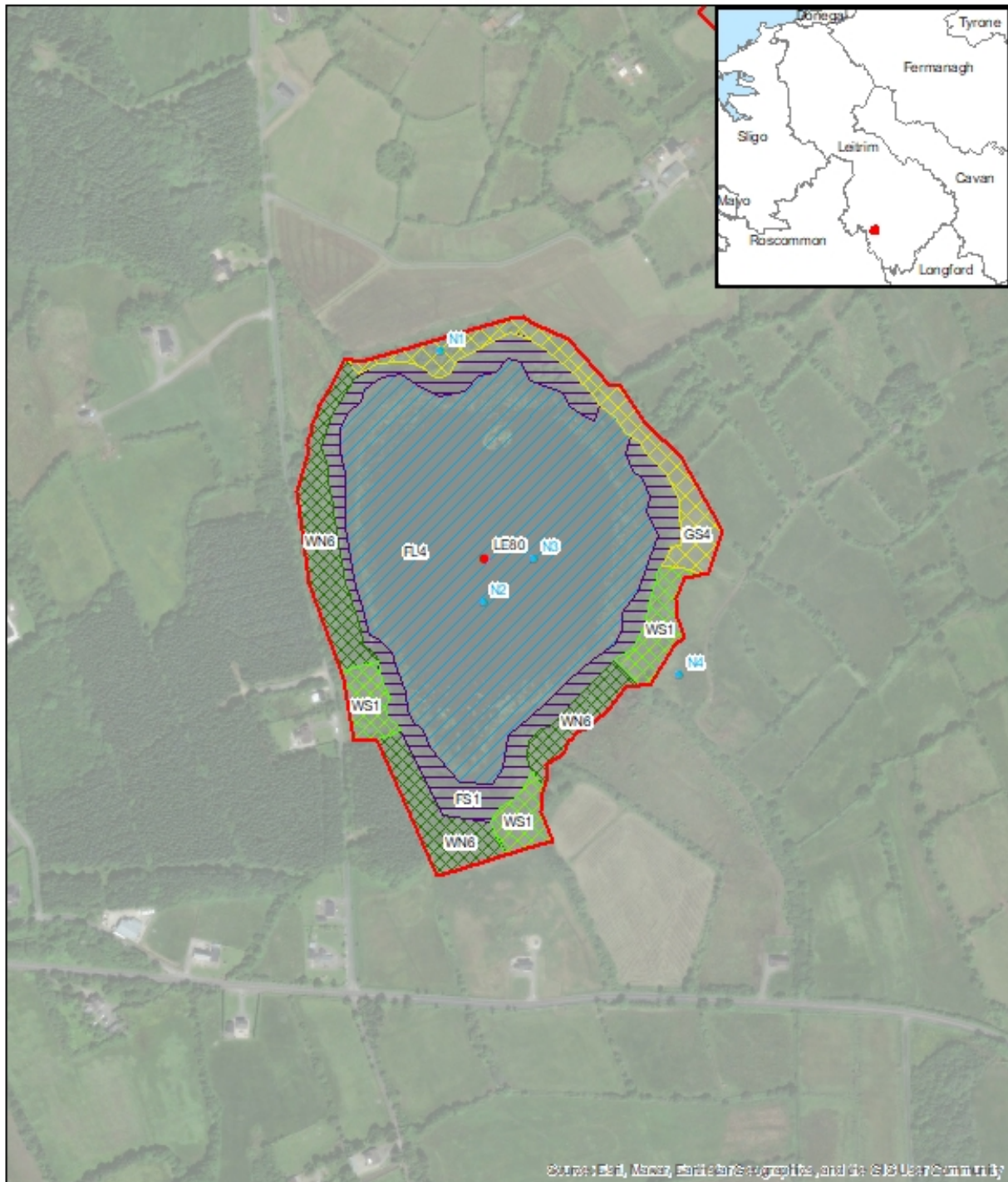


Source: Esri, DeLorme, GeoEye, IGN, AerGRID, AIRPHOTO, IGN, and the GIS User Community

 Site Boundary



GIS Habitat map of the site



Source: Esri, Maxar, Earthstar, GeoGraphics, and the GIS User Community



Site Name: MUNAKILL MORE LOUGH**Site Code:** LE340 **Area (ha):** 23.29 **Grid Ref:** 192995 338694 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

06/07/2023

Survey Code:

LEWS2023

Site source information:

Limited site inspection only

Site previously mapped in GIS dataset

Site previously reported from literature

UAV survey undertaken

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:

MUNAKILL

Solid Geology:

Marine shelf facies

Subsoil type:

Water

Substrate type:

Mineral Soil

Substrate stability:

Firm

River catchment:

Garvogue

CORINE Habitats:

Water bodies

Site Location

Munakill More Lough is located 3.5km to the east of Manorhamilton. In close proximity to the N16.

Site Description and Wetland Habitats Recorded

Site consists of a large mesotrophic lake with minimal reedswamp areas at edge and only in parts. Algal growth was observed in parts of the lake during survey. The lake is important for wintering waterbirds and the site is part of a larger site (North-West Leitrim Mountain Lakes) that is monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Open water. Mesotrophic lake. Algae seems to be quite frequent.
N2	DAMAGE	Algae occurring along the edge of the lake and some floating algae occurring on the lake.
N3	MANAGEMENT	Sheep grazing on wet grassland.

Management Recommendations following survey

Increase buffer zone around lake and limit excess nutrients from entering the lake system.

Future Survey Recommendations

Continue to monitor bird counts as part of the national monitoring scheme i-webs (Irish Wetland Bird Survey).

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site	EU Habitats Directive habitats on site
ER2 Exposed calcareous rock	None noted
FL4 Mesotrophic lakes	
FS1 Reed and large sedge swamps	
GS4 Wet grassland	
WS1 Scrub	
Fossitt habitats surrounding site	
BL3 Buildings and artificial surfaces	
FW2 Depositing/lowland rivers	
GA1 Improved agricultural grassland	
GS4 Wet grassland	
WD1 (Mixed) broadleaved woodland	
WD4 Conifer plantation	
WL2 Treelines	
WS1 Scrub	

Landuse / Management Activity

Grazing - sheep

Frequency of use

3 Frequent (21-50%)

Impacting Activity (EU code and title)

A04.01.02 intensive sheep grazing

Intensity

B = medium

Impact

- 1 = reparable negative influence

H01.05 diffuse pollution to surface waters due to

D = unknown

- 1 = reparable negative influence

Threats

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

Flora on site - Latin & English species name

Algae

Alisma plantago-aquatica

Carex nigra

Carex sp.

Chara spp.

Eleocharis palustris

Equisetum fluviatile

Glyceria fluitans

Hydrocotyle vulgaris

Juncus inflexus

Littorella uniflora

Mentha aquatica

Persicaria amphibia

Potentilla anserina

Ranunculus flammula

Ranunculus sp.

Rorippa palustris

Salix sp.

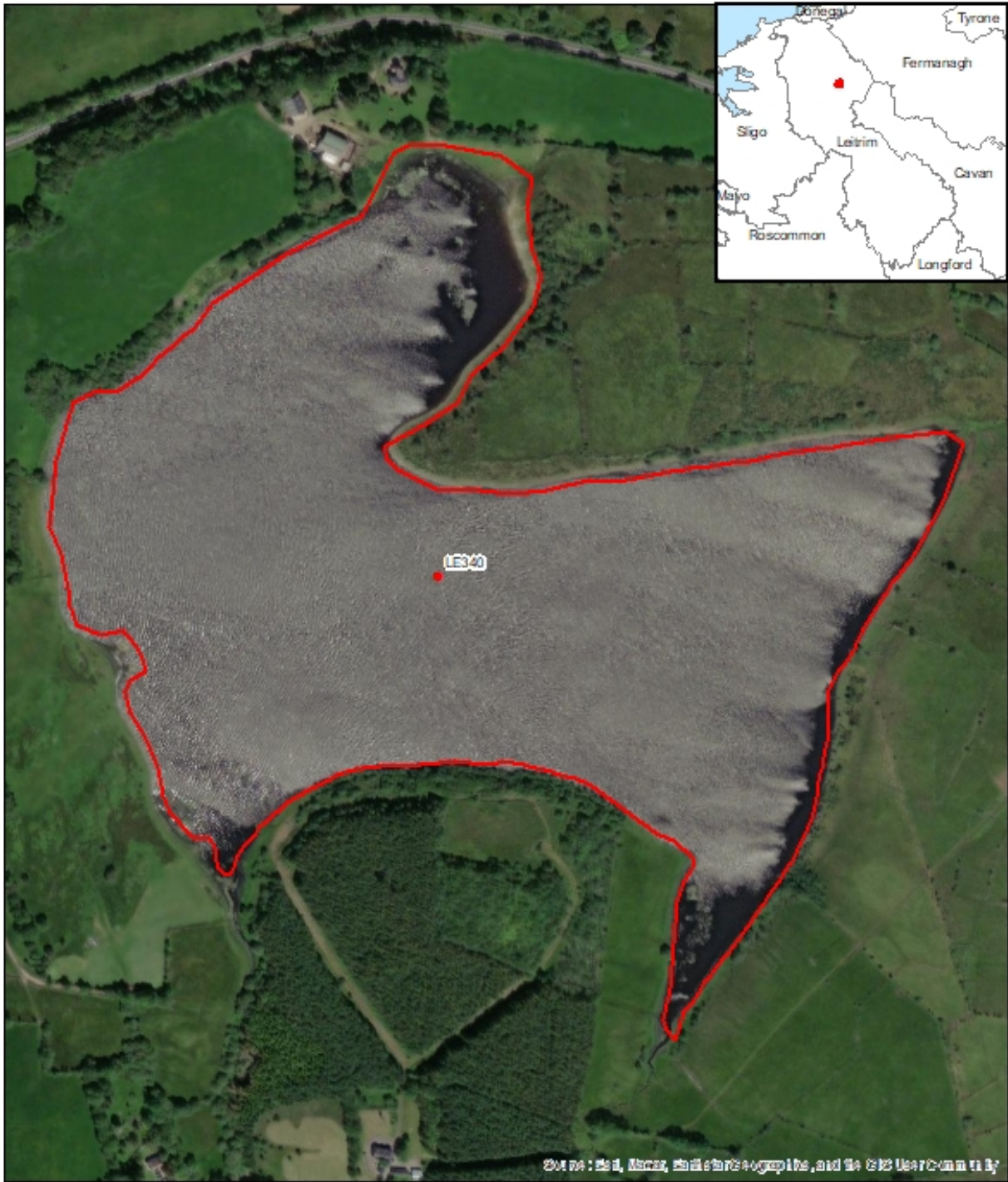
Fauna on site - English and Latin species name

