County Leitrim

Wetlands Field Survey III 2024

Report prepared for Leitrim County Council

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Report cover images:
Top: Cornacorroo Wetland; Middle L to R: Townparks Wetland; Carrick Drumkeilvy; Headford Lough; Bottom: Keeldra Cattan Bog.

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County Leitrim Wetlands Field Survey III 2024

This project involved a field survey of thirty-one freshwater wetlands in County Leitrim, mainly located in the south of the 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 2024 field survey and includes detailed site descriptions and habitat maps for each of the wetlands surveyed.

Acknowledgements

The County Leitrim Wetlands Field Survey 2024 (LEWS2024) 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.

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The project is an action of the County Leitrim Heritage Plan 2020-2025 and is funded by Leitrim County Council and the National Parks and Wildlife Service (Department of Housing, Local Government and Heritage) through the Local Biodiversity Action fund (LBAF).

Executive Summary

1. The aim of the Leitrim Wetlands Field Survey 2024 (LEWS 2024) 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. The thirty-one sites selected for survey all lie outside of designated areas and focused on sites that were deemed likely to contain habitats of biodiversity interest.

3. Field surveys were undertaken on all thirty-one sites comprising an area of 860.6ha. 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 2024.

7. The main findings to emerge from the 2024 wetlands survey is the identification of a number of important wetland sites (ranging from national to high local importance), including a dystrophic lake, transition mires, bog woodland, lake and reed swamps, active raised bog, mesotrophic lakes, Molinia meadows and a number of remnant raised bog sites.

8. The results of the 2024 field survey suggests that many important wetland sites may remain un-identified 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 202 still have no detailed background survey information.

The main aim of the current Leitrim Wetlands Field Survey 2024 (LEWS 2024) 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 2024 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 2024 project was undertaken between April and end of October 2024. Field surveys were completed from June to September 2024. The main elements project included:

- Over forty potential survey sites were selected from the Leitrim Wetlands Map (LEWM) GIS dataset for survey in 2024 with the aim of surveying at least thirty sites. Sites considered are representative of the more common wetland habitats within the county (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-one sites were undertaken from June to September 2024. 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 2024 (LEWS 2024) GIS dataset and site database accompany this report.

2 Materials & Methods

2.1 Leitrim Wetlands Field Survey 2024 - Site Selection

At project commencement forty-two 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 2024 - Field Survey

The field survey was undertaken from June to September 2024. 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 Parnell *et al*. (2012), and species nomenclature follows Parnell *et al*. (2012) for vascular plants, Blockeel *at al.* (2021) for bryophytes and Dobson (2018) for lichens. Searches for rare or protected species of plants (Wyse-Jackson *et al*., 2016) 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 Mullarney *et al*. (2010). Any reptiles, amphibians or (readily identifiable) invertebrates were also noted.

Incidental records of Invasive species were recorded within an emphasis on species listed on the 'Third Schedule' of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) and those listed as 'high impact' under the National Biodiversity Data Centre's 'Invasive Species in Ireland Prioritization Risk Assessment'.

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 but one landowner that was 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. Habitat maps were produced in accordance with guidelines issued by the Heritage Council - *Best Practice Guidance for Habitat Survey and Mapping* (Smith *et al*., 2011).

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), Denyer *et al*. (2023), NPWS (2019), NPWS *et al*. (2023), O'Neill *et al.* (2013; 2023), Perrin *et al.* (2013) and Smith and Crowley (2020).

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 hazardous livestock (e.g. 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 and an un-manned aerial vehicle (UAV). 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.

Full walkover surveys of four sites were not possible due to access difficulties (LE72 – Headford Lough (western lake edge), LE110 – Doogary Lough and Wetland (Leitrim) (east of site) LE126 – Creenagh Lough (northwestern lake edge), and LE392 - Cornacorroo Wetland). In instances where access could not be gained to some areas of the aforementioned sites, a visual survey was conducted from a distance with the use of binoculars and on some occasions, an un-manned aerial vehicle (UAV). The survey methodologies employed allowed for a sufficient level of survey considering the dominant habitat types and land-use present.

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 2024 added) was given the name Leitrim Wetland Map Version 4, 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 2024 for all site selection and mapping purposes using ArcGIS Pro

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 2024 project followed the methodologies recommended by Smith *et al*. (2011) and were added to this LEWS GIS dataset. In certain cases, site boundaries were also adjusted 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 2024. A set of GIS files relevant only to this individual survey (LEWS 2024) are also included with this report.

3 Results

3.1 Leitrim Wetlands Field Survey 2024

The thirty-one 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 2024.

LEWS Site Code	LEWS Site Name	IG Easting	IG Northing	Area (ha)
LE11	LOUGH MACHUGH cNHA	204600	297800	60.49
LE40	LOUGH SALLAGH SOUTH (LEITRIM)	215896	291720	37.79
LE61	BELLAGEEHER MEELARAGH BOG AND CUTOVER	208225	287798	90.93
LE62	CLOONLAUGHIL GUBBADORRIS BOG (LEITRIM)	212241	285755	31.69
LE72	HEADFORD LOUGH	201098	299039	8.49
LE86	GORTNALAMPH DRUMARD BOG	207415	294704	35.61
LE89	DRUMARD (JONES) BOG	208829	293678	18.85
LE92	GORTANURE SOUTH BOG	207774	293133	61.16
LE104	BEAGHMORE LOUGH (LEITRIM)	222520	298772	26.82
LE110	DOOGARY LOUGH AND WETLAND (LEITRIM)	220197	295119	28.67
LE112	CARRICK DRUMKEILVY	210537	298951	15.86
LE120	SUNNAGH MORE SOUTH	215796	297472	13.52
LE126	CREENAGH LOUGH	210559	296220	38.75
LE128	MUCKANAGH DRUMGOWNAGH BOG	213783	294540	70.59
LE130	KEELDRA CATTAN BOG	214984	295268	28.34
LE134	DRUMADORN CORDUFF SOUTH BOG	216325	295744	10.30
LE137	LOUGH NABELWY (LEITRIM)	218906	293692	15.28
LE145	DRUMGILRA DRUMGRANIA BOG COMPLEX	213336	290878	141.73
LE151	DERRYNAHOO LOUGH	196903	309098	11.72
LE156	COSTRE LOUGH	199189	302561	14.45
LE166	CORRACHUILL	196855	311460	8.64
LE168	WOODFORD LOUGHS NORTH AND SOUTH	220445	312036	6.67
LE190	CLOONBOYGHER LOUGH AND WETLAND	220164	307604	14.36
LE200	AGHAVORE NORTH	225701	303665	8.52
LE227	KESHCARRIGAN LOUGH AND WETLAND	203978	307041	62.59
LE324	STONEPARK LOUGH	179298	332188	10.27
LE335	TULLINLOUGHAN LOUGH	189932	331964	2.05
LE338	KILLALEEN LOUGH	181535	330977	8.19
LE343	GORTNADERRARY BOG NORTH	195980	346870	15.86
LE392	CORNACORROO WETLAND	195864	296416	14.66
LE396	TOWNPARKS WETLAND	194195	300308	11.41

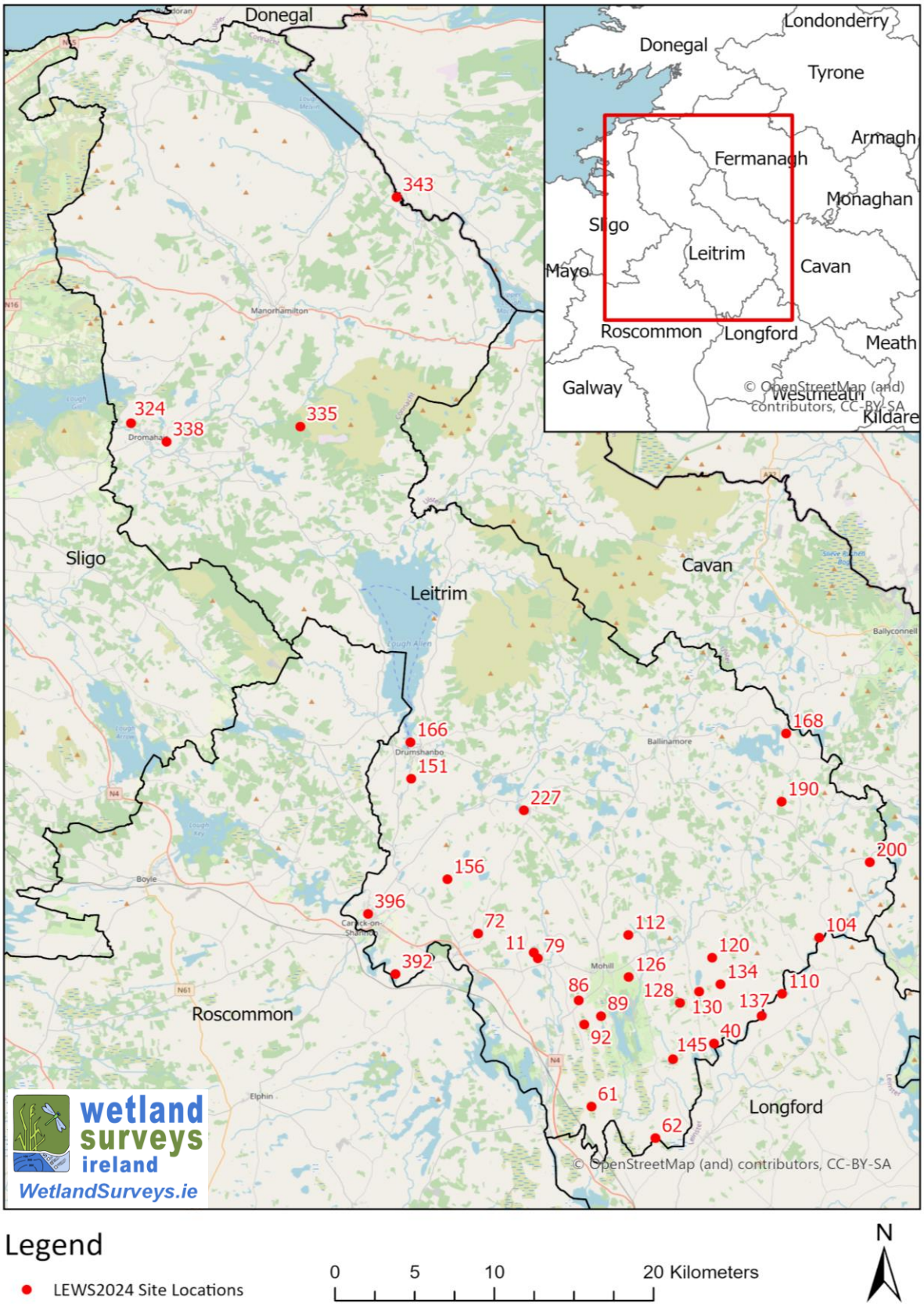

Figure 1: Location of sites selected for survey as part of the Leitrim Wetlands Field Survey 2024.

3.2 Wetland types recorded during LEWS Field Survey 2024

Based on field survey observations, the habitats present (both wetland and non-wetland) within and surrounding each wetland site were recorded using Fossitt (2000). 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; dystrophic lake, *Molinia* meadow, bog woodland, mesotrophic lake, active raised bog, wet woodland, transition mire, and poor fen. 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 2024.

Site Code	Site Name	Site Location	Summary Site Description
LE11	LOUGH MACHUGH cNHA	Mesotrophic lake with several small islands, located approximately 4.5km west of Mohill.	Mesotrophic lake fringed with reed swamps of *Phalaris arundinacea*, Phragmites australis and *Schoenoplectus lacustris*. The lake is surrounded by Salix dominated wet woodland, wet grassland and poor fen. The fen is located to the northeast of the lake, *Carex* spp., *Juncus articulatus, Lychnis flos-cucli, Mentha aquatica, Filipendula ulmaria, Comarum palustre* and *Ranunculus acris* dominate the vegetation. The lake is monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme.
LE40	LOUGH SALLAGH SOUTH (LEITRIM)	Mesotrophic lake in low lying agricultural land, located on the County Leitrim/Longford border, north of Drumlish village and approximately 8km southeast of Mohill.	Lough Sallagh South is a shallow lake, moderately rich in nutrients. It is mainly fringed with reed swamp dominated by *Phragmites australis*, with pockets of *Scheonoplectus lacustris*. The northwest edge of the lake is fringed with annex quality transition mire. The lake's open water has *Nuphar lutea* around the edges, and circular stands of *S.lactustris*. It is managed and used primarily as a fishing lake with stocks of Bream, Roach and Pike. The lake is surrounded by *Salix* dominated Wet woodland and Wet grassland used for agriculture.
LE61	BELLAGEEHER MEELARAGH BOG AND CUTOVER	Raised bog, severely impacted by peat extraction, located approximately 3km east of Roosky.	The site consists of intact raised bog and cutover bog. Peat extraction is ongoing with facebanks approximately 2m in height and a wide drain surrounding most of the high bog. The high bog itself is relatively dry with patches of bare peat and with a poor *Sphagnum* spp. cover that is confined mainly to wetter pockets. Robust *Calluna vulgaris* predominates, replaced by *Narthecium ossifragum* in the flats. The abandoned cutover areas are dominated by *Molinia caerulea, Calluna vulgaris* and *Eriophorum* spp and are being encroached by *Betula pubescens, Ulex europaeus* and *Pteridium aquilinum*.

Site Code	Site Name	Site Location	Summary Site Description
LE62	CLOONLAUGHIL GUBBADORRIS BOG (LEITRIM)	A Raised bog partly cut in the northeast of the site, located approximately 6.5km east of Roosky.	Moderately sized raised bog, that has been extensively impacted by the historic peat cutting and drainage. *Calluna vulgaris* and *Eriophorum* spp. dominate the habitat, with an abundant *Sphagnum* cover in the wetter patches. The drier cutover areas to the northeast and south of the site have Scrub encroachment mainly *Betula pubescens* and *Salix* spp, along with pockets of mature bog woodland (non-annex).
LE72	HEADFORD LOUGH	Headford lough is a small lake located in county Leitrim, approximately 2.5km north of the River Shannon and Leitrim/Roscommon border and 6km east of Carrick-On-Shannon.	Mesotrophic lake with *Nuphar lutea*. The lake is fringed by reed swamp consisting of *Phalaris arundinacea, Phagmites australis, Typha latifolia*, and *Schenoplectus lacustris*, which also spreads into patches of shallower open water. A small area of tall herb swamp occurs on the western edge of the lake. The remaining habitats onsite include marsh dominated by *Filipendula ulmaria* and scrub dominated by *Salix* spp. The lake is monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme.
LE86	GORTNALAMPH DRUMARD BOG	The peatland is located approximately 2.2km southwest of Mohill. It is boarded by conifer plantations on the northern and southern extents.	Large area of degraded raised bog, the majority of the site is cutover with the remaining high bog located to the east and south of the site. Peat extraction and drainage is significantly impacting the site, with ongoing peat cutting in the northwest and active drains across the whole site with a large 2m x 1m drain running the length of the high bog. Much of the cutover bog has now revegetated, with wetter areas developing a high cover of *Sphagnum* spp. and *Eriophorum* spp. The bog is being encroached by *Betula pubescens* and *Salix* spp., with areas of Bog woodland located in the southeast and west of the site, although it is not thought to be Annex quality as much of the understory is dominated by *Pteridium aquilinum* and *Molinia caerulea*.
LE89	DRUMARD (JONES) BOG	Drained Raised bog and Scrub located approximately 3km south of Mohill.	Raised bog significantly impacted by drainage and historic peat cutting, the high bog is dominated by *Calluna vulgaris, Cladonia* spp. and *Eriophorum* spp. with frequent areas of bare ground. The cutover bog has scrub encroaching with areas in the north and west supporting mature bog woodland.
LE92	GORTANURE SOUTH BOG	Linear peatland complex, located south of approximately 3.7km Mohill.	The middle section of the site supports the main area of raised bog, with an expanding area of bog woodland at its centre. The majority of the raised bog to the north of the bog woodland is dominated by *Molinia caerulea*, whilst the area to the south still supports characteristic bog vegetation. A network of drains exists on site with relatively new drains and/or peat extraction occurring in the northwest, west and south of the site. Reed swamp now occurs in some degraded areas, dominated by *Phalaris arundinacea, Iris pseudacorus* and *Valeriana officinalis*, along with areas of scrub.
LE104	BEAGHMORE LOUGH (LEITRIM)	Mesotrophic wetland complex located	Mesotrophic lake with *Nuphar lutea* on the open water, fringing vegetation includes *Phragmites australis, Sparganium erectum, Schoenoplectus*

Site Code	Site Name	Site Location	Summary Site Description
		approximately 4.5km south of Carrigallen.	*lacustris* and pockets of *Menyanthes trifoliata*. The majority of the lake is surrounded by wet grassland dominated by *Juncus effusus*, a small band of fen occurs on the northern edge of the lake where *Carex* spp., *Hydrocotyle vulgaris* and *Mentha aquatica* form the main vegetation layer. Wet woodland occurs at the west end of the lake with *Salix* spp. forming the main canopy. Drainage occurs throughout the surrounding wet grassland which drains into the lake.
LE110	DOOGARY LOUGH AND WETLAND (LEITRIM)	The site is located approximately 5.7km southeast of Aghavas. A river runs along the southern boundary of the site which acts as the county boundary between Leitrim and Longford.	The main habitats onsite are cutover bog, wet grassland, reed and large sedge swamp, bog woodland, and poor fen. Part of the site is mesotrophic lake but the majority of this is situated in County Longford. The wet grassland is dominated by *Juncus* spp. and becomes more species rich closer to the river, whilst the poor fen has an abundant cover of *Carex* spp. Overall, the site is quite overgrown as there is very little management onsite.
LE112	CARRICK DRUMKEILVY	Woodland dominated site located 2.6km north-east of Mohill, county Cavan.	Open areas of cutover bog dominated by *Sphagnum* spp., *Calluna vulgaris* and *Eriophorum* spp. occur in the centre of the site, some of which may be active bog, however some areas remain Molinia caerulea dominated. The small open area of peatland is surrounded by annex bog woodland dominated by *Sphagnum* spp., *Betula pubescens* and *Molinia caerulea*, which grade to wet woodland at the edge of the site. The open area to the west of the site is a mosaic to marsh and poor fen.
LE120	SUNNAGH MORE SOUTH	Peatland complex surrounded by Wet grassland, located approximately 6.2km east of Mohill.	The south and north sections of the site support cutover bog and bog woodland, whilst the centre of the site is dominated by transition mire where *Equisetum fluviatile, Sphagnum spp., Menyanthes trifoliata* and *Carex* spp. are abundant. The bog woodland in the south is not thought to be annex quality as the substrate is relatively dry, and the understory is dominated by *Rubus fruticosus* and *Pteridium aquilinum*. Towards the centre of the site, adjacent to the transition mire the bog woodland is likely to be of better quality. The cutover bog has an abundant cover of *Sphagnum* spp. with *Molinia caerulea* and *Calluna vulgaris* dominating the vascular vegetation, *Betula pubescens* saplings are common across the peatland. Patches of scrub occur across the site dominated by *Ulex europaeus*.
LE126	CREENAGH LOUGH	Mesotrophic lake and wet woodland located just 1.7km to the south-east of Mohill.	Mesotrophic lake with scattered *Nuphar lutea*, fringed with large areas of reed swamp dominated by *Phragmites australis, Phalaris arundinacea* and *Schoenoplectus lacutris*. There is an old wooden jetty at the south end of the lake, adjacent to an area of wet woodland dominated by *Salix* spp. and *Alnus glutinosa.* The lake is surrounded by agricultural land the majority of which is wet grassland dominated by grasses and rushes, but the western side is more improved. The lake is monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme.

Site Code	Site Name	Site Location	Summary Site Description
LE128	MUCKANAGH DRUMGOWNAGH BOG	Large Raised bog located 5.2km south-east of Mohill and 3.6km north-west of the Leitrim/Longford border.	Raised bog dominated by *Calluna vulgaris, Eriophorum* spp. and *Cladonia* spp., drainage occurs throughout the site and has resulted in degradation with evidence of drying peat, subsidence and patches of bare peat. Active peat cutting is present at the edges of the high bog, with a 2m high face-bank in some places. Some of the disused cutover areas are now being encroached by *Salix* and *Betula pubescence* scrub, with pocket of developed/developing bog woodland (non-annex).
LE130	KEELDRA CATTAN BOG	Raised bog located approximately 6.3km to the south-east of Mohill.	The main habitat on site is degraded raised bog dominated by *Calluna vulgaris, Narthecium ossifragum, Eriophorum* spp. and *Cladonia* spp. Deep drains occur throughout the site and the high bog is surrounded by cutover peat which is still being actively cut. *Sphagnum* cover is low (approx. 20%) with *Betula* and *Salix* scrub encroaching on drier peat, along with some areas of bog woodland (non-annex).
LE134	DRUMADORN CORDUFF SOUTH BOG	Peatland complex adjacent to a large coniferous plantation, located 5.5km to the southwest of Aghavas, county Cavan. An old bog track runs up the eastern side of the high bog.	The main habitat on site is raised bog which was historically cut for turf resulting in a 2m+ facebank at the edge of the high bog. The open area of bog is dominated by *Calluna vulgaris, Eriophorum* spp. and *Cladonia* spp. *Sphagnum* cover on the raised bog is poor except in wet hollows and small pools where it's abundant. Overall the bog is dry due to drainage. Areas of bog woodland dominated by *Betula, Sphagnum* spp. and *Molinia caerulea* occur on the cutover bog (some parts likely correspond to Annex quality).
LE137	LOUGH NABELWY (LEITRIM)	Wetland mosaic on the Leitrim/Longford border, located 6.8km to the north-east of Gortletteragh, County Leitrim.	The western section of the site contains cutover bog dominated by *Calluna vulgaris, Cladonia portentosa* and *Molinia caerulea*. This is fringed with *Betula* dominated bog woodland (non-annex), and scrub encroachment. A mesotrophic lake with *Nuphar lutea* occurs to the east of the bog. The majority of the lake is fringed with a narrow band of Reed swamp dominated by *Typha latifolia* and *Phalaris arundinacea,* except approx. 200m on the east side where the grassland meets the edge of the lake with vehicle access for launching boats. The lake is monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme.
LE145	DRUMGILRA DRUMGRANIA BOG COMPLEX	A large site consisting of raised bog which is actively being cut for turf. Close to the county border south of Gortletteragh and roughly 7.5km southeast of Mohill.	Degraded raised bog dominated by *Calluna vulgaris, Narthecium ossifragum* and *Eriophorum* spp. The peatland has been significantly impacted by drainage and ongoing peat extraction, resulting in patches of bare peat and drying *Sphagnum* moss scattered across the site. There is evidence of a historic burn on the high bog, in the southwest. Some cutover areas have formed wet grasslands dominated by grasses and sedges, whilst other patches are being encroached by scrub with bog woodland (non-annex) forming in areas to the north and east of the site.
LE151	DERRYNAHOO LOUGH	Lake and wetland complex located	Mesotrophic lake with fishing platforms, bordered by reed and large sedge swamp where *Carex rostrata*

Site Code	Site Name	Site Location	Summary Site Description
		approximately 1.8km south of Drumshanbo.	and *Typha latifolia* predominate. Surrounding area has wet grassland dominated by rushes, sedges and grasses, along with patches of scrub and wet woodland. New drainage has been implemented in the wet grassland to the northeast of the lake.
LE156	COSTRE LOUGH	A rounded mesotrophic lake bordered by a mix of transition mire and reed swamp situated to the c. 4km to the south-east of Leitrim Town.	Mesotrophic lake with a high cover of *Nuphar lutea*. The lake is fringed by a band *Typha latifolia* and *Phragmites australis* reed swamp, that expands at the southwest end and *P. australis* becomes more prominent. Transition mire also occurs to the southwest of the lake, dominated by *Equisetum* sp., *Carex* sp., *Eriophorum* sp. and *Menyanthes trifoliata*. The lake is surrounded by pockets of *Salix* scrub, along with wet grassland and poor fen which is extensively grazed.
LE166	CORRACHUILL	Wetland complex on the southeastern edge of Lough Allen, just north of Drumshanbo.	*Salix* dominated wet woodland occurs, along with a small area of transition mire which is dominated by *Equisetum* and abundant herbs including *Comarum palustre, Filipendula ulmaria* and *Iris pseudacorus*. The majority of the open area within the woodland is a mosaic of marsh and wet grassland with areas abundant in herbs and grasses. The south of the site supports an area of grazed poor fen which is grazed. There appears to be a significant seasonal variation of the water levels on site.
LE168	WOODFORD LOUGHS NORTH AND SOUTH	Small lake on the river connecting Ballymagauran Lough (county Cavan) and Garadice Lough (County Leitrim), located approximately 7.4km east of Ballinamore.	Mesotrophic lake with *Nuphar lutea,* fringed with reed swamp dominated by *Phragmites australis, Schoenoplectus lacustris* and *Sparganium erectum*. Wet woodland borders the swamp on the east side of the lake with *Salix* spp. and *Alnus glutinosa* dominating. Wet grassland borders the swamp on the northwest side of the lake where rushes and grasses are abundant.
LE190	CLOONBOYGHER LOUGH AND WETLAND	The site is located approximately 2.4km east of Drumlea.	A mesotrophic lake occurs at the northeast edge of the site, supporting *Nuphar lutea* and *Potamogeton natans.* The fringing habitat is reed swamp dominated *Equisetum fluviatile, Menyanthes trifoliata* and *Typha latifolia*. Bog woodland dominates the site, but it is not thought to be of annex quality, *Betula pubescens* and *Salix* spp. dominate the canopy whilst *Rubus fruticosus* and *Pteridium aqulinium* are common components of the understory. The open area in the east of the site is cutover bog with historic, vegetated drains, *Calluna vulgaris* and *Molinia caerulea* dominate the ground vegetation, tree saplings are encroaching the bog.
LE200	AGHAVORE NORTH	Wetland complex located approximately 2.5km east of Carrigallen.	The site is situated in a natural depression on a mixture of clay and peat soils. A large drainage ditch runs through the south and western extent of the site which is greatly impacting the water table. The site consists predominantly of wet *Salix* spp. and *Alnus glutinosa* woodland. Much of the remainder of the site is species poor wet grassland and *Filipendula ulmaria* dominant marsh. A small area of poor quality transition mire occurs towards the centre of the site.

Site Code	Site Name	Site Location	Summary Site Description
LE227	KESHCARRIGAN LOUGH AND WETLAND	A large oblong shaped mesotrophic lake surrounded by species rich grassland, cutover bog and semi-natural woodland just south of Keshcarrigan village.	The site consists of a large mesotrophic lake, that was known to support a population of the Annex II White clawed crayfish. The lake is fringed by *Phragmites australis* reed swamp and currently monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme. Areas of wet grassland and marsh surround much of site. An area of species rich semi-calcareous (*Briza media* and *Carex pulicaris* present) grassland occurs to the north of the lake and is characterised by non-tussock forming *Molinia caerulea* occurring with *Juncus conglomeratus, Succisa pratensis* and *Potentilla erecta* which corresponds to the annex habitat *Molinia* meadows. An area of bog woodland and cutover bog also occur in the southeast of the site.
LE324	STONEPARK LOUGH	Small mesotrophic lake surrounded by a wetland complex, located approximately 1.3km north-west of Dromahair village, county Leitrim.	Mesotrophic lake with *Nuphar lutea*, *Nymphaea alba, Potamogeton natans* and *Alisma plantago-aquatica*, fringed with reed swamp dominated by *Phalaris arundinacea* and *Phagmites australis*. Transition mire (with abundant *Equisetum fluviatile* and *Menyanthes trifoliata*), fen (dominated by sedges and rushes) and wet grassland form the complex of habitats surrounding the lake, with an area of wet woodland to the east. Drainage is having a significant effect on the wetland hydrology, with 1m deep drains frequently occurring throughout the site.
LE335	TULLINLOUGHAN LOUGH	Horseshoe shaped lake due to the northeast side infilling with transition mire, located 8km south of Manorhamilton.	The site contains a dystrophic lake which is an Annex I habitat, the open water is fringed by Juncus effusus with an abrupt edge to the blanket bog. The northeast side of the lake is infilling, creating poor fen dominated by *Carex rostrata, Eriophorum* spp., *Sphagnum* spp. and *Juncus effusus*.
LE338	KILLALEEN LOUGH	Small lake surrounded by a wetland complex, located approximately 1.2km southeast of Dromahair.	Inter drumlin hollow with a small mesotrophic lake fringed with reed swamp dominated by *Phalaris arundinacea*. The main surrounding habitat is grazed, species rich wet grassland with abundant grasses and rushes, and herbs include *Lychnis flos-cuculli, Myosotis* spp., *Ranunculus* spp. and *Trifolium repens*. The northwest side of the lake is surrounded by a coniferous plantation, that merges into wet woodland where *Salix* spp. *Fraxinus excelsior* predominate. Drainage is present in the surrounding habitats.
LE343	GORTNADERRARY BOG NORTH	Cutover bog on the Leitrim/Fermanagh border, approximately 2.2km northwest of Kiltyclogher, county Leitrim.	Wet cutover bog in good condition with high cover of sphagnum (>40%) - parts of the site may correspond to the EU habitat 7110 active raised bog. The site appears to have been historically skimmed as opposed to vertically cut and is now extensively grazed by cattle. The majority of drains on the peatland are vegetated which has improved water retention, but they are likely still having some impact on site hydrology. Some areas of the cutover bog are now wet grassland (east) and scrub (west). The peatland is surrounded by wet grassland, with fully functional drains.

Site Code	Site Name	Site Location	Summary Site Description
LE392	CORNACORROO WETLAND	Situated on the River Shannon and approximately 3.6km South of Carrick-on-Shannon.	The site now forms a large habitat mosaic of poor fen, reed and large sedge swamp, and scrub. Graminoids are a prominent feature of the site, whilst the herbs include *Iris pseudoacorus, Valeriana officinalis* and *Filipendula ulmaria*. The majority of the scrub is *Salix* spp. dominated and interspersed with reed swamp. *Carex* spp. dominated poor fen also occurs at the edge of the site. The substrate is over 1m deep peat, and the majority of the site is not used so the vegetation is tall.
LE396	TOWNPARKS WETLAND	The site is located within the town of Carrick-on-Shannon near Hartley Buisness Park, the wetland is divided by a road.	The site is dominated by overgrown wet grassland characterized by rushes, sedges and grasses. Large drains are affecting the site hydrology, but the vegetation still suggests a very variable water table. A wetter patch on the west side of the road supports a pocket of reed and large sedge swamp, dominated by the near threatened (Wyse Jackson et al. 2016) sedge, *Carex acuta*. Herbs onsite include *Iris pseudacorus, Lathyrus pratensis, Ranunculus* spp. and *Filipendula ulmaria*. Drier areas around the edge of the site have encroaching scrub.

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.

Plate 1: Slender tufted-sedge (*Carex acuta*) found at the Townparks Wetland in a wet grassland habitat, with a variable water table.

The most notable floral record is the Slender tufted-sedge (*Carex acuta), found* in two wetland sites (LE396 – Townparks Wetland and LE72 – Headford Lough). On the DAFOR scale the species would be considered rare in both sites, but where it occurs it dominates the vegetation layer. This species is classed as Near Threatened on Ireland's Vascular Plant Red List (Wyse Jackson *et al.,* 2016).

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

Rhododendron (*Rhododendron ponticum*) – invasive species. Ranked as being at risk of having a **High Impact** by (Kelly et al., 2013). Found at two peatland sites: Cloonlaughil Gubbadorris Bog (Leitrim), Drumgilra Drumgrania Bog Complex, Recommendations are made in the site report to eradicate this invasive non-native species.

Cherry laurel (*Prunus laurocerasus*) – invasive species. Ranked as being at risk of having a **High Impact** by (Kelly et al., 2013). Found at Sunnagh More South. Recommendations are made in the site report to eradicate this invasive non-native species.

Curly waterweed (*Lagarosiphon major*) – invasive species. Ranked as being at risk of having a **High Impact** by (Kelly et al., 2013). Previously reported at Keshcarrigan Lough and wetland. 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:

Plate 2: Duck Mussel (*Anodonta anatina*) shell recorded at the Headford Lough lake edge.

Shells of the Duck Mussel (*Anodonta anatina*) listed as Vulnerable on Ireland's Red list by Byrne et al. (2009) were recorded on Headford Lough during the survey. This is a species of muddy and sandy habitats. 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.

At three sites Corrachuill, Keshcarrigan Lough and Wetland, and Gortnaderrary Bog North abundant suitable habitat for Marsh Fritillary (*Euphydryas aurinia*), an Annex II species of the EU Habitats Directive was observed. However, survey time limitations did not allow for a detailed survey of the distribution and abundance of the species. Additional surveys of this species are recommended (noted in individual site reports) at a more suitable time of the year (ideally September), and should future surveys identify significant resident or regularly occurring populations, then the conservation ranking of the site may need to be reviewed.

3.5 Site Conservation Assessment

On completion of the LEWS 2024 field survey, each of the thirty-one 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 2024 is presented in Table 3 below.

Four sites were deemed to be of national conservation value due to the presence of extensive areas of high-quality habitats; transition mire occurs at three of the sites (Sunnagh More South (LE120), Costre Lough (LE156), Stonepark Lough (LE324)), whilst active raised bog and bog woodland can be found at the fourth site (Carrick Drumkeilvy (LE112)).

Ten sites (Lough Machugh cNHA, Lough Sallagh South (Leitrim), Drumadorn Corduff South Bog, Keshcarrigan Lough and Wetland, Tullinloughan Lough, Gortnaderrary Bog North, Gortanure South Bog, Headford Lough, Creenagh Lough and Cornacorroo Wetland are of County conservation value (C+) due to the occurrence of good quality habitats including mesotrophic lakes, transition mire, poor fen and flush, bog woodland, *Molinia* meadows, raised bog, dystrophic lakes and wet woodland. The remaining seventeen sites were deemed to be of local high local conservation value (C).

Plate 3: Mesotrophic lake fringed by reed swamp and transition mire habitat at Costre Lough.

Table 3: Conservation evaluation of sites surveyed during the LEWS 2024. Sites are ranked according to their conservation value.

LEWS Site Code	LEWS Site Name	Site Wetland Conservation Ranking	Presence of EU Annex Habitats
LE112	CARRICK DRUMKEILVY	B Rating: Nationally Important	The woodland adjacent to the open area of cutover bog corresponds to the EU Annex 1 habitat 91D0 Bog woodland. Parts of the cutover bog may also correspond to the EU Annex 1 Habitat 7110 Active raised bogs.
LE120	SUNNAGH MORE SOUTH	B Rating: Nationally Important	Good quality transition mire is present at the centre of the site. The site also supports bog woodland dominated by birch, close to the area of transition mire, this may correspond with the Annex habitat 91D0,
LE156	COSTRE LOUGH	B Rating: Nationally Important	The transition mire recorded to the southwest of the lake is an excellent example of the EU Annex 1 habitat Transition Mires and Quaking Bogs (7140).
LE324	STONEPARK LOUGH	B Rating: Nationally Important	Some areas of transition mire to the north of the lake likely correspond to the EU Annex I habitat 7140 Transition Mires and Quaking Bogs.
LE40	LOUGH SALLAGH SOUTH (LEITRIM)	C+ Rating: County Conservation value	The transition mire recorded to the northwest of the lake corresponds to the EU Annex 1 habitat Transition Mires and Quaking Bogs (7140).
LE11	LOUGH MACHUGH cNHA	C+ Rating: County Conservation 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.
LE134	DRUMADORN CORDUFF SOUTH BOG	C+ Rating: County Conservation value	Parts of the site may correspond to the EU Annex 1 habitat 91D0 Bog woodland.
LE227	KESHCARRIGAN LOUGH AND WETLAND	C+ Rating: County Conservation value	The area of wet grassland in the northeast of the site likely corresponds to the EU Annex I habitat 6410 Molinia meadow.
LE335	TULLINLOUGHAN LOUGH	C+ Rating: County Conservation value	The lake corresponds to the EU Annex I habitat 3160 Natural dystrophic lakes and ponds.
LE343	GORTNADERRARY BOG NORTH	C+ Rating: County Conservation value	Parts of the cutover bog may correspond to the Annex I habitat 7110 Active raised bogs.
LE92	GORTANURE SOUTH BOG	C+ Rating: County Conservation value	Some of the areas of woodland within the site may correspond to the EU Annex I habitat 91D0 Bog woodland.

LEWS Site Code	LEWS Site Name	Site Wetland Conservation Ranking	Presence of EU Annex Habitats
LE72	HEADFORD LOUGH	C+ Rating: County Conservation 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.
LE126	CREENAGH LOUGH	C+ Rating: County Conservation 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.
LE392	CORNACORROO WETLAND	C+ Rating: County Conservation 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.
LE61	BELLAGEEHER MEELARAGH BOG AND CUTOVER	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.
LE62	CLOONLAUGHIL GUBBADORRIS BOG (LEITRIM)	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.
LE86	GORTNALAMPH DRUMARD BOG	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.
LE89	DRUMARD (JONES) BOG	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.
LE104	BEAGHMORE LOUGH (LEITRIM)	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.
LE110	DOOGARY LOUGH AND WETLAND (LEITRIM)	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.
LE128	MUCKANAGH DRUMGOWNAGH BOG	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.
LE130	KEELDRA CATTAN BOG	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.
LE137	LOUGH NABELWY (LEITRIM)	C Rating: Local conservation value (high value)	Although the site contains bog woodland it is not thought to conform to the EU Habitats Directive priority habitat type.
LE145	DRUMGILRA DRUMGRANIA BOG COMPLEX	C Rating: Local conservation value (high value)	It is not thought any of the habitats present correspond to any of the

LEWS Site Code	LEWS Site Name	Site Wetland Conservation Ranking	Presence of EU Annex Habitats
			habitats listed under Annex I of the EU Habitats Directive.
LE151	DERRYNAHOO 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.
LE166	CORRACHUILL	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.
LE168	WOODFORD LOUGHS NORTH AND SOUTH	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.
LE190	CLOONBOYGHER LOUGH AND WETLAND	C Rating: Local conservation value (high value)	Although the site contains bog woodland, it does not conform to the EU Habitats Directive priority habitat type.
LE200	AGHAVORE NORTH	C Rating: Local conservation value (high value)	A small remnant of transition mire is present at this site. However, the habitat is of poor quality and likely no longer corresponds to the EU Annex 1 habitat
LE338	KILLALEEN 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.
LE396	TOWNPARKS WETLAND	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.

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*).

In recent decades, wetlands have been used 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.

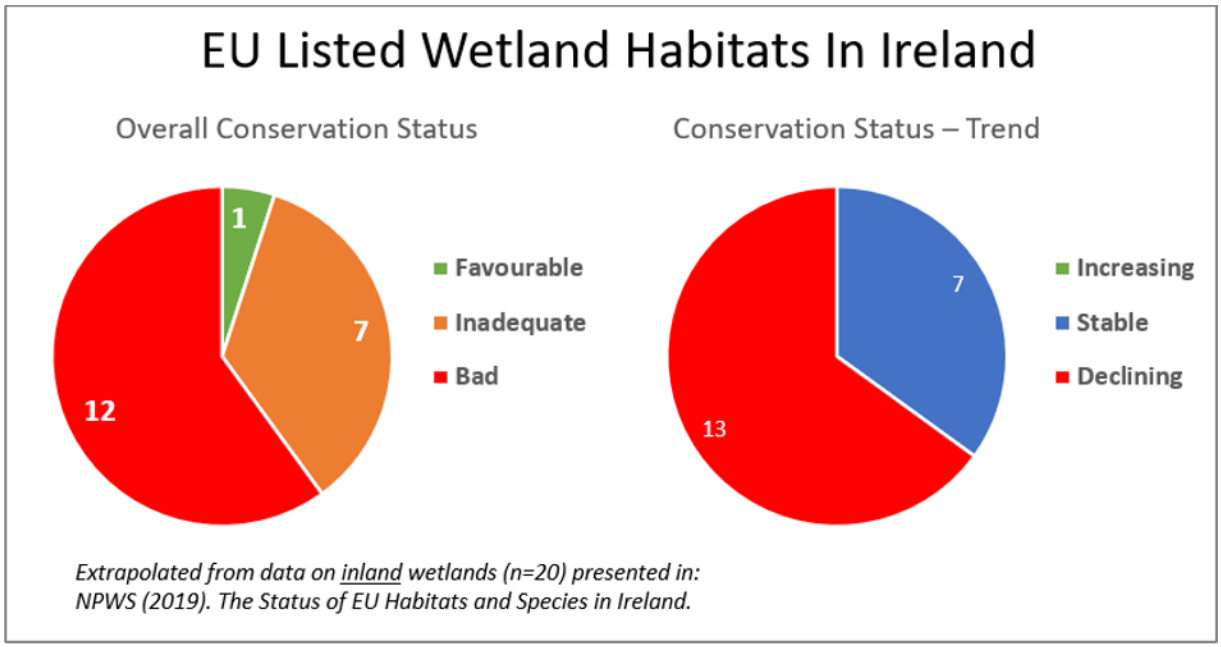

Figure 2: Summary of conservation status reported by NPWS (2019).

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** *Including cultivation, fertilization abandonment, and over grazing*	Fens, Marsh, Raised bog, Wet heath, Reed swamp, Lake and Lake margins, Wet grassland, Wet woodland, Bog woodland, Rivers
B	**Sylviculture, forestry** *Including fertilisation, planting and re-planting, forestry practices*	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** *Including quarry activities, turbary and peat removal*	Raised bog, Dystrophic lake, Bog woodland
D	**Transportation and service corridors** *Including road construction, power transmission*	All wetland types
E	**Urbanisation, residential and commercial development** *Including Urban and industrial development, discharges and waste disposal*	Fen, Bog, Marsh, Wet Grassland, Scrub
F	**Biological resource use other than agriculture & forestry** *Including leisure fishing, hunting*	Lake, Fen, Marsh, River, Bog
G	**Human intrusions and disturbances** *Including recreational facilities, outdoor leisure activities, littering, trampling overuse*	Bog, Fen, Marsh, Reed Swamp, Wet Grassland
H	**Pollution** *Including surface and groundwater water pollution, air pollution*	Oligotrophic Lake, River, Marsh, Fen
I	**Invasive, other problematic species and genes** *Including invasive species, genetic pollution*	Oligotrophic Lake, River, Marsh, Fen
J	**Natural System modifications** *Including landfill, drainage, drain maintenance, water abstraction, burning*	Fen, Marsh, Bog, Reed Swamp, Lake margins, Wet grassland, River
K	**Natural biotic and abiotic processes (without catastrophes)** *Including organic material accumulation*	Fen, Marsh, Bog, Wet woodland

During the course of the LEWS 2024, 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.