Grey Heron

House Martin

Otter

Aerial Photograph showing location of the site



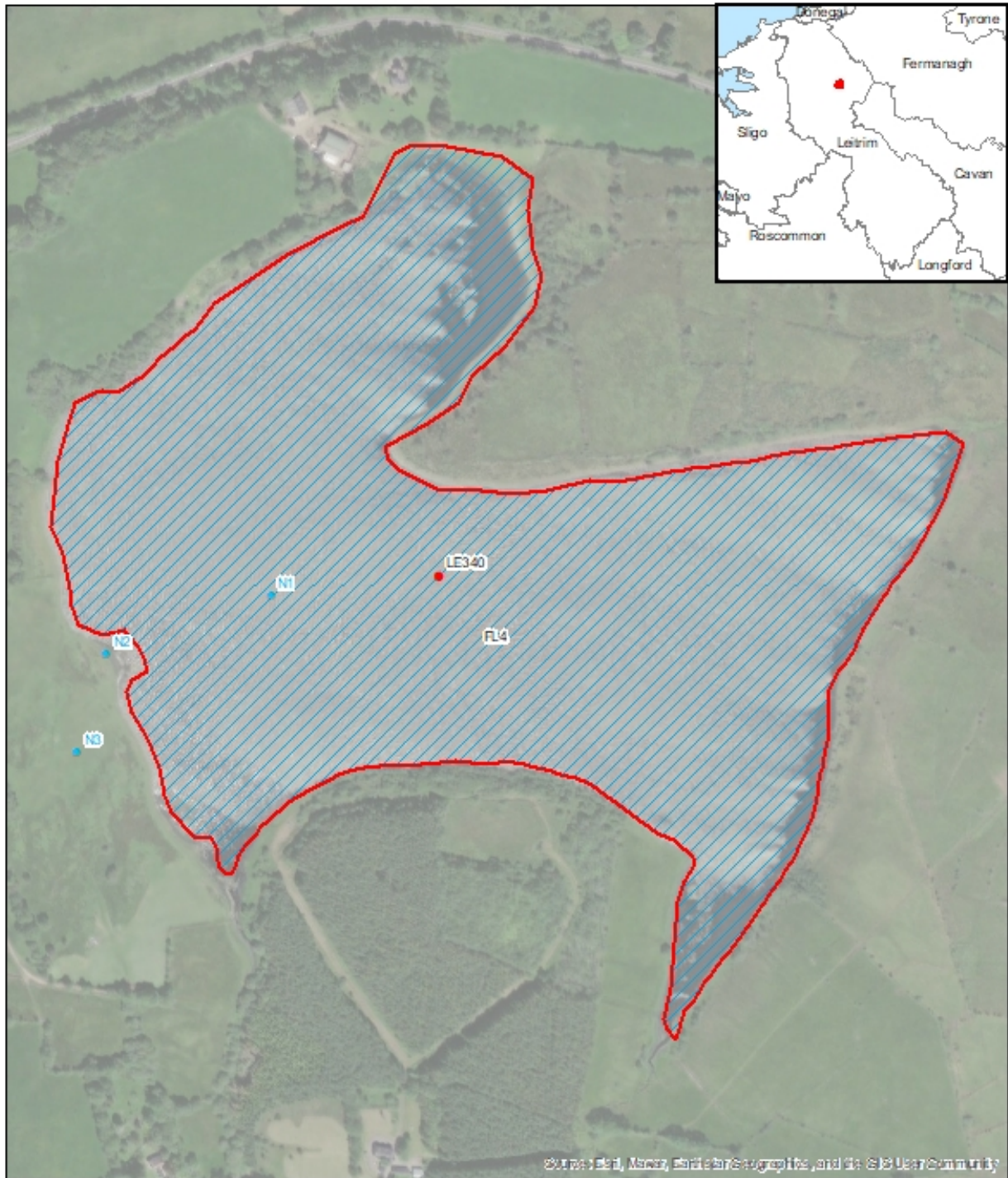
Source: Esri, DeLorme, Garmin, GeoEye, IGN, GeoEye, and the GIS User Community




 Site Boundary

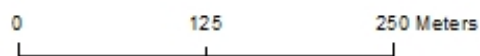
0 125 250 Meters



GIS Habitat map of the site



-  Site Boundary
-  Target Notes
-  FL4 Mesotrophic lakes



Site Name: RAHEELIN COOLDONNELL BOG**Site Code:** LE348 **Area (ha):** 52.81 **Grid Ref:** 193894 344923 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

05/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Further Survey Recommended (Invertebrates)

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:

COOLODONNELL

Solid Geology:

LEITRIM GP; Visean

Subsoil type:

BktPt

Substrate type:

Mineral Soil

Peat

Substrate stability:

Firm

River catchment:

Drowes

CORINE Habitats:

Peat bogs

Site Location

Mosaic of blanket bog, wet heath and wet grassland located 6km to the north-east of Manorhamilton. Site is located adjacent to conifer plantations which are accessed by new hardcore gravel track. The Lattone River runs through the site.

Site Description and Wetland Habitats Recorded

Blanket bog with areas of cutover, wet heath and species-rich wet grassland. Wet heath in the west of the site occurring alongside species-rich wet grassland with abundant *Succisa pratensis*. East of the Lattone River blanket bog dominates in the south of the site with cutover bog in the north and wet grassland in the east.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Patch of cutover bog. Not active.
N10	HABITAT	Species-rich wet grassland/marsh dominated by <i>Filipendula</i> , <i>Juncus acutiflorus</i> and <i>Wquisetum palustre</i> .
N2	HABITAT	Wet heath. <i>Calluna</i> and <i>Molinia</i> co-dominate. <i>Juncus squarrosus</i> , <i>Succisa</i> , <i>Narthecium</i> , <i>Luzula</i> all present.
N3	HABITAT	Wet heath mosaic with wet grassland.
N4	HABITAT	Wet grassland with abundant <i>Succisa</i> .
N5	HABITAT	<i>Succisa</i> abundant. Potential Marsh fritillary habitat.
N6	DAMAGE	WD4. Planted c. 15 years ago.
N7	HABITAT	GA1 cut for silage or hay.
N8	DAMAGE	Active mechanical turf cutting.
N9	HABITAT	Wet grassland. <i>Holcus lanatus</i> and <i>Juncus articulatus</i> dominated.

Management Recommendations following survey

Liaise with turf cutters with a view to ceasing turf cutting. Do not replant all forestry areas once felled. Consider actions to restore as much as possible of the areas affected by cutting and afforestation.

Future Survey Recommendations

Hydrological survey to inform peatland restoration plan. Consider undertaking a Marsh fritillary survey in areas with abundant *Succisa pratensis* at suitable time of year.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

The small areas of wet heath in the west of the site may correspond to the Annex I habitat 4010 Northern Atlantic Wet Heaths. Parts of the site may also correspond to the EU Annex I habitat 7130 Blanket bog.