3.7 Restoration Potential of sites surveyed in County Leitrim Wetlands Field Survey 2024

The Society for Ecological Restoration (SER) defines ecological restoration as the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed. This process includes any activity that has the goal of achieving substantial ecosystem recovery relative to an appropriate reference model, regardless of the time required to achieve recovery. Full recovery is defined as the state or condition whereby, following restoration, all key ecosystem attributes closely resemble those of the reference model. These attributes include absence of threats, species composition, community structure, physical conditions, ecosystem function and external exchanges (Gann *et al*. 2019). Wetland restoration should aim to return degraded wetlands to conditions in which ecosystem functions (e.g. carbon, energy and nutrient dynamics, decomposition of organic matter, biodiversity, production of biomass and water regulation) are as close as possible to natural conditions within the constraints of practicality (Clarke and Rieley 2019).

Within the timeframe of the current survey, it wasn't practical to assess the restoration potential of the sites surveyed using all of the criteria or the ecosystem functions listed above. One simple criterion, which was quickly examined was the potential restoration of water levels in a wetland whereby there were obvious drains to block that could aid restoration. There are ten sites (site codes LE61, LE62, LE86, LE89, LE92, LE120, LE128, LE130, LE134 and LE145) containing areas of raised bog which displayed at least some restoration potential, whilst two peatland sites displayed particularly high restoration potential due to existing areas of natural regeneration (Carrick Drumkeilvy (LE112) and Gortnaderrary Bog North (LE343). Blocking drainage at Stonepark Lough (LE324) would likely also have a significant positive effect on the condition of the transition mire present. Blocking these drains in the near future would help restore water levels to what they were prior to these drainage works.

4 Conclusions and Recommendations

4.1 Distribution and Extent of the Leitrim Wetland Resource

The results of the LEWS 2024 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-one sites identified in the LEWS project 2019 (Foss *et al*. 2019) which were surveyed during 2024, 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 National Fen Survey

The NPWS are currently undertaking a National Fen Survey, which aims to establish a comprehensive understanding of the full fen resource within Ireland. This followed on from a scoping study and pilot survey of fens produced by O'Neill et al. (2023). The guidelines included by O'Neill et al. in the identification and classification of fen habitats were followed during the wetland surveys of County Leitrim in 2024. Furthermore, any fen habitats identified will be forwarded to NPWS for inclusion in their analysis of the national fen resource and will be considered for a more intensive fen-specific survey as part of the National Fen Survey.

4.4 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 with a specialist knowledge of wetland ecosystems 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.

4.5 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.

4.6 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.

4.7 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.

4.8 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.

4.9 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.

Species listed as invasive in Ireland come from the Invasive Species in Ireland prioritization risk assessment last undertaken in 2013 (Kelly et al., 2013; O'Flynn et al., 2014). From this, 48 non-native species were ranked as at risk of having a High Impact and 78 species at risk of having a Medium Impact. Among the High Impact ones, 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 aqauticum*). 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. The main regulations influencing Ireland's invasive species lists is the Third Schedule list of the European Communities (Birds and Natural Habitats) Regulations 2011 [S.I.477/2011].

4.10 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.

4.11 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 Ireland's 4th National Biodiversity Action Plan 2023-2030 (Department of Housing, Local Government and Heritage, 2024), but also in implementing the Water Framework Directive.

4.12 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: 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	**Internationally important** Sites designated (or qualifying for designation) as SAC* or SPA* under the EU Habitats or Birds Directives. Undesignated sites containing good examples of Annex I priority habitats under the EU Habitats Directive. Sites designated (or qualifying for designation) as SAC* for salmonids or Annex II species under the EU Habitats Directives. Major salmon river fisheries. Major salmonid (salmon, trout or char) lake fisheries.
B	**Nationally important** • 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 significant numbers 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+	**County value** Area of Special Amenity. Area subject to a Tree Preservation Order. Area of High Amenity, or equivalent, designated under the County Development Plan. Resident or regularly occurring populations (assessed to be important at the County level) of the following: • 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. 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. 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. Sites containing habitats and species that are rare or are undergoing a decline in quality or extent at a national level.
C	**High value, locally important** 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. 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. Small water bodies with known salmonid populations or with good potential salmonid habitat. Large water bodies with some coarse fisheries value.
D	**Moderate value, locally important** Sites containing some semi-natural habitat or locally important for wildlife. Small water bodies with some coarse fisheries value or some potential salmonid habitat. Any water body with unpolluted water (Q-value rating 4-5).
E	**Low value, locally important** Artificial or highly modified habitats with low species diversity and low wildlife value. Water bodies with no current fisheries value and no significant potential fisheries value.
F	**Unknown Value** Sites of possible ecological value which require further investigation at the optimum season to establish importance. Sites of possible fisheries value requiring further survey.

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

Appendix 2: Individual Site Reports from the Leitrim Wetlands Field Survey III 2024

Sites are listed in alphabetical order by site name

Site Name: AGHAVORE NORTH

Site Code: LE200 **Area (ha):** 8.52 **Grid Ref:** 225701 303665 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Adam Vanmechelen & Poppy Overy

Date of wetland survey:
12/09/2024

Survey Code:
LEWS2024

Site source information:
Detailed Wetland Survey undertaken
NPWS National Fen Survey recommended
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:
CLOGHLOUGH

Solid Geology:
Derryveeny Formation

Subsoil type:
Cut

Substrate type:
Mineral Soil
Peat

Substrate stability:
Soft

River catchment:
Erne

CORINE Habitats:
Pastures

Site Location

Wetland complex located approximately 2.5km east of Carrigallen.

Site Description and Wetland Habitats Recorded

The site is situated in a natural depression on a mixture of clay and peat soils. A large drainage ditch runs through the south and western extent of the site which is greatly impacting the water table. The site consists predominantly of wet Salix spp. and Alnus glutinosa woodland. Much of the remainder of the site is species poor wet grassland and Filipendula ulmaria dominant marsh. A small area of poor-quality transition mire occurs towards the centre of the site.

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

No.	Category	Comment
N1	HABITAT	Transition more with abundant Equisetum fluviatile. It is in very poor condition as the water table is significantly lowered.
N2	HABITAT	Species poor Wet grassland.
N3	HABITAT	Salix spp. scrub.
N4	HABITAT	Species poor Wet grassland.

Management Recommendations following survey

Discuss the potential for drain blocking with the landowners in order to raise the water table of the site and improve the conservation value and the annexed habitat, Transition mire.

Future Survey Recommendations

A fen survey of the transition mire is recommended to determine quality and extent. Assess hydrological integrity of the site and the potential for drain blocking.

Landowner Information Comments

Spoke with landowner who granted access.

Description of potential EU Habitats Directive Annex 1 habitats

A small remnant of transition mire is present at this site. However, the habitat is of poor quality and likely no longer corresponds to the EU Annex 1 habitat.

Main Fossitt habitats on site

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

WD4 Conifer plantation

WL1 Hedgerows

WL2 Treelines

WN6 Wet willow-alder-ash woodland

EU Habitats Directive habitats on site

None noted

Landuse / Management Activity	Frequency of use
Grazing - cattle	2 Occasional (5-20%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A02.01 agricultural intensification	B = medium	- 1 = reparable negative influence

J02.05 Modification of hydrographic functioning, A = high - 1 = reparable negative influence

Threats

A02.01 agricultural intensification

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

The large boundary drains (2m+) appear to be significantly impacting the sites hydrology. The agricultural improvements to the Wet grassland onsite has altered the vegetation composition, reducing species richness.

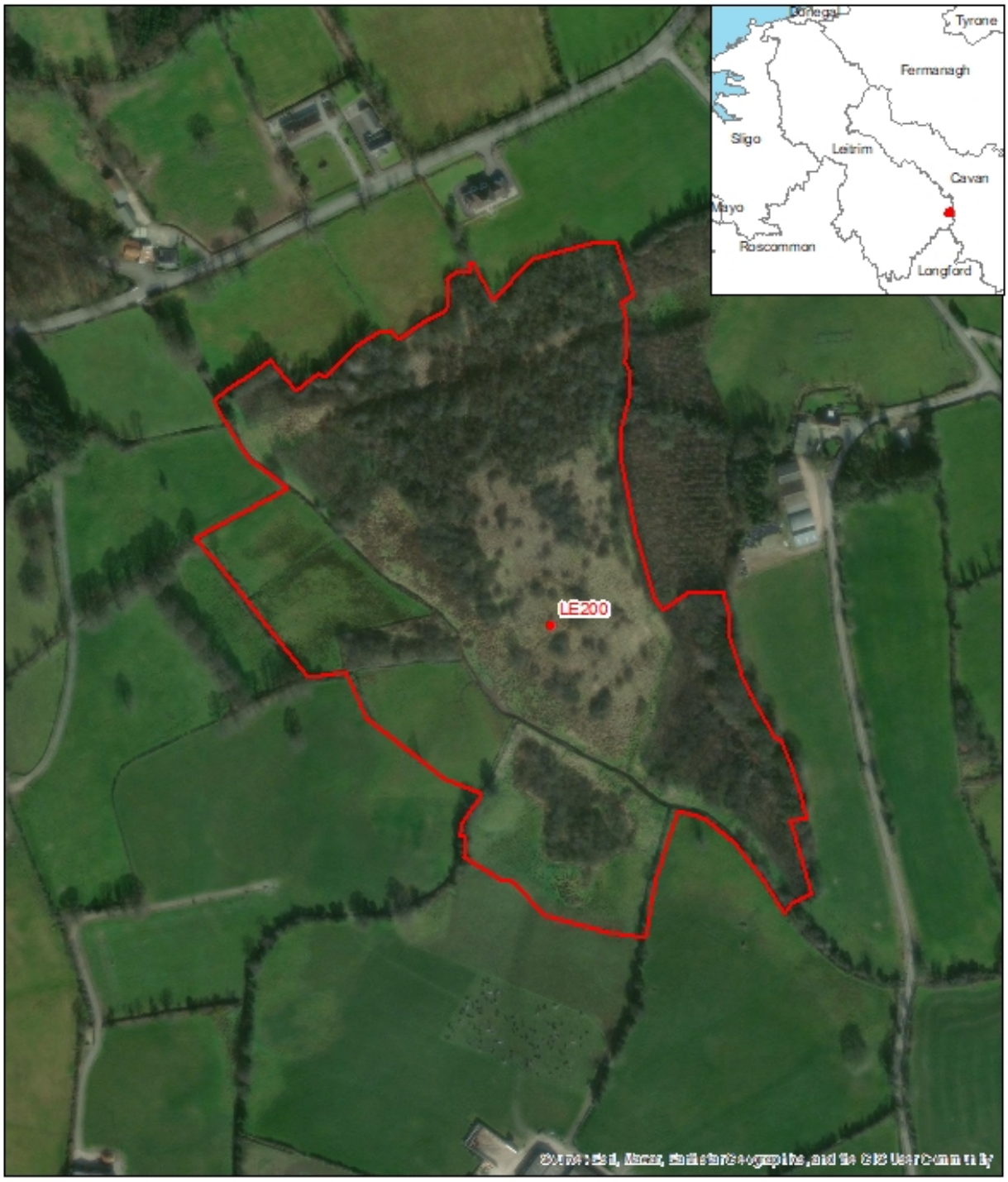
Flora on site - Latin & English species name

Alnus glutinosa	Alder
Angelica sylvestris	Wild Angelica
Anthoxanthum odoratum	Sweet Vernal-grass
Betula pubescens	Downy Birch
Carex sp.	Sedge
Cirsium palustre	Marsh Thistle
Comarum palustre	Marsh Cinquefoil
Deschampsia cespitosa	Tufted Hair-grass
Epilobium hirsutum	Great Willowherb
Equisetum fluviatile	Water Horsetail
Filipendula ulmaria	Meadowsweet
Fuchsia magellanica	Fuchsia
Hedera helix	Ivy
Holcus lanatus	Yorkshire-fog
Juncus effusus	Soft-rush
Phalaris arundinacea	Reed Canary-grass
Pteridium aquilinum	Bracken
Ranunculus acris	Meadow Buttercup
Ranunculus repens	Creeping Buttercup
Rubus fruticosus agg.	Blackberry
Rumex acetosa	Common Sorrel
Salix aurita	Eared Willow
Salix cinerea subsp. cinerea	Grey Willow
Sparganium erectum	Branched Bur-reed
Stachys palustris	Marsh Woundwort
Succisa pratensis	Devil's-bit Scabious
Typha latifolia	Bulrush
Urtica dioica	Common Nettle
Valeriana officinalis	Common Valerian

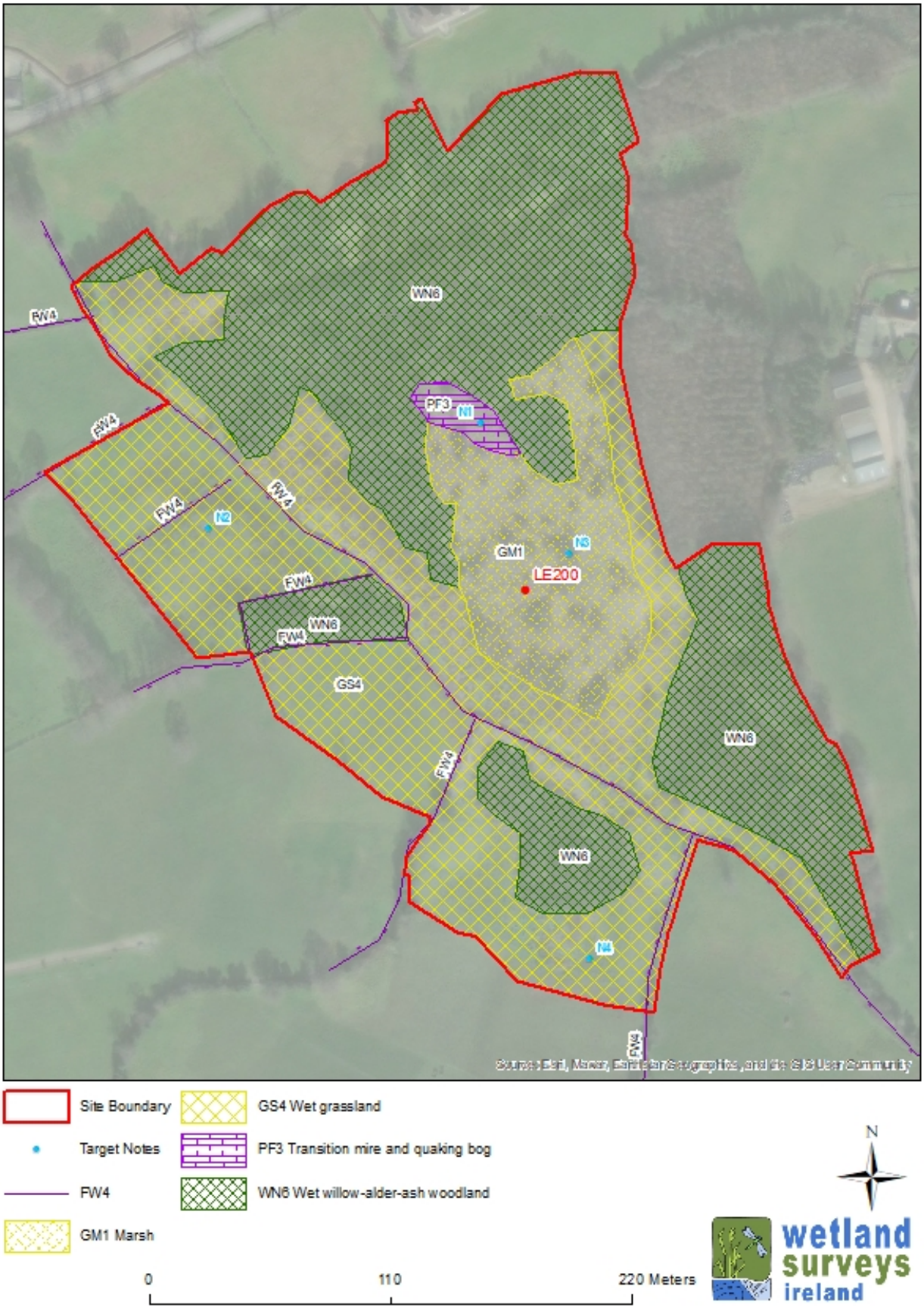
Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: BEAGHMORE LOUGH (LEITRIM)

Site Code: LE104 **Area (ha):** 26.82 **Grid Ref:** 222520 298772 **County:** LE LF

Site designation(s):
Undesignated site

Surveyed by:
Adam Vanmechelen & Poppy Overy

Date of wetland survey:
13/09/2024

Survey Code:
LEWS2024

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:
BEAGH MORE

Solid Geology:
Derryveeny Formation

Subsoil type:
Water

Substrate type:
Mineral Soil
Peat

Substrate stability:
Very soft

River catchment:
Erne

CORINE Habitats:
Pastures

Site Location

Mesotrophic wetland complex located approximately 4.5km south of Carrigallen.

Site Description and Wetland Habitats Recorded

MMesotrophic lake with Nuphar lutea on the open water, fringing vegetation includes Phragmites australis, Sparganium erectum, Schoenoplectus lacustris and pockets of Menyanthes trifoliata. The majority of the lake is surrounded by wet grassland dominated by Juncus effusus, a small band of fen occurs on the northern edge of the lake where Carex spp., Hydrocotyle vulgaris and Mentha aquatica form the main vegetation layer. Wet woodland occurs at the west end of the lake with Salix spp. forming the main canopy. Drainage occurs throughout the surrounding wet grassland which drains into the lake.

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

No.	Category	Comment
N1	HABITAT	Wet woodland consisting predominantly of Salix spp. and Alnus glutinosa. Comarum palustre, Carex nigra, Sphagnum squarrosum and Calliergon giganteum in the ground flora.
N2	HABITAT	Wet grassland dominated by Juncus effusus due to a lack of grazing/mowing.
N3	HABITAT	Mesotrophic lake with Nuphar lutea and fringed by Phragmites australis Reedswamp.
N4	FAUNA	Scales from fish here, on otter track.
N5	HABITAT	Wet grassland dominated by Juncus effusus.
N6	HABITAT	Poor fen occurring on this edge of the site. Consists of Carex spp. with Hydrocotyle vulgaris.
N7	HYDROLOGY	Lake floods this area, resulting in a seasonal variation of vegetation composition - at the time of survey this area was a mosaic of Recolonising bare ground and Reed swamp.

Management Recommendations following survey

Some areas of the Wet grassland are undergrazed, these could do with targeted grazing or mowing to reduce Juncus dominance. There are frequent areas of bare ground as a result of livestock poaching, care should be taken to ensure these areas do not have direct pathways to the lake (e.g. drains). The majority of the lake has no buffer from the surrounding agricultural land and implementing one may be difficult due to the significant variation in the lake water levels - fencing the lake at the highest consistent water level mark is potentially the best solution.

Future Survey Recommendations

None.

Landowner Information Comments

Spoke with a landowner in the southwest of the site who granted access.

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

ED3 Recolonising bare ground

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

FW4 Drainage ditches

GS4 Wet grassland

PF2 Poor fen and flush

WN6 Wet willow-alder-ash woodland

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
FW4 Drainage ditches
GA1 Improved agricultural grassland
GS4 Wet grassland
WL1 Hedgerows
WL2 Treelines

Landuse / Management Activity	Frequency of use
Grazing - cattle	2 Occasional (5-20%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A03.02 abandonment / lack of mowing	C = low	- 1 = reparable negative influence
A04.02.01 non intensive cattle grazing	C = low	- 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,	B = medium	- 1 = reparable negative influence

Threats

A03.02 abandonment / lack of mowing
A04.02.01 non intensive cattle grazing
H01.05 diffuse pollution to surface waters due to agricultural and forestry activities
J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

Drainage occurs throughout the Wet grassland and feeds directly into the lake, this is impacting the site's hydrology and likely increasing the nutrient and sediment levels in the lake. Some parcels of Wet grassland are under grazed/mowed leading to a loss of species richness and a dominance of Juncus effusus. Livestock have direct access to the lake from the majority of the Wet grassland which will be impacting the water quality of the lake.

Flora on site - Latin & English species name

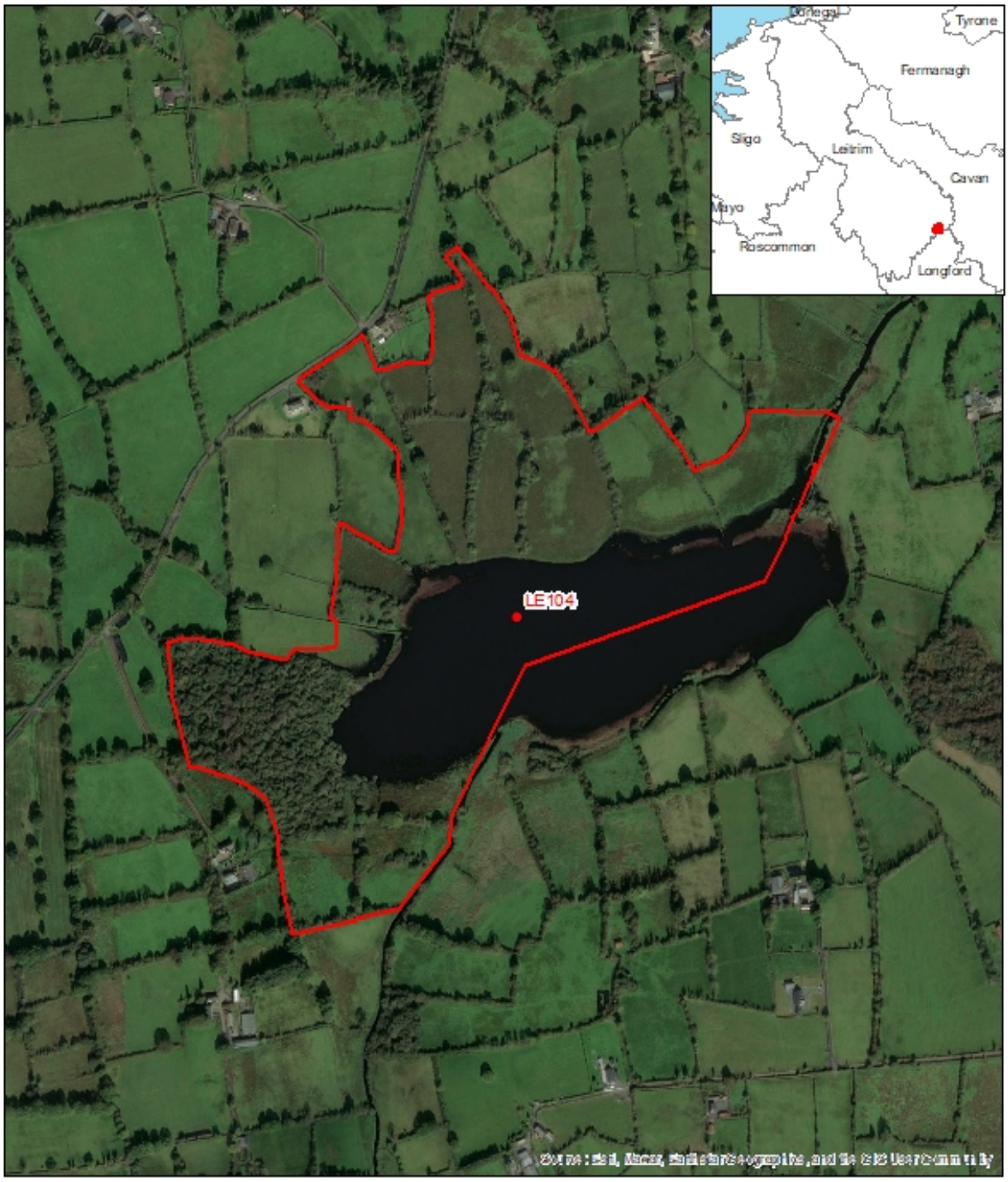
Alisma plantago-aquatica	Water-plantain
Bidens cernua	Nodding Bur-marigold
Calliergon giganteum	Moss
Calliergonella cuspidata	Pointed Spear Moss
Caltha palustris	Marsh-marigold
Carex nigra	Common Sedge
Carex rostrata	Bottle Sedge
Centaurea nigra	Common Knapweed
Comarum palustre	Marsh Cinquefoil
Crataegus monogyna	Hawthorn
Deschampsia cespitosa	Tufted Hair-grass
Equisetum fluviatile	Water Horsetail
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Galium palustre	Marsh-bedstraw
Gnaphalium uliginosum	Marsh Cudweed
Holcus lanatus	Yorkshire-fog
Hydrocotyle vulgaris	Marsh Pennywort
Juncus effusus	Soft-rush
Lysimachia nummularia	Creeping-Jenny
Lythrum salicaria	Purple-loosestrife
Mentha aquatica	Water Mint
Menyanthes trifoliata	Bogbean

Myosotis sp.	Forget-me-not
Nuphar lutea	Yellow Water-lily
Persicaria hydropiper	Water-pepper
Phalaris arundinacea	Reed Canary-grass
Phragmites australis	Common Reed
Potamogeton natans	Broad-leaved Pondweed
Potentilla anserina	Silverweed
Quercus robur	Pedunculate Oak
Rubus fruticosus agg.	Blackberry
Salix aurita	Eared Willow
Salix cinerea subsp. cinerea	Grey Willow
Schoenoplectus lacustris	Common Club-rush
Sparganium emersum	Unbranched Bur-reed
Sparganium erectum	Branched Bur-reed
Sphagnum squarrosum	Spiky Bog Moss
Urtica dioica	Common Nettle

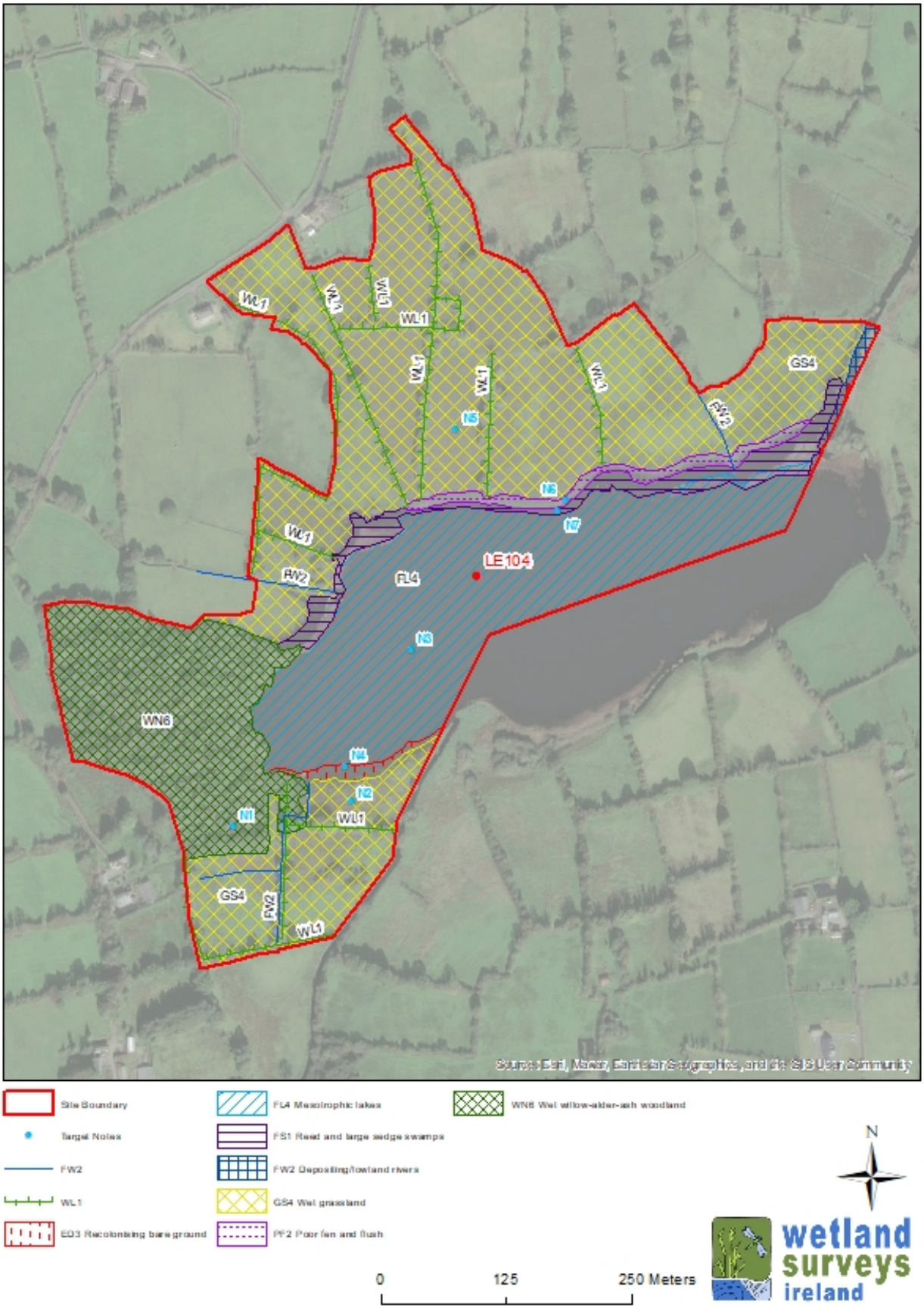
Fauna on site - English and Latin species name

Cormorant	*Phalacrocorax carbo*
Grey Heron	*Ardea cinerea*
Otter	*Lutra lutra*

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: BELLAGEEHER MEELARAGH BOG AND CUTOVER

Site Code: LE61 **Area (ha):** 90.93 **Grid Ref:** 208225 287798 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
18/06/2024

Survey Code:
LEWS2024

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:
BELLAGEEHER

Solid Geology:
Navan Group

Subsoil type:
Cut

Substrate type:
Peat

Substrate stability:
Soft

River catchment:
Shannon Upr

CORINE Habitats:
Peat bogs

Site Location

Raised bog, severely impacted by peat extraction, located approximately 3km east of Roosky.

Site Description and Wetland Habitats Recorded

The site consists of intact raised bog and cutover bog. Peat extraction is ongoing with facebanks approximately 2m in height and a wide drain surrounding most of the high bog. The high bog itself is relatively dry with patches of bare peat and with a poor Sphagnum spp. cover that is confined mainly to wetter pockets. Robust Calluna vulgaris predominates, replaced by Narthecium ossifragum in the flats. The abandoned cutover areas are dominated by Molinia caerulea, Calluna vulgaris and Eriophorum spp and are being encroached by Betula pubescens, Ulex europaeus and Pteridium aquilinum.

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

No.	Category	Comment
N1	DAMAGE	Peat cut for turf, drying here.
N2	INVASIVE	Invasive Rhododendron ponticum present in severe flowering clumps
N3	DAMAGE	Recent cutting 2m+ cut face with wide drain at base
N4	HABITAT	Dry with Calluna vulgaris dominant. Areas of bare peat or Narthecium ossifragum dominated flats. Very little Sphagnum spp. cover.
N5	DAMAGE	Bare peat in hollows and flats.
N6	HABITAT	Marginal lots of bare peat and very uneven with cracks.
N7	HABITAT	Cutover with Molinia caerula, Calluna vulgaris, Eriophorum spp. and Betula pubescens and Ulex europeaus Scrub encroaching.

Management Recommendations following survey

The control and removal of invasive species is a priority, a Rhododendron ponticum management plan should be put in place. Consider blocking the internal drains of the site.

Future Survey Recommendations

Survey to inform invasive specie management. A hydrological survey to assess the impact that the drains are having on the site and determine restoration potential.

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

BL3 Buildings and artificial surfaces

FW4 Drainage ditches

PB1 Raised bogs

PB4 Cutover bog

WN7 Bog woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

EU Habitats Directive habitats on site

None noted

WL1 Hedgerows

WL2 Treelines

WS1 Scrub

Landuse / Management Activity	Frequency of use
None	3 Frequent (21-50%)
Peat cutting (mechanical)	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
I01 invasive non-native species	B = medium	- 1 = reparable negative influence
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence

Threats

C01.03.02 mechanical removal of peat

I01 invasive non-native species

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

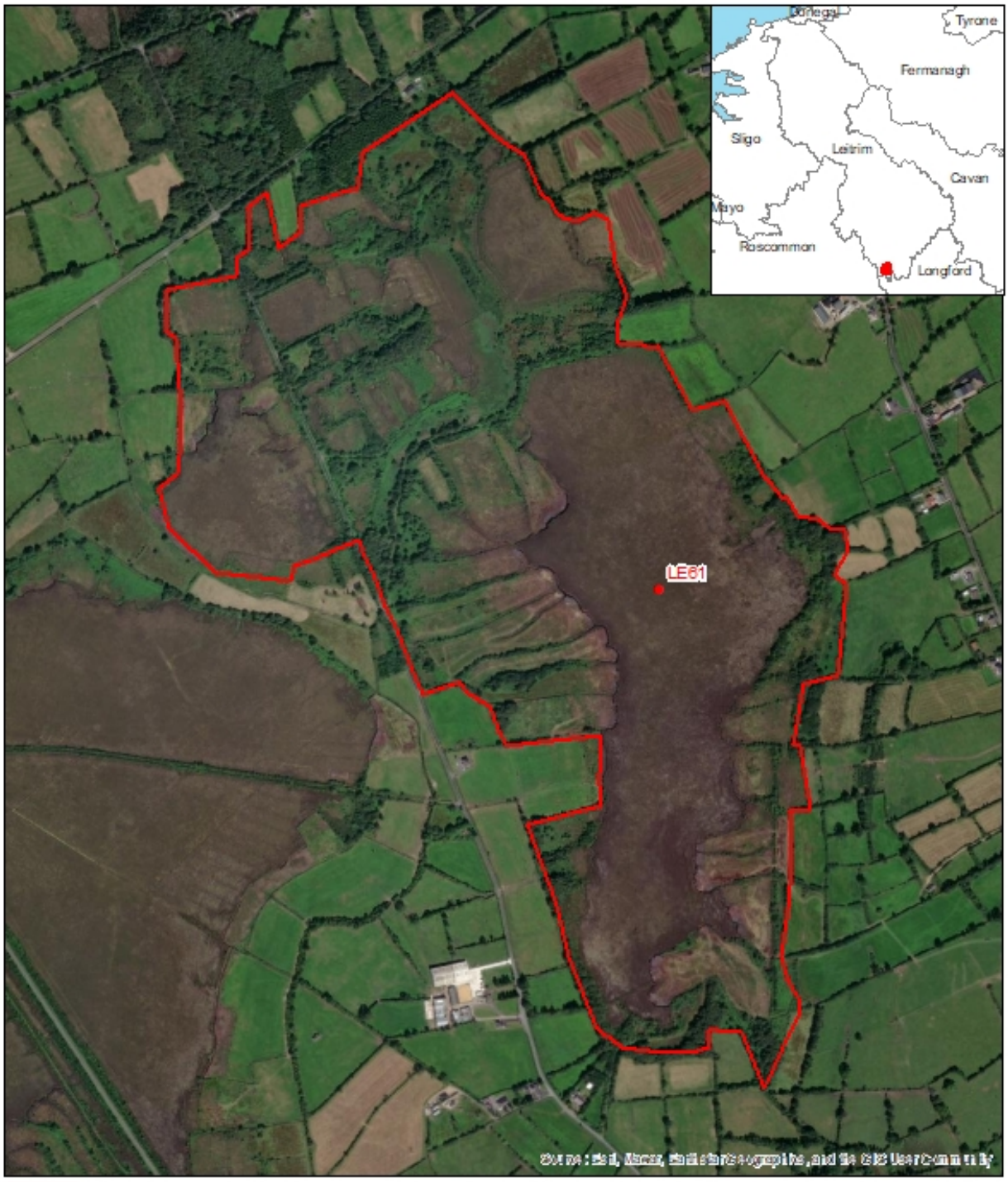
Extensive current and historic peat cutting is impacting the Raised bog. Rhododendron ponticum is an invasive species present in the cutover areas and poses a high risk to the whole site. Drainage onsite is having a significant effect on the wetlands hydrology.

Flora on site - Latin & English species name	
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Carex panicea	Carnation Sedge
Cladonia portentosa	Branching Lichen
Cladonia uncialis	Antler Lichen
Comarum palustre	Marsh Cinquefoil
Drosera anglica	Great Sundew
Drosera rotundifolia	Round-leaved Sundew
Erica tetralix	Cross-leaved Heath
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Juncus effusus	Soft-rush
Molinia caerulea	Purple Moor-grass
Narthecium ossifragum	Bog Asphodel
Potamogeton polygonifolius	Bog Pondweed
Pteridium aquilinum	Bracken
Rhynchospora alba	White Beak-sedge
Salix cinerea subsp. cinerea	Grey Willow
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum cuspidatum	Feathery Bog Moss
Sphagnum papillosum	Papillose Bog Moss
Trichophorum cespitosum	Deergrass
Ulex europaeus	Gorse

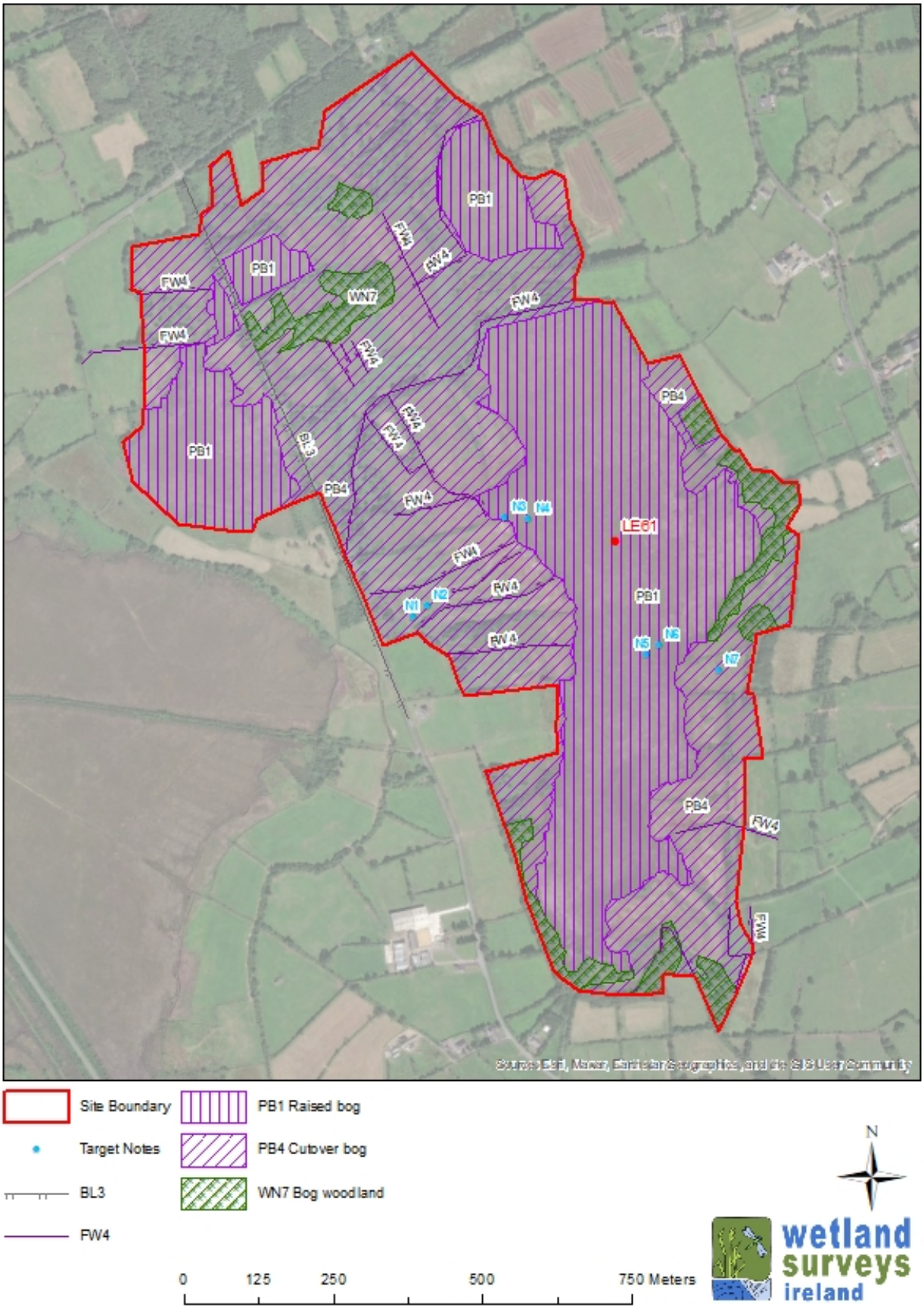
Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: CARRICK DRUMKEILVY

Site Code: LE112 **Area (ha):** 15.86 **Grid Ref:** 210537 298951 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
03/07/2024

Survey Code:
LEWS2024

Site source information:
Detailed raised bog ecotope survey recommended
Detailed Wetland Survey undertaken
Detailed woodland survey recommended
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:
CARRICK (Mohill By)

Solid Geology:	**Subsoil type:**
Visean basinal limestone	Cut
Substrate type:	**Substrate stability:**
Peat	Soft

River catchment:
Shannon Upr

CORINE Habitats:
Land principally occupied by

Site Location

Woodland dominated site located 2.6km north-east of Mohill, county Cavan.

Site Description and Wetland Habitats Recorded

Open areas of cutover bog dominated by Sphagnum spp., Calluna vulgaris and Eriophorum spp. occur in the centre of the site, some of which may be active bog, however some areas remain Molinia caerulea dominated. The small open area of peatland is surrounded by annex bog woodland dominated by Sphagnum spp., Betula pubescens and Molinia caerulea, which grade to wet woodland at the edge of the site. The open area to the west of the site is a mosaic to marsh and poor fen.

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

No.	Category	Comment
N1	HYDROLOGY	Large drain at boundary of site, approx 2m wide, 50cm deep. Open water with Lemna minor.
N10	HABITAT	Less developed Bog woodland
N11	HYDROLOGY	Narrow 1m deep drain, vegetated.
N12	HABITAT	Open area dominated by Molinia caerula, Calluna vulgaris, Eriophorum spp. and Sphagnum spp., with tree saplings scattered across the area mainly Betula and Pinus
N13	HABITAT	Bog woodland. Sphagnum not as dominant and more Salix spp. present. Juncus spp., Potentilla erecta, Rubus fruticosus present.
N14	HABITAT	Open area dominated by Molinia caerula with Erica tetralix, Potentilla erecta, Cladonia potentosa, Calluna vulgaris and Ulex europaeus scattered among the M.caerula tussocks
N15	HABITAT	Molinia caerula dominated, with hummocks of Cladonia portenosa, Calluna vulgaris, Erica tetralix, Potentilla erecta, and scattered Eriophorum. Betula saplings are abundant
N16	HABITAT	Large pools/soaks with Sphagnum spp. and Eriophorum spp.
N17	HABITAT	Small area of Dense bracken
N18	HABITAT	Small bit of Bog woodland fringing open area
N19	FLORA	Carex rostrata, Comarum palustre, Equisetum fluviatile in Bog woodland.
N2	DAMAGE	Dumping of domestic waste
N20	HABITAT	Alnus glutinosa, Betula pubescens and Salix spp. woodland, Rubus fruticosus dominated ground floor
N21	GENERAL	Best access from here
N22	DAMAGE	Tree clearance and ploughed clearance of ground cover.

Management Recommendations following survey

Although visual evidence of drainage on the majority of the site is limited, blocking any drains identified by a hydrological survey could significantly benefit the natural regeneration of this site. Remove and manage all non-native tree species.

Future Survey Recommendations
A detailed survey of the birch woodland on the site is recommended to determine the extent of the Annex Bog woodland. A detailed survey of the Sphagnum-rich cutover areas noted during this survey is recommended to assess whether these areas correspond to the Annex habitat Active Raised Bog. Undertaking a hydrological survey would best inform management of this site.

Landowner Information Comments
Spoke with landowner who granted access and informed us the site used to be cut for turf but has been abandoned for a long time.

Description of potential EU Habitats Directive Annex 1 habitats
The woodland adjacent to the open area of cutover bog corresponds to the EU Annex 1 habitat 91D0 Bog woodland. Parts of the cutover bog may also correspond to the EU Annex 1 Habitat 7110 Active raised bogs.

Main Fossitt habitats on site	EU Habitats Directive habitats on site
BC3 Tilled land	7110 *Active raised bogs
GS4 Wet grassland	91D0 *Bog woodland
HD1 Dense bracken	
PB1 Raised bogs	
PB4 Cutover bog	
PF2 Poor fen and flush	
WN6 Wet willow-alder-ash woodland	
WN7 Bog woodland	
WS1 Scrub	

Fossitt habitats surrounding site
BL3 Buildings and artificial surfaces
GA1 Improved agricultural grassland
WD4 Conifer plantation
WL1 Hedgerows
WL2 Treelines

Landuse / Management Activity	Frequency of use
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A02.01 agricultural intensification	C = low	- 1 = reparable negative influence
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
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence

Threats
A02.01 agricultural intensification
A10.01 removal of hedges and copses or scrub
B01.02 artificial planting on open ground (non-native trees)
E03.01 disposal of household waste
J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments
The drainage on site did not seem extensive (except in the newly cleared area) but given the sites abandonment it is likely to be well vegetated but may still be impacting hydrology. There is evidence of dumping along the roadsides and deer have torn up areas of sphagnum in the cutover bog. Vegetation clearance is occurring at the northern edge of the site, likely for agricultural use although the adjacent land had been afforested. Saplings of non-native tree species have established on the site.

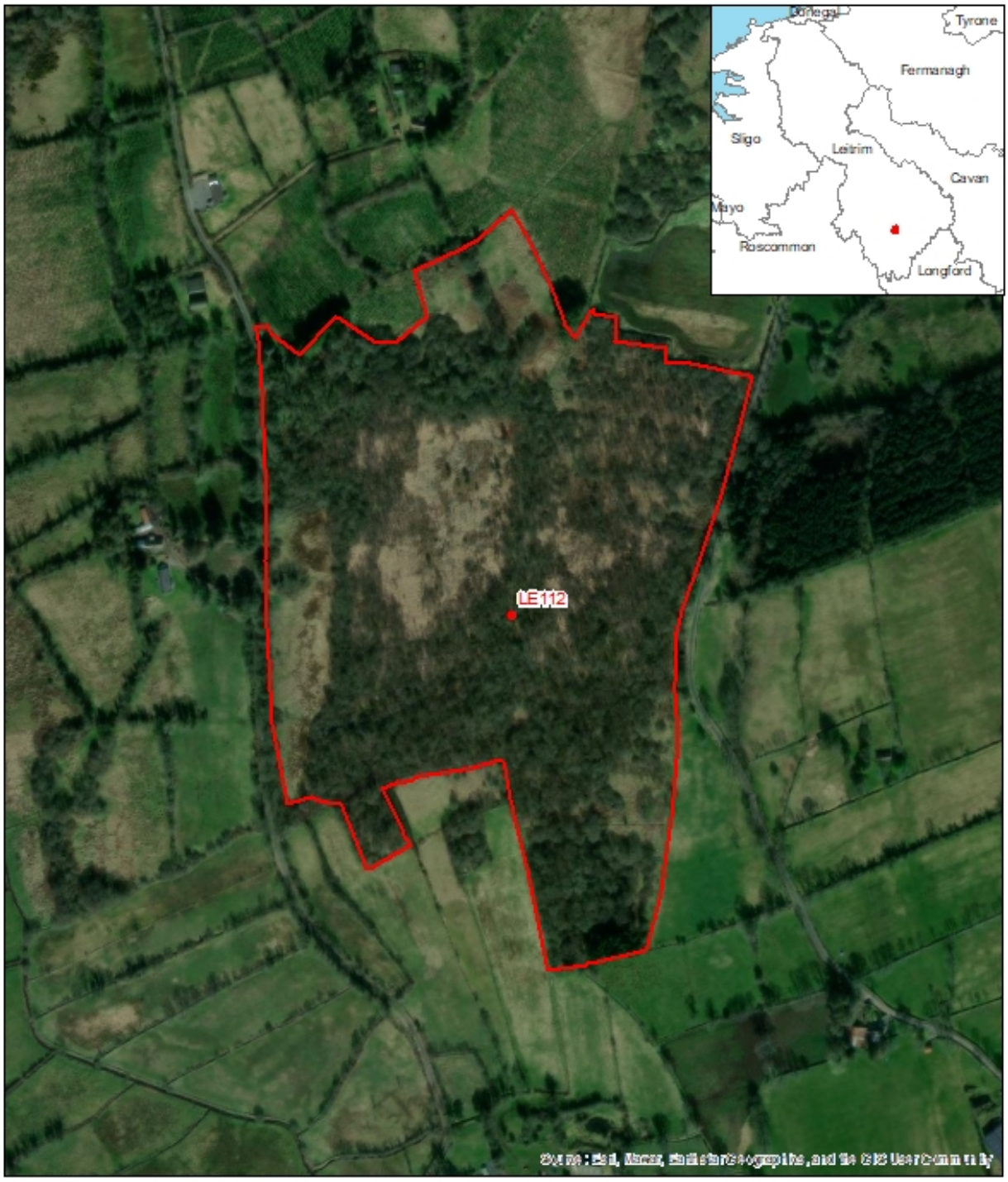
Flora on site - Latin & English species name	
Acer pseudoplatanus	Sycamore

Alnus glutinosa	Alder
Angelica sylvestris	Wild Angelica
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Carex diandra	Lesser Tussock-sedge
Carex echinata	Star Sedge
Carex rostrata	Bottle Sedge
Circaea lutetiana	Enchanter's-nightshade
Cirsium palustre	Marsh Thistle
Cladonia portentosa	Branching Lichen
Comarum palustre	Marsh Cinquefoil
Corylus avellana	Hazel
Crataegus monogyna	Hawthorn
Dactylorhiza sp.	Orchid
Equisetum fluviatile	Water Horsetail
Erica tetralix	Cross-leaved Heath
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Filipendula ulmaria	Meadowsweet
Geranium robertianum	Herb-Robert
Hedera helix	Ivy
Ilex aquifolium	Holly
Juncus articulatus	Jointed Rush
Juncus conglomeratus	Compact Rush
Juncus effusus	Soft-rush
Lathyrus pratensis	Meadow Vetchling
Ligustrum vulgare	Wild Privet
Lychnis flos-cuculi	Ragged-Robin
Molinia caerulea	Purple Moor-grass
Narthecium ossifragum	Bog Asphodel
Pinus contorta	Lodgepole Pine
Potentilla erecta	Tormentil
Prunus spinosa	Blackthorn
Pseudoscleropodium purum	Neat Feather-moss
Pteridium aquilinum	Bracken
Rhytidiadelphus squarrosus	Springy Turf-Moss
Rubus fruticosus agg.	Blackberry
Salix aurita	Eared Willow
Salix cinerea subsp. cinerea	Grey Willow
Salix viminalis	Osier
Sphagnum capillifolium	Acute-leaved Bog Moss
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum palustre	Blunt-leaved Bog Moss
Sphagnum subnitens	Lustrous Bog Moss
Succisa pratensis	Devil's-bit Scabious
Ulex europaeus	Gorse
Urtica dioica	Common Nettle
Vicia cracca	Tufted Vetch

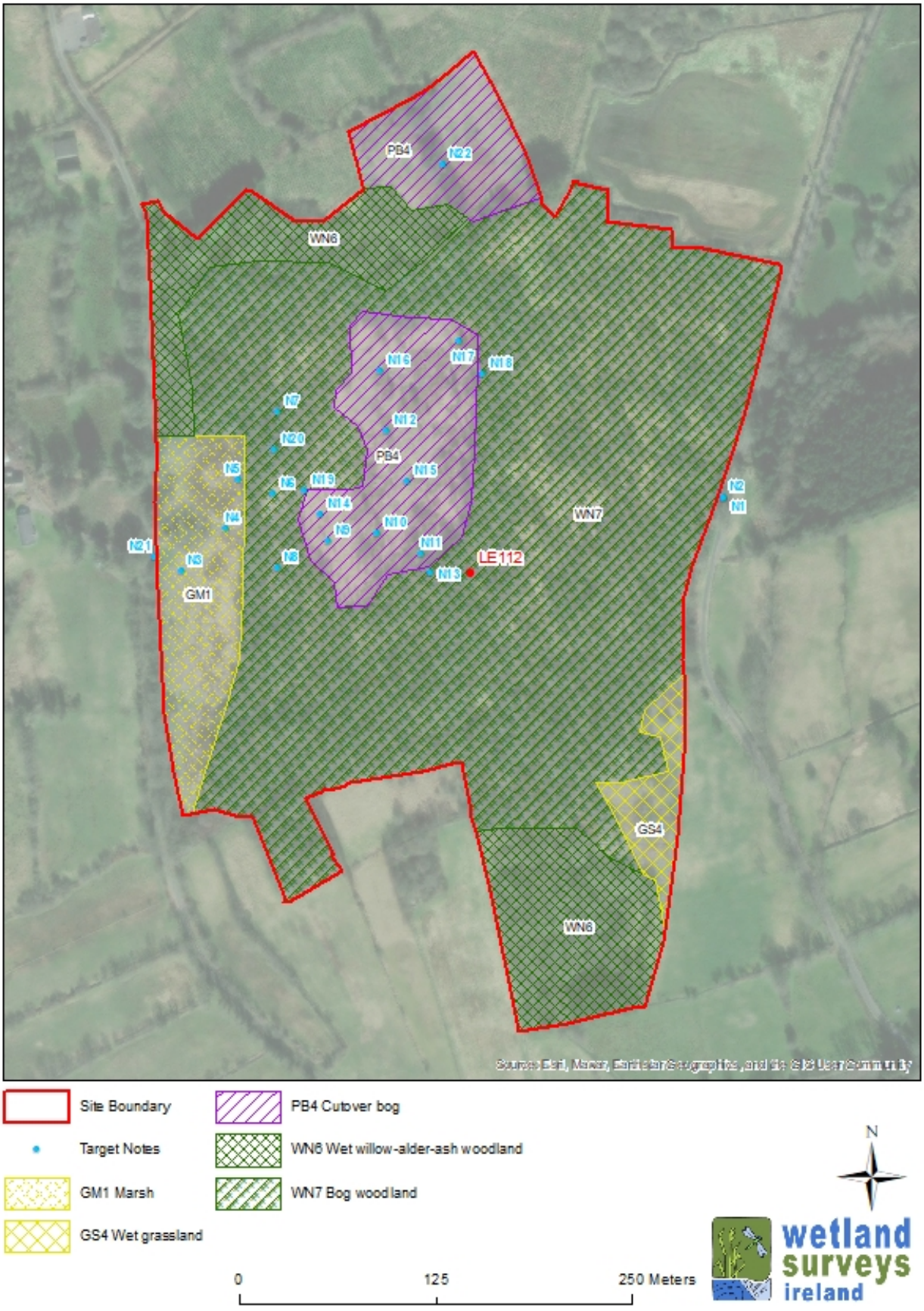
Fauna on site - English and Latin species name

Common Frog	*Rana temporaria*
Dragon and Damselflies	
Fox	*Vulpes vulpes*
Wren	*Troglodytes troglodytes*

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: CLOONBOYGHER LOUGH AND WETLAND

Site Code: LE190 **Area (ha):** 14.36 **Grid Ref:** 220164 307604 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Adam Vanmechelen & Poppy Overy

Date of wetland survey:
12/09/2024

Survey Code:
LEWS2024

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:
CROCKEEN

Solid Geology:

Subsoil type:
Cut

Substrate type:
Peat

Substrate stability:
Soft

River catchment:
Erne

CORINE Habitats:
Land principally occupied by

Site Location

The site is located approximately 2.4km east of Drumlea.

Site Description and Wetland Habitats Recorded

A mesotrophic Lake occurs at the northeast edge of the site, supporting Nuphar lutea and Potamogeton natans. The fringing habitat is reed swamp dominated Equisetum fluviatile, Menyanthes trifoliata and Typha latifolia. Bog woodland dominates the site, but it is not thought to be of annex quality, Betula pubescens and Salix spp. dominate the canopy whilst Rubus fruticosus and Pteridium aqulinium are common components of the understory. The open area in the east of the site is cutover bog with historic, vegetated drains, Calluna vulgaris and Molinia caerulea dominate the ground vegetation, tree saplings are encroaching the bog.

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

No.	Category	Comment
N1	HABITAT	Mesotrophic lake surrounded by Reed swamp which is dominated by Phragmites australis.
N2	HABITAT	Dry Bog woodland.
N3	HABITAT	Cutover bog being encroached by Scrub consisting of Betula pubescens and Ulex europeaus
N4	HYDROLOGY	Drainage ditch.
N5	HABITAT	Dry bog woodland.
N6	DAMAGE	Abundant colonistaion of non-native conifers, or possibly failing area of coniferous plantation.
N7	HABITAT	Species poor Wet grassland on Cutover bog.
N8	INVASIVE	Symphoricarpos albus

Management Recommendations following survey

The invasive species (Symphoricarpos albus) on site should be mapped, eradicated and monitored to prevent further spread. Non-native tree species should be removed from the wetland site.

Future Survey Recommendations

A hydrological survey is recommended to determine how the drainage could be managed to restore the sites hydrological integrity, which will improve the habitat's condition.

Landowner Information Comments

Spoke with landowner, access was granted.

Description of potential EU Habitats Directive Annex 1 habitats

Although the site contains Bog woodland with Birch this does not conform to the EU Habitats Directive priority habitat type.

Main Fossitt habitats on site

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

FW4 Drainage ditches

GS4 Wet grassland

PB4 Cutover bog

WN7 Bog woodland

WS1 Scrub

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

FW4 Drainage ditches

GA1 Improved agricultural grassland

WD4 Conifer plantation

WL1 Hedgerows

WL2 Treelines

Landuse / Management Activity	Frequency of use
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
B01.02 artificial planting on open ground (non-native	B = medium	- 1 = reparable negative influence
H02.06 diffuse groundwater pollution due to	D = unknown	- 1 = reparable negative influence
H04.02 Nitrogen-input	C = low	- 1 = reparable negative influence
I01 invasive non-native species	C = low	- 1 = reparable negative influence
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence

Threats

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

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

H04.02 Nitrogen-input

I01 invasive non-native species

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

Part of the original site boundary has now been planted with coniferous forestry significantly impacting the wetland. Open drainage occurs at the boundary of the site and historic peat drains occur throughout the peatland which are impacting the site hydrology. The invasive species, Symphoricarpos albus, occurs along the road edge of the site. The presence of Urtica dioica at the edges of the site potentially indicate nitrogen input from the surrounding land.

Flora on site - Latin & English species name

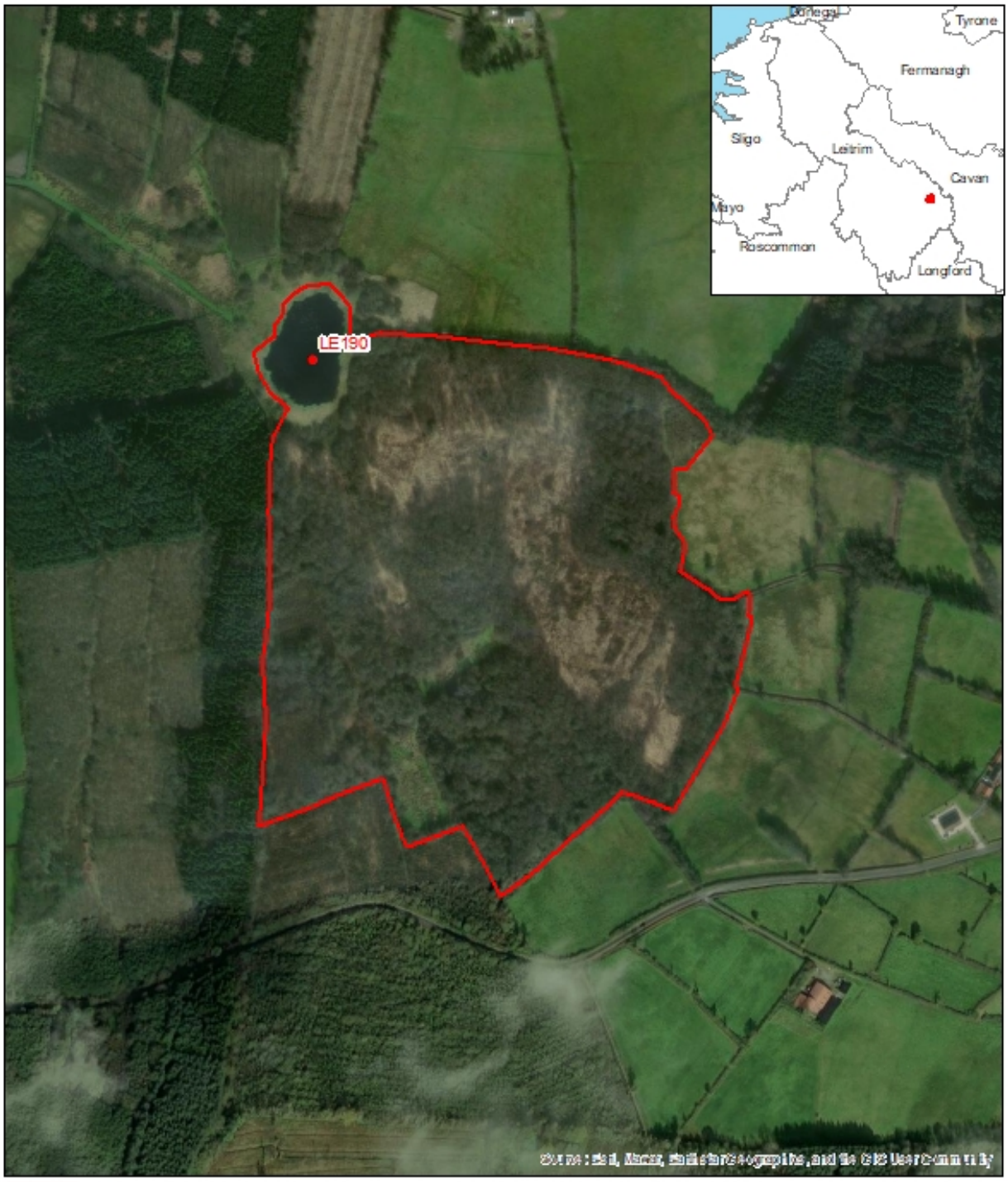
Angelica sylvestris	Wild Angelica
Betula pubescens	Downy Birch
Carex panicea	Carnation Sedge
Cladonia portentosa	Branching Lichen
Crataegus monogyna	Hawthorn
Deschampsia cespitosa	Tufted Hair-grass
Epilobium palustre	Marsh Willowherb
Equisetum fluviatile	Water Horsetail
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Ilex aquifolium	Holly
Juncus effusus	Soft-rush
Menyanthes trifoliata	Bogbean
Molinia caerulea	Purple Moor-grass
Nuphar lutea	Yellow Water-lily
Osmunda regalis	Royal Fern
Phalaris arundinacea	Reed Canary-grass
Pinus contorta	Lodgepole Pine
Potamogeton natans	Broad-leaved Pondweed
Pteridium aquilinum	Bracken

Rubus fruticosus agg.	Blackberry
Salix aurita	Eared Willow
Salix cinerea subsp. cinerea	Grey Willow
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum cuspidatum	Feathery Bog Moss
Sphagnum medium	Magellan's Bog Moss
Sphagnum papillosum	Papillose Bog Moss
Stachys palustris	Marsh Woundwort
Symphoricarpos albus	Snowberry
Trichophorum cespitosum	Deergrass
Typha latifolia	Bulrush
Ulex europaeus	Gorse
Urtica dioica	Common Nettle
Vicia cracca	Tufted Vetch

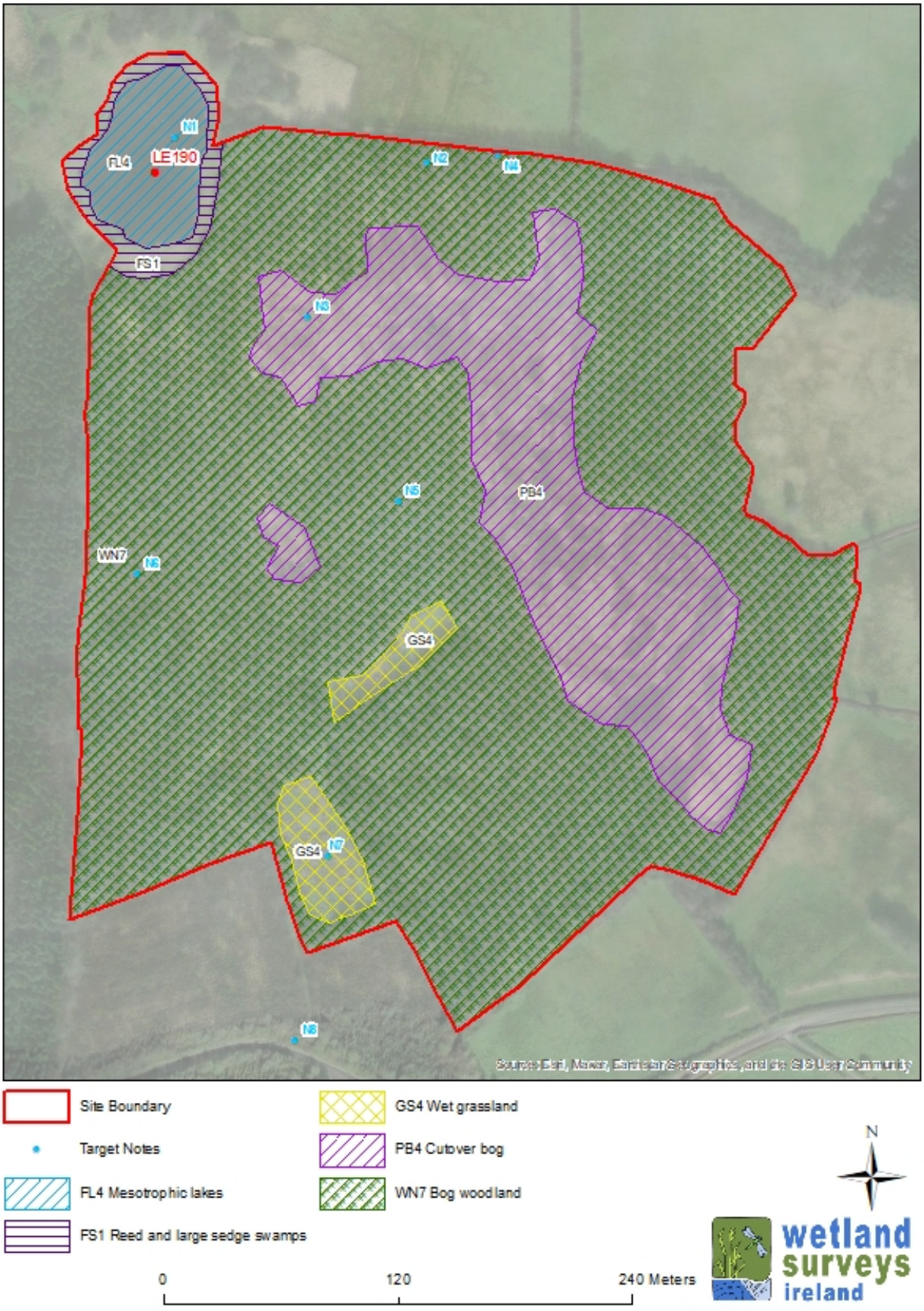
Fauna on site - English and Latin species name

Robin	*Erithacus rubecula*

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: CLOONLAUGHIL GUBBADORRIS BOG (LEITRIM)

Site Code: LE62 **Area (ha):** 31.69 **Grid Ref:** 212241 285755 **County:** LE LF

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
18/06/2024

Survey Code:
LEWS2024

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:
GUBADORRIS

Solid Geology:
Navan Group

Subsoil type:
Cut

Substrate type:
Peat

Substrate stability:
Soft

River catchment:
Shannon Upr

CORINE Habitats:
Peat bogs

Site Location

A Raised bog partly cut in the north east of the site, located approximately 6.5km east of Roosky.

Site Description and Wetland Habitats Recorded

Moderately sized raised bog, that has been extensively impacted by the historic peat cutting and drainage. Calluna vulgaris and Eriophorum spp. dominate the habitat, with an abundant Sphagnum cover in the wetter patches. The drier cutover areas to the northeast and south of the site have Scrub encroachment mainly Betula pubescens and Salix spp, along with pockets of mature bog woodland (non-annex).

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

No.	Category	Comment
N1	HABITAT	Historic facebank, 2m to base of drain between high bog and grassland.
N10	HABITAT	Area of historic peat cutting, dominated by Molinia caerula, Calluna vulgaris, Sphagnum spp., Myrica gale
N11	HABITAT	Dominated by hummocks and occasional hollows, with leggy Calluna vulgaris and Betula pubescens (Raised bog complex 9/7)
N12	FLORA	Dry Molinia caerula dominant area
N13	HABITAT	Molinia caerula dominates stand of Betula pubescens, growing around Sphagnum spp. filled drain at old cut face
N14	HABITAT	Dominated by hummocks and hollows (Raised bog complex 9/7/6)
N15	HABITAT	Dominated by hummocks and hollows (Raised bog complex 9/7/6)
N16	HABITAT	Wooded area dominated by Betula pubescens, with some Salix spp, and Ilex aquifolium. Understory dominated by Rubus fruticosus.
N17	GENERAL	Cracked peat with rank heather.
N18	HABITAT	Cutover with Phragmites australis.
N19	FLORA	Cow wheat (Melampyrum pratense).
N2	HABITAT	Dominated by Calluna vulgaris and Cladonia spp., with abundant Eriophorum vaginatum
N3	HABITAT	Abundant Narthecium ossifragum with Sphagnum spp. and Calluna vulgaris
N4	INVASIVE	Large Rhododendron ponticum at edge of bog
N5	HABITAT	Dominated by hummocks and hollows (Raised bog complex 9/7/6)

Management Recommendations following survey

Remove invasive from the area and implement monitoring to prevent reestablishment. Rewetting of adjacent lands and drain blocking may improve hydrological integrity. Although no active bog (peat forming) was found onsite, the original bog is fairly intact and may benefit from some restoration work.

Future Survey Recommendations

Hydrological survey to inform drain blocking and restoration potential of the raised bog. Assess the extent of Rhododendron ponticum on site and in the immediate vicinity.

Landowner Information Comments
Adjacent farmer told us to work away.

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
FW4 Drainage ditches
PB1 Raised bogs
PB4 Cutover bog
WN7 Bog woodland
WS1 Scrub

EU Habitats Directive habitats on site
None noted

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

Landuse / Management Activity	Frequency of use
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
I01 invasive non-native species	C = low	- 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

Damaging Operations Comments
One large stand of flowering Rhododendron ponticum was noted on the north-east of the raised bog. No drains are present on the high bog, but the hydrology of the site is impacted by the surrounding field drains and historic turf cutting. Adjacent lands are heavily drained Improved grasslands.

Flora on site - Latin & English species name

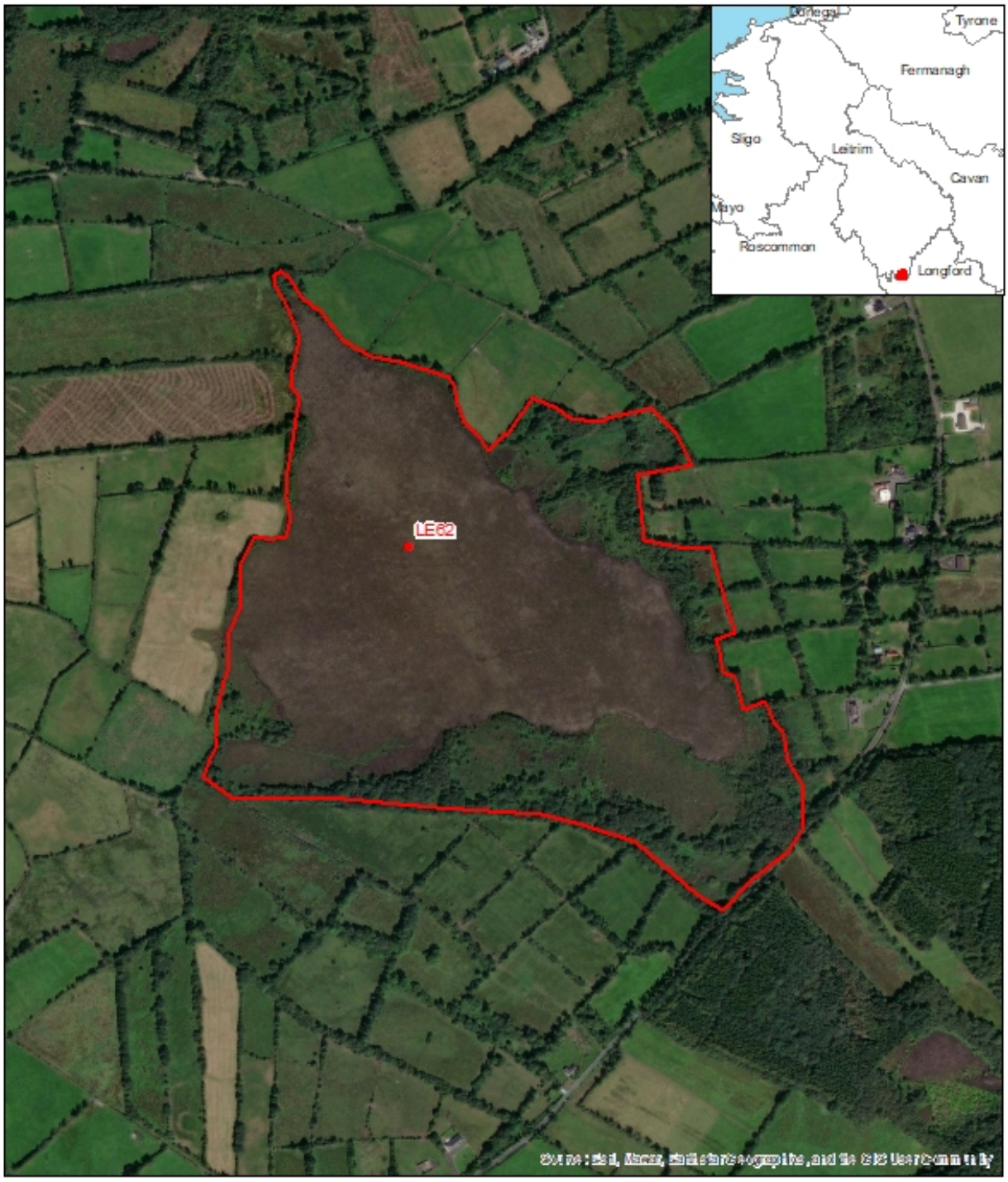
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Cladonia portentosa	Branching Lichen
Drosera rotundifolia	Round-leaved Sundew
Erica tetralix	Cross-leaved Heath
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Ilex aquifolium	Holly
Melampyrum pratense	Common Cow-wheat
Molinia caerulea	Purple Moor-grass
Myrica gale	Bog-myrtle
Narthecium ossifragum	Bog Asphodel
Phragmites australis	Common Reed

Pinus sp.	Pine
Potentilla erecta	Tormentil
Pteridium aquilinum	Bracken
Rhododendron ponticum	Rhododendron
Rubus fruticosus agg.	Blackberry
Salix aurita	Eared Willow
Salix cinerea subsp. cinerea	Grey Willow
Sphagnum austinii	Austin's Bog Moss
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum cuspidatum	Feathery Bog Moss
Sphagnum papillosum	Papillose Bog Moss
Sphagnum tenellum	Soft Bog Moss
Trichophorum germanicum	Northern Deergrass
Ulex europaeus	Gorse

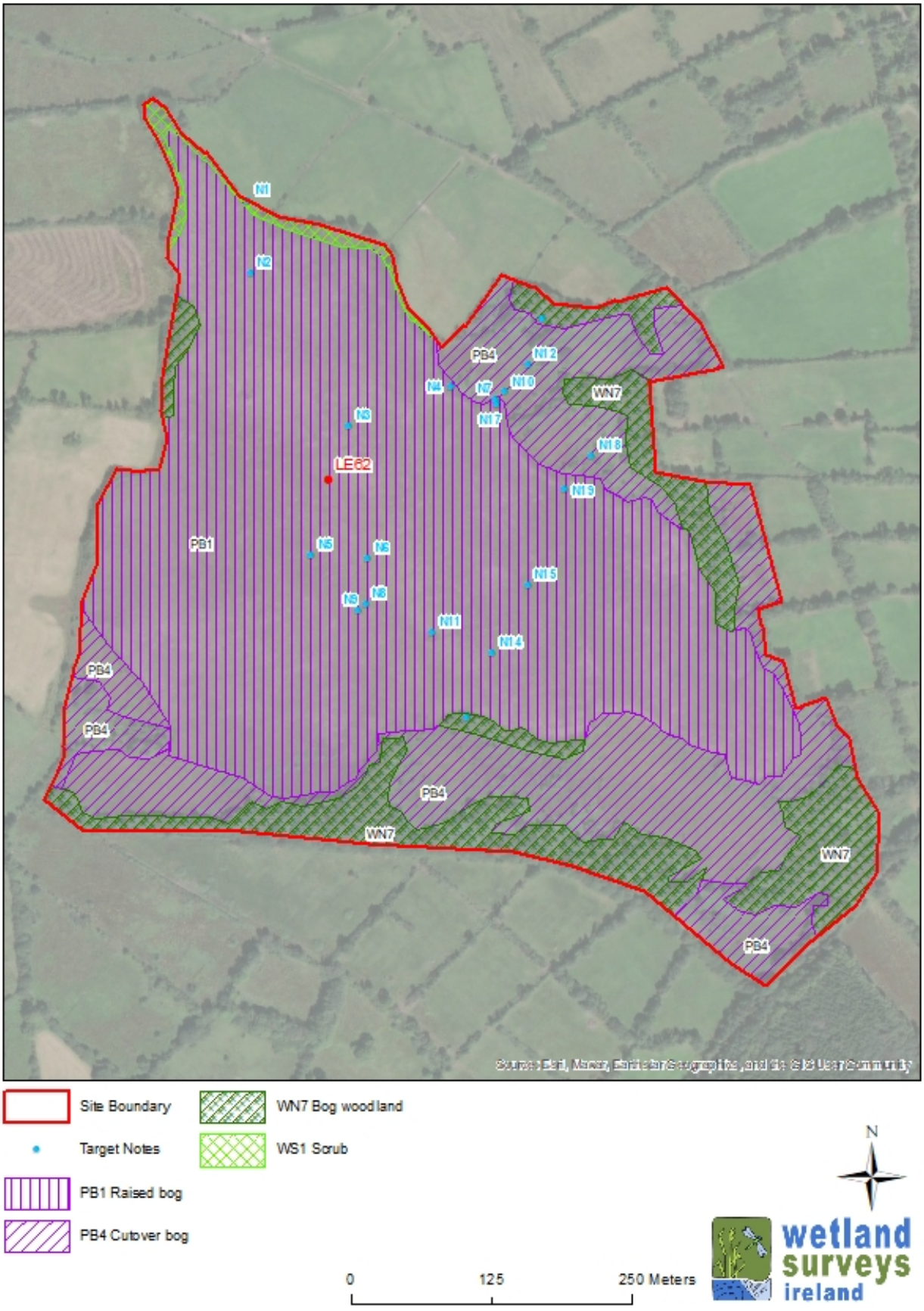
Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: CORNACORROO WETLAND

Site Code: LE392 **Area (ha):** 14.66 **Grid Ref:** 195864 296416 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
19/06/2024

Survey Code:
LEWS2024

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:
CORNACORROO

Solid Geology:
Marine shelf facies

Subsoil type:
FenPt

Substrate type:
Peat

Substrate stability:
Soft

River catchment:
Shannon Upr

CORINE Habitats:
Pastures

Site Location

Situated on the River Shannon and approximately 3.6km South of Carrick-on-shannon.

Site Description and Wetland Habitats Recorded

The site now forms a large habitat mosaic of poor fen, reed and large sedge swamp, and scrub. Graminoids are a prominent feature of the site, whilst the herbs include Iris pseudoacorus, Valeriana officinalis and Filipendula ulmaria. The majority of the scrub is Salix spp. dominated and interspersed with reed swamp. Carex spp. dominated poor fen also occurs at the edge of the site. The substrate is over 1m deep peat, and the majority of the site is not used so the vegetation is tall.

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

No.	Category	Comment
N1	HABITAT	Carex spp. dominate with abundant Juncus spp. Frequent Lychnis flos-cuculi and Iris pseudacorus.
N2	HABITAT	Fen - Carex spp. more than 50% cover, peat more than 1m deep
N3	HABITAT	Fen needs grazing

Management Recommendations following survey

Once the hydrological survey is complete, implement a management plan, consider blocking drains to improve site condition. Implementing yearly extensive grazing would likely increase species richness and vegetation structure.

Future Survey Recommendations

Consider a hydrological survey to assess the impact that the drains are having on the site. A further detailed survey of the Poor fen and Reed swamp mosaic would determine habitat condition.

Landowner Information Comments

Permission received from farmer, he said it was a bog now cut out, he's in ACRES so has stopped grazing.

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

FW4 Drainage ditches

GS4 Wet grassland

PF2 Poor fen and flush

WL1 Hedgerows

WS1 Scrub

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FL4 Mesotrophic lakes

FW4 Drainage ditches

GA1 Improved agricultural grassland

WL1 Hedgerows

WL2 Treelines

WS1 Scrub

Landuse / Management Activity	Frequency of use
Grazing - unknown	1 Rare (<5%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact

A04.03 abandonment of pastoral systems, lack of	B = medium	- 1 = reparable negative influence
C01.03 Peat extraction	A = high	- 2 = irreparable negative influence
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence

Threats

A03.02 abandonment / lack of mowing

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

Historic peat extraction has had a significant affect on the wetland site, and the remaining drainage continues to impact the site hydrology. Grazing has been abandoned on the majority of the site (decision influences by CAP ACRES), this has caused a decrease in vegetation species richness and structure variation.

Flora on site - Latin & English species name

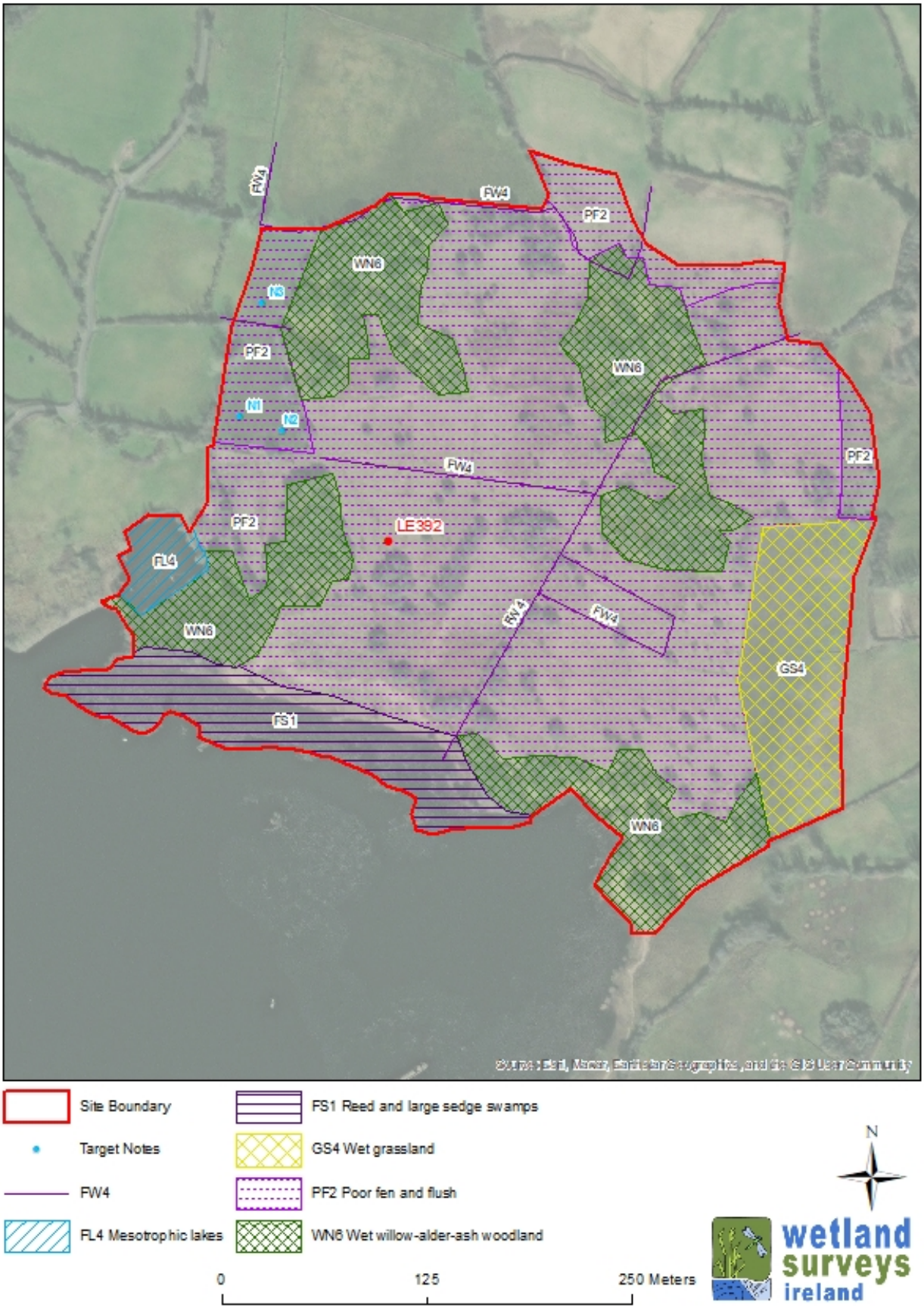
Angelica sylvestris	Wild Angelica
Arrhenatherum elatius	False Oat-grass
Betula pubescens	Downy Birch
Carex echinata	Star Sedge
Carex nigra	Common Sedge
Cirsium dissectum	Meadow Thistle
Comarum palustre	Marsh Cinquefoil
Crataegus monogyna	Hawthorn
Deschampsia cespitosa	Tufted Hair-grass
Equisetum fluviatile	Water Horsetail
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Filipendula ulmaria	Meadowsweet
Galium palustre	Marsh-bedstraw
Hydrocotyle vulgaris	Marsh Pennywort
Iris pseudacorus	Yellow Iris
Juncus articulatus	Jointed Rush
Juncus effusus	Soft-rush
Lychnis flos-cuculi	Ragged-Robin
Mentha aquatica	Water Mint
Phragmites australis	Common Reed
Poa pratensis	Smooth Meadow-grass
Ranunculus flammula	Lesser Spearwort
Ranunculus repens	Creeping Buttercup
Rubus fruticosus agg.	Blackberry
Salix cinerea subsp. cinerea	Grey Willow
Salix sp.	Willow
Salix viminalis	Osier
Urtica dioica	Common Nettle
Valeriana officinalis	Common Valerian
Vicia cracca	Tufted Vetch

Fauna on site - English and Latin species name

Common Frog	*Rana temporaria*

Aerial Photograph showing location of the site

GIS Habitat map of the site



Site Name: CORRACHUILL

Site Code: LE166 **Area (ha):** 8.64 **Grid Ref:** 196855 311460 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
20/06/2024

Survey Code:
LEWS2024

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:
CORRACHUILL

Solid Geology:	**Subsoil type:**
	Cut
Substrate type:	**Substrate stability:**
Peat	Firm

River catchment:
Shannon Upr

CORINE Habitats:
Water bodies

Site Location

Wetland complex on the south eastern edge of Lough Allen, just north of Drumshanbo.