Main Fossitt habitats on site

BL1 Stone walls and other stonework
BL3 Buildings and artificial surfaces
ED2 Spoil and bare ground
FW1 Eroding/upland rivers
FW4 Drainage ditches

EU Habitats Directive habitats on site

4010 Northern Atlantic wet heaths with *Erica tetralix*
7130 Blanket bog (*if active bog)

GS3 Dry-humid acid grassland

GS4 Wet grassland

HH3 Wet heath

PB2 Upland blanket bog

PB4 Cutover bog

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GS4 Wet grassland

HH3 Wet heath

PB2 Upland blanket bog

PB4 Cutover bog

WD4 Conifer plantation

Landuse / Management Activity

Grazing - cattle

Grazing - sheep

Peat cutting (mechanical)

Frequency of use

2 Occasional (5-20%)

2 Occasional (5-20%)

2 Occasional (5-20%)

Impacting Activity (EU code and title)

A04.02.01 non intensive cattle grazing

A04.02.02 non intensive sheep grazing

C01.03 Peat extraction

Intensity

C = low

C = low

C = low

Impact

+1= natural positive influence

0 = neutral

- 2 = irreparable negative influence

Threats

B01.02 artificial planting on open ground (non-native trees)

C01.03.02 mechanical removal of peat

Flora on site - Latin & English species name

Anagallis tenella

Anthoxanthum odoratum

Aulacomnium palustre

Calliergonella cuspidata

Calluna vulgaris

Carex echinata

Carex nigra

Carex panicea

Cirsium palustre

Cladonia portentosa

Cynosurus cristatus

Dactylorhiza maculata subsp. ericetorum

Digitalis purpurea

Erica cinerea

Erica tetralix

Eriophorum angustifolium

Eriophorum vaginatum

Filipendula ulmaria

Galium palustre

Holcus lanatus

Juncus acutiflorus

Juncus articulatus

Juncus conglomeratus

Juncus effusus

Juncus squarrosus

Luzula multiflora

Lychnis flos-cuculi

Molinia caerulea

Myosotis scorpioides

Myrica gale

Narthecium ossifragum

Picea sitchensis

Plantago lanceolata

Potentilla erecta

Prunella vulgaris

Pteridium aquilinum

Ranunculus repens

Salix sp.

Sorbus aucuparia

Sphagnum capillifolium

Sphagnum capillifolium subsp. rubellum

Sphagnum fallax

Sphagnum papillosum

Succisa pratensis

Trichophorum cespitosum

Trifolium repens

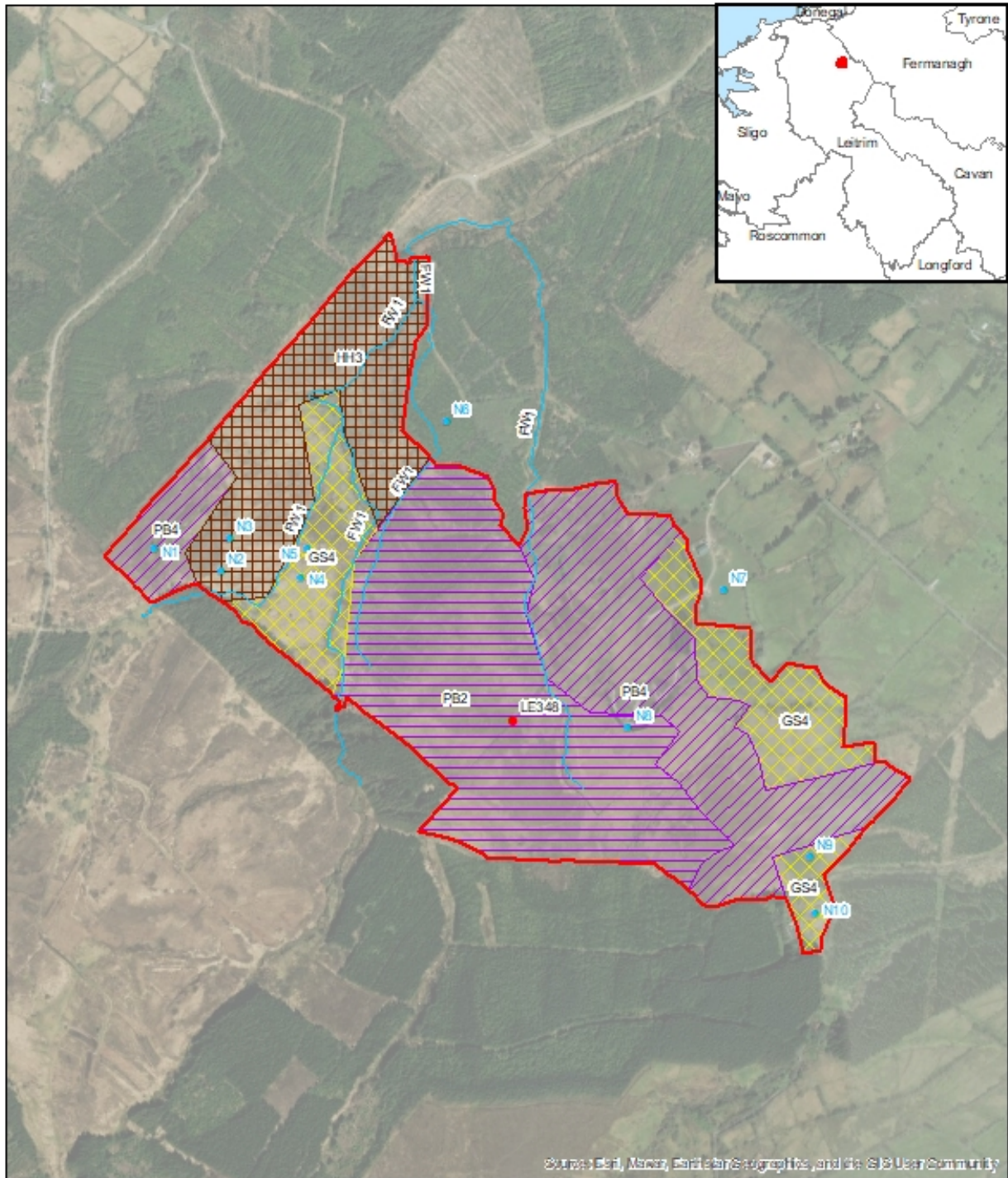
Urtica dioica

Vaccinium myrtillus

Fauna on site - English and Latin species name

No faunal observations were made

GIS Habitat map of the site



Source: Esri, Maxar, Earthstar, GeoGraphics, and the GIS User Community

- Site Boundary
- Target Notes
- FW1 Eroding/upland rivers
- GS4 Wet grassland
- HH3 Wet heath
- PB2 Upland blanket bog
- PB4 Cutover bog



Site Name: RIVER FRONT AMENITY PARK**Site Code:** LE383 **Area (ha):** 15.67 **Grid Ref:** 194170 299325 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

12/07/2023

Survey Code:

LEWS2023

Site source information:

Additional Survey may be required

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

TOWNPARKS

Solid Geology:

Mineral Soil

River catchment:

Shannon Upr

CORINE Habitats:

Discontinuous urban fabric

Subsoil type:

Made

Substrate type:**Substrate stability:**

Soft

Site Location

The site is comprised of the lower section of the River Shannon that runs through Carrick on Shannon town from Cumann na mBan Bridge south to Butler's Marina.

Site Description and Wetland Habitats Recorded

The site includes riparian habitats including reed swamp, wet woodland and amenity grassland, along the northern bank of the River Shannon. The site is managed for amenity and biodiversity. However, the eastern extent of the site has recently been drained.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	DAMAGE	This area has been removed for development.
N10	FLORA	Planted Leyland cypress.
N11	HABITAT	Reed bed. Phragmites, schoenoplectus and Sparganium.
N12	INVASIVE	Winter heliotrope.
N13	FLORA	Apple tree area
N2	DAMAGE	This area has been removed for development.
N3	HABITAT	Open water. Dirty at the moment due to digging works.
N4	HABITAT	Reeds just outside of treeline.
N5	FLORA	Along this side of the drain bank leyland have been planted.
N6	HABITAT	Valerian, ranunculus repens, Galium palustre, phalaris, urtica, iris (Occasional) dominated area. Bindweed, Filipendula and Juncus effusus also growing in smaller amounts.
N7	FLORA	Large willow trees 8m high and wide.
N8	HABITAT	Salix and Alnus dominated wood with canary grass, Urtica and bindweed underneath.
N9	INVASIVE	Winter heliotrope

Management Recommendations following survey

The invasive species Winter heliotrope should be eradicated from the site. Consider the impact that the drainage and ground clearance works are having on the wetland and control/prevent any future drainage works if necessary.

Future Survey Recommendations

Survey to assess the extent of invasive species within the site. Some interesting bat activity was noted at the waters edge during the survey and so a detailed bat survey is recommended to assess the importance of the site for bats.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought any of the habitats present correspond to any of the habitats listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

BC2 Horticultural land
 BC4 Flower beds and borders
 BL3 Buildings and artificial surfaces
 FS1 Reed and large sedge swamps
 FS2 Tall herb swamps
 FW2 Depositing/lowland rivers
 FW4 Drainage ditches
 GA2 Amenity grassland (improved)
 WD1 (Mixed) broadleaved woodland
 WN6 Wet willow-alder-ash woodland
 WS1 Scrub

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
 GA1 Improved agricultural grassland
 GA2 Amenity grassland (improved)
 GS4 Wet grassland
 WL2 Treelines
 WS1 Scrub

Landuse / Management Activity

Boating
 Fishing

Frequency of use

4 Dominant (>50%)
 3 Frequent (21-50%)

Impacting Activity (EU code and title)

E01.01 continuous urbanisation
 G01.01.01 motorized nautical sports
 I01 invasive non-native species
 J02.05 Modification of hydrographic functioning,

Intensity

A = high
 B = medium
 C = low
 A = high

Impact

- 2 = irreparable negative influence
 - 2 = irreparable negative influence
 - 1 = reparable negative influence
 - 1 = reparable negative influence

Threats

E01.01 continuous urbanisation
 G01.01.01 motorized nautical sports
 I01 invasive non-native species
 J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name

Alnus glutinosa

Angelica sylvestris

Arrhenatherum elatius

Calystegia sepium

Centaurea nigra

Cirsium arvense

Cirsium palustre

Epilobium hirsutum

Equisetum fluviatile

Equisetum telmateia

Galium palustre

Holcus lanatus

Iris pseudacorus

Juncus effusus

Lythrum salicaria

Mentha aquatica

Menyanthes trifoliata

Myosotis scorpioides

Nuphar lutea

Petasites fragrans

Phalaris arundinacea

Phragmites australis

Plantago lanceolata

Salix sp.

Schoenoplectus lacustris

Sparganium erectum

Stachys palustris

Trifolium pratense

Valeriana officinalis

Fauna on site - English and Latin species name

Black-headed Gull

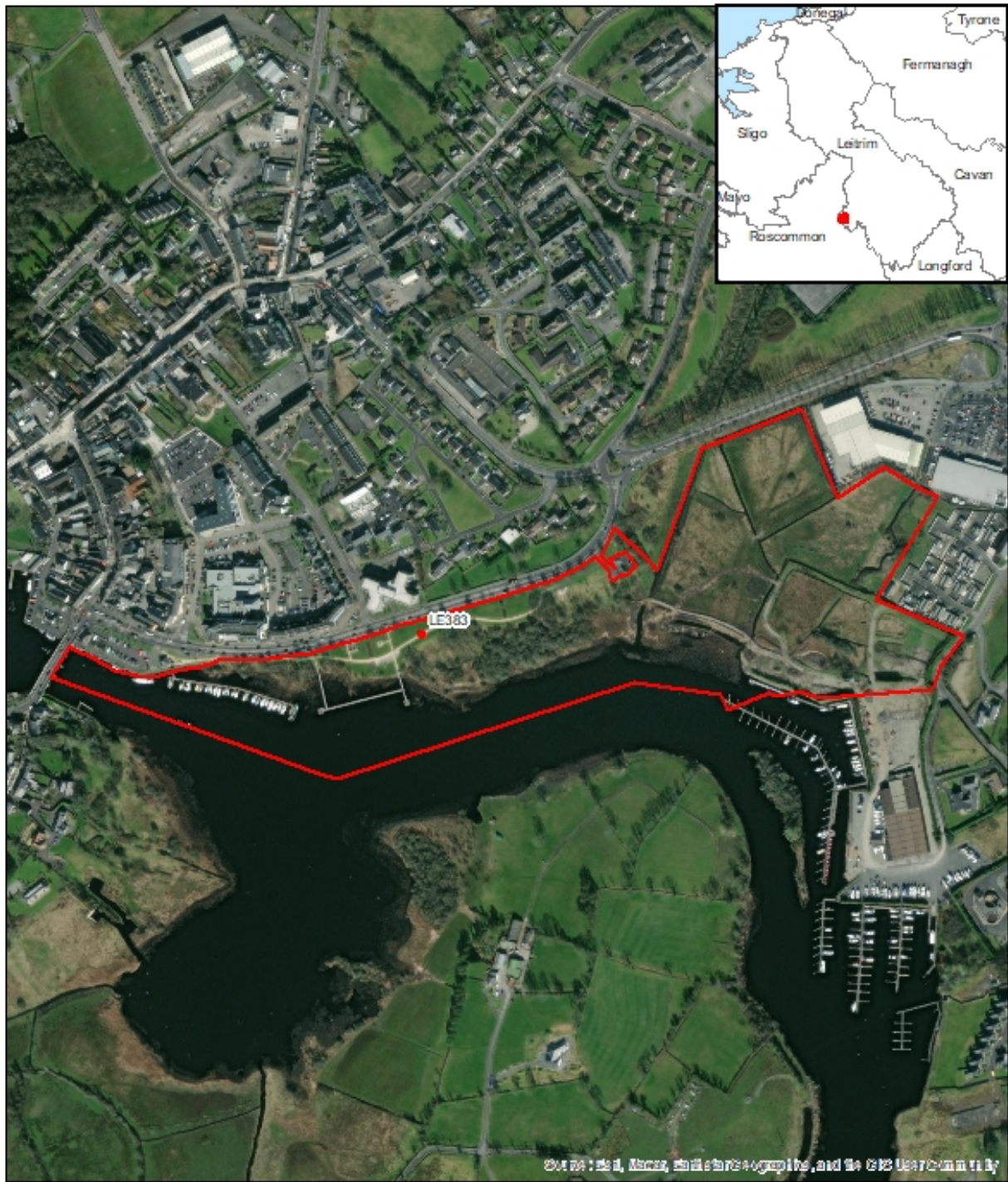
Leisler's bat

Mallard

Moorhen

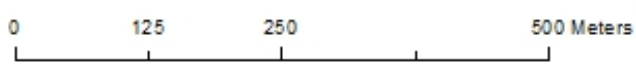
Swallow

Aerial Photograph showing location of the site

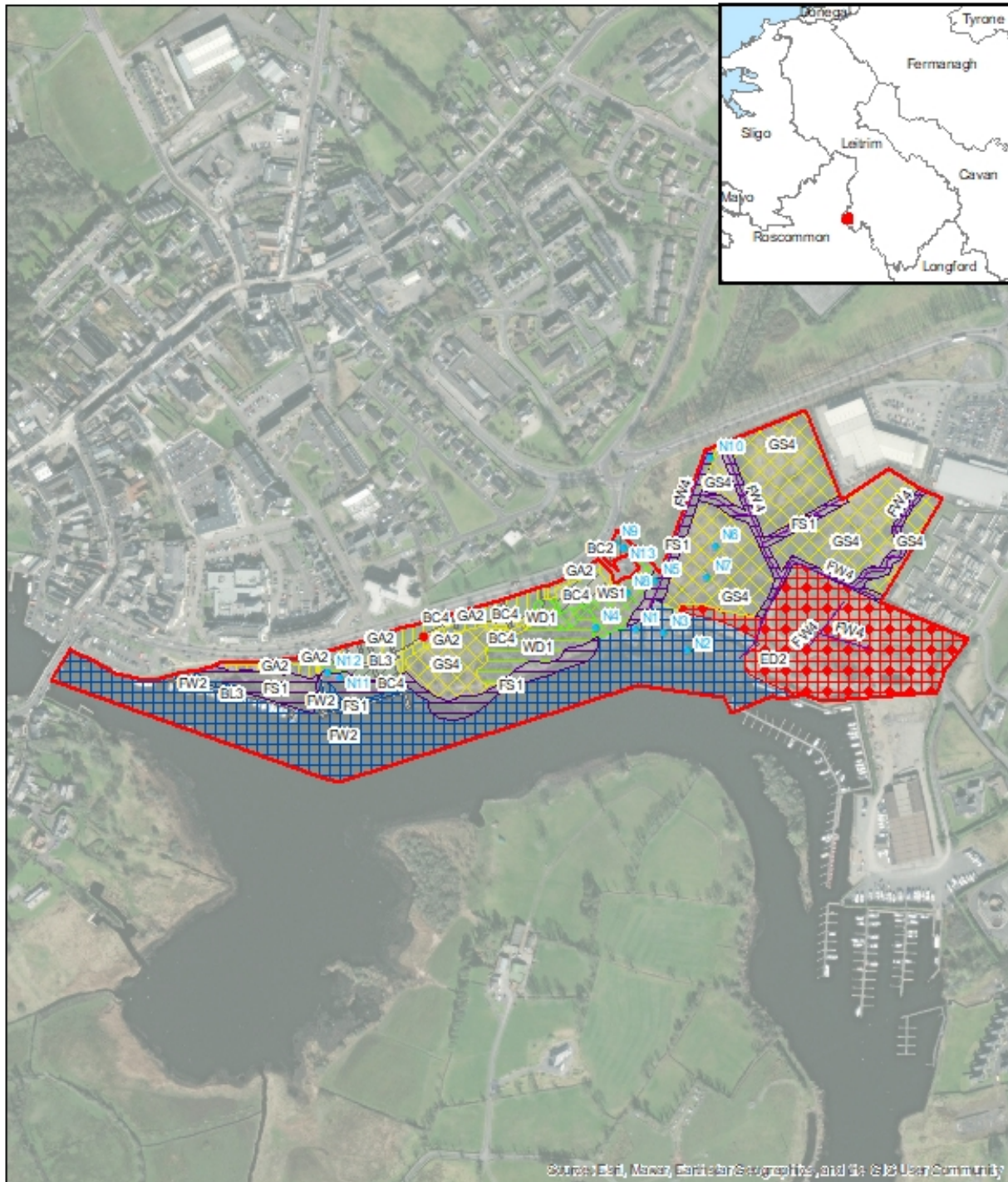


SOURCE: Esri, Maxar, Earthstar, GeoEye, and the GIS User Community

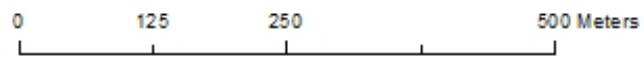
 Site Boundary



GIS Habitat map of the site



Source: Esri, Maxar, Earthstar Geographics, and Swisstopo; Esri User Community



Site Name: RIVER SHANNON (LEITRIM)**Site Code:** LE382**Area (ha):** 14.85**Grid Ref:** 193414 299503**County:** LE
LF
DO**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

12/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed grassland survey recommended

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

UAV survey undertaken

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:**Solid Geology:****Substrate type:**

Loose Rock

Mineral Soil

River catchment:

Shannon Upr

CORINE Habitats:

Stream courses

Subsoil type:

Water

Substrate stability:

Firm

Site Location

The site includes a 1 km section of River Shannon in Co. Leitrim running northwards from the bridge crossing the Shannon in Carrick-on-Shannon.