Site Description and Wetland Habitats Recorded

Salix dominated wet woodland occurs, along with a small area of transition mire which is dominated by Equisetum and abundant herbs including Comarum palustre, Filipendula ulmaria and Iris pseudacorus. The majority of the open area within the woodland is a mosaic of marsh and wet grassland with areas abundant in herbs and grasses. The south of the site supports an area of grazed poor fen which is grazed. There appears to be a significant seasonal variation of the water levels on site.

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

No.	Category	Comment
N1	DAMAGE	Small area of Scrub clearing, tree cutting and mulching
N2	HABITAT	Grasses and rushes dominate with rank mats of vegetation. Equisetum fluviatile and lots of hedge bindweed.
N3	HABITAT	Molinia caerula dominates, Potentilla erecta present, along with Alnus glutinosa and Salix spp. scrub
N4	HABITAT	Equisetum spp. dominant with high cover of grasses. Comarum palustre and Filipendula ulmaria, Epilobium and Angelica sylvestris. Rank vegetation dominates ground with areas of Rhytidiadelphus sp.
N5	HABITAT	Equisetum still dominant. Menyanthes trifoliata and Phalaris arundinacea present.
N6	HABITAT	Molinia caerula clearing with abundant mosses and Succisa pratensis, potential Marsh fritillary.
N7	HABITAT	Scrub encroachment with Rubus fruticosus, and tighter canopy of Salix spp. and Alnus glutinosa
N8	HABITAT	More grasses less species rich - Wet grassland.
N9	HABITAT	Phalaris arundinacea dominated Reed swamp with Equisetum spp.

Management Recommendations following survey

The majority of the site would benefit from the introduction of yearly extensive grazing during drier period of the year, this would open the vegetation layer and improve vegetation richness and structure. A fenced riparian buffer zone is recommended for any areas livestock have access to waterbodies, this would reduce the risk of nutrient and sediment entering the water.

Future Survey Recommendations

Consider completing a Marsh fritillary survey at a suitable time of year.

Landowner Information Comments

Received permission from adjacent adventure centre.

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

FS1 Reed and large sedge swamps

GM1 Marsh

GS4 Wet grassland

PF3 Transition mire & quaking bog

WN6 Wet willow-alder-ash woodland

EU Habitats Directive habitats on site

None noted

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FL4 Mesotrophic lakes

GA2 Amenity grassland (improved)

WL1 Hedgerows

WL2 Treelines

Landuse / Management Activity	Frequency of use
Grazing - horses	2 Occasional (5-20%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A04.02.03 non intensive horse grazing	C = low	0 = neutral
A04.03 abandonment of pastoral systems, lack of	B = medium	- 1 = reparable negative influence
A10.01 removal of hedges and copses or scrub	C = low	0 = neutral

Threats

A04.03 abandonment of pastoral systems, lack of grazing

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

Damaging Operations Comments

A small area of tree and scrub clearance has occurred at the northern edge of the site, most likely for recreational use, at the current level its impact is minimal so long as the hedge cutting season is adhered to. The majority of the site is undergrazed resulting in rank vegetation and a decrease in species richness, except the area south of the wet woodland which has a greater level of grazing but livestock have direct access to the waterbodies. Overall the woodland is expanding into the open area.

Flora on site - Latin & English species name

Alnus glutinosa	Alder
Angelica sylvestris	Wild Angelica
Anthoxanthum odoratum	Sweet Vernal-grass
Calystegia sepium	Hedge Bindweed
Carex nigra	Common Sedge
Carex panicea	Carnation Sedge
Carex rostrata	Bottle Sedge
Cirsium palustre	Marsh Thistle
Comarum palustre	Marsh Cinquefoil
Dactylorhiza sp.	Orchid
Deschampsia cespitosa	Tufted Hair-grass
Epilobium sp.	Willowherb
Equisetum fluviatile	Water Horsetail
Filipendula ulmaria	Meadowsweet
Galium palustre	Marsh-bedstraw
Holcus lanatus	Yorkshire-fog
Iris pseudacorus	Yellow Iris
Juncus acutiflorus	Sharp-flowered Rush
Juncus effusus	Soft-rush
Lemna minor	Common Duckweed
Lotus pedunculatus	Greater Bird's-foot-trefoil
Lychnis flos-cuculi	Ragged-Robin
Lysimachia nummularia	Creeping-Jenny
Menyanthes trifoliata	Bogbean

Molinia caerulea	Purple Moor-grass
Nuphar lutea	Yellow Water-lily
Phalaris arundinacea	Reed Canary-grass
Potamogeton natans	Broad-leaved Pondweed
Potentilla anserina	Silverweed
Potentilla erecta	Tormentil
Pseudoscleropodium purum	Neat Feather-moss
Ranunculus acris	Meadow Buttercup
Ranunculus repens	Creeping Buttercup
Rhytidiadelphus sp.	
Rubus fruticosus agg.	Blackberry
Rumex acetosa	Common Sorrel
Salix cinerea subsp. cinerea	Grey Willow
Schoenoplectus lacustris	Common Club-rush
Succisa pratensis	Devil's-bit Scabious
Typha latifolia	Bulrush
Ulex europaeus	Gorse
Urtica dioica	Common Nettle
Valeriana officinalis	Common Valerian
Vicia cracca	Tufted Vetch

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site

GIS Habitat map of the site

Site Name: COSTRE LOUGH

Site Code: LE156 **Area (ha):** 14.45 **Grid Ref:** 199189 302561 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
19/06/2024

Survey Code:
LEWS2024

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:
B Rating: Nationally Important

Townland:
GOWEL

Solid Geology:
Marine shelf facies

Subsoil type:
Water

Substrate type:
Clay
Peat

Substrate stability:
Soft

River catchment:
Shannon Upr

CORINE Habitats:
Pastures

Site Location

A rounded mesotrophic lake bordered by a mix of fen and reed swamp situated to the south-east of Leitrim town, approximately 3.8km.

Site Description and Wetland Habitats Recorded

Mesotrophic lake with a high cover of Nuphar lutea. The lake is fringed by a band Typha latifolia and Phragmites australis reed swamp, that expands at the southwest end and P. australis becomes more prominent. Transition mire also occurs to the southwest of the lake, dominated by Equisetum sp., Carex sp., Eriophorum sp. and Menyanthes trifoliata. The lake is surrounded by pockets of Salix scrub, along with wet grassland and poor fen which is extensively grazed.

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

No.	Category	Comment
N1	HABITAT	Wet grassland Juncus spp. dominated with grasses and Ranunculus, some Carex panicea and Lychnis flos-cuculi
N2	HABITAT	Filipendula ulmaria, Iris pseudacorus, and Carexe spp.
N3	HABITAT	Fringed by Typha latifolia and Menyanthes trifoliata Reed swamp

Management Recommendations following survey

Continue the current grazing regime and consider fencing a buffer zone on the southeast edge of the lake to reduce nutrient and sediment input.

Future Survey Recommendations

A detailed fen survey of the transition mire is recommended.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

The transition mire recorded to the southwest of the lake is an excellent example of the EU Annex 1 habitat Transition Mires and Quaking Bogs (7140).

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	
GS4 Wet grassland	
PF2 Poor fen and flush	
PF3 Transition mire & quaking bog	
WS1 Scrub	

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

WL1 Hedgerows

WL2 Treelines

WS1 Scrub

Landuse / Management Activity	Frequency of use
Grazing - cattle	3 Frequent (21-50%)
None	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

Threats

H01.03 other point source pollution to surface water

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

Damaging Operations Comments
Some areas of the wet grassland were poached but overall the current grazing levels are beneficial for the fen. The majority of the lake has a good buffer zone from the surrounding agricultural land, except the southeast edge where livestock can access the lake increase the risk of nutrient and sediment pollution.

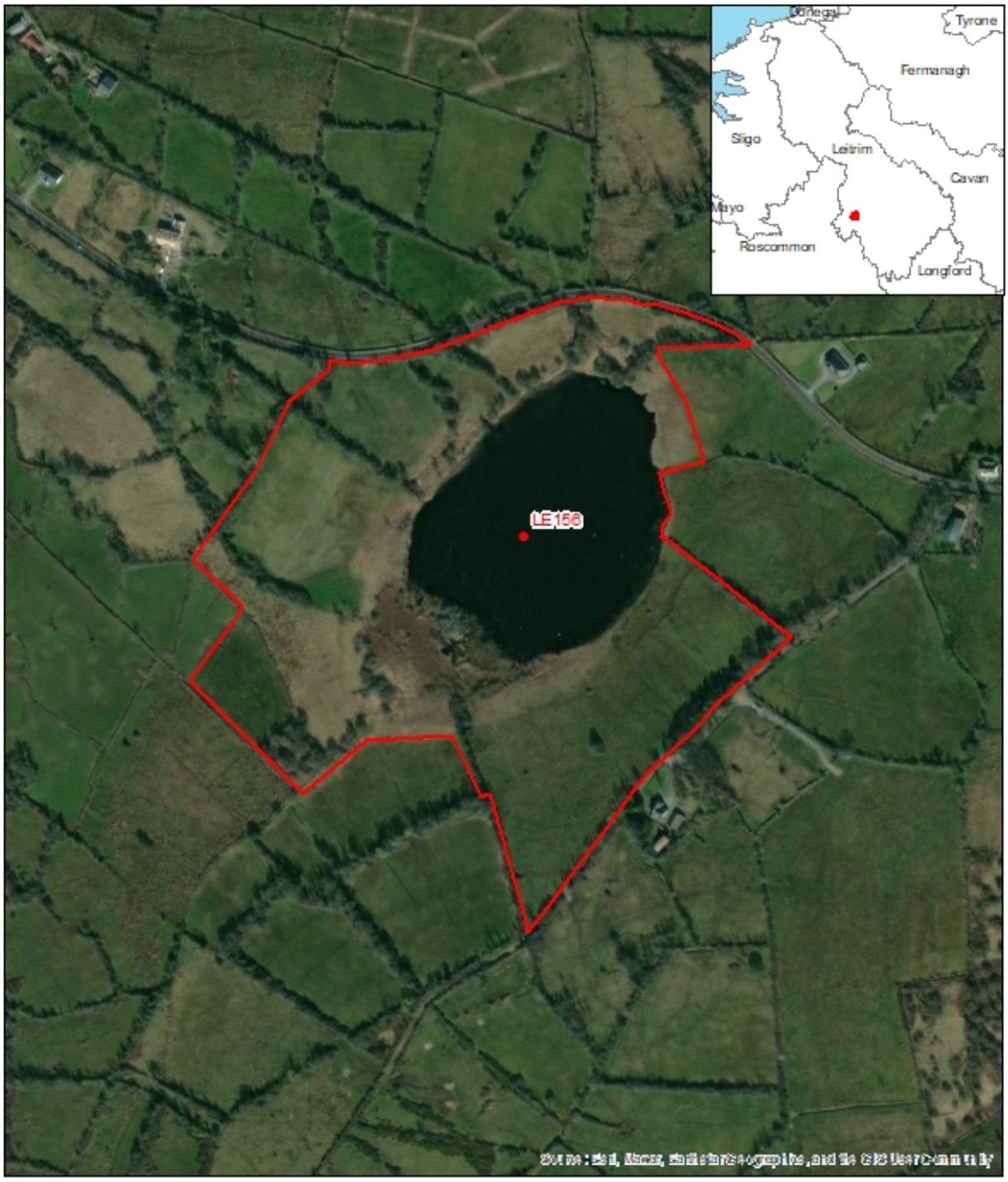
Flora on site - Latin & English species name

Briza media	Quaking-grass
Carex echinata	Star Sedge
Carex nigra	Common Sedge
Carex panicea	Carnation Sedge
Cirsium palustre	Marsh Thistle
Comarum palustre	Marsh Cinquefoil
Dactylorhiza maculata subsp. ericetorum	Heath Spotted-orchid
Equisetum fluviatile	Water Horsetail
Equisetum palustre	Marsh Horsetail
Eriophorum angustifolium	Common Cottongrass
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Holcus lanatus	Yorkshire-fog
Hydrocotyle vulgaris	Marsh Pennywort
Iris pseudacorus	Yellow Iris
Juncus effusus	Soft-rush
Juncus inflexus	Hard Rush
Lychnis flos-cuculi	Ragged-Robin
Mentha aquatica	Water Mint
Menyanthes trifoliata	Bogbean
Nuphar lutea	Yellow Water-lily
Pedicularis palustris	Marsh Lousewort
Phragmites australis	Common Reed
Plantago lanceolata	Ribwort Plantain
Poa pratensis	Smooth Meadow-grass
Potentilla anserina	Silverweed
Potentilla erecta	Tormentil
Ranunculus acris	Meadow Buttercup
Ranunculus flammula	Lesser Spearwort
Rhytidiadelphus squarrosus	Springy Turf-Moss
Salix cinerea subsp. cinerea	Grey Willow
Salix sp.	Willow
Schoenoplectus lacustris	Common Club-rush
Succisa pratensis	Devil's-bit Scabious
Typha latifolia	Bulrush

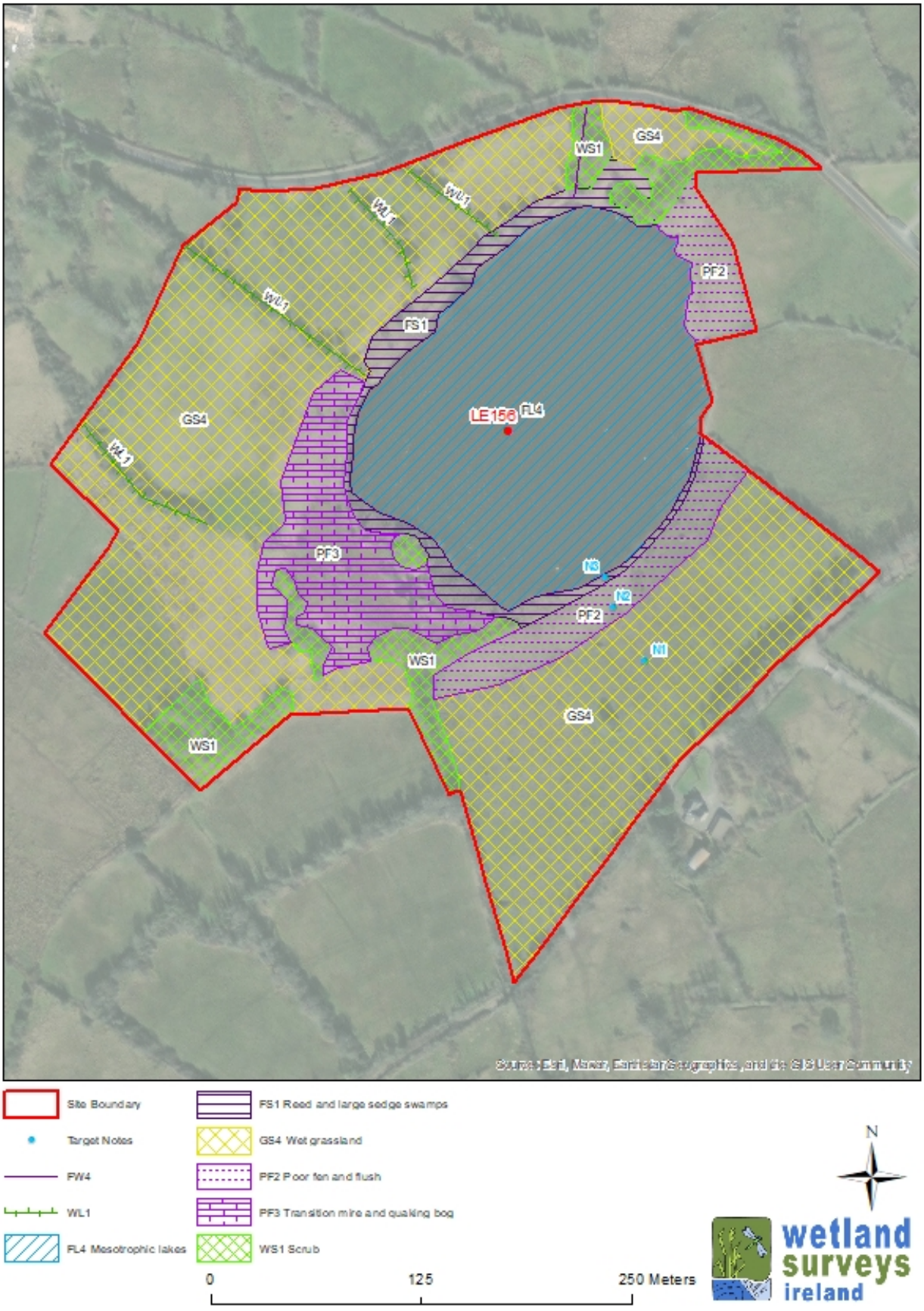
Fauna on site - English and Latin species name

Common Frog	*Rana temporaria*
Coot	*Fulica atra*
Dragon and Damselflies	
Great Crested Grebe	*Podiceps cristatus*
Mute Swan	*Cygnus olor*

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: CREENAGH LOUGH

Site Code: LE126 **Area (ha):** 38.75 **Grid Ref:** 210559 296220 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
03/07/2024

Survey Code:
LEWS2024

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:
CREENAGH (Mohill By)

Solid Geology:
Courceyan limestone

Subsoil type:
Water

Substrate type:
Mineral Soil

Substrate stability:
Firm

River catchment:
Shannon Upr

CORINE Habitats:
Water bodies

Site Location

Mesotrophic lake and wet woodland located just 1.7km to the southeast of Mohill.

Site Description and Wetland Habitats Recorded

Mesotrophic lake with scattered Nuphar lutea, fringed with large areas of reed swamp dominated by Phragmites australis, Phalaris arundinacea and Schoenoplectus lacutris. There is an old wooden jetty at the south end of the lake, adjacent to an area of wet woodland dominated by Salix spp. and Alnus glutinosa. The lake is surrounded by agricultural land the majority of which is wet grassland dominated by grasses and rushes, but the western side is more improved. The lake 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	GENERAL	Old wooden jetty
N2	HABITAT	Phragmites australis and Schoenoplectus lacustris Reed swamp along lake edge
N3	HABITAT	Open water. Some areas have nuphar lutea but very scattered
N4	HYDROLOGY	2m wide, deep drain with Lemna minor and Phragmites australis.
N5	HABITAT	Woodland with tree species including Alnus glutinosa, Fraxinus excelsior, Picea sp., Pinus sylvestris, Salix spp. and Crataegus monogyna. Abundant Rubus fruticosus on ground floor some wetter areas with Phalaris arundinacea and Flipendula ulmaria.
N6	HYDROLOGY	Deep drain in field boundary
N7	HABITAT	Wet grassland left for hay meadow. Species include Fillipendula ulmaria, Holcus lanatus, Iris pseudacorus, Juncus effusus and Ranunculus repens.

Management Recommendations following survey

Ensure all watercourses flow through a seepage area before entering the lake to reduce the nutriet and sediment input from the landscape.

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 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

FW4 Drainage ditches

GS4 Wet grassland

WL1 Hedgerows

WN6 Wet willow-alder-ash woodland

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FW4 Drainage ditches

GA1 Improved agricultural grassland

EU Habitats Directive habitats on site

None noted

GS4 Wet grassland

WL1 Hedgerows

WL2 Treelines

WS1 Scrub

Landuse / Management Activity	Frequency of use
Grazing - cattle	2 Occasional (5-20%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A04.02.01 non intensive cattle grazing	B = medium	- 1 = reparable negative influence
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence

Threats

A04.02.01 non intensive cattle grazing

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

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

The Wet grassland surrounding the lake has a significant level of drainage some of which drains directly into the lake, this will be impacting the hydrological integrity of the grassland and acting as a nutrient and sediment pathway into the lake. The majority of the lake appears to be adequately buffered from the surrounding agricultural land, this is important to maintain as diffuse pollution poses a threat to the water quality.

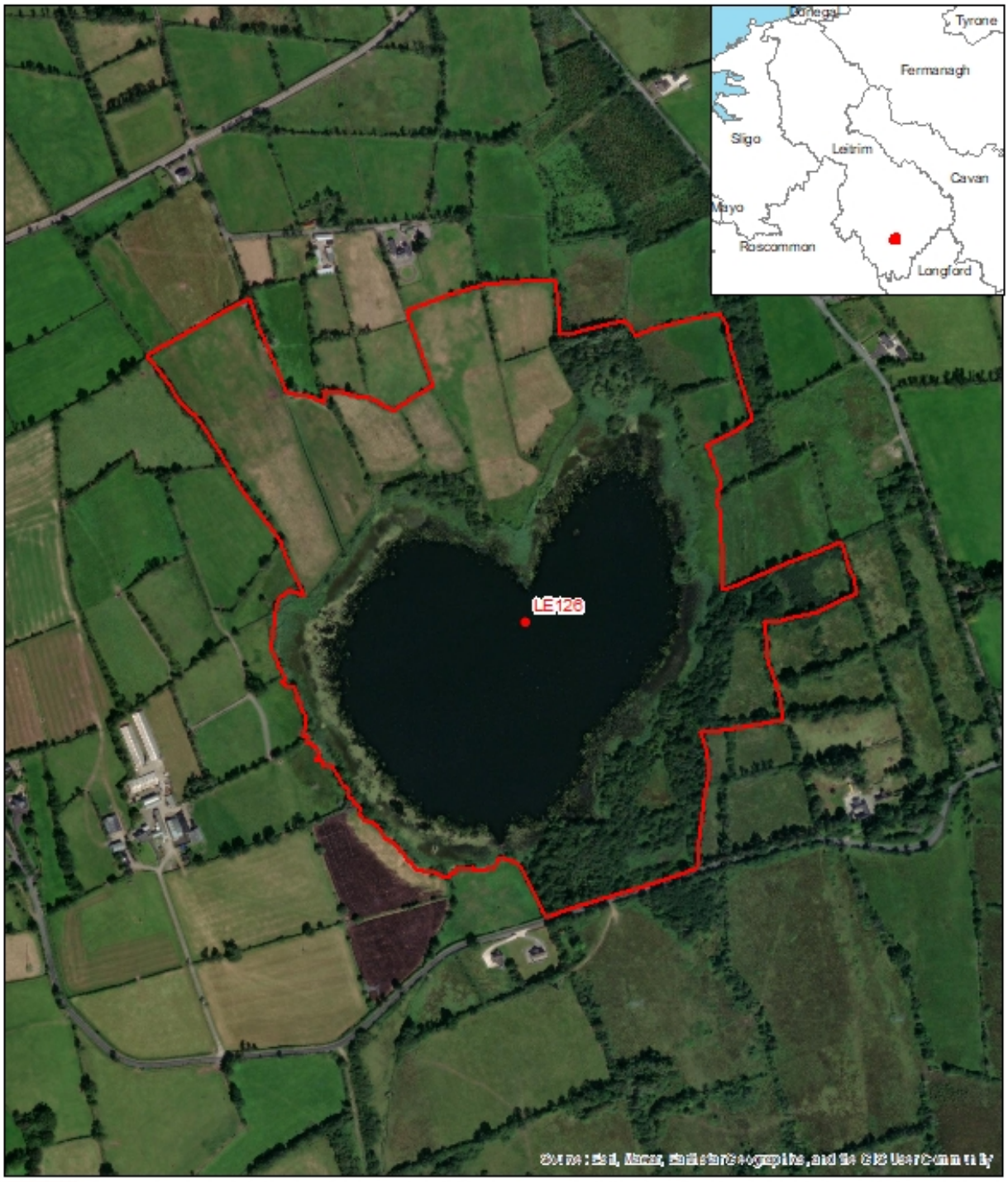
Flora on site - Latin & English species name	
Alisma plantago-aquatica	Water-plantain
Alnus glutinosa	Alder
Carex sp.	Sedge
Comarum palustre	Marsh Cinquefoil
Crataegus monogyna	Hawthorn
Dactylis glomerata	Cock's-foot
Equisetum fluviatile	Water Horsetail
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Galium palustre	Marsh-bedstraw
Holcus lanatus	Yorkshire-fog
Iris pseudacorus	Yellow Iris
Juncus effusus	Soft-rush
Lemna minor	Common Duckweed
Lychnis flos-cuculi	Ragged-Robin
Mentha aquatica	Water Mint
Menyanthes trifoliata	Bogbean
Nuphar lutea	Yellow Water-lily
Phalaris arundinacea	Reed Canary-grass
Phragmites australis	Common Reed
Picea sp.	Spruce
Pinus sylvestris	Scots Pine
Plantago lanceolata	Ribwort Plantain
Potentilla anserina	Silverweed
Ranunculus repens	Creeping Buttercup
Rubus fruticosus agg.	Blackberry
Salix aurita	Eared Willow
Salix cinerea subsp. cinerea	Grey Willow

Schoenoplectus lacustris	Common Club-rush
Urtica dioica	Common Nettle
Valeriana officinalis	Common Valerian

Fauna on site - English and Latin species name

Coot	*Fulica atra*
Mute Swan	*Cygnus olor*
Tufted Duck	*Aythya fuligula*

Aerial Photograph showing location of the site



GIS Habitat map of the site

Site Name: DERRYNAHOO LOUGH

Site Code: LE151 **Area (ha):** 11.72 **Grid Ref:** 196903 309098 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
20/06/2024

Survey Code:
LEWS2024

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:
CORNAROY

Solid Geology:
Up Silurian - Lr Devonian ORS

Subsoil type:
Cut

Substrate type:
Peat

Substrate stability:
Soft

River catchment:
Shannon Upr

CORINE Habitats:
Pastures

Site Location

Lake and wetland complex located approximately 1.8km south of Drumshanbo.

Site Description and Wetland Habitats Recorded

Mesotrophic lake with fishing platforms, bordered by reed and large sedge swamp where Carex rostrata and Typha latifolia predominate. Surrounding area has wet grassland dominated by rushes, sedges and grasses, along with patches of scrub and wet woodland. New drainage has been implemented in the wet grassland to the northeast of the lake.

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

No.	Category	Comment
N1	DAMAGE	Drainage works
N2	GENERAL	A number of small plastic platforms for fishing along lake edge.
N3	HABITAT	Water is very murky with algae growing. Nuphar lutea present on open water
N4	HYDROLOGY	Small drainage feature with Carex rosteata and Juncus effusus
N5	HABITAT	Sparganium erectum and Carex rostrata fringe the lake.
N6	DAMAGE	Drainage works

Management Recommendations following survey

Continue current grazing regime on the Wet grassland. Encourage all landowners to implement a seepage area at the end of the drains to filter the water before it reaches the lake thus reducing sediment and nutrient inputs. Consider establishing a wider buffer zone between the wetland and land used for agriculture to minimise nutrient input into the wetland system.

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

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

FW4 Drainage ditches

GS4 Wet grassland

WL1 Hedgerows

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

FW4 Drainage ditches

GA1 Improved agricultural grassland

WD2 Mixed broadleaved/conifer woodland

WL1 Hedgerows

WS1 Scrub

Landuse / Management Activity	Frequency of use
Fishing	1 Rare (<5%)
Grazing - sheep	3 Frequent (21-50%)
None	3 Frequent (21-50%)

Impacting Activity (EU code and title)	Intensity	Impact
F02 Fishing and harvesting aquatic resources	C = low	Unknown
H01.03 other point source pollution to surface water	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,	B = medium	- 1 = reparable negative influence

Threats

H01.03 other point source pollution to surface water

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

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

The grassland surrounding the lake is extensively drained and this often flows freely into lake which is likely increasing the sediment and nutrient levels. There is a number of jetties on the lake used for recreational fishing. Diffuse pollution may also be a pressure for the lakes water quality.

Flora on site - Latin & English species name

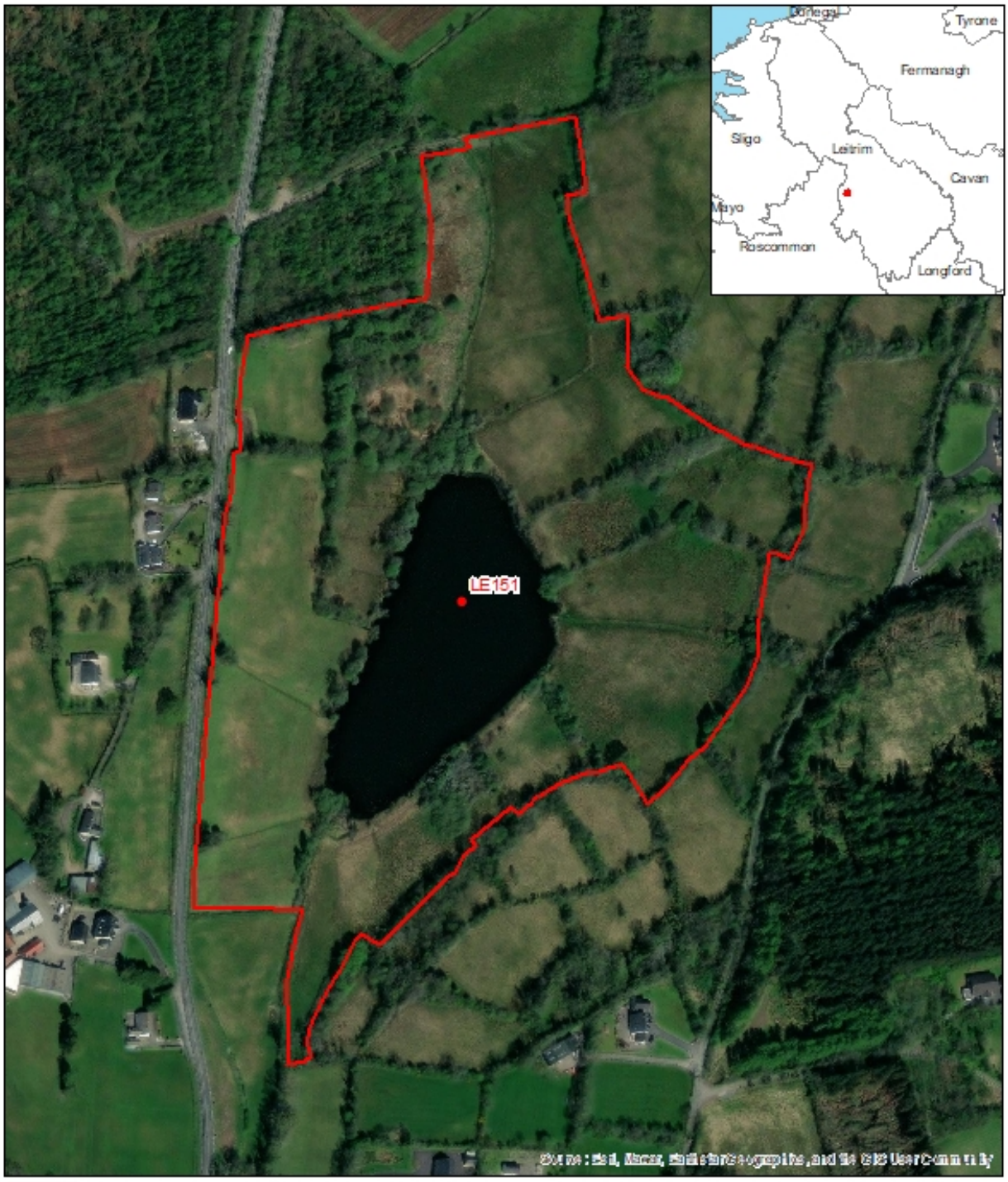
Alnus glutinosa	Alder
Anthoxanthum odoratum	Sweet Vernal-grass
Cardamine pratensis	Cuckooflower
Carex leporina	Oval Sedge
Carex panicea	Carnation Sedge
Carex rostrata	Bottle Sedge
Cicuta virosa	Cowbane
Cirsium palustre	Marsh Thistle
Comarum palustre	Marsh Cinquefoil
Crataegus monogyna	Hawthorn
Equisetum fluviatile	Water Horsetail
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Galium palustre	Marsh-bedstraw
Hedera helix	Ivy
Holcus lanatus	Yorkshire-fog
Ilex aquifolium	Holly
Iris pseudacorus	Yellow Iris
Juncus conglomeratus	Compact Rush
Juncus effusus	Soft-rush
Juncus inflexus	Hard Rush
Lychnis flos-cuculi	Ragged-Robin
Mentha aquatica	Water Mint
Myosotis sp.	Forget-me-not
Nuphar lutea	Yellow Water-lily
Potentilla anserina	Silverweed
Potentilla erecta	Tormentil
Quercus robur	Pedunculate Oak

Ranunculus acris	Meadow Buttercup
Ranunculus flammula	Lesser Spearwort
Rosa canina	Dog-rose
Rumex acetosa	Common Sorrel
Salix cinerea subsp. cinerea	Grey Willow
Sparganium erectum	Branched Bur-reed
Trifolium repens	White Clover
Typha latifolia	Bulrush
Ulex gallii	Western Gorse
Urtica dioica	Common Nettle

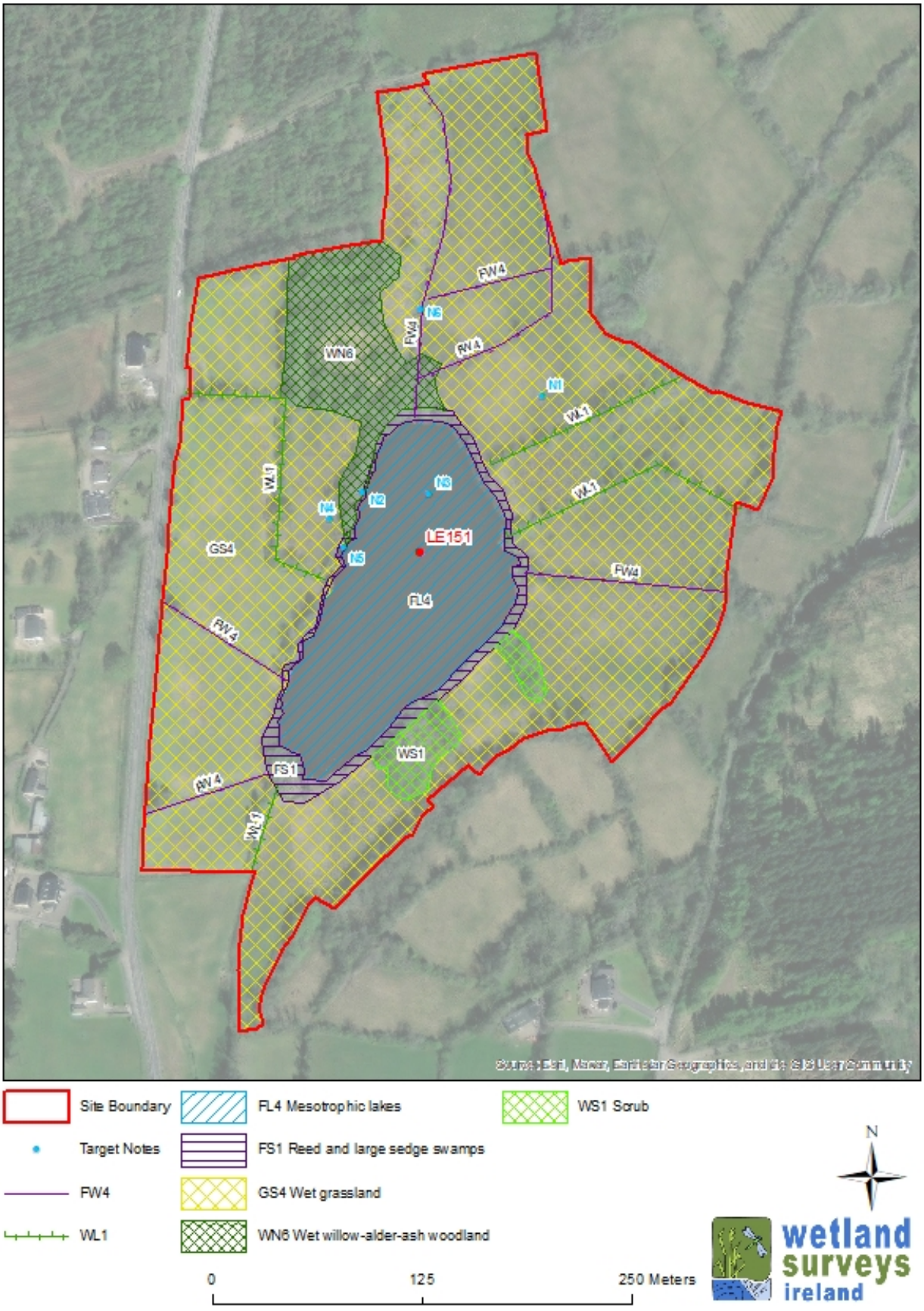
Fauna on site - English and Latin species name

Dragon and Damselflies

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: DOOGARY LOUGH AND WETLAND (LEITRIM)

Site Code: LE110 **Area (ha):** 28.67 **Grid Ref:** 220197 295119 **County:** LE LF

Site designation(s):
Undesignated site

Surveyed by:
Adam Vanmechelen & Poppy Overy

Date of wetland survey:
12/09/2024

Survey Code:
LEWS2024

Site source information:
Detailed Wetland Survey undertaken
Further detailed wetland survey recommended
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:
KILMAKENNY

Solid Geology:
Derryveeny Formation

Subsoil type:
Cut

Substrate type:
Mineral Soil
Peat

Substrate stability:
Very soft

River catchment:
Erne

CORINE Habitats:
Inland marshes

Site Location

The site is located approximately 5.7km southeast of Aghavas. A river runs along the southern boundary of the site which acts as the county boundary between Leitrim and Longford.

Site Description and Wetland Habitats Recorded

The main habitats onsite are cutover bog, wet grassland, reed and large sedge swamp, bog woodland, and poor fen. Part of the site is mesotrophic lake but the majority of this is situated in County Longford. The wet grassland is dominated by Juncus spp. and becomes more species rich closer to the river, whilst the poor fen has an abundant cover of Carex spp. Overall, the site is quite overgrown as there is very little management onsite.

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

No.	Category	Comment
N1	HABITAT	Wet grassland here is of poor quality and consists of dominant Juncus effusus and a mix of grasses (Holcus lanatus, Agrostis spp. and Anthoxanthum odoratum).
N2	HABITAT	Phragmites australis dominated swamp.
N3	HABITAT	Bog woodland not thought to be annex quality.
N4	HABITAT	Mesotrophic lake, Nuphar lutea is abundant.
N5	HABITAT	Cutover raised bog, Molinia caerula dominated.
N6	HABITAT	Poor fen along the edge of the lake (area was not surveyed on the ground as permission to acces could not be achieved). Comarum palustre and Juncus spp. are prominent species.
N7	HABITAT	Potentially Transition mire, however further confirmation is required as the current identificantion was completed by UAV.
N8	HABITAT	Small area of Poor fen, abundant Carex spp. and Succisa pratensis.

Management Recommendations following survey

Introduce extensive grazing to the Wet grassland and Poor fen to improve vegetation structure and composition. Ensure all drainage runs through a seepage zone before entering the lake to reduce the loss of sediment and nutrients into the lake.

Future Survey Recommendations

Further detailed wetland surveys to determine the extent and condition of the fens and bog woodland onsite.

Landowner Information Comments

Access granted for land in the south-west of the site, no one home for the land in the north-east.

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

PB4 Cutover bog

PF2 Poor fen and flush

WN6 Wet willow-alder-ash woodland

EU Habitats Directive habitats on site

None noted

WN7 Bog woodland

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

Landuse / Management Activity	Frequency of use
Grazing - unknown	2 Occasional (5-20%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A03.02 abandonment / lack of mowing	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,	B = medium	- 1 = reparable negative influence

Threats

A03.02 abandonment / lack of mowing

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

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

Drainage occurs across the site, most of which is vegetated now but impacts to site hydrology are still present. The majority of the site has been abandoned resulting in a decrease in vegetation structure and species richness.

Flora on site - Latin & English species name

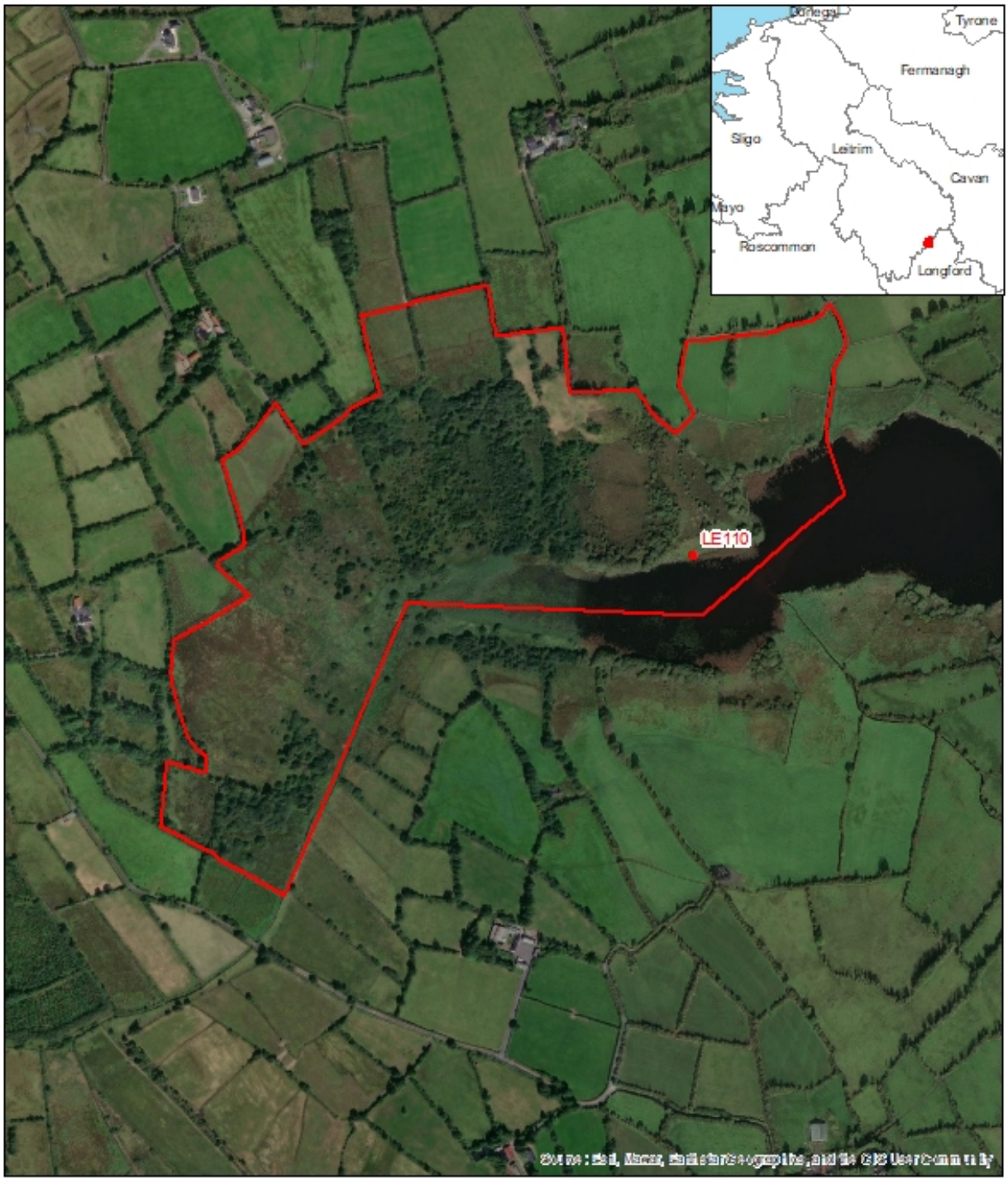
Alnus glutinosa	Alder
Angelica sylvestris	Wild Angelica
Anthoxanthum odoratum	Sweet Vernal-grass
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Caltha palustris	Marsh-marigold
Carex leporina	Oval Sedge
Carex panicea	Carnation Sedge
Cladonia portentosa	Branching Lichen
Comarum palustre	Marsh Cinquefoil
Deschampsia cespitosa	Tufted Hair-grass
Epilobium palustre	Marsh Willowherb
Equisetum fluviatile	Water Horsetail
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Filipendula ulmaria	Meadowsweet
Holcus lanatus	Yorkshire-fog
Iris pseudacorus	Yellow Iris
Juncus articulatus	Jointed Rush
Juncus conglomeratus	Compact Rush
Juncus effusus	Soft-rush
Lemna minor	Common Duckweed

Lotus pedunculatus	Greater Bird's-foot-trefoil
Luzula multiflora	Heath Wood-rush
Mentha aquatica	Water Mint
Molinia caerulea	Purple Moor-grass
Myrica gale	Bog-myrtle
Narthecium ossifragum	Bog Asphodel
Nuphar lutea	Yellow Water-lily
Phalaris arundinacea	Reed Canary-grass
Phragmites australis	Common Reed
Picea sp.	Spruce
Polytrichum commune	Common Haircap Moss
Potentilla anserina	Silverweed
Potentilla erecta	Tormentil
Ranunculus acris	Meadow Buttercup
Ranunculus flammula	Lesser Spearwort
Ranunculus repens	Creeping Buttercup
Rubus fruticosus agg.	Blackberry
Rumex acetosa	Common Sorrel
Salix cinerea subsp. cinerea	Grey Willow
Succisa pratensis	Devil's-bit Scabious
Typha latifolia	Bulrush
Ulex europaeus	Gorse
Urtica dioica	Common Nettle
Valeriana officinalis	Common Valerian

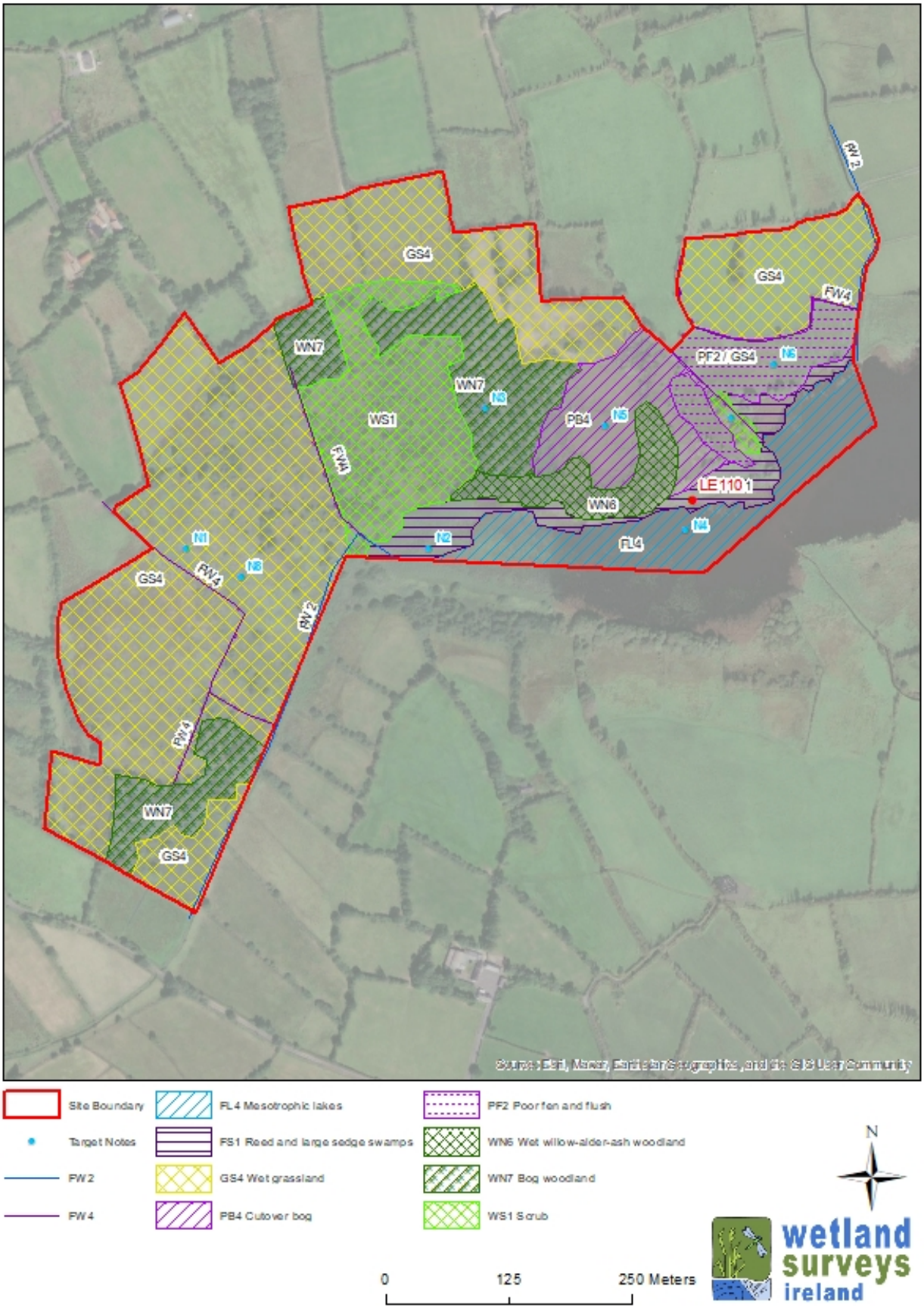
Fauna on site - English and Latin species name

Deer species

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: DRUMADORN CORDUFF SOUTH BOG

Site Code: LE134 **Area (ha):** 10.30 **Grid Ref:** 216325 295744 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
04/07/2024

Survey Code:
LEWS2024

Site source information:
Detailed Wetland Survey undertaken
Detailed woodland survey recommended
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:
DRUMADORN

Solid Geology:	**Subsoil type:**
COURCEYAN "basal clastics"	Cut
Substrate type:	**Substrate stability:**
Peat	Soft

River catchment:
Shannon Upr

CORINE Habitats:
Pastures

Site Location

Peatland complex adjacent to a large coniferous plantation, located 5.5km to the southwest of Aghavas, county Cavan. An old bog track runs up the eastern side of the high bog.

Site Description and Wetland Habitats Recorded

The main habitat on site is raised bog which was historically cut for turf resulting in a 2m+ facebank at the edge of the high bog. The open area of bog is dominated by Calluna vulgaris, Eriophorum spp. and Cladonia spp. Sphagnum cover on the raised bog is poor except in wet hollows and small pools where it's abundant. Overall the bog is dry due to drainage. Areas of bog woodland dominated by Betula, Sphagnum spp. and Molinia caerulea occur on the cutover bog (some parts likely correspond to Annex quality).

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

No.	Category	Comment
N1	DAMAGE	Historic cut face, 2m from bottom of drain to high bog
N10	HABITAT	Old bog track abundant Succisa pratensis and Anthoxanthum odoratum
N11	HABITAT	Ulex europeaus scrub encroachment on Cutover bog
N12	HABITAT	Dry high bog with large drains
N13	HABITAT	Cutover bog with Betula pubescens.
N14	HABITAT	More than 2m below high bog. Molinia caerula dominated, with Calluna vulgaris and Vaccinium myrtillus. Betula 4m+, good cover of sphagnum in places (S.fallax mostly with some S.subnitens and S.palustre).
N2	HABITAT	Calluna vulgaris and Eriophorum vaginatum dominant with abundant Cladonia. Scattered Erica tetralix and Trichophorum cespitosum. Dry with sparse Sphagnum
N3	HABITAT	Some tiny pools of S.cuspidatum and hollows with Rhynchospora alba. Little to no sphagnum in area except pools and low hollows. Calluna vulgaris, Cladonia and Eriophorum vaginatum dominate
N4	HABITAT	Very uneven with leggy Calluna vulgaris hummocks and abundant Cladonia sp.
N5	HYDROLOGY	20cm wide, 50cm deep drain, widens towards bog edge to 2m
N6	HABITAT	Very leggy Calluna vulgaris with Betula pubescens saplings
N7	HABITAT	Betula pubescens on Cutover bog - Bog woodland. Molinia caerula dominated with Calluna vulgaris.
N8	HABITAT	Sphagnum cuspidatum pool in area of Cutover bog
N9	HYDROLOGY	2m+ deep drain. Lots of smaller drains and cut faces in bog.

Management Recommendations following survey

Following the hydrological survey consider blocking drains to raise the water table. Ensure non-native conifers do not become abundant on the peatland.

Future Survey Recommendations

Consider a hydrological survey to assess the impact that the drains are having on the site and determine restoration potential. A detailed survey of the Betula woodland is recommended to confirm the presence of annex Bog

woodland and determine quality.

Landowner Information Comments
Spoke to landowner happily gave access.

Description of potential EU Habitats Directive Annex 1 habitats
Parts of the site may correspond to the EU Annex 1 habitat 91D0 Bog woodland.

Main Fossitt habitats on site	EU Habitats Directive habitats on site
FW4 Drainage ditches	91D0 *Bog woodland
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
WL1 Hedgerows
WS1 Scrub

Landuse / Management Activity	Frequency of use
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
D01.01 paths, tracks, cycling tracks	C = low	0 = neutral
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence

Threats

B01.02 artificial planting on open ground (non-native trees)
J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments
Deep drains traverse the high bog and surrounding area impacting the hydrology. Adjacent coniferous forestry increases the risk of conifer saplings growing on the drier areas of high bog. An old bog track runs up the east side of the site but it is fully vegetated with no current impacts.

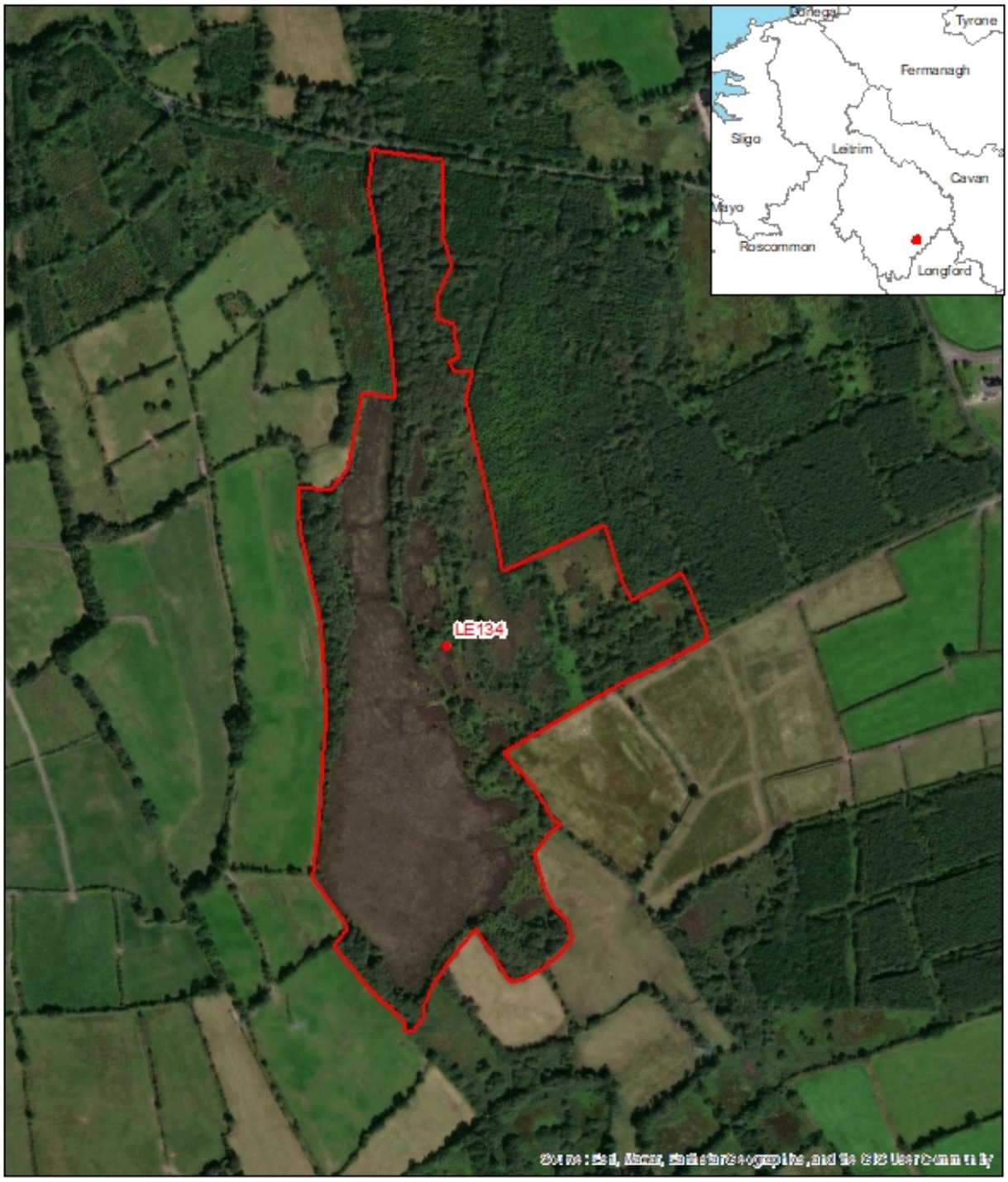
Flora on site - Latin & English species name	
Alnus glutinosa	Alder
Anthoxanthum odoratum	Sweet Vernal-grass
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Cirsium palustre	Marsh Thistle
Cladonia portentosa	Branching Lichen
Cladonia uncialis	Antler Lichen
Drosera rotundifolia	Round-leaved Sundew
Erica tetralix	Cross-leaved Heath
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Ilex aquifolium	Holly
Juncus articulatus	Jointed Rush
Juncus effusus	Soft-rush
Luzula multiflora	Heath Wood-rush
Narthecium ossifragum	Bog Asphodel

Odontoschisma sphagni	Bog-moss flapwort
Polygala serpyllifolia	Heath Milkwort
Potentilla erecta	Tormentil
Rhynchospora alba	White Beak-sedge
Rubus fruticosus agg.	Blackberry
Salix cinerea subsp. cinerea	Grey Willow
Sorbus aucuparia	Rowan
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum cuspidatum	Feathery Bog Moss
Sphagnum divinum	Magellanic Bog-moss
Sphagnum fallax	Flat-topped Bog Moss
Sphagnum palustre	Blunt-leaved Bog Moss
Sphagnum papillosum	Papillose Bog Moss
Sphagnum subnitens	Lustrous Bog Moss
Succisa pratensis	Devil's-bit Scabious
Trichophorum cespitosum	Deergrass
Trifolium pratense	Red Clover
Ulex europaeus	Gorse
Vaccinium myrtillus	Bilberry

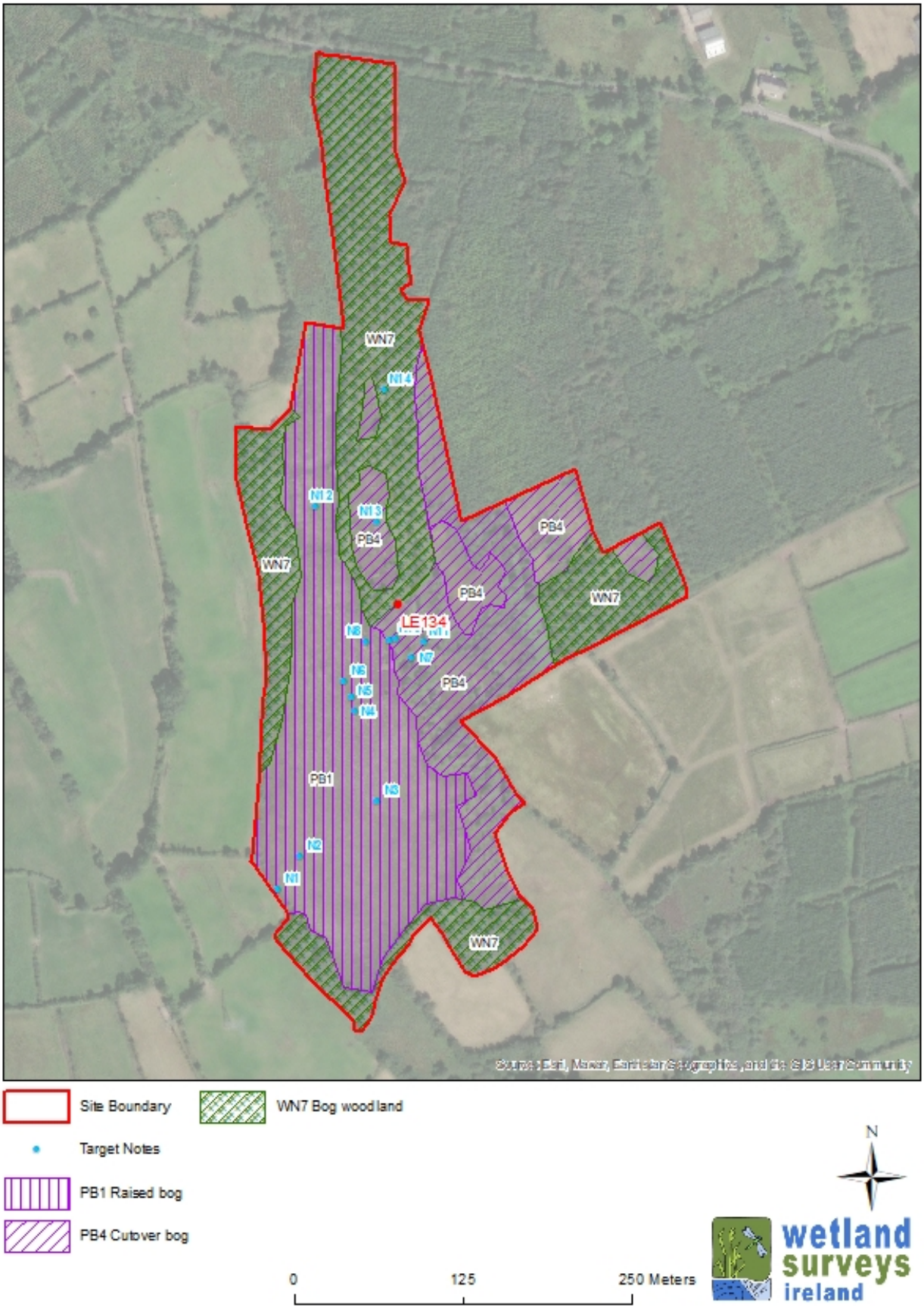
Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: DRUMARD (JONES) BOG

Site Code: LE89 **Area (ha):** 18.85 **Grid Ref:** 208829 293678 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
04/07/2024

Survey Code:
LEWS2024

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:
DRUMARD (Jones)

Solid Geology:
Navan Group

Subsoil type:
Cut

Substrate type:
Peat

Substrate stability:
Firm

River catchment:
Shannon Upr

CORINE Habitats:
Peat bogs

Site Location

Drained Raised bog and scrub located approximately 3km south of Mohill.

Site Description and Wetland Habitats Recorded

Raised bog significantly impacted by drainage and historic peat cutting, the high bog is dominated by Calluna vulgaris, Cladonia spp. and Eriophorum spp. with frequent areas of bare ground. The cutover bog has scrub encroaching with areas in the north and west supporting mature bog woodland.

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

No.	Category	Comment
N1	HABITAT	Cutover but now Wet grassland, dominated by rushes with good grass cover, along with Succisa pratensis. Very high moss cover including Sphagnum spp., Pseudoscleropodium purum, Rhytidiadelphus squarrosus.
N10	MANAGEMEN	Dirt track to the bog.
N2	FLORA	Abundant Succisa potential Marsh fritillary habitat.
N3	DAMAGE	2m high cut face.
N4	HABITAT	High bog, firm with low Sphagnum cover, abundant Calluna vulgaris, Cladonia sp. and Narthecium ossifragum, along with bare peat.
N5	HABITAT	Betula pubescens dominates but Salix spp., Ulex europaeus and Quercus robur also present.
N6	HABITAT	Degraded high bog. Calluna vulgaris, Cladonia sp., Rhynchospora alba and Narthecium ossifragum present, along with bare peat.
N7	DAMAGE	1m x 1m drain, partially infilled. Sphagnum cuspidatum in the drain.
N8	DAMAGE	2m x 2m drain, partially vegetated with Molinia caerula.
N9	MANAGEMEN	Dirt track to the bog.

Management Recommendations following survey

Block drainage and cease peat cutting. Ensure peat cutting has permanently ceased by liaising with the turf cutters. Consider drain blocking and restoration works to prevent further degradation. Remove non-native tree species.

Future Survey Recommendations

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.

Landowner Information Comments

Spoke to adjacent home owner who granted access.

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

GS4 Wet grassland

PB1 Raised bogs

PB4 Cutover bog

WN7 Bog woodland

EU Habitats Directive habitats on site

None noted

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

WD4 Conifer plantation

WL1 Hedgerows

WL2 Treelines

WN Semi-natural woodland

WS1 Scrub

Landuse / Management Activity	Frequency of use
Grazing - cattle	1 Rare (<5%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A11 Agriculture activities not referred to above	B = medium	- 1 = reparable negative influence
J02.05 Modification of hydrographic functioning,	A = high	- 1 = reparable negative influence

Threats

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

C01.03.02 mechanical removal of peat

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

Significant drains occur throughout the peatland. There is evident of relatively recent peat cutting but its not currently active. Some cutover areas have been reclaimed for grazing and non-native pine saplings occur on drier areas.

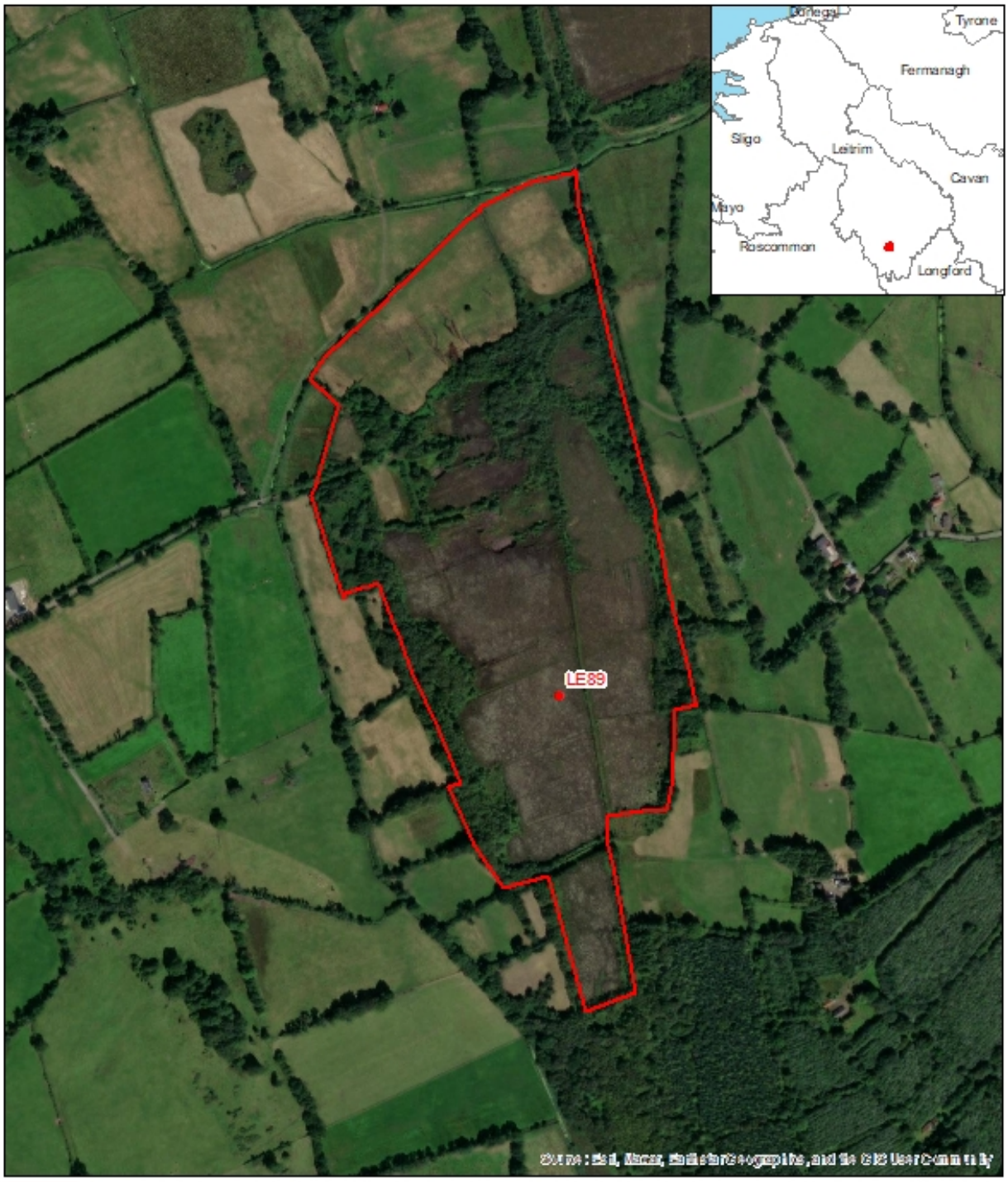
Flora on site - Latin & English species name	
Angelica sylvestris	Wild Angelica
Anthoxanthum odoratum	Sweet Vernal-grass
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Carex nigra	Common Sedge
Carex panicea	Carnation Sedge
Cirsium palustre	Marsh Thistle
Cladonia portentosa	Branching Lichen
Cladonia uncialis	Antler Lichen
Drosera rotundifolia	Round-leaved Sundew
Erica tetralix	Cross-leaved Heath
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Holcus lanatus	Yorkshire-fog
Ilex aquifolium	Holly
Juncus effusus	Soft-rush
Lemna minor	Common Duckweed
Luzula multiflora	Heath Wood-rush
Molinia caerulea	Purple Moor-grass
Narthecium ossifragum	Bog Asphodel
Pinus contorta	Lodgepole Pine
Pleurozia purpurea	Purple Spoonwort
Potentilla erecta	Tormentil
Pseudoscleropodium purum	Neat Feather-moss

Pteridium aquilinum	Bracken
Quercus robur	Pedunculate Oak
Racomitrium lanuginosum	Silver-haired Moss
Ranunculus repens	Creeping Buttercup
Rhynchospora alba	White Beak-sedge
Rhytidiadelphus squarrosus	Springy Turf-Moss
Rubus fruticosus agg.	Blackberry
Salix aurita	Eared Willow
Salix cinerea subsp. cinerea	Grey Willow
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum cuspidatum	Feathery Bog Moss
Sphagnum papillosum	Papillose Bog Moss
Succisa pratensis	Devil's-bit Scabious
Trichophorum cespitosum	Deergrass
Ulex europaeus	Gorse

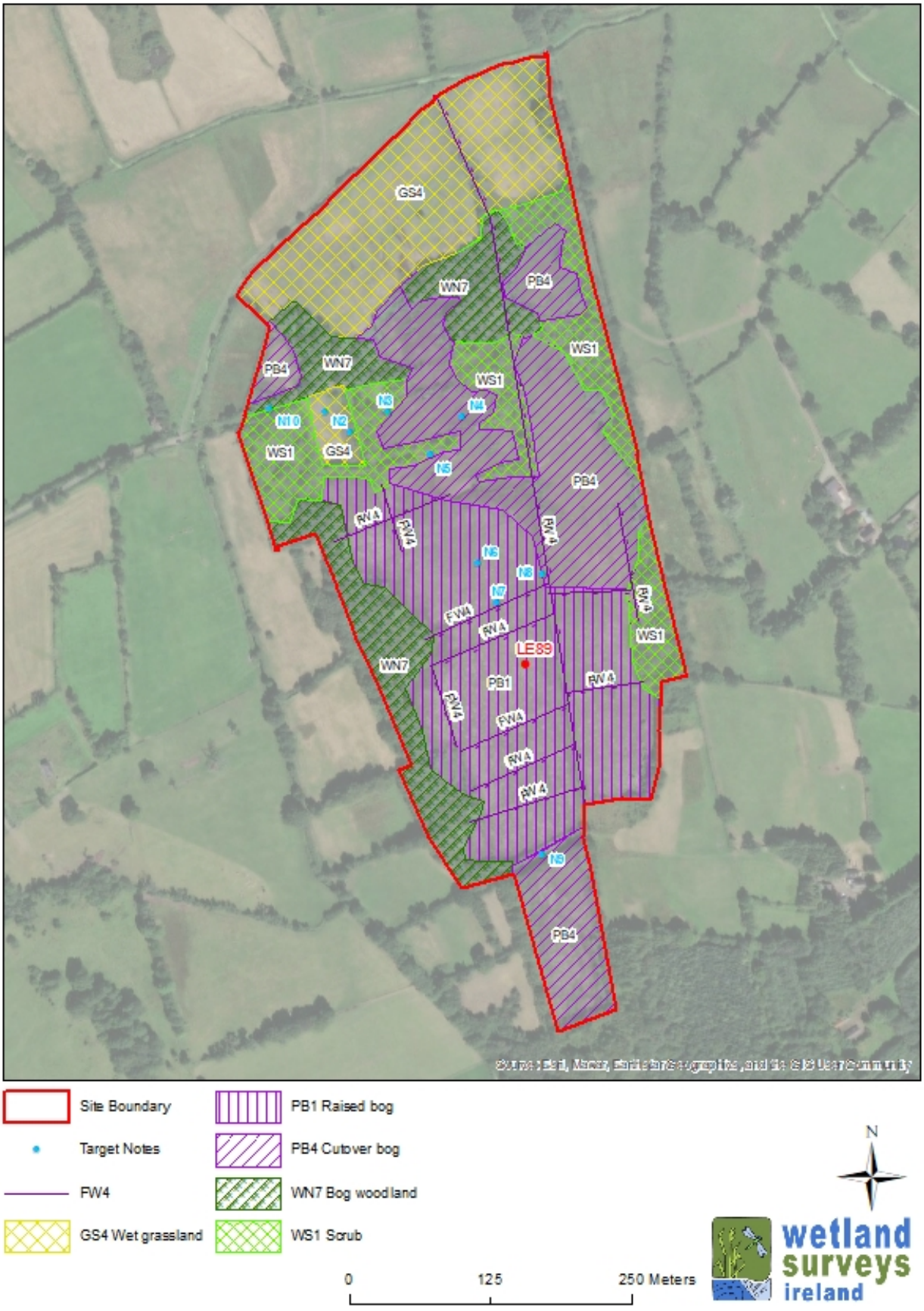
Fauna on site - English and Latin species name

Common Frog	*Rana temporaria*

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: DRUMGILRA DRUMGRANIA BOG COMPLEX

Site Code: LE145 **Area (ha):** 141.73 **Grid Ref:** 213336 290878 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
18/06/2024

Survey Code:
LEWS2024

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:
DRUMGILRA (Mohill By)

Solid Geology:	**Subsoil type:**
Navan Group	Cut
Substrate type:	**Substrate stability:**
Peat	Soft

River catchment:
Shannon Upr

CORINE Habitats:
Peat bogs

Site Location

A large site consisting of raised bog which is actively being cut for turf. Close to the county border south of Gortletteragh and roughly 7.5km south east of Mohill.

Site Description and Wetland Habitats Recorded

Degraded raised bog dominated by Calluna vulgaris, Narthecium ossifragum and Eriophorum spp. The peatland has been significantly impacted by drainage and ongoing peat extraction, resulting in patches of bare peat and drying Sphagnum moss scattered across the site. There is evidence of a historic burn on the high bog, in the southwest. Some cutover areas have formed wet grasslands dominated by grasses and sedges, whilst other patches are being encroached by scrub with bog woodland (non-annex) forming in areas to the north and east of the site.

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

No.	Category	Comment
N1	HABITAT	Cutover bog / Wet grassland. Juncus dominated near track but grades to Eriophorum spp. and Calluna vulgaris.
N10	DAMAGE	Dirt track to the bog
N11	DAMAGE	Dirt track to the bog
N12	DAMAGE	Dirt track to the bog
N13	DAMAGE	Dirt track to the bog
N2	HABITAT	Wetter area, with Eriophorum spp., Calluna vulgaris, Sphagnum spp. and Molinia caerula.
N3	DAMAGE	Active turf cutting in this area
N4	FAUNA	Badger tracks in the cut peat that's laid out to dry
N5	DAMAGE	Newly dug drain
N6	DAMAGE	A track dominated by Eriophorum spp. and Carex panicea with drains either side.
N7	HABITAT	Similar to Raised bog complex 9/7/4, good Sphagnum spp. cover and small pools, but the Sphagnum in the pools looks in poor condition possibly dried out.
N8	HABITAT	Raised mound dominated by Calluna vulgaris with a ring of Trichophorum cespitosum on slopes.
N9	DAMAGE	Historic burn

Management Recommendations following survey

Develop and activate a management plan for the invasive species, Rhododendron ponticum. Aim to cease turf cutting by liaising with turf cutters. Following a hydrological survey consider implementing restoration techniques such as drain blocking and reprofiling to reduce the impact of facebanks and drainage.

Future Survey Recommendations

Survey of invasive species to determine extent and inform management plan. Consider a hydrological survey to map the drainage network on site.

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
FW4 Drainage ditches
PB1 Raised bogs
PB4 Cutover bog
PF2 Poor fen and flush
WN7 Bog woodland
WS1 Scrub

EU Habitats Directive habitats on site
None noted

Fossitt habitats surrounding site
BL3 Buildings and artificial surfaces
FW4 Drainage ditches
GA1 Improved agricultural grassland
WL1 Hedgerows
WL2 Treelines
WS1 Scrub

Landuse / Management Activity	Frequency of use
None	4 Dominant (>50%)
Peat cutting (mechanical)	3 Frequent (21-50%)

Impacting Activity (EU code and title)	Intensity	Impact
C01.03.02 mechanical removal of peat	A = high	- 2 = irreparable negative influence
D01.01 paths, tracks, cycling tracks	C = low	0 = neutral
I01 invasive non-native species	C = low	- 1 = reparable negative influence
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence
J03 Other ecosystem modifications	B = medium	- 1 = reparable negative influence

Threats
A02.01 agricultural intensification
C01.03.02 mechanical removal of peat
I01 invasive non-native species
J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments
Extensive peat cutting occurs at the edges of the high bog resulting in a 1m+ facebank and destablised bog edges. There is evidence of a historic burn in the west of the site which may have significantly impacted the habitat integrity. The Raised bog has extensive drainage with newly dug drains associated with active peat cutting areas. The alien invasive Rhododendron ponticum is present in cutover areas. There are vehicle tracks on site,used to access the turf cutting areas, the majority of them are vegetated with no significant impact to the site.

Flora on site - Latin & English species name

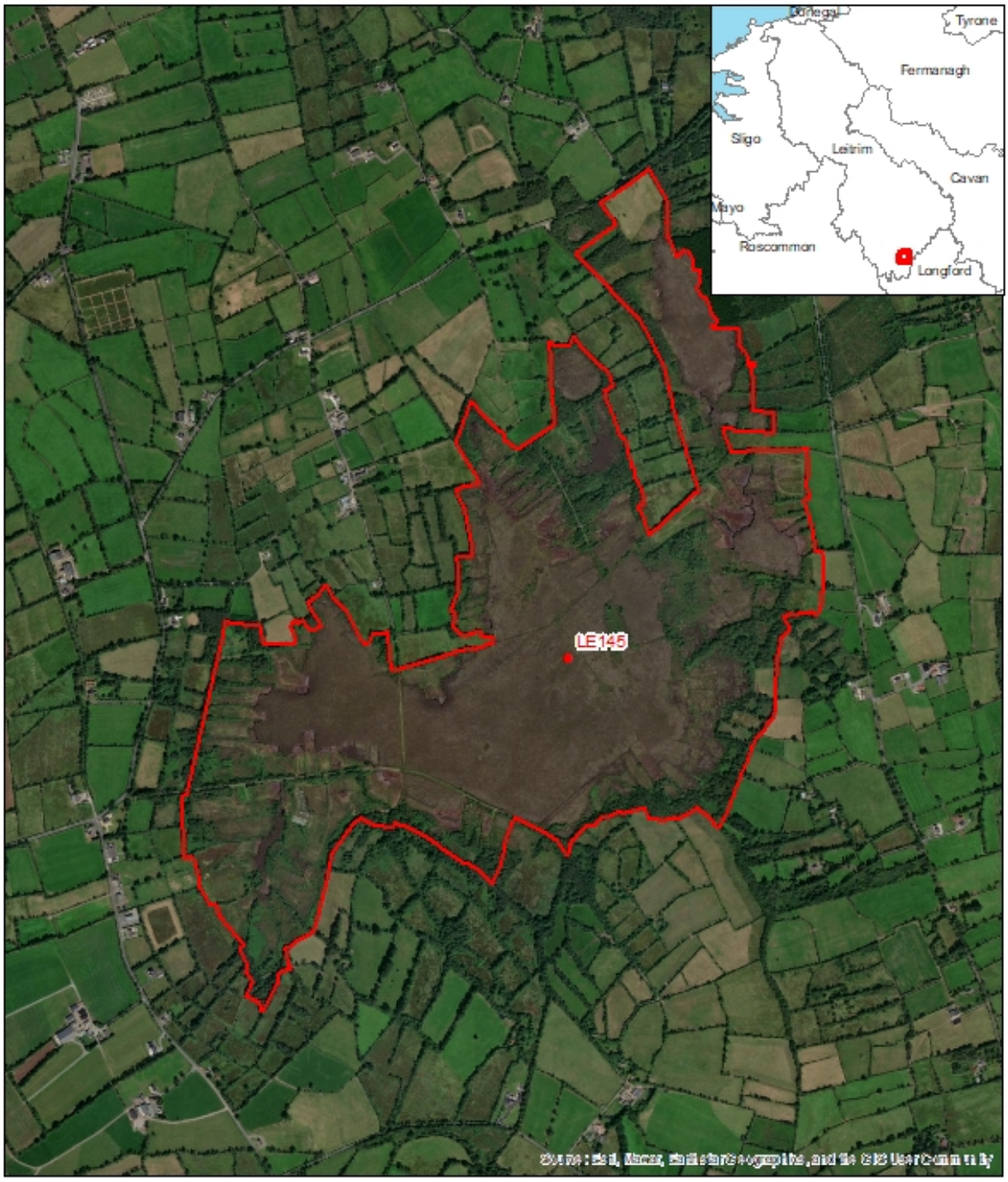
Algae	
Andromeda polifolia	Bog-rosemary
Anthoxanthum odoratum	Sweet Vernal-grass
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Carex demissa	Common Yellow-sedge
Carex hirta	Hairy Sedge
Carex nigra	Common Sedge

Carex panicea	Carnation Sedge
Cladonia portentosa	Branching Lichen
Drosera anglica	Great Sundew
Drosera rotundifolia	Round-leaved Sundew
Equisetum fluviatile	Water Horsetail
Erica tetralix	Cross-leaved Heath
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Filipendula ulmaria	Meadowsweet
Geranium robertianum	Herb-Robert
Holcus lanatus	Yorkshire-fog
Juncus articulatus	Jointed Rush
Juncus effusus	Soft-rush
Molinia caerulea	Purple Moor-grass
Myrica gale	Bog-myrtle
Narthecium ossifragum	Bog Asphodel
Plantago lanceolata	Ribwort Plantain
Poa pratensis	Smooth Meadow-grass
Potentilla anserina	Silverweed
Potentilla erecta	Tormentil
Pteridium aquilinum	Bracken
Ranunculus acris	Meadow Buttercup
Ranunculus flammula	Lesser Spearwort
Rhododendron ponticum	Rhododendron
Rhynchospora alba	White Beak-sedge
Rubus fruticosus agg.	Blackberry
Salix sp.	Willow
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum cuspidatum	Feathery Bog Moss
Sphagnum divinum	Magellanic Bog-moss
Succisa pratensis	Devil's-bit Scabious
Trichophorum cespitosum	Deergrass
Trifolium pratense	Red Clover
Ulex europaeus	Gorse

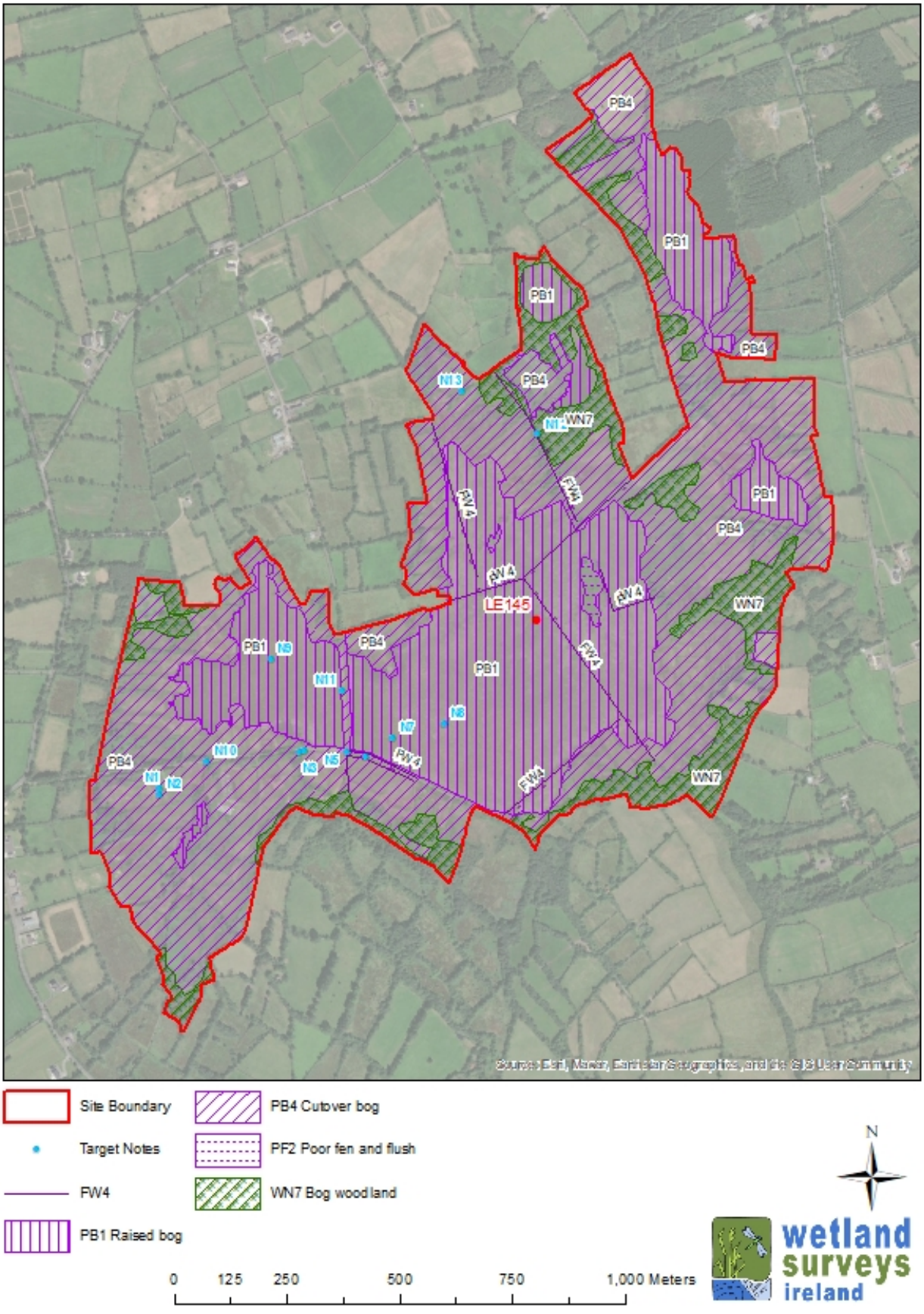
Fauna on site - English and Latin species name

Badger	*Meles meles*
Common Frog	*Rana temporaria*
Common snipe	*Gallinago gallinago*

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: GORTANURE SOUTH BOG

Site Code: LE92 **Area (ha):** 61.16 **Grid Ref:** 207774 293133 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
21/06/2024

Survey Code:
LEWS2024

Site source information:
Detailed Wetland Survey undertaken
Detailed woodland survey recommended
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:
ROOSKYNAMONA

Solid Geology:	**Subsoil type:**
Navan Group	Cut
Substrate type:	**Substrate stability:**
Peat	Very soft

River catchment:
Shannon Upr

CORINE Habitats:
Peat bogs

Site Location

Large linear peatland complex, located south of approximately 3.7km Mohill.