Site Description and Wetland Habitats Recorded

The site consists of a stretch of the River Shannon that runs northwards from the bridge in Carrick on Shannon. It includes the River Shannon as well as a marinas and wetland habitats in the riparian zone, mainly reed swamp, tall herb swamp, wet woodland and scrub.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Wet grassland and potentially Molinia meadow (6410). Valerian, Ranunculus repens, Galium palustre, Phalaris, Urtica, Iris all frequent. Calystegia, Filipendula and Juncus effusus also growing in smaller amounts.
N2	HABITAT	Dominated by tall herb swamp. Likely corresponds to the Annex habitat 6430.
N3	FLORA	Salix and Alnus scrub.
N4	HABITAT	Phragmites dominated but with frequent tall herbs.
N5	HABITAT	Narrow band of tall herb vegetation at landward side of jetty.

Management Recommendations following survey

None.

Future Survey Recommendations

A detailed grassland survey to assess whether the wet grassland in the north of the site corresponds to the Annex habitat 6410 Molinia meadows and whether the tall herb area corresponds to the Annex habitat 6430 Hydrophilous tall herb fringe communities.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

The area of wet grassland in the north of the site may correspond to the EU Annex I habitat 6410 Molinia meadows and some of the tall herb vegetation along the margins of the river may correspond with 6430 Hydrophilous tall herb fringe communities.

Main Fossitt habitats on site

BL1 Stone walls and other stonework
 BL3 Buildings and artificial surfaces
 ED Disturbed ground
 FS1 Reed and large sedge swamps
 FS2 Tall herb swamps
 FW2 Depositing/lowland rivers
 GA2 Amenity grassland (improved)
 GS4 Wet grassland
 WD1 (Mixed) broadleaved woodland
 WL1 Hedgerows
 WN6 Wet willow-alder-ash woodland
 WS1 Scrub

EU Habitats Directive habitats on site

6410 Molinia meadows on calcareous, peaty or clayey-
 6430 Hydrophilous tall herb fringe communities of

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
 GA1 Improved agricultural grassland
 GA2 Amenity grassland (improved)

GS4 Wet grassland

WL2 Treelines

Landuse / Management Activity

Boating

Fishing

Frequency of use

4 Dominant (>50%)

2 Occasional (5-20%)

Impacting Activity (EU code and title)

G01.01.01 motorized nautical sports

Intensity

B = medium

Impact

- 1 = reparable negative influence

Threats

G01.01.01 motorized nautical sports

Flora on site - Latin & English species name*Alnus glutinosa**Chara spp.**Equisetum fluviatile**Filipendula ulmaria**Fraxinus excelsior**Hydrocotyle vulgaris**Iris pseudacorus**Leucanthemum vulgare**Lythrum salicaria**Mentha aquatica**Menyanthes trifoliata**Nuphar lutea**Phragmites australis**Potamogeton polygonifolius**Salix sp.**Schoenoplectus lacustris**Sparganium erectum**Valeriana officinalis***Fauna on site - English and Latin species name**

Mute Swan

Swallow

Aerial Photograph showing location of the site

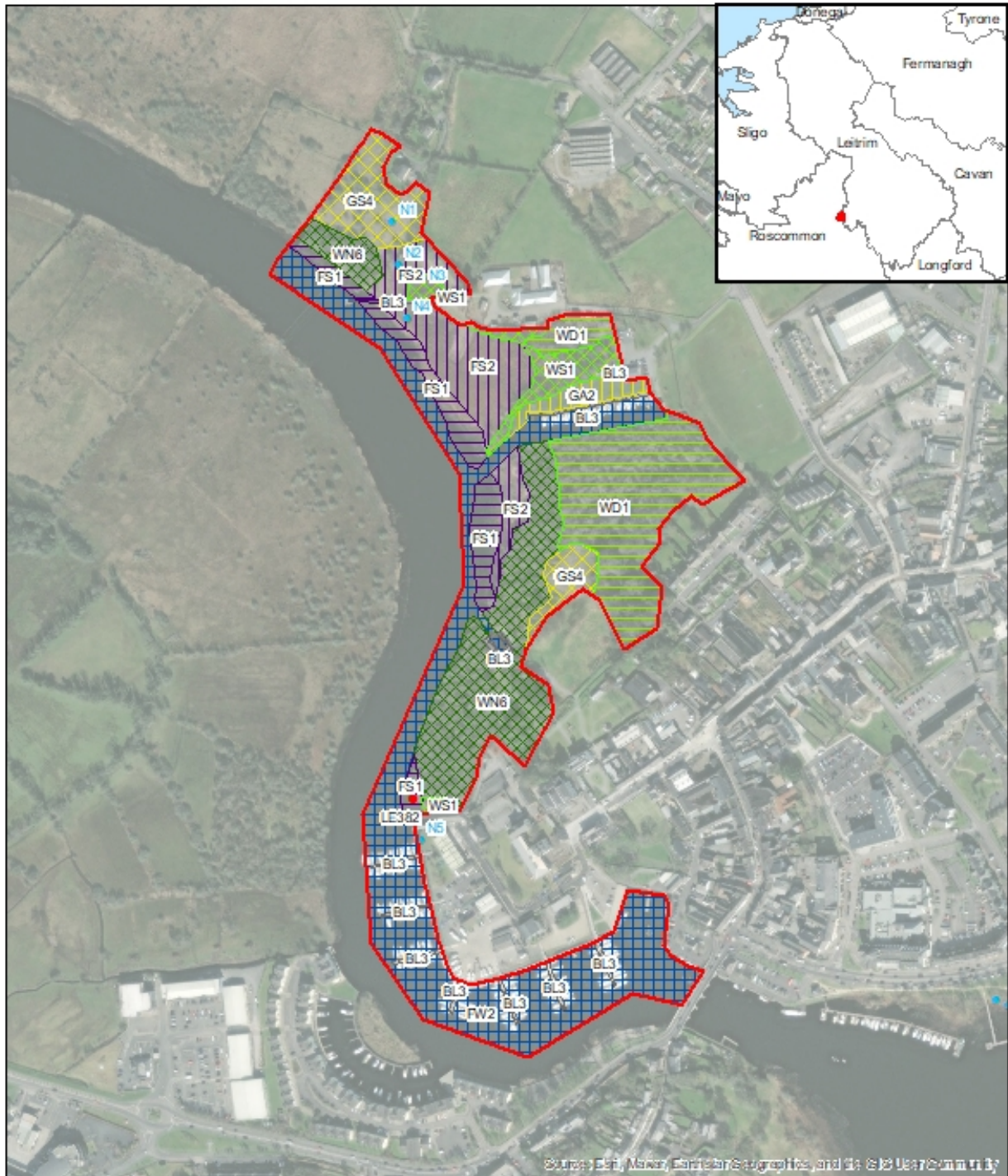


 Site Boundary

0 125 250 500 Meters



GIS Habitat map of the site



Site Name: ROOSKY LOUGH**Site Code:** LE100 **Area (ha):** 8.63 **Grid Ref:** 207551 291431 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

William Crowley & Adam Vanmechelen

Date of wetland survey:

27/06/2023

Survey Code:

LEWS2023

Site source information:

Detailed fen survey recommended

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:

CLOONBONIAGH SOUTH

Solid Geology:

Navan Group

Subsoil type:

Water

Substrate type:

Peat

Substrate stability:

Soft

River catchment:

Shannon Upr

CORINE Habitats:

Peat bogs

Site Location

Roosky Lough is an infilling lake located 3km north-east of Dromod.

Site Description and Wetland Habitats Recorded

Infilling lake. No open water remaining. Central area of former lake dominated by transition mire characterised by abundant *Carex* sp., *Comarum*, *Succisa*, *Equisetum fluviatile*, *Lychnis* and frequent *Holcus lanatus*, *Anthoxanthum*, *Iris*, *Valerian* and *Angelica*. Moss layer dominated by *Aulacomnium* with a low (10% cover) of *Sphagnum* (mainly *S. palustre* & *S. fallax*). Transition mire is surrounded by birch and willow scrub with wet willow dominated woodland to the north, dry birch woodland to the south and cutover bog to the west.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	PF2 dominated by <i>Molinia</i> and <i>Myrica</i> . Very wet with a high (>50%) cover of <i>Sphagnum</i> . <i>S. palustre</i> , <i>S. fallax</i> and <i>S. rubellum</i> . <i>Equisetum fluviatile</i> , <i>P. erecta</i> , <i>Menyanthes</i> with scattered <i>Betula</i> .
N10	GENERAL	High bog is ca 1m above level of cutover.
N11	HABITAT	GS4 Species rich wet grassland. <i>Holcus lanatus</i> and <i>Filipendula (a) juncus conglomeratus</i> .
N12	HABITAT	Dry WN7 <i>Salix</i> and <i>Betula</i> dom (8-10m) <i>Rubus</i> dominated ground layer.
N2	HABITAT	PF3 dom by <i>Comarum</i> with abundant <i>Succisa</i> , <i>Equisetum fluviatile</i> , <i>Lychnis</i> ; <i>Carex</i> spp, and frequent <i>Holcus lan</i> , <i>Anthox</i> , <i>Iris</i> , <i>Valerian</i> , <i>Angelica</i> . Moss layer dominated by <i>Aulacomnium</i> with a low (10% cover) of <i>Sphagnum</i> (mainly <i>S. palustre</i> & <i>S. fallax</i>).
N3	HABITAT	PF2 with abundant <i>Calluna</i> , <i>Carex</i> spp., <i>Molinia</i> , <i>Myrica</i> . Moss layer mainly <i>Aulacomnium</i> , <i>Polytrichum commune</i> and <i>Sphagnum palustre</i> .
N4	HABITAT	Slightly elevated area with dense bracken.
N5	HABITAT	Dominated by <i>Molinia</i> <i>Myrica</i> and <i>Calluna</i> . Possibly very old cutover bog.
N6	HABITAT	PB4. Old cutover bog dom by tussocky <i>Molinia</i> , <i>Myrica</i> and <i>Calluna</i> . <i>Sphagnum</i> cover ca 20%.
N7	HABITAT	FS1 <i>Phragmites</i> dominated.
N8	HABITAT	<i>Salix</i> dominated (4-5m) with <i>Comarum</i> , <i>Equisetum fluviatile</i> , <i>Succisa</i> and <i>Iris</i> .
N9	HABITAT	WN6/7 <i>Salix</i> dominated with birch. Tussocky <i>Molinia</i> dominating ground layer.

Management Recommendations following survey

None.

Future Survey Recommendations

Undertake a detailed fen survey. Consider a Marsh fritillary survey at a suitable time of the year. Consider also a hydrological survey to assess whether management is needed to protect the integrity of the site.

Landowner Information Comments

Landowner to the west of the site granted access.

Description of potential EU Habitats Directive Annex 1 habitats

Some of the areas of transition mire within the site likely correspond to the EU Annex I habitat 7140 Transition Mires and Quaking Bogs.

Main Fossitt habitats on site

FS1 Reed and large sedge swamps

EU Habitats Directive habitats on site

7140 Transition mires and quaking bogs

HD1 Dense bracken
 PB4 Cutover bog
 PF2 Poor fen and flush
 PF3 Transition mire & quaking bog
 WN6 Wet willow-alder-ash woodland
 WN7 Bog woodland
 WS1 Scrub

Fossitt habitats surrounding site

GA1 Improved agricultural grassland
 GS4 Wet grassland
 PB1 Raised bogs
 PB4 Cutover bog
 WL1 Hedgerows
 WS1 Scrub

Landuse / Management Activity

None

Frequency of use

4 Dominant (>50%)

Impacting Activity (EU code and title)

J02.05 Modification of hydrographic functioning,

Intensity

C = low

Impact

- 1 = reparable negative influence

Threats

J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name*Agrostis stolonifera**Alnus glutinosa**Angelica sylvestris**Anthoxanthum odoratum**Aulacomnium palustre**Betula pubescens**Calluna vulgaris**Carex echinata**Carex flacca**Carex nigra**Carex panicea**Carex rostrata**Cladonia portentosa**Comarum palustre**Dactylorhiza fuchsii**Drosera rotundifolia**Equisetum fluviatile**Erica tetralix**Eriophorum angustifolium**Eriophorum vaginatum**Galium palustre**Holcus lanatus**Hylocomium splendens**Iris pseudacorus**Juncus articulatus**Juncus effusus**Lychnis flos-cuculi*

Menyanthes trifoliata

Molinia caerulea

Myrica gale

Phragmites australis

Polytrichum commune

Potentilla erecta

Rhynchospora alba

Salix aurita

Salix cinerea subsp. cinerea

Sphagnum capillifolium

Sphagnum fallax

Sphagnum fimbriatum

Sphagnum magellanicum

Sphagnum palustre

Succisa pratensis

Trichophorum cespitosum

Typha latifolia

Vaccinium myrtillus

Valeriana officinalis

Fauna on site - English and Latin species name

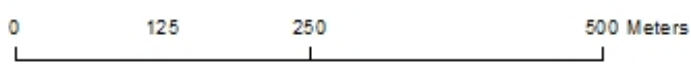
No faunal observations were made

Aerial Photograph showing location of the site

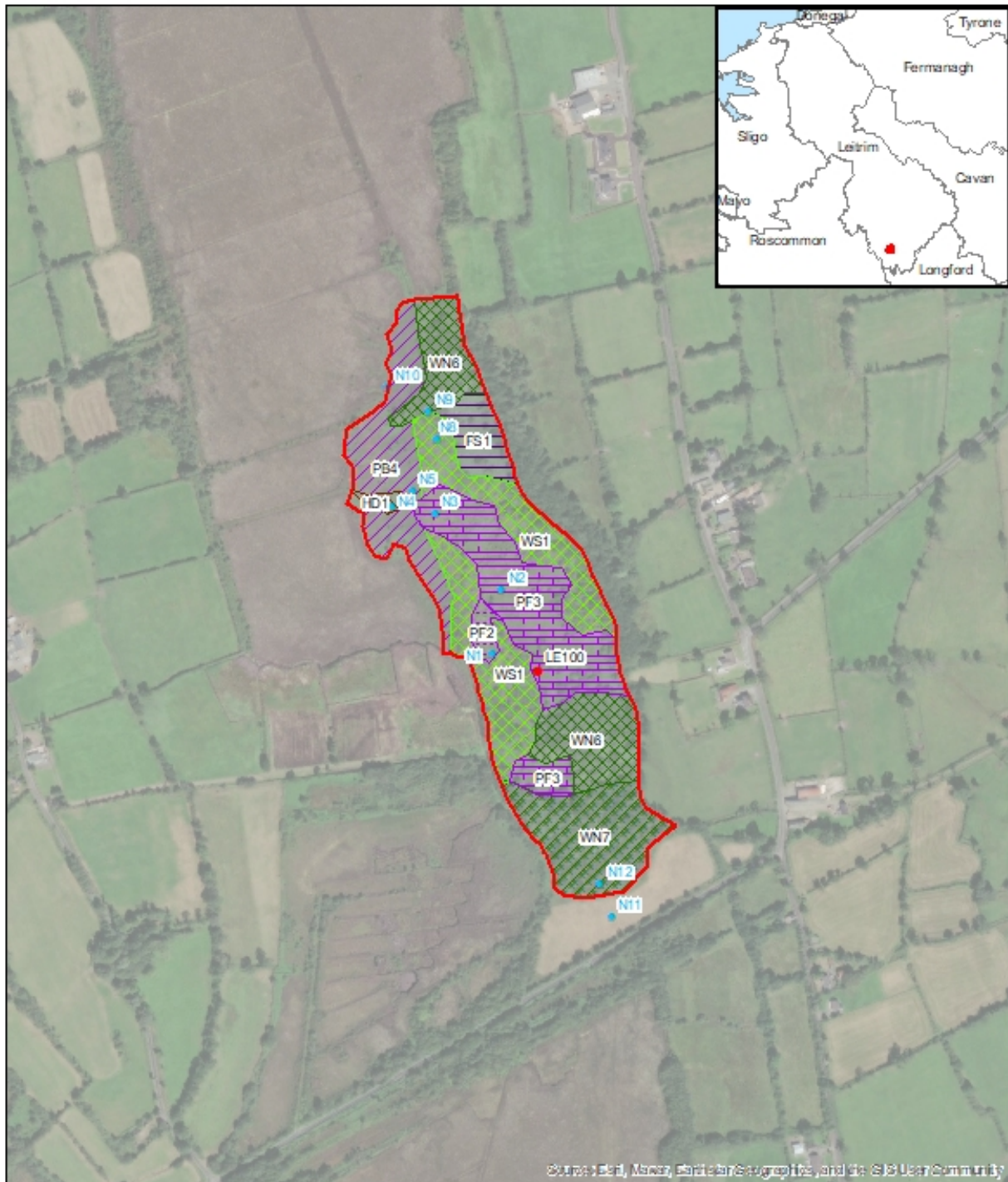


Source: Esri, DeLorme, GeoEye, IGN, AerGRID, AIRPHOTO, IGN, and the GIS User Community

 Site Boundary



GIS Habitat map of the site



Source: Esri, Maxar, Earthstar, GeoEye, and the GIS User Community



Site Name: ROSCUNNISH LOUGH**Site Code:** LE164 **Area (ha):** 8.09 **Grid Ref:** 198940 311303 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

12/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed fen survey recommended

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

Site previously reported from literature

UAV survey undertaken

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:

DERRYHALLAGH

Solid Geology:

Marine shelf facies

Subsoil type:

Water

Substrate type:

Clay

Mineral Soil

Peat

Substrate stability:

Soft

River catchment:

Shannon Upr

CORINE Habitats:

Land principally occupied by

Site Location

Mesotrophic lake fringed with transition mire located 1km to the east of Drumshanbo, Co. Leitrim.