Site Description and Wetland Habitats Recorded

The middle section of the site supports the main area of raised bog, with an expanding area of bog woodland at its centre. The majority of the raised bog to the north of the bog woodland is dominated by Molinia caerulea, whilst the area to the south still supports characteristic bog vegetation. A network of drains exists on site with relatively new drains and/or peat extraction occurring in the northwest, west and south of the site. Reed swamp now occurs in some degraded areas, dominated by Phalaris arundinacea, Iris pseudacorus and Valeriana officinalis, along with areas of scrub.

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

No.	Category	Comment
N1	HYDROLOGY	A 2m wide drain which is 2m deeper than Raised bog facebank (4m from top of bog).
N10	HABITAT	This area may correspond to the EU annex I habitat 91D0 - Bog woodland.
N11	DAMAGE	Significant new drainage.
N12	DAMAGE	Significant new drainage.
N2	HABITAT	Molinia caerula dominated with scattered Myrica gale and Erica tetralix. Sparse Eriophorum spp. and Calluna vulgaris.
N3	FLORA	Succisa pratensis and Dactylorhiza spp.
N4	HABITAT	Valariana officinalis and Phalaris arundinacea, 1.5m tall along drain
N5	HABITAT	Molinia caerula dominates up to Betula pubescens and Salix spp. woodland
N6	HABITAT	Dense bracken
N7	HYDROLOGY	Drainage ditch 2m wide, 1m deep. Adjacent farm land heavily drained
N8	HABITAT	Improvement in bog quality here, more Cladonia spp. and Eriophorum vaginatum
N9	HABITAT	Bog woodland. Betula pubescens 4-6m, Myrica gale in parts. Molinia caerula dominates, 1m tussocks.

Management Recommendations following survey

Consider removing scrub from peatland areas with restoration potential. Following a hydrological survey drains could be blocked to raise the water table and improve the abundance of peatland vegetation and the habitats conservation value.

Future Survey Recommendations

A hydrological survey of the site is recommended to map the sites drains and integrity with the aim of determining the sites restoration potential and creating a management plan. A detailed survey of the birch woodland on the site (particularly towards the south of the centred woodland) is recommended with a view to establishing whether any of it corresponds with Annex bog woodland.

Landowner Information Comments

Spoke to peatland owner farming to the northeast of the site who granted access.

Description of potential EU Habitats Directive Annex 1 habitats
Some of the areas of woodland within the site may correspond to the EU Annex I habitat 91D0 Bog woodland.

Main Fossitt habitats on site	EU Habitats Directive habitats on site
FS1 Reed and large sedge swamps	91D0 *Bog woodland
FW4 Drainage ditches	
GS4 Wet grassland	
HD1 Dense bracken	
PB1 Raised bogs	
PB4 Cutover bog	
WN6 Wet willow-alder-ash woodland	
WN7 Bog woodland	
WS1 Scrub	

Fossitt habitats surrounding site
BL3 Buildings and artificial surfaces
FW4 Drainage ditches
GA1 Improved agricultural grassland
WD4 Conifer plantation
WL1 Hedgerows
WL2 Treelines

Landuse / Management Activity	Frequency of use
Grazing - cattle	2 Occasional (5-20%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A02.01 agricultural intensification	B = medium	Unknown
A10.01 removal of hedges and copses or scrub		
C01.03.02 mechanical removal of peat	B = medium	- 2 = irreparable negative influence
J02.05 Modification of hydrographic functioning,	A = high	- 1 = reparable negative influence

Threats
A02.01 agricultural intensification
B01.02 artificial planting on open ground (non-native trees)
B02.01.02 forest replanting (non native trees)
C01.03.02 mechanical removal of peat
H04.02 Nitrogen-input
J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments
The site is heavily drained with relatively new drains noted, particularly at the boundary of the high bog area and in the surrounding habitats. Scrub encroachment is occurring in drier areas and some of the Cutover bog is being modified for agricultural use. Peat cutting is ongoing particularly in the southern section of the site. Nitrogen-input poses a threat through the agricultural use of the habitats and the adjacent forestry is a seed source for the introduction of non-native tree species on site.

Flora on site - Latin & English species name	
Alnus glutinosa	Alder
Andromeda polifolia	Bog-rosemary
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Cladonia portentosa	Branching Lichen
Dactylorhiza sp.	Orchid

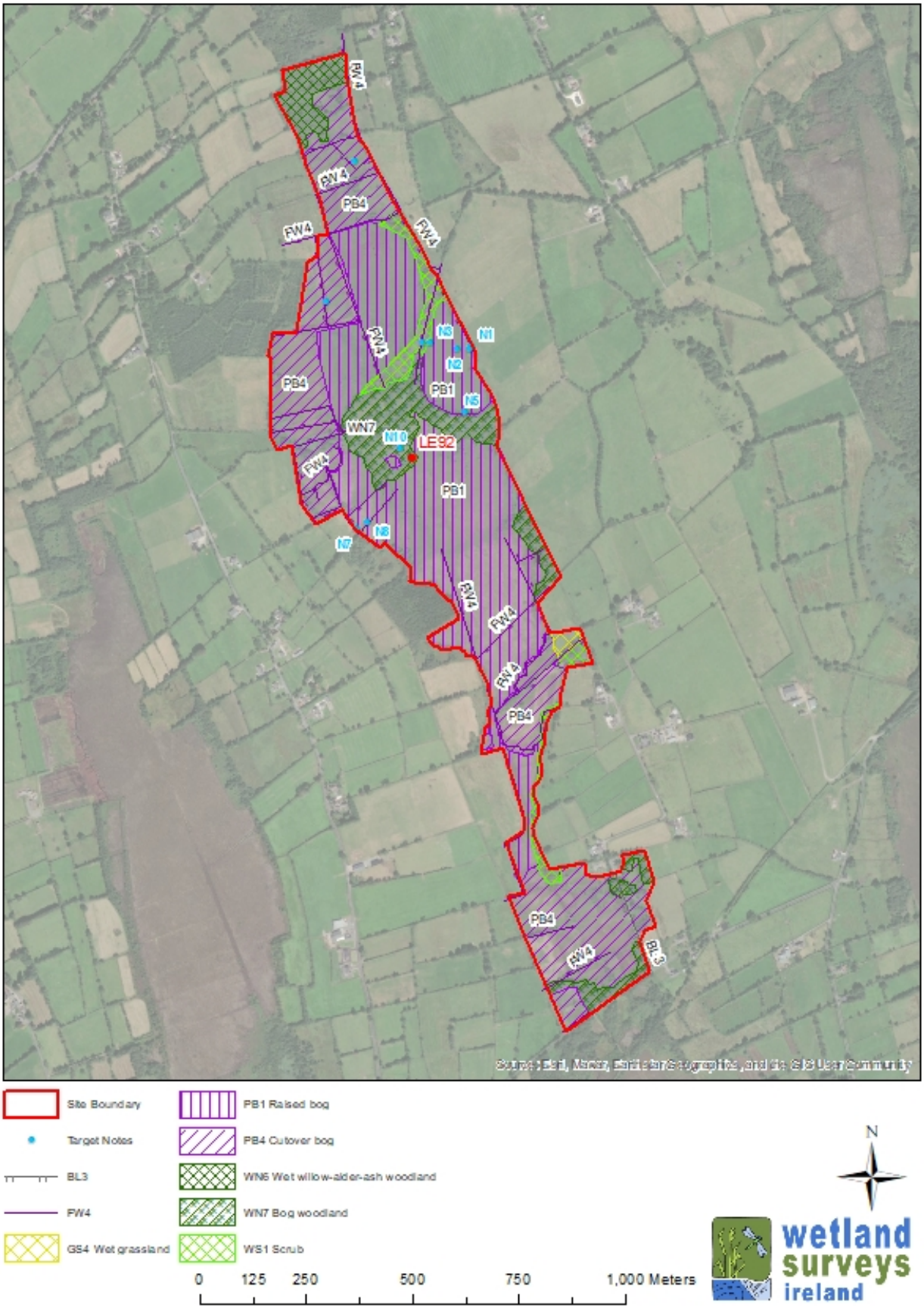
Erica tetralix	Cross-leaved Heath
Eriophorum vaginatum	Hare's-tail Cottongrass
Filipendula ulmaria	Meadowsweet
Holcus lanatus	Yorkshire-fog
Iris pseudacorus	Yellow Iris
Juncus acutiflorus	Sharp-flowered Rush
Juncus conglomeratus	Compact Rush
Molinia caerulea	Purple Moor-grass
Myrica gale	Bog-myrtle
Narthecium ossifragum	Bog Asphodel
Phalaris arundinacea	Reed Canary-grass
Potentilla erecta	Tormentil
Rubus fruticosus agg.	Blackberry
Salix sp.	Willow
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum papillosum	Papillose Bog Moss
Succisa pratensis	Devil's-bit Scabious
Trichophorum cespitosum	Deergrass
Ulex europaeus	Gorse
Valeriana officinalis	Common Valerian

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site

GIS Habitat map of the site



Site Name: GORTNADERRARY BOG NORTH

Site Code: LE343 **Area (ha):** 15.86 **Grid Ref:** 195980 346870 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
02/07/2024

Survey Code:
LEWS2024

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: County Conservation value

Townland:
LATTONE

Solid Geology:
Marine shelf facies

Subsoil type:
Cut

Substrate type:
Mineral Soil
Peat

Substrate stability:
Soft

River catchment:
Drowes

CORINE Habitats:
Land principally occupied by

Site Location

Cutover bog on the Leitrim/Fermanagh border, approximately 2.2km northwest of Kiltyclogher, county Leitrim.

Site Description and Wetland Habitats Recorded

Wet cutover bog in good condition with high cover of sphagnum (>40%) - parts of the site may correspond to the EU habitat 7110 active raised bog. The site appears to have been historically skimmed as opposed to vertically cut and is now extensively grazed by cattle. The majority of drains on the peatland are vegetated which has improved water retention, but they are likely still having some impact on site hydrology. Some areas of the cutover bog are now wet grassland (east) and scrub (west). The peatland is surrounded by wet grassland, with fully functional drains.

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

No.	Category	Comment
N1	HABITAT	Myrica gale dominates with open areas of Eriophorum spp., Sphagnum spp. and rare cover of low growing Calluna vulgaris. Rushes, sedges and grasses also present. 1m+ deep peat, with Dactylorhiza spp. and Succisa pratensis, grazed by cattle
N10	HYDROLOGY	Low flow murky brown water
N11	HABITAT	Wet grassland Juncus spp. dominated, topped.
N12	HYDROLOGY	1m wide and deep functioning drain here
N13	FLORA	High cover of Sphagnum spp. but no real pools.
N14	HYDROLOGY	Drain partially blocked
N15	HABITAT	Cutover bog little Calluna vulgaris, high Eriophorum spp. and Sphagnum spp. cover.
N16	HABITAT	1.5m dry bank
N17	HABITAT	Similar to Raised bog complex 9/7/10 with Cladonia - abundant Sphagnum spp., with 20 -40% Calluna vulgaris and Eriophorum spp.
N18	FLORA	Racomitrium lanuginosum
N2	HABITAT	Characteristic bog vegetation with some bare peat from poaching. Notably little Calluna vulgaris. Wet with lots of Eriophorum spp. and Sphagnum spp. Myrica gale present.
N3	HABITAT	Mineral ridge Juncus spp. dominated wet grassland.
N4	HABITAT	High Sphagnum spp. and Eriophorum cover with some Molinia caerula but not dominant. Grazed by cattle. Juncus conglomerates, Carex echinata and Succisa pratensis present.
N5	HABITAT	50cm high bank, considerably firmer with less Sphagnum than surrounding Cutover bog.
N6	HYDROLOGY	Old wide drain, dry Juncus spp. dominated

Management Recommendations following survey

The substantial natural recovery of this peatland indicates it may be a good candidate for peatland restoration. Following the hydrology survey blocking active drains should be considered to raise the water levels and improve peatland recovery.

Future Survey Recommendations
A detailed cutover bog survey is recommended to determine the full extent of Active Raised Bog, along with an assessment of restoration potential (LiDAR survey may be needed) using eco-hydrological modelling techniques. A Marsh fritillary survey is also recommended at an appropriate time of year.

Landowner Information Comments
Spoke to the landowner, easy access.

Description of potential EU Habitats Directive Annex 1 habitats
Parts of the cutover bog correspond to the Annex I habitat 7110 Active raised bogs.

Main Fossitt habitats on site	EU Habitats Directive habitats on site
FW2 Depositing/lowland rivers	7110 *Active raised bogs
FW4 Drainage ditches	
GS4 Wet grassland	
PB4 Cutover bog	
WS1 Scrub	

Fossitt habitats surrounding site
BL3 Buildings and artificial surfaces
GS Semi-Natural Grassland
WD4 Conifer plantation
WL1 Hedgerows
WL2 Treelines
WS1 Scrub

Landuse / Management Activity	Frequency of use
Grazing - cattle	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A04.02.01 non intensive cattle grazing	B = medium	0 = neutral
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence

Threats
A04.02.01 non intensive cattle grazing
J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments
Most of the drainage onsite is well vegetated with limited to no flow but it is still likely having an impact of the hydrology. Cattle grazing is generally positive with just small patches of bare peat from poaching but we were surveying in the main grazing period so overall grazing is well managed. The Wet grassland in the east of the site was likely a flood plain but the adjacent river appears to have been artificially deepened.

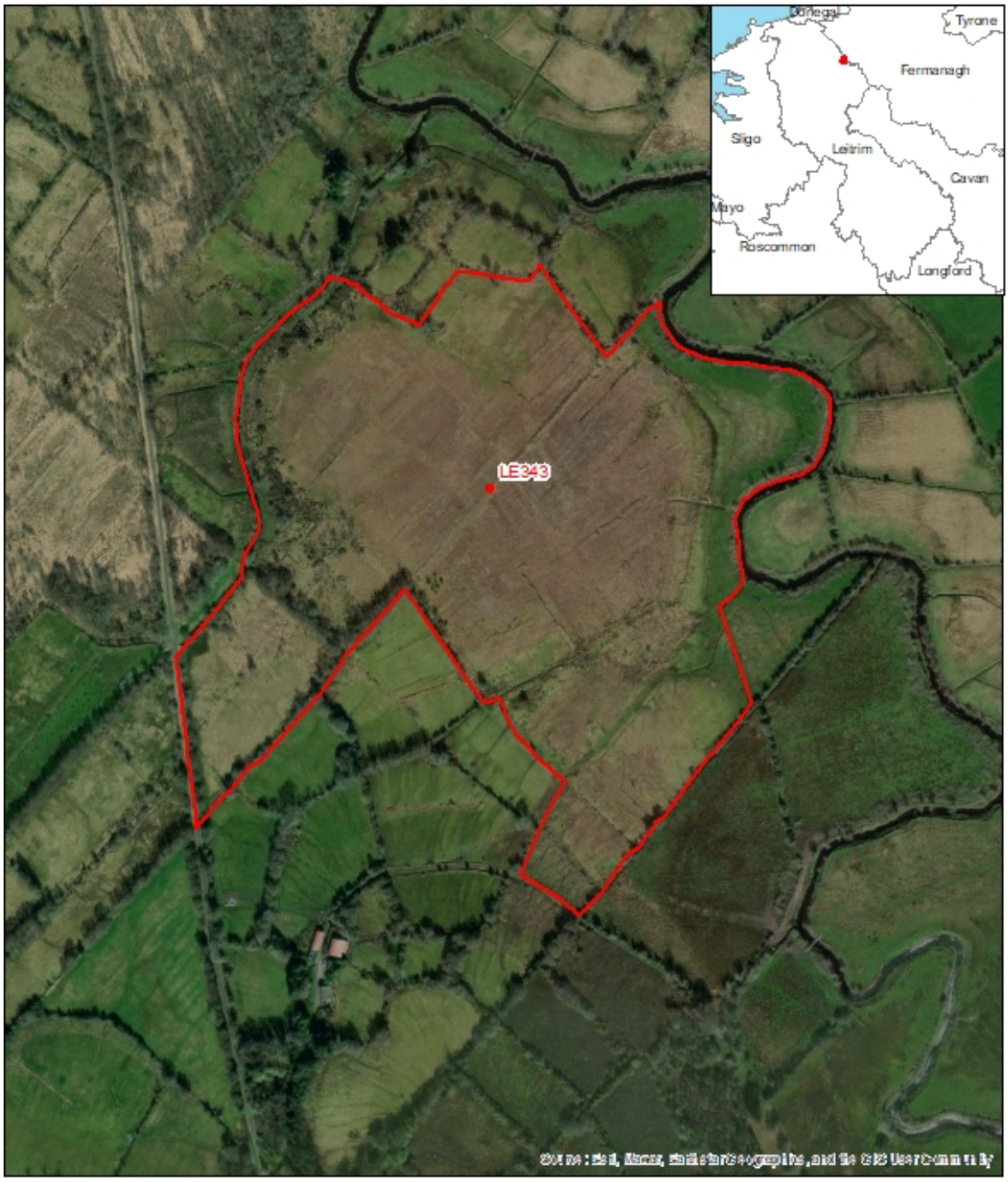
Flora on site - Latin & English species name	
Anthoxanthum odoratum	Sweet Vernal-grass
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Carex demissa	Common Yellow-sedge
Carex echinata	Star Sedge
Carex nigra	Common Sedge
Carex panicea	Carnation Sedge
Carex pulicaris	Flea Sedge
Cirsium palustre	Marsh Thistle
Cladonia portentosa	Branching Lichen
Cladonia uncialis	Antler Lichen
Comarum palustre	Marsh Cinquefoil
Crataegus monogyna	Hawthorn

Dactylorhiza sp.	Orchid
Drosera rotundifolia	Round-leaved Sundew
Equisetum palustre	Marsh Horsetail
Erica cinerea	Bell Heather
Erica tetralix	Cross-leaved Heath
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Filipendula ulmaria	Meadowsweet
Galium palustre	Marsh-bedstraw
Holcus lanatus	Yorkshire-fog
Juncus articulatus	Jointed Rush
Juncus conglomeratus	Compact Rush
Juncus effusus	Soft-rush
Juncus squarrosus	Heath Rush
Luzula multiflora	Heath Wood-rush
Lychnis flos-cuculi	Ragged-Robin
Melampyrum pratense	Common Cow-wheat
Molinia caerulea	Purple Moor-grass
Myrica gale	Bog-myrtle
Narthecium ossifragum	Bog Asphodel
Pedicularis sylvatica	Lousewort
Pinus sp.	Pine
Polytrichum commune	Common Haircap Moss
Potentilla erecta	Tormentil
Racomitrium lanuginosum	Silver-haired Moss
Ranunculus acris	Meadow Buttercup
Ranunculus repens	Creeping Buttercup
Rhynchospora alba	White Beak-sedge
Rhytidiadelphus squarrosus	Springy Turf-Moss
Salix cinerea subsp. cinerea	Grey Willow
Sambucus nigra	Elder
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum cuspidatum	Feathery Bog Moss
Sphagnum denticulatum	Cow-horn Bog Moss
Sphagnum divinum	Magellanic Bog-moss
Sphagnum fallax	Flat-topped Bog Moss
Sphagnum palustre	Blunt-leaved Bog Moss
Sphagnum papillosum	Papillose Bog Moss
Sphagnum squarrosum	Spiky Bog Moss
Sphagnum subnitens	Lustrous Bog Moss
Succisa pratensis	Devil's-bit Scabious
Trichophorum cespitosum	Deergrass
Trifolium repens	White Clover
Ulex europaeus	Gorse
Viola palustris	Marsh Violet

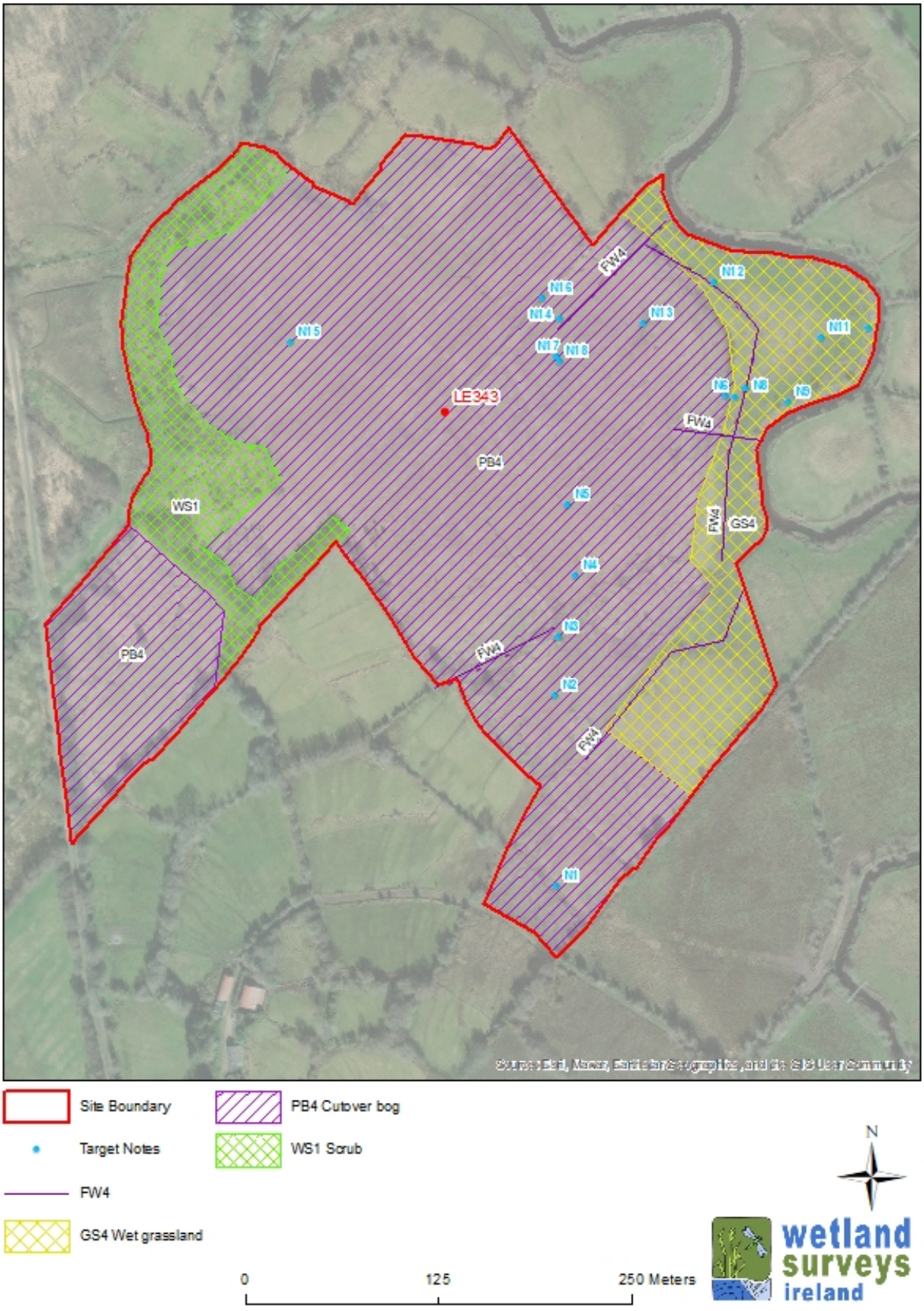
Fauna on site - English and Latin species name

Common Frog	*Rana temporaria*

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: GORTNALAMPH DRUMARD BOG

Site Code: LE86 **Area (ha):** 35.61 **Grid Ref:** 207415 294704 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
21/06/2024

Survey Code:
LEWS2024

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:
GORTNALAMPH

Solid Geology:
Navan Group

Subsoil type:
Cut

Substrate type:
Peat

Substrate stability:
Soft

River catchment:
Shannon Upr

CORINE Habitats:
Peat bogs

Site Location

The peatland is located approximately 2.2km southwest of Mohill. It is boarded by conifer plantations on the northern and southern extents.

Site Description and Wetland Habitats Recorded

Large area of degraded raised bog, the majority of the site is cutover with the remaining high bog located to the east and south of the site. Peat extraction and drainage is significantly impacting the site, with ongoing peat cutting in the northwest and active drains across the whole site with a large 2m x 1m drain running the length of the high bog. Much of the cutover bog has now revegetated, with wetter areas developing a high cover of Sphagnum spp. and Eriophorum spp. The bog is being encroached by Betula pubescens and Salix spp., with areas of Bog woodland located in the southeast and west of the site, although it is not thought to be Annex quality as much of the understory is dominated by Pteridium aquilinum and Molinia caerulea.

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

No.	Category	Comment
N1	DAMAGE	Dumping
N2	HABITAT	Wet cutover lots of Sphagnum spp. and Eriophorum Vaginatum
N3	HABITAT	Mostly Raised bog complex 9/7/6, and marginal areas. Heavily drained with subsidence in areas.
N4	HYDROLOGY	Large drain 2m wide 1m deep, vegetated but still functioning.
N5	DAMAGE	Active cutting, and Scrub encroachment by Betula
N6	DAMAGE	Scrub clearance

Management Recommendations following survey

Liaise with turf cutters with the aim of ceasing turf cutting. Consider drain blocking and rewetting works to prevent further degradation of the peatland and potentially improve the quality of the Bog woodland. Prevent further rubbish dumping. Following detailed peatland survey consider managing scrub encroachment on peatland areas with restoration potential.

Future Survey Recommendations

A hydrological survey of the site is also recommended to assist in determining the peatland's integrity and potential for restoration works.

Landowner Information Comments

No landowner met accessed from adjacent road.

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

PB1 Raised bogs

PB4 Cutover bog

WN7 Bog woodland

WS1 Scrub

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

WD4 Conifer plantation

WL1 Hedgerows

WL2 Treelines

Landuse / Management Activity	Frequency of use
None	4 Dominant (>50%)
Peat cutting (mechanical)	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
C01.03.02 mechanical removal of peat	B = medium	- 2 = irreparable negative influence
E03.01 disposal of household waste	C = low	- 1 = reparable negative influence
J02.05 Modification of hydrographic functioning,	A = high	- 1 = reparable negative influence

Threats

A10.01 removal of hedges and copses or scrub

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

C01.03.02 mechanical removal of peat

E03.01 disposal of household waste

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

Site has extensive drainage system, along with active turf cutting. Dumping and tree clearance was also occurring near the roadsides at the time of the survey. The adjacent coniferous plantations pose a threat to the site through the spread of non-native seedlings on drier areas of the bog. Further affosrestation in the area is also a potential threat.

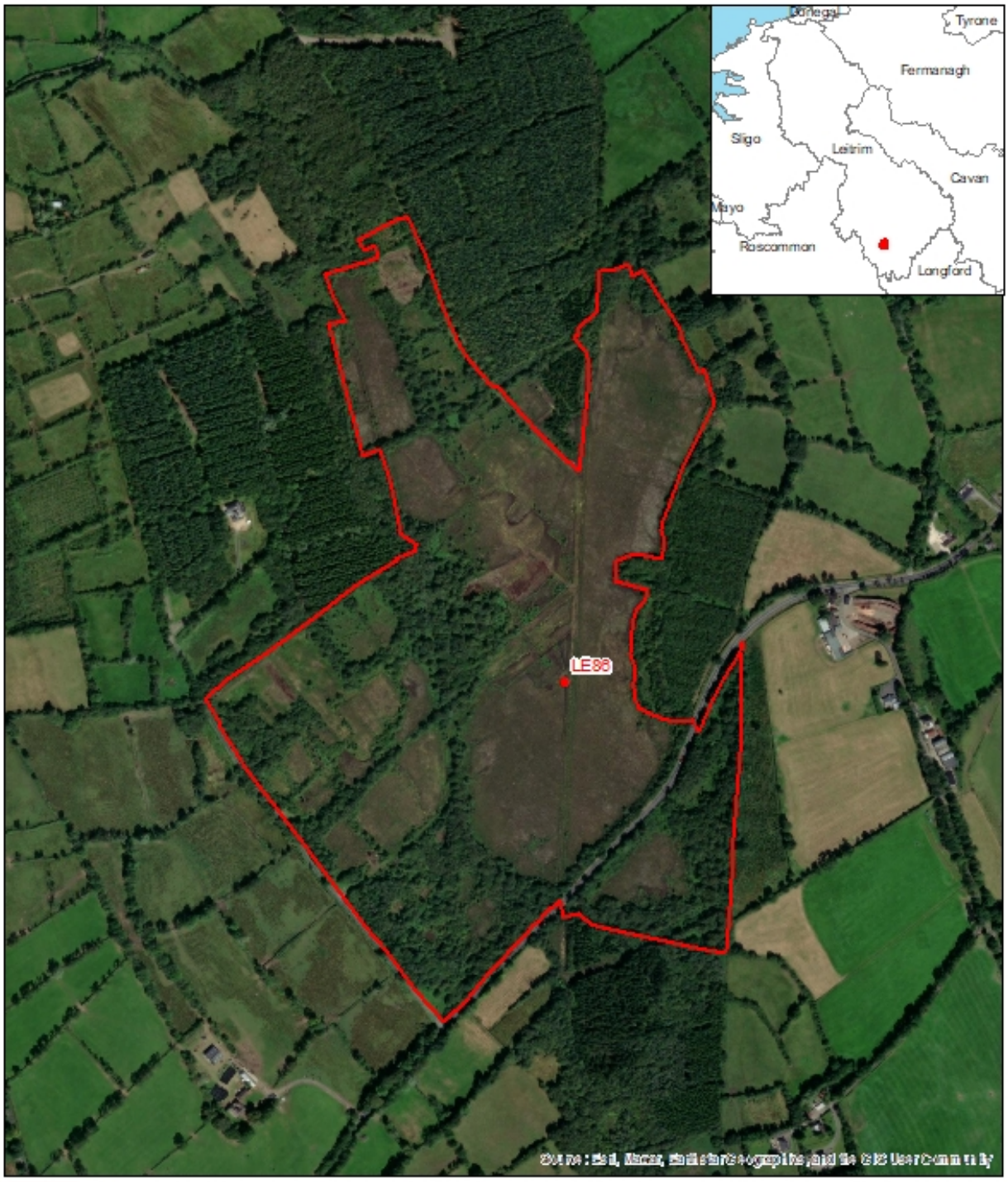
Flora on site - Latin & English species name	
Alnus glutinosa	Alder
Angelica sylvestris	Wild Angelica
Anthoxanthum odoratum	Sweet Vernal-grass
Avena sativa	Oat
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Carex echinata	Star Sedge
Carex nigra	Common Sedge
Carex panicea	Carnation Sedge
Cladonia portentosa	Branching Lichen
Dactylorhiza sp.	Orchid
Erica tetralix	Cross-leaved Heath
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Holcus lanatus	Yorkshire-fog
Iris pseudacorus	Yellow Iris
Juncus conglomeratus	Compact Rush
Juncus effusus	Soft-rush
Menyanthes trifoliata	Bogbean
Molinia caerulea	Purple Moor-grass
Myrica gale	Bog-myrtle
Narthecium ossifragum	Bog Asphodel
Plantago lanceolata	Ribwort Plantain
Potentilla anserina	Silverweed

Potentilla erecta	Tormentil
Pteridium aquilinum	Bracken
Ranunculus flammula	Lesser Spearwort
Ranunculus repens	Creeping Buttercup
Rubus fruticosus agg.	Blackberry
Salix cinerea subsp. cinerea	Grey Willow
Salix sp.	Willow
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum palustre	Blunt-leaved Bog Moss
Sphagnum squarrosum	Spiky Bog Moss
Succisa pratensis	Devil's-bit Scabious
Trichophorum cespitosum	Deergrass
Trifolium pratense	Red Clover
Trifolium repens	White Clover
Tussilago farfara	Colt's-foot
Ulex europaeus	Gorse
Urtica dioica	Common Nettle
Vicia cracca	Tufted Vetch

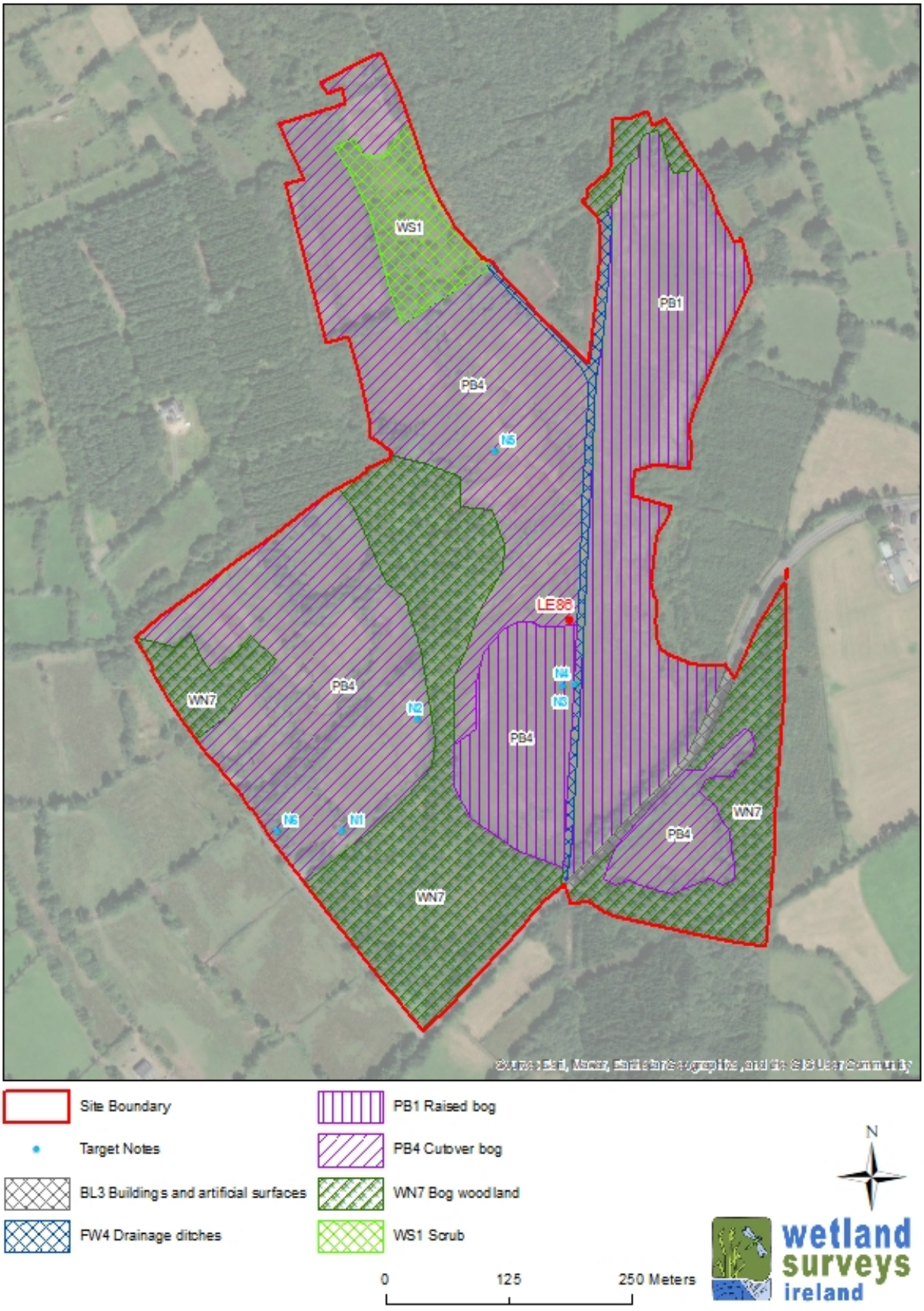
Fauna on site - English and Latin species name

Common Frog	*Rana temporaria*

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: HEADFORD LOUGH

Site Code: LE72 **Area (ha):** 8.49 **Grid Ref:** 201098 299039 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
01/07/2024

Survey Code:
LEWS2024

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:
DRISTERNAN

Solid Geology:
Marine shelf facies

Subsoil type:
Water

Substrate type:
Mineral Soil
Peat

Substrate stability:
Firm

River catchment:
Shannon Upr

CORINE Habitats:
Pastures

Site Location

Headford lough is a small lake located in county Leitrim, approximately 2.5km north of the River Shannon and Leitrim/Roscommon border and 6km east of Carrick-On-Shannon.

Site Description and Wetland Habitats Recorded

Mesotrophic lake with Nuphar lutea. The lake is fringed by reed swamp consisting of Phalaris arundinacea, Phagmites australis, Typha latifolia, and Schenoplectus lacustris, which also spreads into patches of shallower open water. A small area of tall herb swamp occurs on the western edge of the lake. The remaining habitats onsite include marsh dominated by Filipendula ulmaria and scrub dominated by Salix spp. The lake 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	Marsh dominated by Filipendula ulmaria and Juncus spp.
N2	HABITAT	Reed swamp dominated by Phagmites arundinacea, Phalaris australis and Typha latifolia.
N3	FLORA	Typha latifolia dominated reeds
N4	HABITAT	Scrub dominated by Salix spp.
N5	FAUNA	Potentially duck mussels present
N6	FLORA	Area dominated by Carex acuta
N7	HABITAT	Mesotrophic lake with patches of Schoenoplectus lacustris and Nuphar lutiea, fringed by Reed swamp
N8	GENERAL	Public access to the lake.
N9	HABITAT	FS2 - Tall herb swamp

Management Recommendations following survey

Prevent livestock from accessing the lake,consider improving the presence and size of the buffer zone around the lake to limit excess nutrient and sediment inputs.

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 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

FS2 Tall herb swamps

FW2 Depositing/lowland rivers

FW4 Drainage ditches

GM1 Marsh

EU Habitats Directive habitats on site

None noted

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FW4 Drainage ditches

GA1 Improved agricultural grassland

WD4 Conifer plantation

WL1 Hedgerows

WL2 Treelines

Landuse / Management Activity	Frequency of use
Grazing - horses	2 Occasional (5-20%)

Impacting Activity (EU code and title)	Intensity	Impact
A04.02.03 non intensive horse grazing	C = low	0 = neutral
J02.05 Modification of hydrographic functioning,	C = low	- 1 = reparable negative influence

Threats

A04.02.03 non intensive horse grazing

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

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

Livestock have direct access to the lake on the east side likely increasing the nutrient and sediment inputs to the lake. The habitats surrounding the lake are impacted by the presence of drainage, some of which flow straight into the lake contributing to the nutrient and sediment levels.