Site Description and Wetland Habitats Recorded

Mesotrophic lake with yellow water-lily growing abundantly on the sub-margins particularly in the north of the site. On the landward side of this there is a narrow band of reedswamp/transition mire (dominated by *Carex* spp., *Iris*, *Phalaris* and *Typha*) growing around most of the site and an area of wet willow dominated woodland in the north-east. The lake is connected to Derryhallagh Lough, which lies 250m to the west by a drainage channel and a stream connects the lake to the Aghagranis River in the north-east. Agricultural land surrounds the lake with a conifer plantation adjacent to the site in the north-east. The Swan Mussel (*Anodonta cygnea*), which is listed as Vulnerable on Ireland's Red List (Bvrne et al. 2009) was recorded on site during the survey.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Mesotrophoc lake. Open water with yellow water lily on the sub margins and then <i>Iris</i> , <i>Phalaris</i> , <i>Carex rostrata</i> and <i>Typha</i> growing on the margins.
N2	DAMAGE	Ground clearance.

Management Recommendations following survey

Increase buffer zone around lake (particularly in the west of the site) in an effort to control/limit excess nutrients from entering the lake system. Increase public awareness at the site to prevent the zebra mussel from colonising the lake as this would threaten the population of swan mussel at the site.

Future Survey Recommendations

Undertake a detailed fen survey of the transition mire.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

Some of the areas of transition mire around the edge of the lake likely correspond to the EU Annex I habitat 7140 Transition Mires and Quaking Bogs.

Main Fossitt habitats on site

FL4 Mesotrophic lakes
 FS1 Reed and large sedge swamps
 FW2 Depositing/lowland rivers
 FW4 Drainage ditches
 PF3 Transition mire & quaking bog
 WN6 Wet willow-alder-ash woodland
 WS1 Scrub

EU Habitats Directive habitats on site

7140 Transition mires and quaking bogs

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
 ED Disturbed ground
 ED5 Refuse and other waste
 FW2 Depositing/lowland rivers
 FW4 Drainage ditches
 GA1 Improved agricultural grassland
 GS4 Wet grassland
 WD4 Conifer plantation
 WL1 Hedgerows
 WL2 Treelines
 WS1 Scrub

Landuse / Management Activity

Boating

Frequency of use

2 Occasional (5-20%)

Fishing	2 Occasional (5-20%)	
Impacting Activity (EU code and title)	Intensity	Impact
A10.01 removal of hedges and copses or scrub	C = low	- 1 = reparable negative influence
E03.01 disposal of household waste	C = low	- 1 = reparable negative influence
H01.05 diffuse pollution to surface waters due to	B = medium	- 1 = reparable negative influence
J02.05 Modification of hydrographic functioning,	C = low	- 1 = reparable negative influence

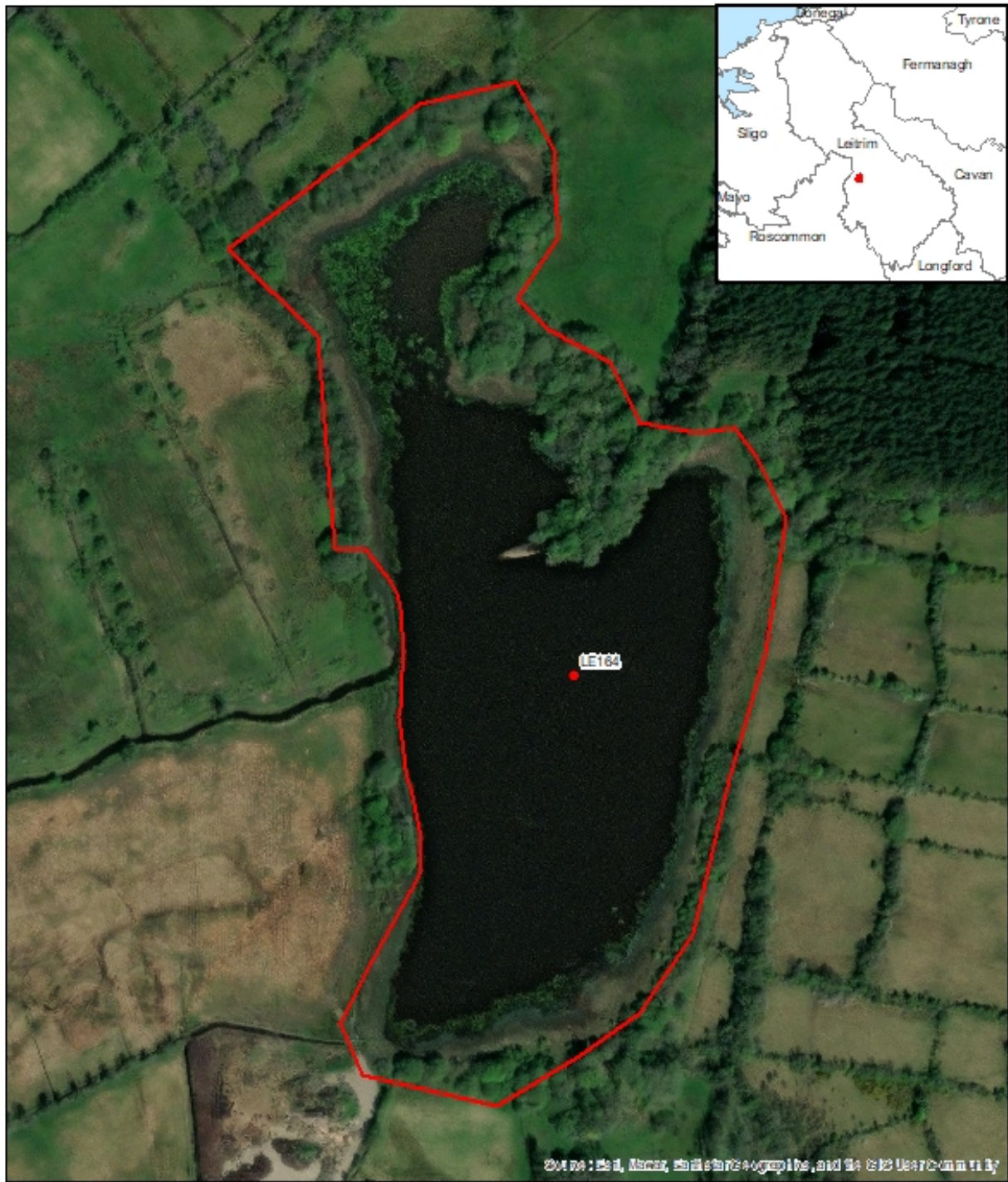
Threats

A02.01 agricultural intensification
 E03.01 disposal of household waste
 H01.05 diffuse pollution to surface waters due to agricultural and forestry activities
 J02.05 Modification of hydrographic functioning, general

Flora on site - Latin & English species name*Carex rostrata**Galium palustre**Iris pseudacorus**Juncus effusus**Lythrum salicaria**Mentha aquatica**Nuphar lutea**Phalaris arundinacea**Salix sp.**Schoenoplectus lacustris**Typha latifolia***Fauna on site - English and Latin species name**

Swan mussel

Aerial Photograph showing location of the site

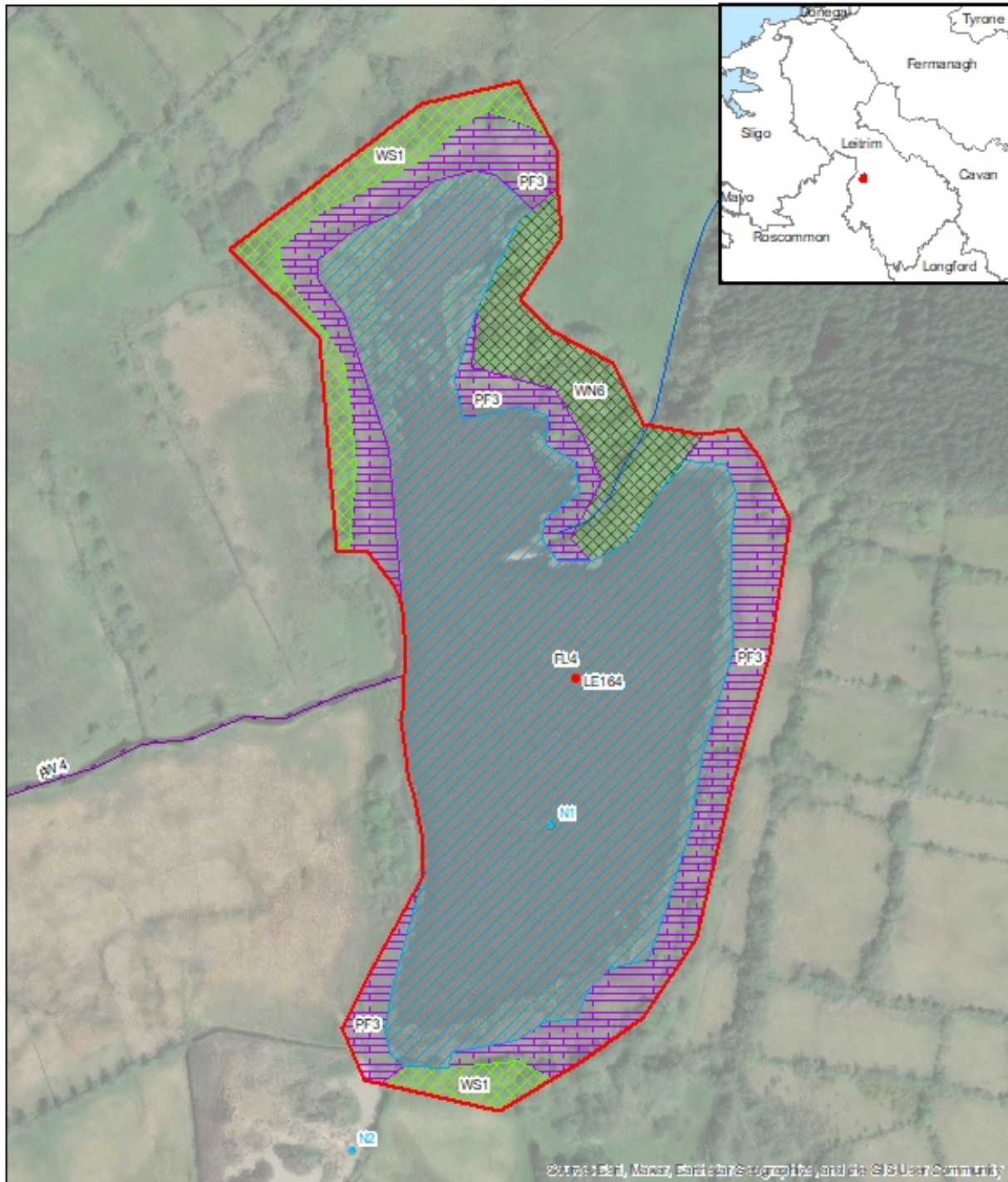


 Site Boundary

0 125 250 Meters



GIS Habitat map of the site



Site Name: ROSHARRY**Site Code:** LE77 **Area (ha):** 4.54 **Grid Ref:** 209299 298923 **County:** LE**Site designation(s):**

Undesignated site

Surveyed by:

Adam Vanmechelen & Joe O'Sullivan

Date of wetland survey:

13/07/2023

Survey Code:

LEWS2023

Site source information:

Detailed Wetland Survey undertaken

Site previously mapped in GIS dataset

UAV survey undertaken

Wetland Present on the Site

YES

Conservation ranking after survey:

D Rating: Local conservation value (moderate value)

Townland:

GORTFADDA

Solid Geology:

Courseyan limestone

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Firm

River catchment:

Shannon Upr

CORINE Habitats:

Land principally occupied by

Site Location

Dry birch woodland located 2km north-north-east of Mohill.

Site Description and Wetland Habitats Recorded

Birch-willow woodland on peat with areas of scrub, wet grassland and a small area of marsh.

Target Notes - (see Habitat Map for location of Target Notes)

No.	Category	Comment
N1	HABITAT	Willow and birch woodland.
N2	DAMAGE	It appears that there may have been an attempt at agricultural reclamation here in recent years. A small area of woodland was removed. However, it appears that no drainage was inserted.
N3	HABITAT	A mix of scrub is recolonising the area with abundant young birch as well as heather, bindweed and rushes with patches of bare peat persisting.

Management Recommendations following survey

None.

Future Survey Recommendations

None.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

It is not thought that any of the habitats present within this site correspond to a habitat listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site

BL3 Buildings and artificial surfaces
ED3 Recolonising bare ground
GM1 Marsh
GS4 Wet grassland
WN7 Bog woodland
WS1 Scrub
WS5 Recently-felled woodland

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
GA1 Improved agricultural grassland
GA1 Improved agricultural grassland
WD4 Conifer plantation
WL1 Hedgerows

Landuse / Management Activity

Grazing - cattle

Frequency of use

2 Occasional (5-20%)

Impacting Activity (EU code and title)

A10.01 removal of hedges and copses or scrub

Intensity

C = low

Impact

- 1 = reparable negative influence

Threats

A10.01 removal of hedges and copses or scrub

Flora on site - Latin & English species name

Angelica sylvestris

Anthoxanthum odoratum

Arrhenatherum elatius

Betula pubescens

Calluna vulgaris

Cirsium palustre

Epilobium palustre

Filipendula ulmaria

Juncus effusus

Potentilla erecta

Pteridium aquilinum

Rubus fruticosus agg.

Salix sp.

Ulex europaeus

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



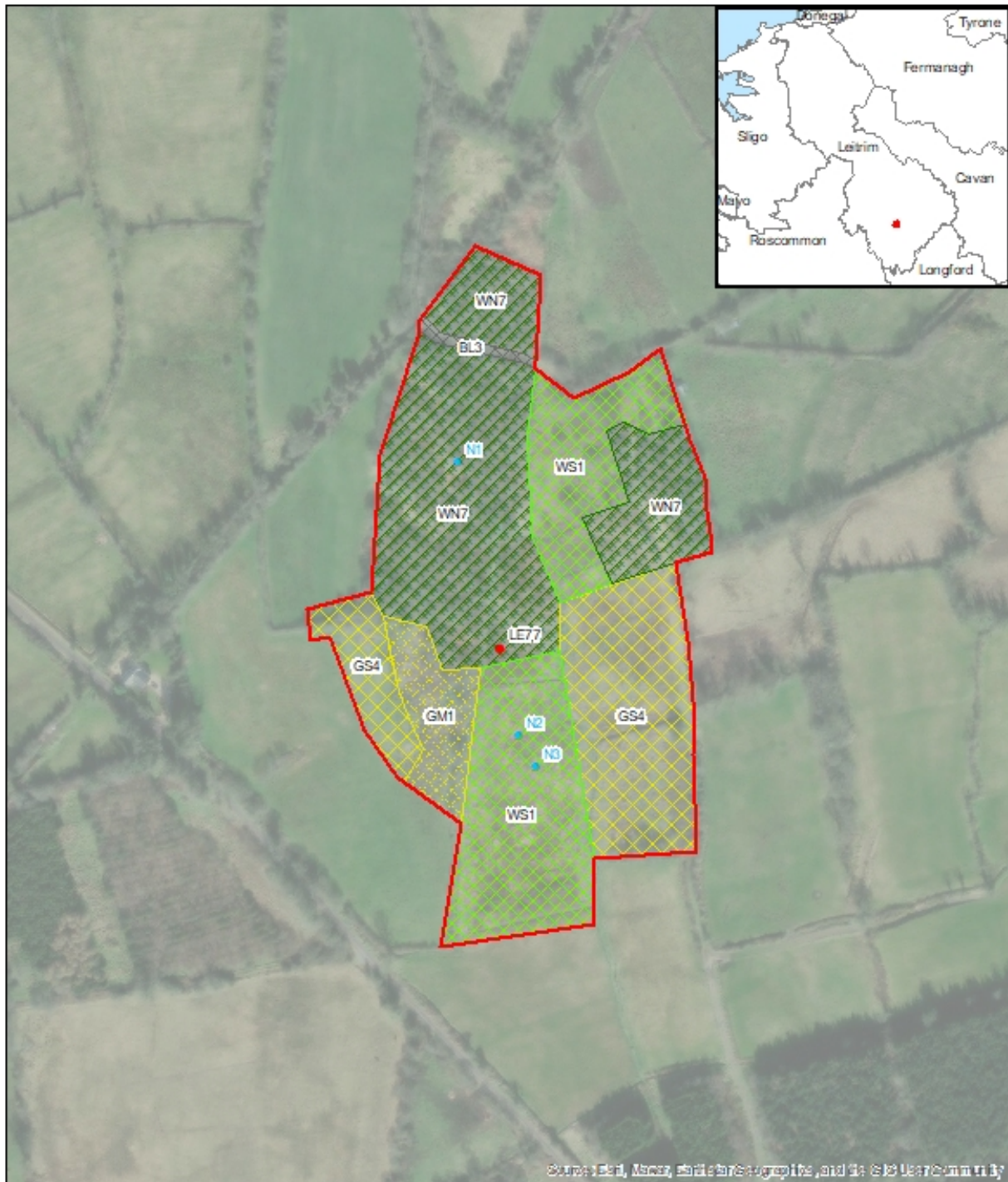
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 Site Boundary

0 125 250 Meters



GIS Habitat map of the site



County Leitrim Wetlands Field Survey II 2023

Data Deliverables Contents

by Crushell, P., Crowley, W. , Vanmechelen, A., O’Sullivan, J. & Foss, P.J

Contents:

1. **County Leitrim Wetlands Field Survey II 2023.** Main survey report and individual site reports prepared by Willie Crowley, Patrick Crushell, Adam Vanmechelen & Peter Foss (In PDF format, requires Adobe Acrobat to view).
2. **Leitrim Wetland Site Database 2023 Version 3.0; Leitrim Wetland Survey Database 2023 Version 2.0** (requires Filemaker Pro to view).
3. **Excel tables to accompany the County Leitrim Wetlands Field Survey II 2023 report**

LEWS_Survey_Database_Site_Summary: Summary information on sites survey during the LEWS 2023, including site location, and table with site description and conservation ranking.
4. **GIS files from the County Leitrim Wetlands Field Survey 2023.**
 - a. Geodatabase containing sites surveyed and the habitats noted
 - b. Shapefiles containing the sites surveyed and the habitats noted
 - c. Style file containing the Fossitt habitat symbology used during the study

**The project is an action of the County Leitrim Heritage Plan 2020-2025
funded under the National Biodiversity Action Plan Fund 2025**