Flora on site - Latin & English species name

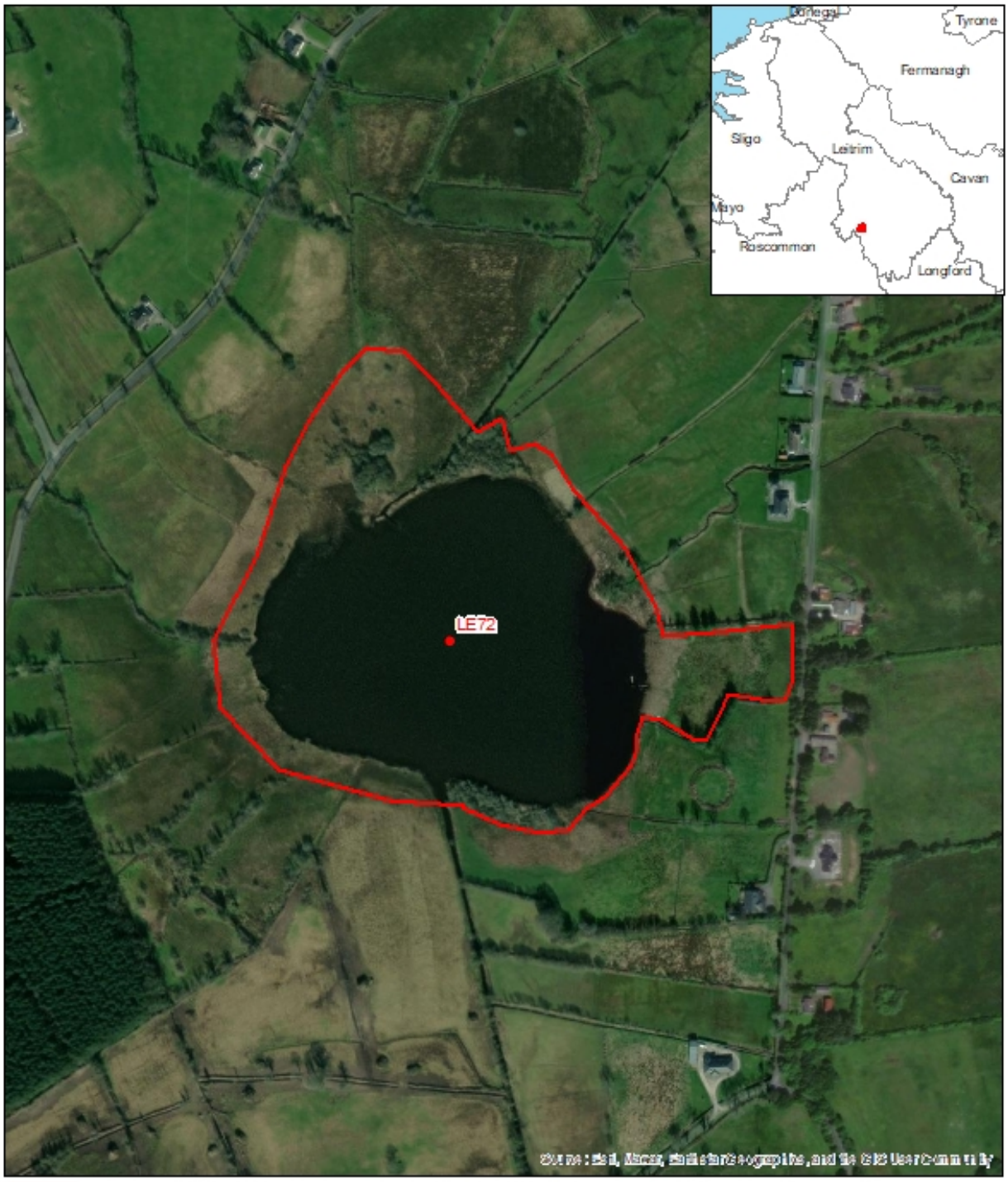
Angelica sylvestris	Wild Angelica
Caltha palustris	Marsh-marigold
Carex acuta	Slender Tufted-sedge
Carex rostrata	Bottle Sedge
Equisetum fluviatile	Water Horsetail
Filipendula ulmaria	Meadowsweet
Galium palustre	Marsh-bedstraw
Juncus articulatus	Jointed Rush
Juncus effusus	Soft-rush
Juncus inflexus	Hard Rush
Lathyrus pratensis	Meadow Vetchling
Lychnis flos-cuculi	Ragged-Robin
Lysimachia vulgaris	Yellow Loosestrife
Lythrum salicaria	Purple-loosestrife
Mentha aquatica	Water Mint
Menyanthes trifoliata	Bogbean
Myosotis sp.	Forget-me-not
Nuphar lutea	Yellow Water-lily
Phalaris arundinacea	Reed Canary-grass
Phragmites australis	Common Reed
Picea sp.	Spruce
Potentilla anserina	Silverweed
Ranunculus acris	Meadow Buttercup
Salix sp.	Willow
Salix viminalis	Osier

Schoenoplectus lacustris	Common Club-rush
Stachys palustris	Marsh Woundwort
Trifolium repens	White Clover
Typha latifolia	Bulrush
Valeriana officinalis	Common Valerian
Vicia cracca	Tufted Vetch

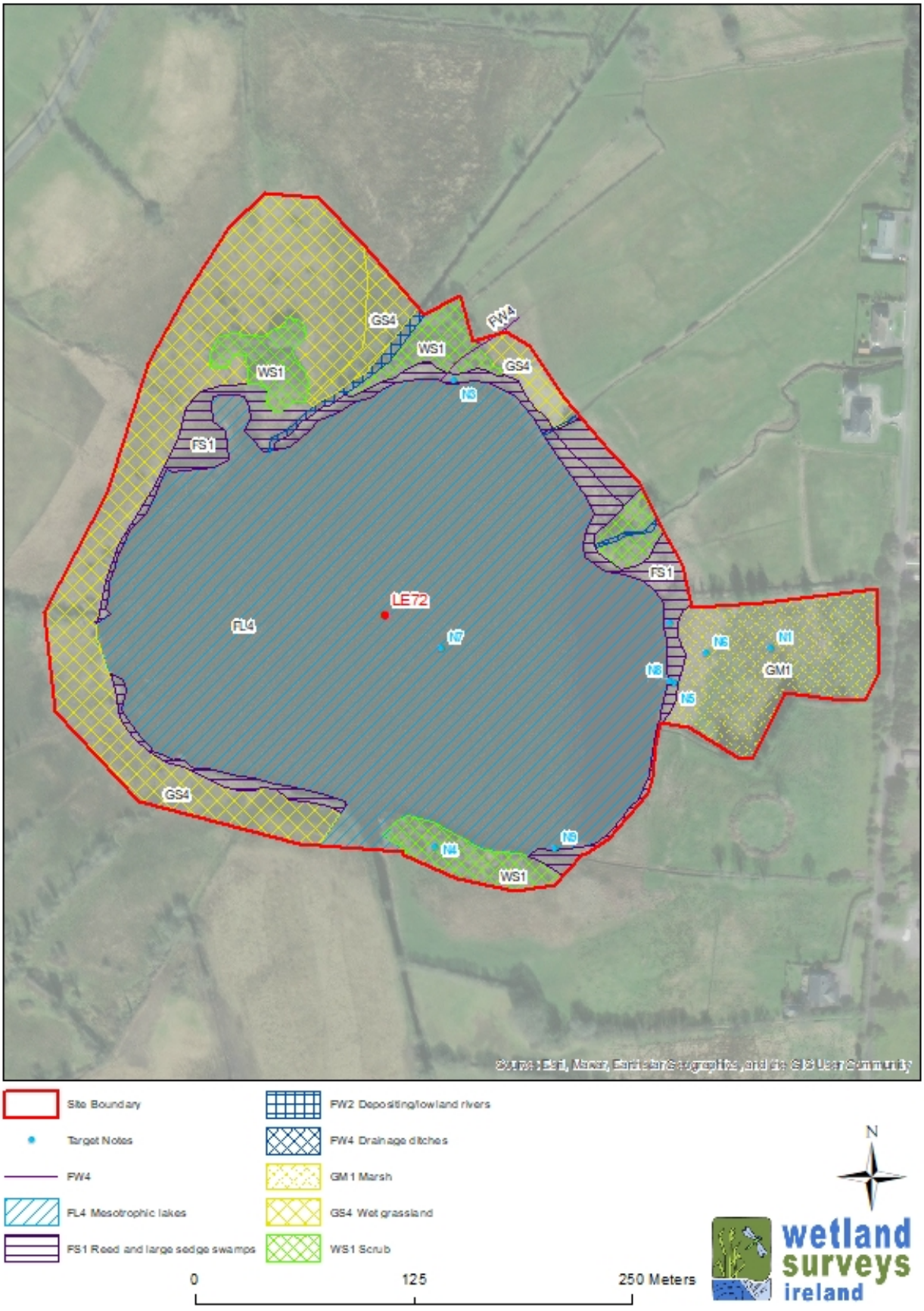
Fauna on site - English and Latin species name

Black-headed Gull	*Chroicocephalus ridibundus*
Duck mussel	*Anodonta anatina*
Sedge Warbler	*Acrocephalus schoenobaenus*

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: KEELDRA CATTAN BOG

Site Code: LE130 **Area (ha):** 28.34 **Grid Ref:** 214984 295268 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
04/07/2024

Survey Code:
LEWS2024

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:
KEELDRA

Solid Geology:
COURCEYAN "basal clastics"

Subsoil type:
Cut

Substrate type:
Peat

Substrate stability:
Firm

River catchment:
Shannon Upr

CORINE Habitats:
Peat bogs

Site Location

Raised bog located approximately 6.3km to the south-east of Mohill.

Site Description and Wetland Habitats Recorded

The main habitat on site is degraded raised bog dominated by Calluna vulgaris, Narthecium ossifragum, Eriophorum spp. and Cladonia spp. Deep drains occur throughout the site and the high bog is surrounded by cutover peat which is still being actively cut. Sphagnum cover is low (approx. 20%) with Betula and Salix scrub encroaching on drier peat, along with some areas of bog woodland (non-annex).

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

No.	Category	Comment
N1	HABITAT	Eriophorum vaginatum dominates with scattered Calluna vulgaris and Molinia caerula. Dactylorhiza sp. also present.
N2	HABITAT	Cutover - high cover of grasses. Scattered Calluna vulgaris and Eriophorum spp., Sphagnum and Rhytidiadelphus sp.. Abundant Potentilla erecta.
N3	DAMAGE	2m facebank relatively recently cut.
N4	HABITAT	1m+ deep peat
N5	HABITAT	20% sphagnum cover, mostly Calluna vulgaris and Eriophorum vaginatum with Narthecium ossifragum in flats.
N6	HYDROLOGY	Narrow drain less than 50cm wide but over 2m deep. Water table 2m below surface in drain. Leggy Calluna vulgaris borders the drain and Betula trees have grown sporadically along the edge.
N7	HABITAT	Very dry along drain with gentle slope. Flats are Narthecium ossifragum dominated
N8	DAMAGE	High bog has a lattice of drains across it.

Management Recommendations following survey

Liaise with turf cutters with the aim to cease peat cutting and encourage restoration. Following the development of a restoration plan consider blocking drainage to raise the water table. Remove and manage non-native conifer seedlings..

Future Survey Recommendations

A hydrological survey is recommended to inform drain blocking and restoration works as blocking drains would likely enhance the quality of the peatland habitats. Monitor for colonising non-native conifer trees.

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

FW4 Drainage ditches

PB1 Raised bogs

PB4 Cutover bog

WN7 Bog woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FL4 Mesotrophic lakes

EU Habitats Directive habitats on site

None noted

WD4 Conifer plantation

WL1 Hedgerows

WN Semi-natural woodland

WS1 Scrub

Landuse / Management Activity	Frequency of use
None	4 Dominant (>50%)
Peat cutting (mechanical)	1 Rare (<5%)

Impacting Activity (EU code and title)	Intensity	Impact
C01.03.02 mechanical removal of peat	C = low	- 2 = irreparable negative influence
D01.01 paths, tracks, cycling tracks	C = low	- 1 = reparable negative influence
D02.01 electricity and phone lines	C = low	- 1 = reparable negative influence
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence

Threats

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

C01.03.02 mechanical removal of peat

D01.01 paths, tracks, cycling tracks

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

Drains occur throughout the site, of particular note is the deep drain (2m) that divides the raised bog from north to south, the bog to the east of this has an extensive lattice of smaller drains. Active peat cutting occurs at the edges of the high bog, vehicle tracks are used to access this area but the majority are fully vegetated with minimal impact. An electricity line runs up the east edge of the site.

Flora on site - Latin & English species name

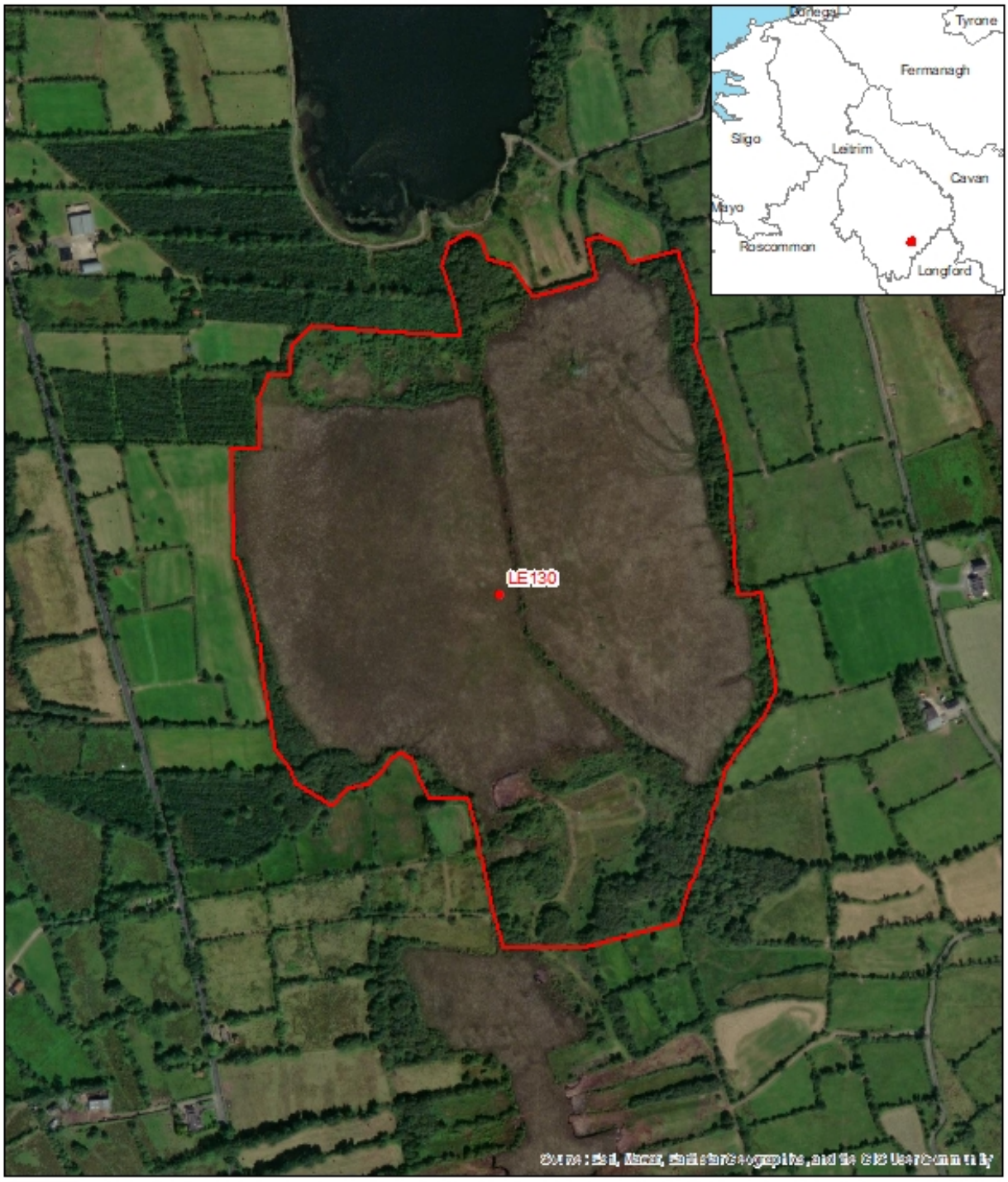
Algae	
Andromeda polifolia	Bog-rosemary
Anthoxanthum odoratum	Sweet Vernal-grass
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Carex nigra	Common Sedge
Cladonia portentosa	Branching Lichen
Cladonia uncialis	Antler Lichen
Dactylorhiza sp.	Orchid
Drosera rotundifolia	Round-leaved Sundew
Erica tetralix	Cross-leaved Heath
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Juncus articulatus	Jointed Rush
Juncus bulbosus	Bulbous Rush
Juncus effusus	Soft-rush
Luzula multiflora	Heath Wood-rush
Molinia caerulea	Purple Moor-grass
Myrica gale	Bog-myrtle
Narthecium ossifragum	Bog Asphodel
Picea sp.	Spruce
Pleurozia purpurea	Purple Spoonwort
Polygala serpyllifolia	Heath Milkwort
Potentilla erecta	Tormentil
Rhynchospora alba	White Beak-sedge

Rhytidiadelphus squarrosus	Springy Turf-Moss
Rubus fruticosus agg.	Blackberry
Salix sp.	Willow
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum papillosum	Papillose Bog Moss
Succisa pratensis	Devil's-bit Scabious
Trichophorum cespitosum	Deergrass
Ulex europaeus	Gorse

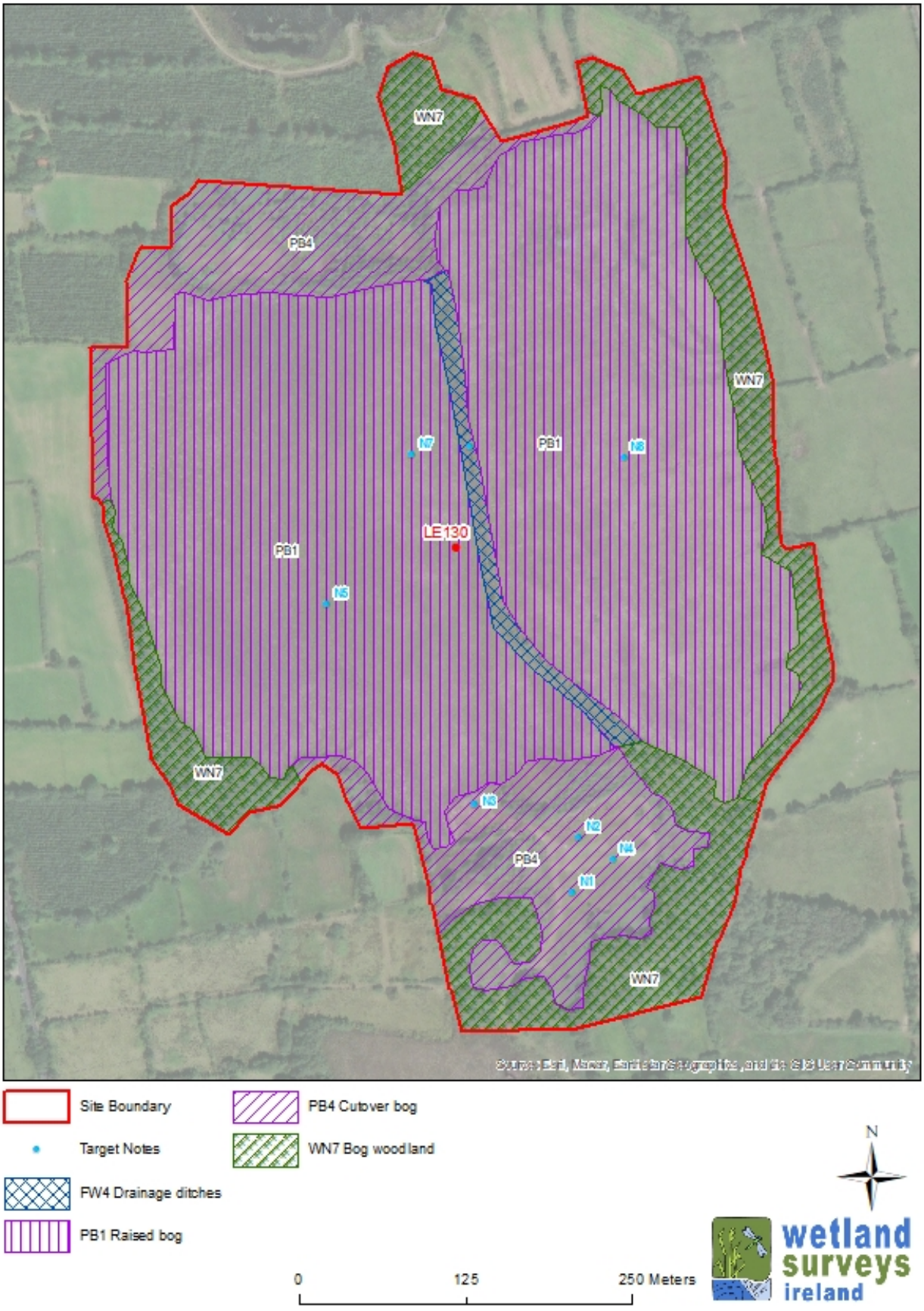
Fauna on site - English and Latin species name

Common Frog	*Rana temporaria*

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: KESHCARRIGAN LOUGH AND WETLAND

Site Code: LE227 **Area (ha):** 62.59 **Grid Ref:** 203978 307041 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
20/06/2024

Survey Code:
LEWS2024

Site source information:
Detailed grassland survey recommended
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:
CLOONEY

Solid Geology:
Marine shelf facies

Subsoil type:
Water

Substrate type:
Loose Rock
Peat
Silt

Substrate stability:
Firm

River catchment:
Erne

CORINE Habitats:
Water bodies

Site Location

A large oblong shaped mesotrophic lake surrounded by species rich grassland, cutover bog and semi-natural woodland just south of Keshcarrigan village.

Site Description and Wetland Habitats Recorded

The site consists of a large mesotrophic lake, that was known to support a population of the Annex II White clawed crayfish. The lake is fringed by Phragmites australis reed swamp and currently monitored as part of the Irish Wetland Bird Survey (I-WeBS) national monitoring scheme. Areas of wet grassland and marsh surround much of site. An area of species rich semi-calcareous (Briza media and Carex pulicaris present) grassland occurs to the north of the lake and is characterised by non-tussock forming Molinia caerulea occurring with Juncus conglomeratus, Succisa pratensis and Potentilla erecta which corresponds to the annex habitat Molinia meadows. An area of bog woodland and cutover bog also occur in the southeast of the site.

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

No.	Category	Comment
N1	HABITAT	Small patch of Molinia meadows - Molinia caerula is frequent but does not dominate, Succisa pratensis is abundant with Briza media, Carex panicea, C. nigra, C.pulicaris in more open pockets.
N2	HABITAT	Small area of Reed swamp Phalaris arundinacea dominated
N3	HABITAT	Epilobium hirsutum dominates here, tall 1m.
N4	HABITAT	Rank vegetation scrub encroaching Marsh, abundant Juncus spp. with Filipendula ulmaria, Valeriana officinalis, Lotus pedunculatus and Epilobium hirsutum.
N5	HABITAT	Lotus valerian filipendula and Epilobium 1m plus tall.
N6	DAMAGE	Small bit of dumping
N7	HABITAT	Molinia caerula dominated Cutover bog, with scattered leggy Calluna vulgaris, Erica tetralix, Potentilla erecta and Eriophorum vaginatum.
N8	DAMAGE	Large boulders dumped, likely as a form of erosion defence
N9	DAMAGE	Dumping

Management Recommendations following survey

Develop grazing/management plan for grassland areas of site, especially the area of Annex Molinia meadows. Implement eradication and ongoing management plan for invasive species following the assessment of extent. Consider establishing buffer zone between the wetland and land used for agriculture to minimise nutrient input into the wetland system. Liaise with landowners with the aim that all drainage would run through a seepage zone before entering the waterbodies on site.Implementing signage with information on caring for freshwater habitats and preventing the spread of invasive species may increase awareness and reduce the risk of water quality impacts.

Future Survey Recommendations

Marsh fritillary survey and Molinia meadows survey recommended to establish Annex status. Establish extent of the invasive species Lagarosiphon major and Driessena polymorpha. Assess peatland for for restoration potential. Continue to monitor bird counts as part of the national monitoring scheme I-WeBS (Irish Wetland Bird Survey).

Landowner Information Comments

No landowner met. Molinia meadows and much of site can be accessed from road and amenity area. Area of bog was accessed with permission from adjacent homeowner.

Description of potential EU Habitats Directive Annex 1 habitats

The area of wet grassland in the northeast of the site likely corresponds to the EU Annex I habitat 6410 Molinia meadow.

Main Fossitt habitats on site

BL3 Buildings and artificial surfaces
FL4 Mesotrophic lakes
FS1 Reed and large sedge swamps
FW4 Drainage ditches
GM1 Marsh
GS4 Wet grassland
PB4 Cutover bog
WL1 Hedgerows
WN6 Wet willow-alder-ash woodland
WN7 Bog woodland
WS1 Scrub

EU Habitats Directive habitats on site

6410 Molinia meadows on calcareous, peaty or clayey-

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
FW4 Drainage ditches
GA1 Improved agricultural grassland
GA2 Amenity grassland (improved)
WD4 Conifer plantation
WL1 Hedgerows
WL2 Treelines

Landuse / Management Activity	Frequency of use
Amenity Management	1 Rare (<5%)
Grazing - cattle	2 Occasional (5-20%)
Grazing - unknown	2 Occasional (5-20%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A03 mowing / cutting of grassland	C = low	+1= natural positive influence
A04.02.01 non intensive cattle grazing	C = low	Unknown
A04.03 abandonment of pastoral systems, lack of	C = low	- 1 = reparable negative influence
E03.01 disposal of household waste	C = low	- 1 = reparable negative influence
G02 Sport and leisure structures	C = low	0 = neutral
H01.05 diffuse pollution to surface waters due to	D = unknown	- 1 = reparable negative influence
H04.02 Nitrogen-input	D = unknown	- 1 = reparable negative influence
I01 invasive non-native species	D = unknown	Unknown
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence

Threats

A03.02 abandonment / lack of mowing
B02.01 forest replanting
E03.01 disposal of household waste
G02 Sport and leisure structures
H01.05 diffuse pollution to surface waters due to agricultural and forestry activities
H04.02 Nitrogen-input
I01 invasive non-native species
J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

The area of Molinia meadows is adjacent to an amenity area, expanding the current amenity management is a threat to the habitat, but stopping the existing management would also impact the habitat, as seen in adjacent areas

that have been abandoned. It is thought the lake contains the invasive Lagarosiphon major which is known to grow rapidly causing significant changes to the natural ecology. The algae in the lake suggests an increase in nutrient content likely a result of diffuse and point source pollution from the surrounding land. Drainage is present in the wetlands surrounding the lake which will be impacting the terrestrial habitats and acting as a pathway for nutrients

Flora on site - Latin & English species name

Algae	
Alnus glutinosa	Alder
Angelica sylvestris	Wild Angelica
Betula pubescens	Downy Birch
Briza media	Quaking-grass
Calluna vulgaris	Ling Heather
Caltha palustris	Marsh-marigold
Carex echinata	Star Sedge
Carex hirta	Hairy Sedge
Carex leporina	Oval Sedge
Carex nigra	Common Sedge
Carex panicea	Carnation Sedge
Carex pulicaris	Flea Sedge
Carex rostrata	Bottle Sedge
Centaurea nigra	Common Knapweed
Cirsium palustre	Marsh Thistle
Cladonia portentosa	Branching Lichen
Crataegus monogyna	Hawthorn
Dactylorhiza sp.	Orchid
Drosera rotundifolia	Round-leaved Sundew
Eleocharis palustris	Common Spike-rush
Epilobium hirsutum	Great Willowherb
Equisetum fluviatile	Water Horsetail
Equisetum palustre	Marsh Horsetail
Erica tetralix	Cross-leaved Heath
Eriophorum vaginatum	Hare's-tail Cottongrass
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Galium palustre	Marsh-bedstraw
Geranium dissectum	Cut-leaved Crane's-bill
Hedera helix	Ivy
Holcus lanatus	Yorkshire-fog
Ilex aquifolium	Holly
Iris pseudacorus	Yellow Iris
Juncus acutiflorus	Sharp-flowered Rush
Juncus bufonius	Toad Rush
Juncus conglomeratus	Compact Rush
Lagarosiphon major	Curly Waterweed
Lathyrus pratensis	Meadow Vetchling
Lotus pedunculatus	Greater Bird's-foot-trefoil
Luzula multiflora	Heath Wood-rush
Lychnis flos-cuculi	Ragged-Robin
Mentha aquatica	Water Mint
Molinia caerulea	Purple Moor-grass

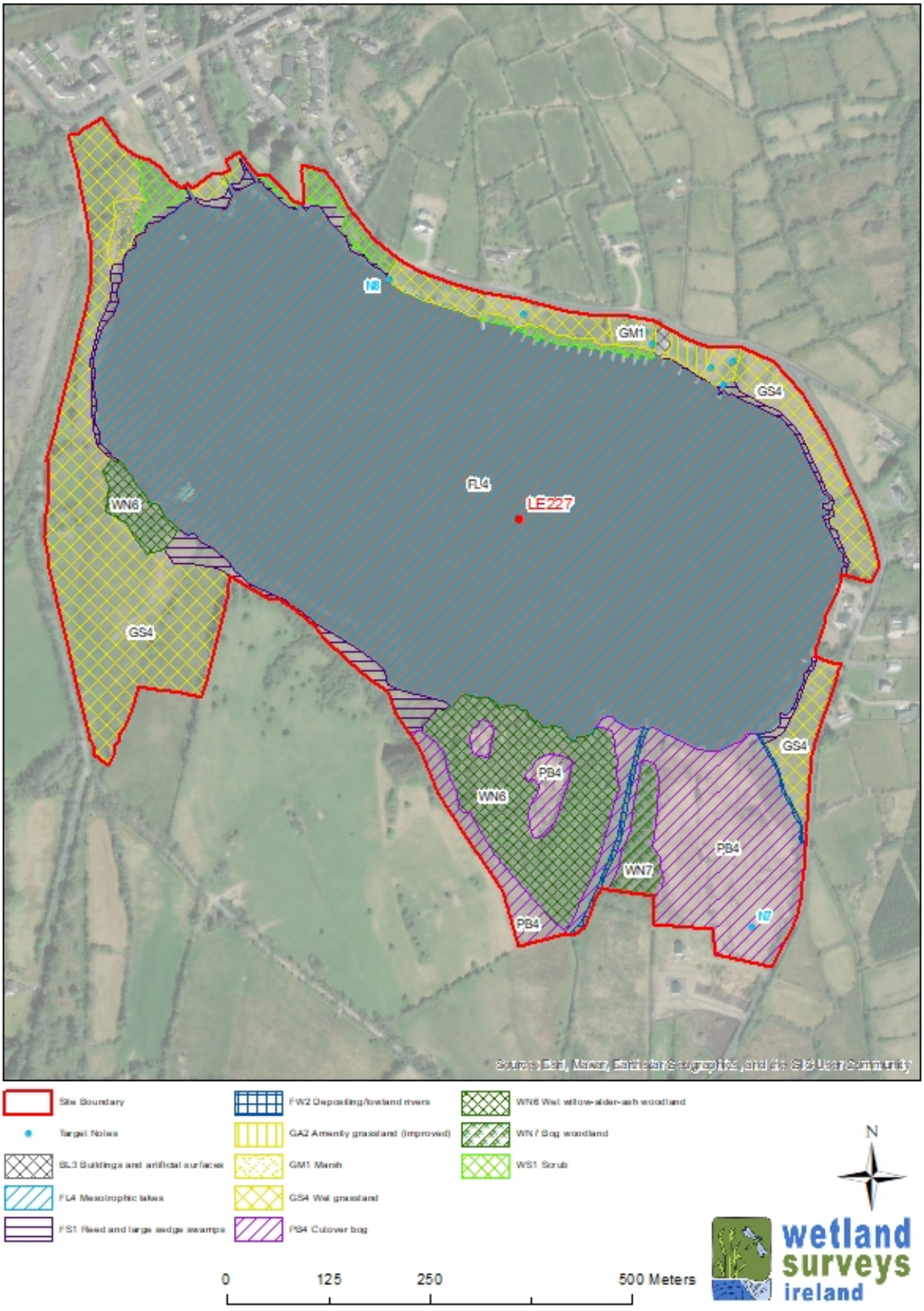
Myosotis sp.	Forget-me-not
Narthecium ossifragum	Bog Asphodel
Nuphar lutea	Yellow Water-lily
Phalaris arundinacea	Reed Canary-grass
Plantago lanceolata	Ribwort Plantain
Polygala serpyllifolia	Heath Milkwort
Potentilla anserina	Silverweed
Quercus robur	Pedunculate Oak
Ranunculus acris	Meadow Buttercup
Rosa canina	Dog-rose
Rubus fruticosus agg.	Blackberry
Salix cinerea subsp. cinerea	Grey Willow
Schedonorus pratensis	Meadow Fescue
Schoenoplectus lacustris	Common Club-rush
Sonchus asper	Prickly Sow-thistle
Sparganium erectum	Branched Bur-reed
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum denticulatum	Cow-horn Bog Moss
Sphagnum divinum	Magellanic Bog-moss
Sphagnum palustre	Blunt-leaved Bog Moss
Sphagnum subnitens	Lustrous Bog Moss
Succisa pratensis	Devil's-bit Scabious
Taraxacum agg.	Dandelion
Trichophorum cespitosum	Deergrass
Trifolium dubium	Lesser Trefoil
Trifolium pratense	Red Clover

Fauna on site - English and Latin species name

Black-headed Gull	*Chroicocephalus ridibundus*
Common Frog	*Rana temporaria*
Sika Deer	*Cervus nippon*
White-clawed Crayfish	*Austropotamobius pallipes*
Zebra mussel	*Driessena polymorpha*

Aerial Photograph showing location of the site

GIS Habitat map of the site



Site Name: KILLALEEN LOUGH

Site Code: LE338 **Area (ha):** 8.19 **Grid Ref:** 181535 330977 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
02/07/2024

Survey Code:
LEWS2024

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:
DRUMLEASE

Solid Geology:
Marine shelf facies

Subsoil type:
BktPt

Substrate type:
Mineral Soil
Peat

Substrate stability:
Soft

River catchment:
Garvogue

CORINE Habitats:
Land principally occupied by

Site Location

Small lake surrounded by a wetland complex, located approximately 1.2km southeast of Dromahair.

Site Description and Wetland Habitats Recorded

Inter drumlin hollow with a small mesotrophic lake fringed with reed swamp dominated by Phalaris arundinacea. The main surrounding habitat is grazed, species rich wet grassland with abundant grasses and rushes, and herbs include Lychnis flos-cuculli, Myosotis spp., Ranunculus spp. and Trifolium repens. The northwest side of the lake is surrounded by a coniferous plantation, that merges into wet woodland where Salix spp. Fraxinus excelsior predominate. Drainage is present in the surrounding habitats.

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

No.	Category	Comment
N1	HABITAT	Wet grassland prominent species include Iris pseudacorus, Juncus sp., Cirsium palustre, Trifolium repens, Ranunculus sp., Lychnis flos-cuculi and Dactylorhiza sp.
N2	HYDROLOGY	Large deep drain in field boundary, vegetated with Filipendula ulmaria and Phalaris arundinacea.
N3	HABITAT	Mentha aquatica, Comarum palustre, Equisetum sp. and Menyanthes trifoliata.
N4	FLORA	Carex nigra and C.panicea present but sparse.
N5	HYDROLOGY	Shallow old drain with Sparganium erectum.

Management Recommendations following survey

It is recommended that the current grazing regime is maintained with care given to avoid heavy grazing during very wet periods.

Future Survey Recommendations

None.

Landowner Information Comments

Permission received from adjacent house.

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

FW4 Drainage ditches

GS4 Wet grassland

WL1 Hedgerows

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

FW4 Drainage ditches

GA1 Improved agricultural grassland

GS4 Wet grassland

WD4 Conifer plantation

WL1 Hedgerows

Landuse / Management Activity **Frequency of use**

Grazing - cattle	3 Frequent (21-50%)
None	3 Frequent (21-50%)

Impacting Activity (EU code and title)	Intensity	Impact
A04.02.01 non intensive cattle grazing	C = low	0 = neutral
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence

Threats

A04.02.01 non intensive cattle grazing

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

Majority of drainage is vegetated but impacts remain evident in the surrounding habitats. Cattle grazing is currently a positive influence to the wet grassland, the extensive regime should be maintained.

Flora on site - Latin & English species name

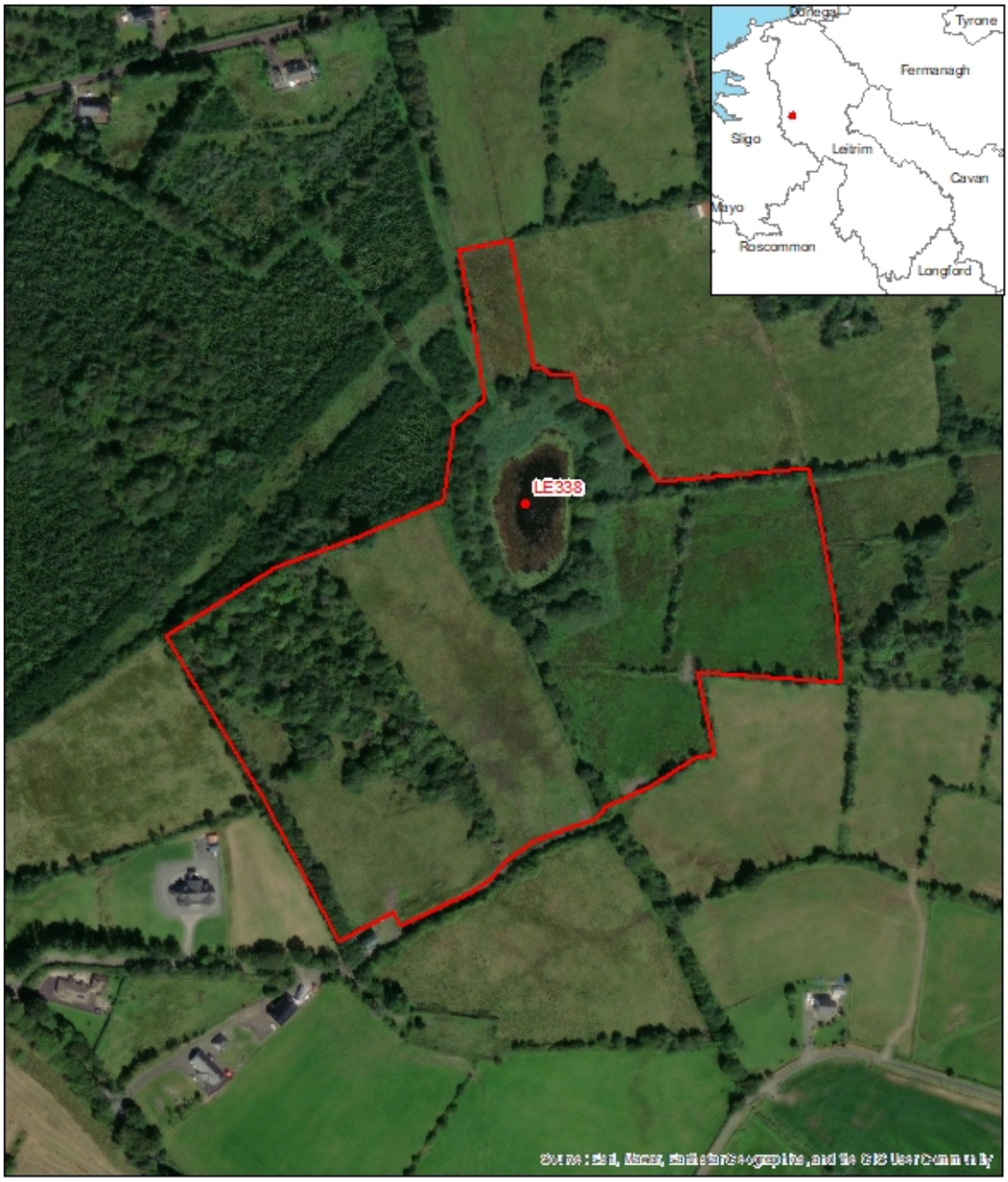
Alnus glutinosa	Alder
Calliergonella cuspidata	Pointed Spear Moss
Calystegia sepium	Hedge Bindweed
Cardamine pratensis	Cuckooflower
Carex demissa	Common Yellow-sedge
Carex nigra	Common Sedge
Carex panicea	Carnation Sedge
Cirsium palustre	Marsh Thistle
Cirsium vulgare	Spear Thistle
Comarum palustre	Marsh Cinquefoil
Corylus avellana	Hazel
Dactylorhiza sp.	Orchid
Equisetum fluviatile	Water Horsetail
Equisetum palustre	Marsh Horsetail
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Galium palustre	Marsh-bedstraw
Holcus lanatus	Yorkshire-fog
Ilex aquifolium	Holly
Iris pseudacorus	Yellow Iris
Juncus articulatus	Jointed Rush
Juncus conglomeratus	Compact Rush
Juncus effusus	Soft-rush
Juncus inflexus	Hard Rush
Lathyrus pratensis	Meadow Vetchling
Lychnis flos-cuculi	Ragged-Robin
Mentha aquatica	Water Mint
Menyanthes trifoliata	Bogbean
Myosotis sp.	Forget-me-not
Phalaris arundinacea	Reed Canary-grass
Pinus sp.	Pine
Potentilla anserina	Silverweed
Potentilla erecta	Tormentil
Prunus spinosa	Blackthorn
Ranunculus acris	Meadow Buttercup
Ranunculus flammula	Lesser Spearwort

Ranunculus repens	Creeping Buttercup
Rubus fruticosus agg.	Blackberry
Salix aurita	Eared Willow
Salix cinerea subsp. cinerea	Grey Willow
Sparganium erectum	Branched Bur-reed
Succisa pratensis	Devil's-bit Scabious
Trifolium repens	White Clover
Valeriana officinalis	Common Valerian

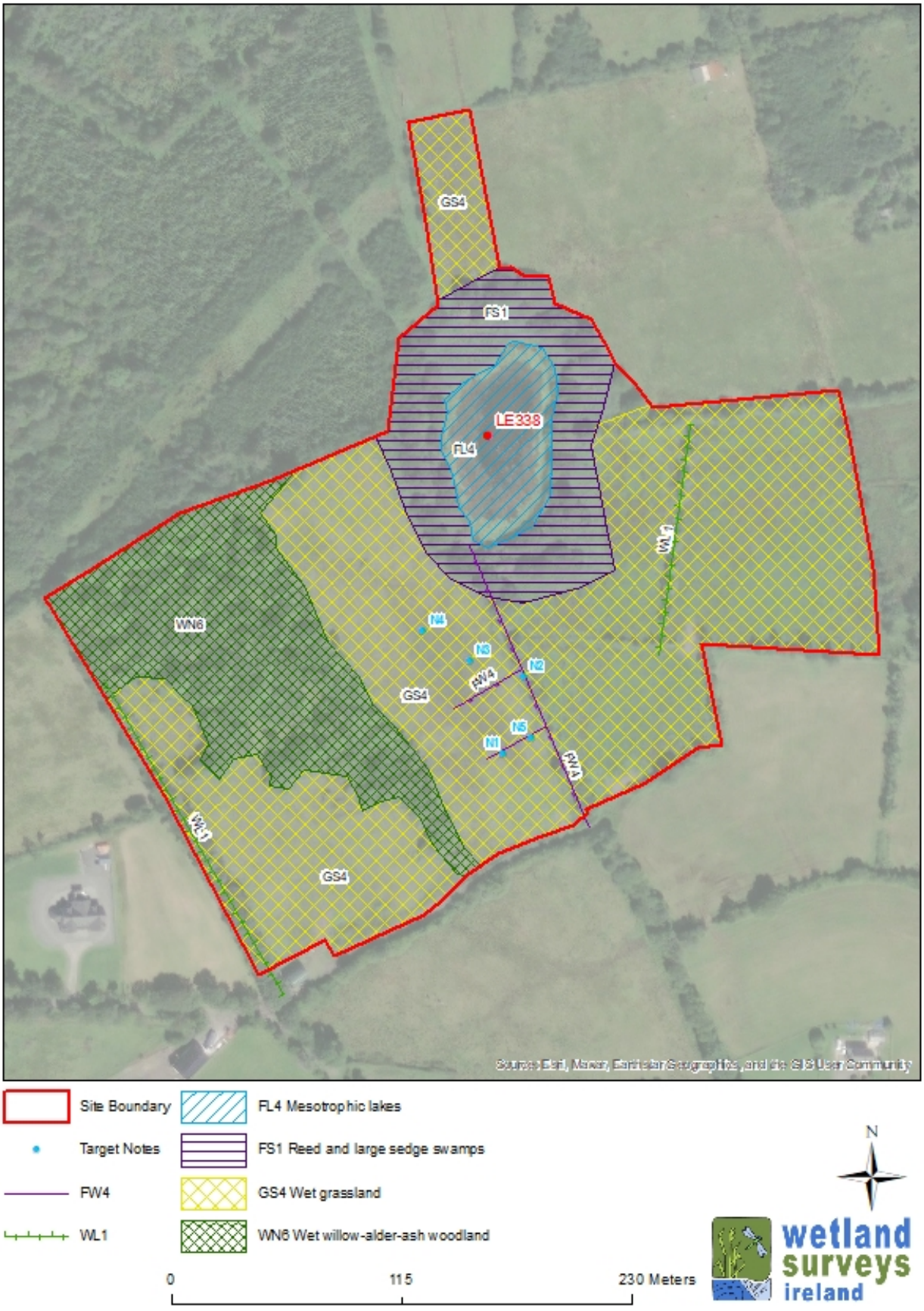
Fauna on site - English and Latin species name

Dragon and Damselflies

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: LOUGH MACHUGH cNHA

Site Code: LE11 **Area (ha):** 60.49 **Grid Ref:** 204600 297800 **County:** LE

Site designation(s):

cNHA
SMR
Undesignated site

Surveyed by:

Joe O'Sullivan & Poppy Overy

Date of wetland survey:

01/07/2024

Survey Code:

LEWS2024

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:

DRUMLARA

Solid Geology:

Navan Group

Subsoil type:

Water

Substrate type:

Mineral Soil
Peat

Substrate stability:

Very soft

River catchment:

Shannon Upr

CORINE Habitats:

Water bodies

Site Location

Mesotrophic lake with several small islands, located approximately 4.5km west of Mohill.

Site Description and Wetland Habitats Recorded

Mesotrophic lake fringed with reed swamps of Phalaris arundinacea, Phragmites australis and Schoenoplectus lacustris. The lake is surrounded by Salix dominated wet woodland, wet grassland and poor fen. The fen is located to the northeast of the lake, Carex spp., Juncus articulatus, Lychnis flos-cucli, Mentha aquatica, Filipendula ulmaria, Comarum palustre and Ranunculus acris dominate the vegetation. The lake 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	Tall reed swamp dominated by Phagmites australis, Menyanthes trifoliata and Filipendula ulmaria.
N2	HABITAT	Poor fen dominated by Carex spp., Juncus articulatus, Lychnis flos-cuculi, Mentha aquatica, Filipendula ulmaria, Comarum palustre and Ranunculus acris.
N3	HABITAT	Reed and large sedge swamp dominated by Phalaris arundinacea, Sparganium erectum and Equisetum fluviatile.
N4	HABITAT	Mesotrophic lake with Nuphar lutea. Majority of lake fringed by Reed swamp dominated by Phalaris arundinacea.
N5	GENERAL	Old wooden jetty.
N6	GENERAL	Carpark.
N7	GENERAL	Several jetties along this edge of the lake.

Management Recommendations following survey

Extend the buffer zone around lake in an effort to reduce excess nutrient inputs from entering it.

Future Survey Recommendations

A detailed fen survey is recommended. Continue to monitor bird counts as part of the national monitoring scheme I-WeBS (Irish Wetland Bird Survey).

Landowner Information Comments

Accessed from county council right of way, lake jetty.

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

BL3 Buildings and artificial surfaces

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

GS4 Wet grassland

HD1 Dense bracken

PF2 Poor fen and flush

WN6 Wet willow-alder-ash woodland

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FW4 Drainage ditches

GA1 Improved agricultural grassland

EU Habitats Directive habitats on site

None noted

GS4 Wet grassland

WL1 Hedgerows

WL2 Treelines

Landuse / Management Activity	Frequency of use
Boating	2 Occasional (5-20%)
Fishing	2 Occasional (5-20%)
Grazing - sheep	1 Rare (<5%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
H01.03 other point source pollution to surface water	D = unknown	- 1 = reparable negative influence
H01.05 diffuse pollution to surface waters due to	D = unknown	- 1 = reparable negative influence

Threats

H01.03 other point source pollution to surface water

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

H04.02 Nitrogen-input

Damaging Operations Comments

Some algae noted in the lake, likely a result of point source (drains) and diffuse nutrient pollution from the surrounding agricultural land.

Flora on site - Latin & English species name

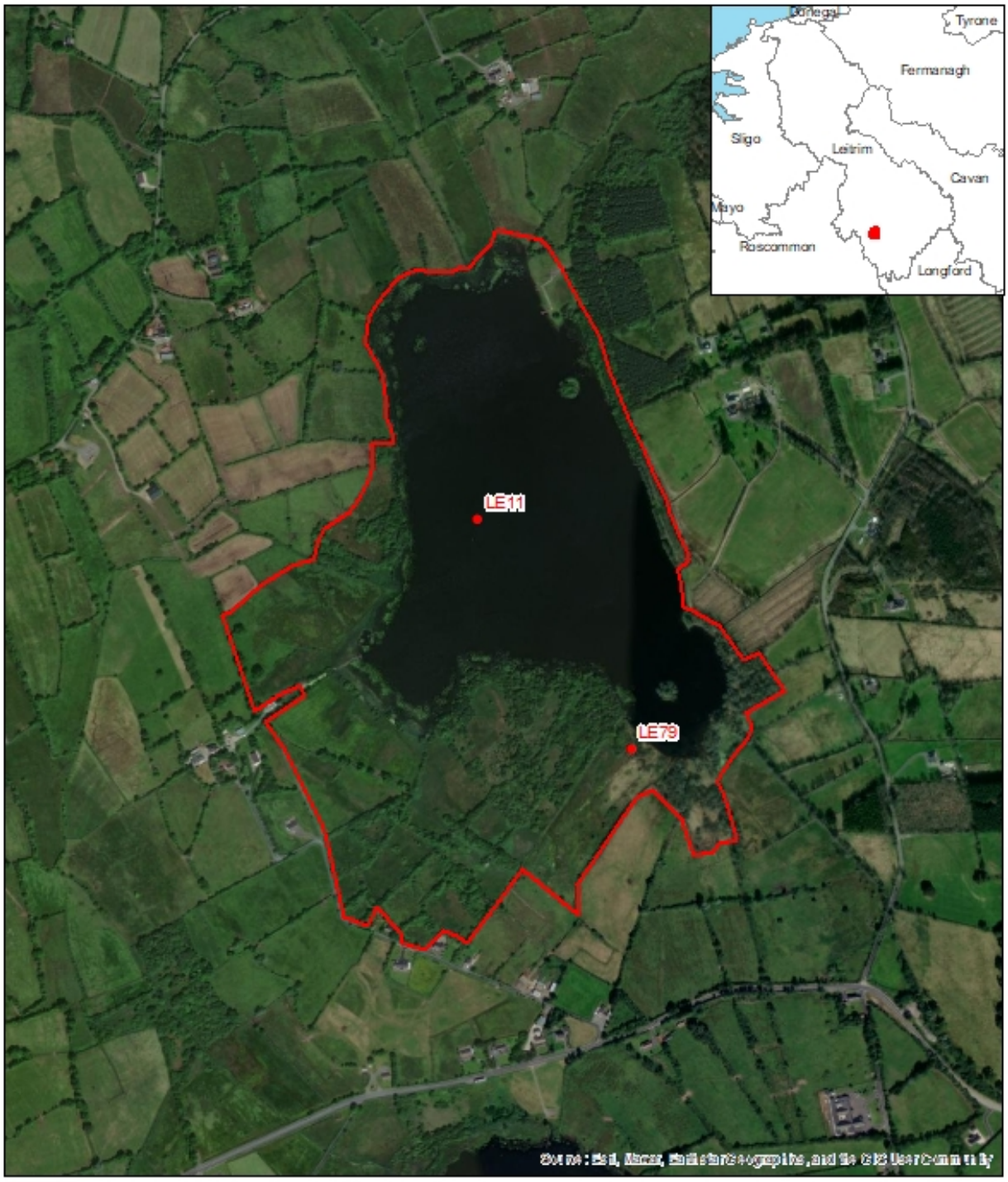
Algae	
Alnus glutinosa	Alder
Angelica sylvestris	Wild Angelica
Betula pubescens	Downy Birch
Briza media	Quaking-grass
Calliergonella cuspidata	Pointed Spear Moss
Caltha palustris	Marsh-marigold
Carex demissa	Common Yellow-sedge
Carex diandra	Lesser Tussock-sedge
Carex echinata	Star Sedge
Carex nigra	Common Sedge
Carex panicea	Carnation Sedge
Carex rostrata	Bottle Sedge
Comarum palustre	Marsh Cinquefoil
Crataegus monogyna	Hawthorn
Dactylorhiza sp.	Orchid
Eleocharis palustris	Common Spike-rush
Equisetum fluviatile	Water Horsetail
Equisetum palustre	Marsh Horsetail
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Galium palustre	Marsh-bedstraw
Hedera helix	Ivy
Holcus lanatus	Yorkshire-fog
Iris pseudacorus	Yellow Iris
Juncus articulatus	Jointed Rush
Juncus conglomeratus	Compact Rush
Juncus effusus	Soft-rush

Lychnis flos-cuculi	Ragged-Robin
Mentha aquatica	Water Mint
Menyanthes trifoliata	Bogbean
Nuphar lutea	Yellow Water-lily
Phalaris arundinacea	Reed Canary-grass
Phragmites australis	Common Reed
Plantago lanceolata	Ribwort Plantain
Potentilla anserina	Silverweed
Pteridium aquilinum	Bracken
Ranunculus acris	Meadow Buttercup
Ranunculus flammula	Lesser Spearwort
Ranunculus repens	Creeping Buttercup
Rhytidiadelphus squarrosus	Springy Turf-Moss
Rubus fruticosus agg.	Blackberry
Rumex acetosa	Common Sorrel
Salix sp.	Willow
Schoenoplectus lacustris	Common Club-rush
Sparganium erectum	Branched Bur-reed
Succisa pratensis	Devil's-bit Scabious
Trifolium pratense	Red Clover
Trifolium repens	White Clover
Valeriana officinalis	Common Valerian

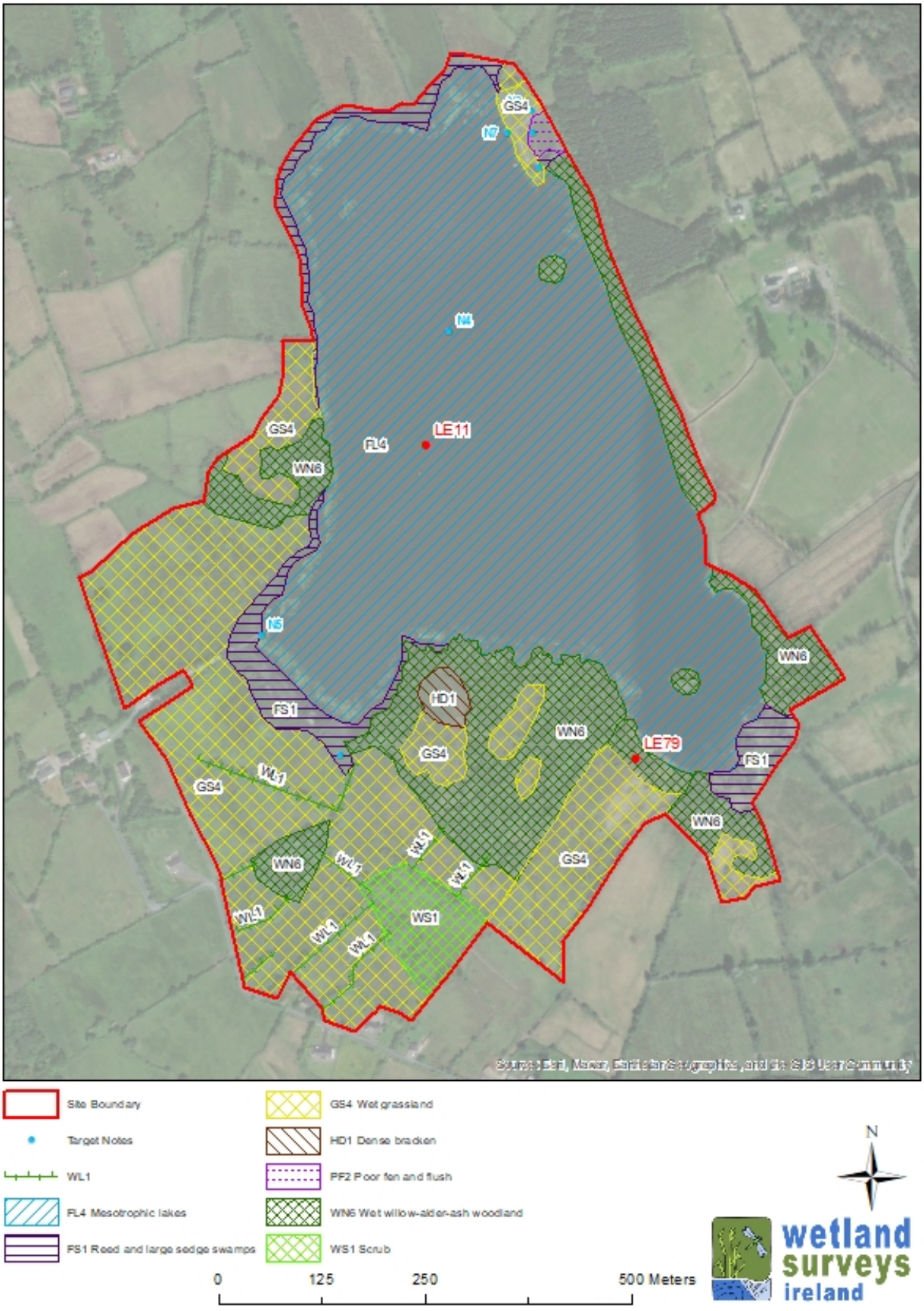
Fauna on site - English and Latin species name

Black-headed Gull	*Chroicocephalus ridibundus*
Mute Swan	*Cygnus olor*

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: LOUGH NABELWY (LEITRIM)

Site Code: LE137 **Area (ha):** 15.28 **Grid Ref:** 218906 293692 **County:** LE LF

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
04/07/2024

Survey Code:
LEWS2024

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:
KILLYVEHY

Solid Geology:
Derryveeny Formation

Subsoil type:
Cut

Substrate type:
Loose Rock
Peat

Substrate stability:
Firm

River catchment:
Erne

CORINE Habitats:
Peat bogs

Site Location

Wetland mosaic on the Leitrim/Longford border, located 6.8km to the north-east of Gortletteragh, county Leitrim.

Site Description and Wetland Habitats Recorded

The western section of the site contains cutover bog dominated by Calluna vulgaris, Cladonia portentosa and Molinia caerulea. This is fringed with Betula dominated bog woodland (non-annex), and scrub encroachment. A mesotrophic lake with Nuphar lutea occurs to the east of the bog. The majority of the lake is fringed with a narrow band of Reed swamp dominated by Typha latifolia and Phalaris arundinacea, except approx. 200m on the east side where the grassland meets the edge of the lake with vehicle access for launching boats. The lake 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	Cutover bog - Molinia caerula dominant with leggy Calluna vulgaris and scattered Eriophorum sp. High cover of Cladonia and Narthecium ossifragum, some Sphagnum spp.
N2	HABITAT	Bog woodland, 4m+ tall Betula with Molinia caerula and some Sphagnum.
N3	FLORA	Abundant Narthecium ossifragum throughout Molinia caerula. Dactylorhiza spp. also present.

Management Recommendations following survey

Ensure there is an adequate buffer around the lake to minimise the input of pollutants from the roads and nutrients from the agricultural land. Consider erecting signage where vehicles access the lake to provide guidance on recreational boating to reduce the risk of impacts to water quality and spreading alien invasives. Implementing measures to improve the hydrological integrity of the peatland would be beneficial.

Future Survey Recommendations

Hydrological survey for drain blocking. Continue to monitor bird counts as part of the national monitoring scheme I-WeBS (Irish Wetland Bird Survey). Consider a hydrological survey to assist in managing the peatland habitats.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

Although the site contains bog woodland with Birch it is not to conform to the EU Habitats Directive priority habitat type.

Main Fossitt habitats on site

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

FW4 Drainage ditches

GS4 Wet grassland

PB4 Cutover bog

WN7 Bog woodland

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

WL1 Hedgerows

WL2 Treelines

Landuse / Management Activity	Frequency of use
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
J02.05 Modification of hydrographic functioning,	B = medium	- 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

Damaging Operations Comments

Diffuse nutrient pollution from the surrounding agricultural land is a significant threat to the quality of the lake. The Raised bog was historically drained and whilst the majority of drains are now vegetated they are still impacting the sites hydrological integrity.

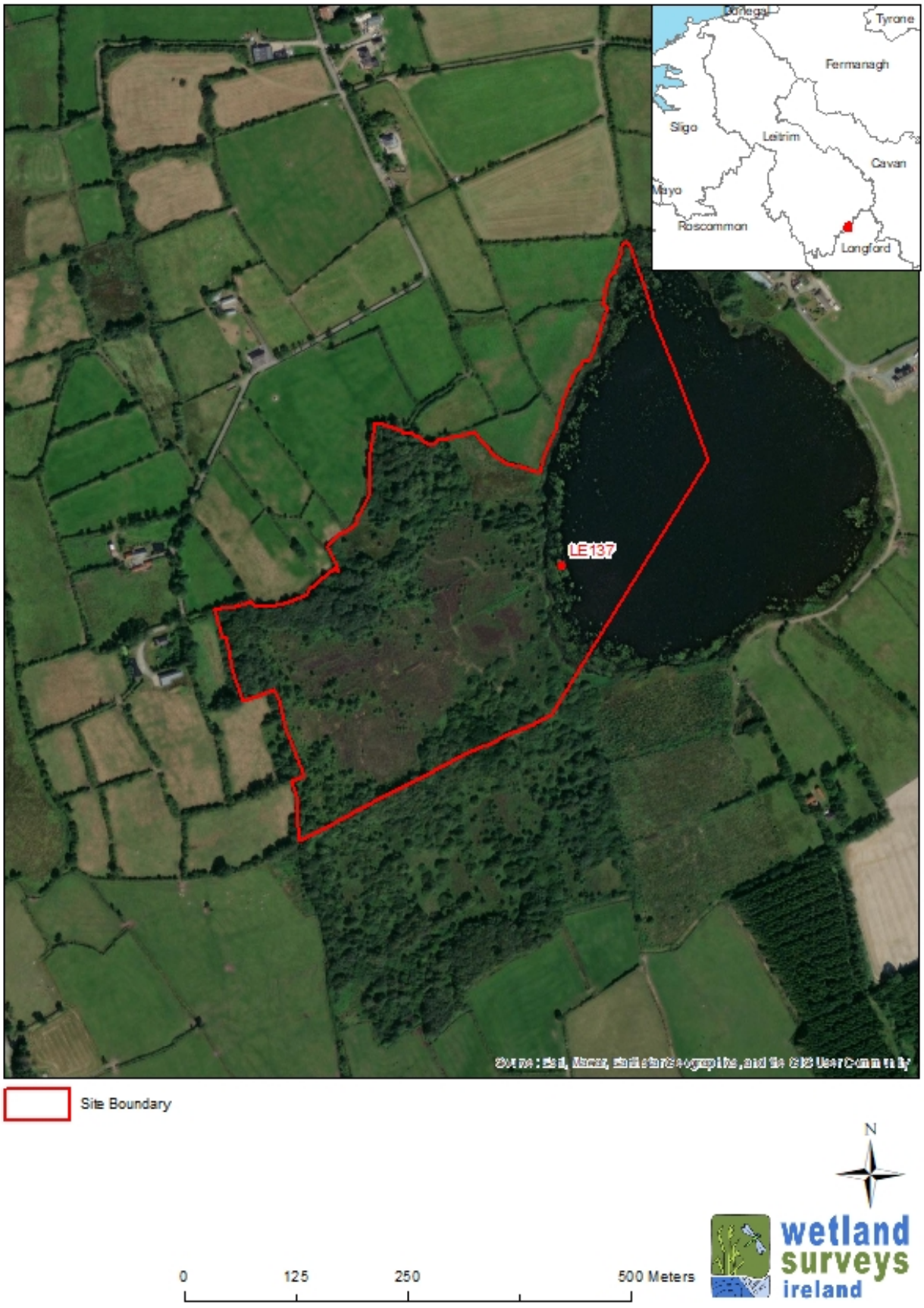
Flora on site - Latin & English species name

Alnus glutinosa	Alder
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Caltha palustris	Marsh-marigold
Cladonia portentosa	Branching Lichen
Dactylorhiza sp.	Orchid
Erica tetralix	Cross-leaved Heath
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Filipendula ulmaria	Meadowsweet
Juncus acutiflorus	Sharp-flowered Rush
Molinia caerulea	Purple Moor-grass
Narthecium ossifragum	Bog Asphodel
Nuphar lutea	Yellow Water-lily
Phalaris arundinacea	Reed Canary-grass
Pteridium aquilinum	Bracken
Ranunculus flammula	Lesser Spearwort
Salix aurita	Eared Willow
Salix cinerea subsp. cinerea	Grey Willow
Schoenoplectus lacustris	Common Club-rush
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum cuspidatum	Feathery Bog Moss
Sphagnum divinum	Magellanic Bog-moss
Sphagnum papillosum	Papillose Bog Moss
Trichophorum cespitosum	Deergrass
Typha latifolia	Bulrush

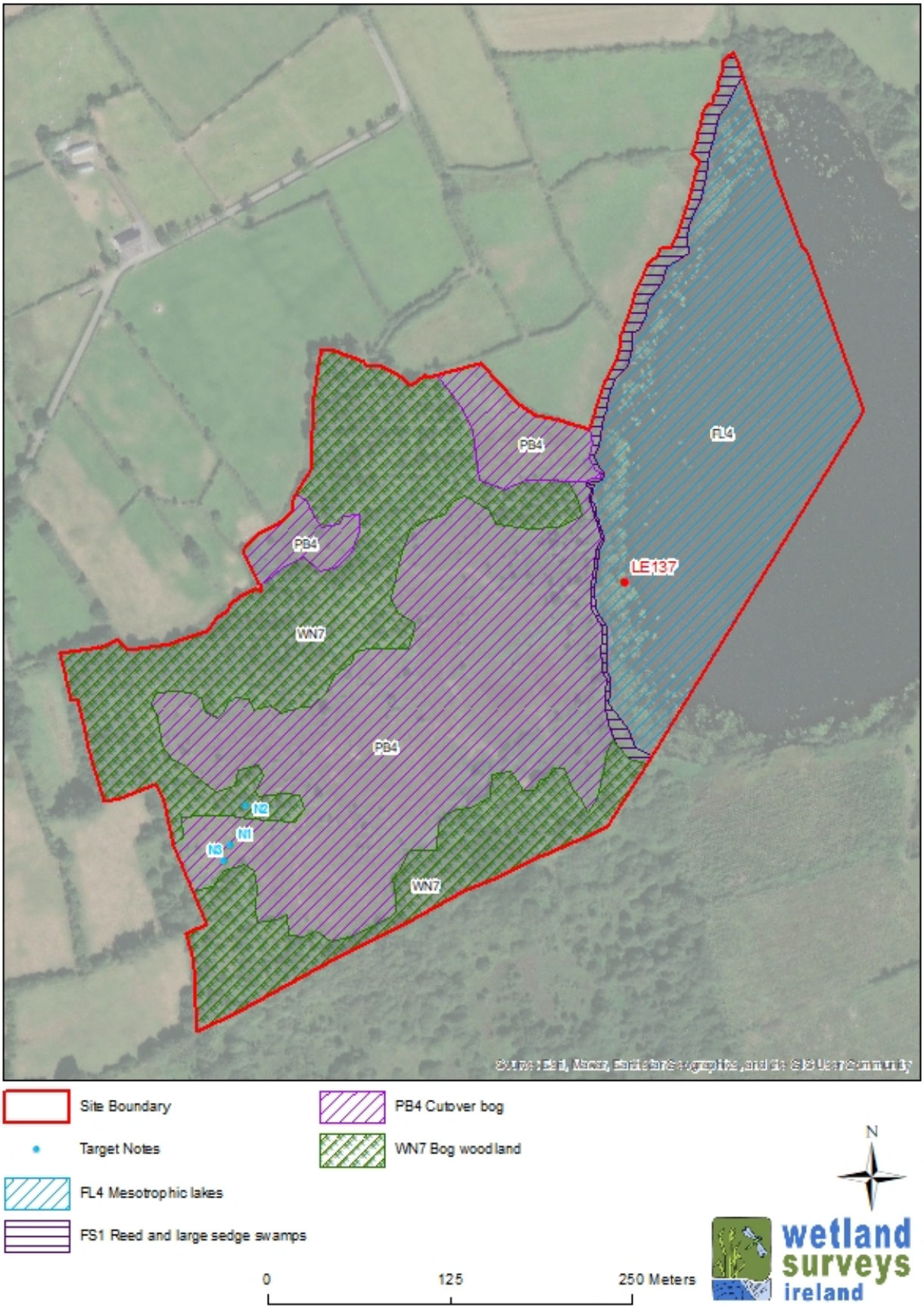
Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: LOUGH SALLAGH SOUTH (LEITRIM)

Site Code: LE40 **Area (ha):** 37.79 **Grid Ref:** 215896 291720 **County:** LE LF

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
18/06/2024

Survey Code:
LEWS2024

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:
CORNAGEEHA (Mohill By)

Solid Geology:
COURCEYAN "basal clastics"

Subsoil type:
Water

Substrate type:
Loose Rock
Silt

Substrate stability:
Firm

River catchment:
Shannon Upr

CORINE Habitats:
Pastures

Site Location

Mesotrophic lake in low lying agricultural land, located on the County Leitrim/Longford border, north of Drumlish village and approximately 8km south east of Mohill.

Site Description and Wetland Habitats Recorded

Lough Sallagh South is a shallow lake, moderately rich in nutrients. It is mainly fringed with reed swamp dominated by Phragmites australis, with pockets of Scheonoplectus lacustris. The northwest edge of the lake is fringed with annex quality transition mire. The lake's open water has Nuphar lutea around the edges, and circular stands of S. lactustris. It is managed and used primarily as a fishing lake with stocks of Bream, Roach and Pike. The lake is surrounded by Salix dominated Wet woodland and Wet grassland used for agriculture.

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

No.	Category	Comment
N1	GENERAL	Private lake access with hut at the waters edge.
N2	GENERAL	Private lake access.
N3	GENERAL	Private lake access with track to waters edge.

Management Recommendations following survey

Increase buffer zones (and fence them) around lake in an effort to reduce excess nutrient inputs from entering it. Manage vehicle access to the lake at the southeast end, to reduce the risk of pollution from road runoff and vehicles, signage could also be implemented in this area displaying the guidance on recreational boating to reduce the risk of impacts to water quality and spreading alien invasives.

Future Survey Recommendations

None.

Landowner Information Comments

Surveyed from public, roadside lake access.

Description of potential EU Habitats Directive Annex 1 habitats

The transition mire recorded to the northwest of the lake corresponds to the EU Annex 1 habitat Transition Mires and Quaking Bogs (7140).

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

EU Habitats Directive habitats on site

7140 Transition mires and quaking bogs

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

GS4 Wet grassland

WD4 Conifer plantation

WL1 Hedgerows

WL2 Treelines

WS1 Scrub

Landuse / Management Activity	Frequency of use
Grazing - cattle	1 Rare (<5%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact

A04.02.01 non intensive cattle grazing	B = medium	- 1 = reparable negative influence
H01.03 other point source pollution to surface water	D = unknown	- 1 = reparable negative influence
H01.05 diffuse pollution to surface waters due to	D = unknown	- 1 = reparable negative influence
H04.02 Nitrogen-input	B = medium	- 1 = reparable negative influence

Threats

H01.03 other point source pollution to surface water

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

H04.02 Nitrogen-input

Damaging Operations Comments

A moderate level of algae was present in the lake, likely a result of diffuse pollution from the surrounding agricultural land and point source pollution from the road network. Cattle have direct access to the lake at the northern end of the site with poaching and fecal matter at the waters edge, this will contribute to the sediment and nutrient levels in the lake.

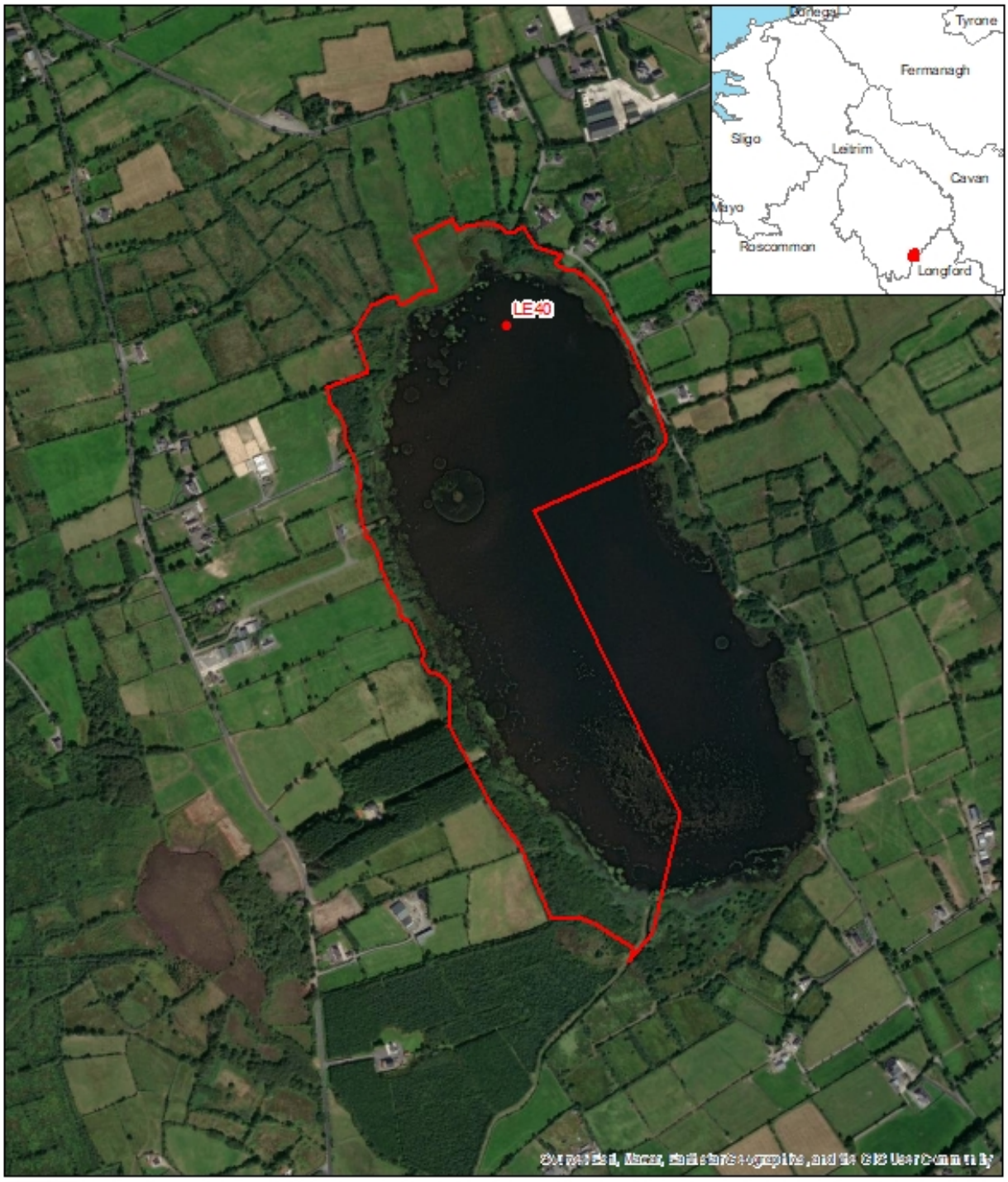
Flora on site - Latin & English species name

Algae	
Alnus glutinosa	Alder
Comarum palustre	Marsh Cinquefoil
Eleocharis palustris	Common Spike-rush
Filipendula ulmaria	Meadowsweet
Fraxinus excelsior	Ash
Juncus effusus	Soft-rush
Menyanthes trifoliata	Bogbean
Nuphar lutea	Yellow Water-lily
Phalaris arundinacea	Reed Canary-grass
Phragmites australis	Common Reed
Potentilla anserina	Silverweed
Ranunculus acris	Meadow Buttercup
Ranunculus flammula	Lesser Spearwort
Salix cinerea subsp. cinerea	Grey Willow
Salix sp.	Willow
Schoenoplectus lacustris	Common Club-rush
Senecio aquaticus	Marsh Ragwort
Trifolium repens	White Clover
Typha latifolia	Bulrush

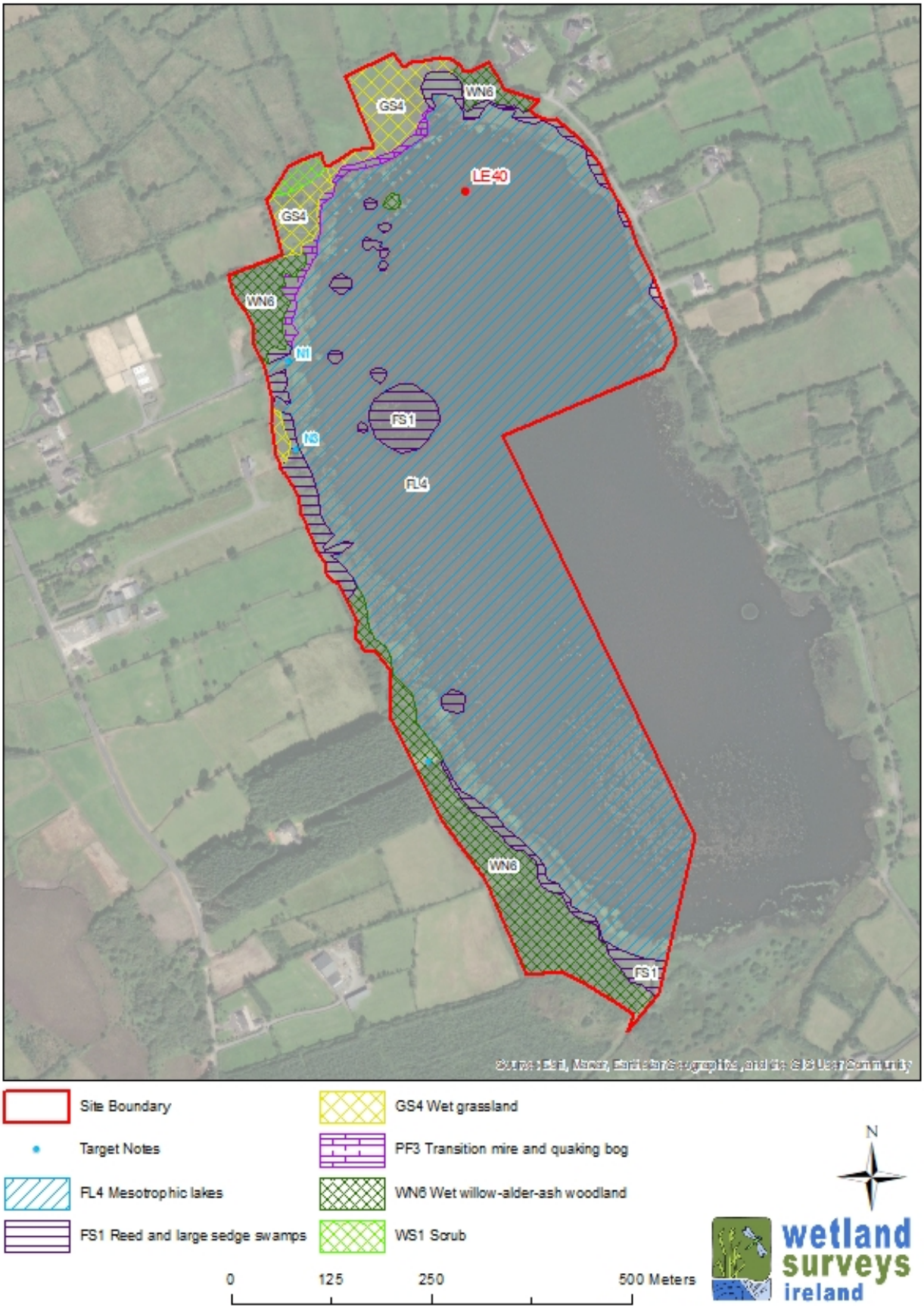
Fauna on site - English and Latin species name

Great Crested Grebe	*Podiceps cristatus*
Grey Heron	*Ardea cinerea*
Mute Swan	*Cygnus olor*

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: MUCKANAGH DRUMGOWNAGH BOG

Site Code: LE128 **Area (ha):** 70.59 **Grid Ref:** 213783 294540 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
03/07/2024

Survey Code:
LEWS2024

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:
MUCKANAGH

Solid Geology:
COURCEYAN "basal clastics"

Subsoil type:
Cut

Substrate type:
Peat

Substrate stability:
Firm

River catchment:
Shannon Upr

CORINE Habitats:
Peat bogs

Site Location

Large Raised bog located 5.2km south-east of Mohill and 3.6km north-west of the Leitrim/Longford border.

Site Description and Wetland Habitats Recorded

Raised bog dominated by Calluna vulgaris, Eriophorum spp. and Cladonia spp., drainage occurs throughout the site and has resulted in degradation with evidence of drying peat, subsidence and patches of bare peat. Active peat cutting is present at the edges of the high bog, with a 2m high face-bank in some places. Some of the disused cutover areas are now being encroached by Salix and Betula pubescence scrub, with pocket of developed/developing bog woodland (non-annex).

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

No.	Category	Comment
N1	DAMAGE	Turf cutting.
N10	DAMAGE	Historic drain fully vegetated.
N11	DAMAGE	1m wide, 30cm deep, vegetated drain.
N12	DAMAGE	2m wide shallow historic drain full of Sphagnum papillosum, S.divinum, Eriophorum vaginatum. Adjacent dry bank formed from turf dug out for the drain.
N13	DAMAGE	2m+ cut facebank.
N14	HABITAT	Cutover bog with Eriophorum angustifolium, Molinia caerula and leggy Calluna vulgaris. Birch pubescens and Salix spp. colonisation present.
N15	HABITAT	Low Sphagnum cover. 50 percent cover of Cladonia sp. and bare peat combined.
N16	HABITAT	Cutover, Molinia caerula dominated with leggy Calluna vulgaris, Pteridium aquilinum and conifer saplings.
N17	HABITAT	Betula pubescens dominated Cutover bog - Bog woodland.
N18	HYDROLOGY	2m wide and deep drain running along base of 2m+ facebank. Potamogetom sp. and Sphagnum spp. in the drain. Betula pubescens scrub on Cutover bog, up to mineral ridge.
N19	HABITAT	Facebank ecotope with large cracks.
N2	DAMAGE	Drying cut turf.
N3	DAMAGE	Tuft cut and footed.
N4	DAMAGE	2m facebank freshly cut
N5	HABITAT	Marginal high bog. High cover of Cladonia sp.

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 it’s conservation value. Aim to cease turf cutting by liaising with turf cutter. Consider removing non-native conifers from the site.

Future Survey Recommendations
A hydrological survey is recommended to inform drain blocking and restoration works as blocking internal drains would likely enhance the quality of the bog and aid carbon sequestration.

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
FW4 Drainage ditches
PB1 Raised bogs
PB4 Cutover bog
WN7 Bog woodland
WS1 Scrub

EU Habitats Directive habitats on site
None noted

Fossitt habitats surrounding site
BL3 Buildings and artificial surfaces
WD4 Conifer plantation
WL2 Treelines
WN Semi-natural woodland
WS1 Scrub

Landuse / Management Activity	Frequency of use
None	4 Dominant (>50%)
Peat cutting (mechanical)	2 Occasional (5-20%)

Impacting Activity (EU code and title)	Intensity	Impact
C01.03.02 mechanical removal of peat	A = high	- 2 = irreparable negative influence
D01.01 paths, tracks, cycling tracks	C = low	- 1 = reparable negative influence
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence

Threats
B01.02 artificial planting on open ground (non-native trees)
C01.03.02 mechanical removal of peat
D01.01 paths, tracks, cycling tracks
J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments
Drainage is present throughout the bog impacting the hydrology, and active peat cutting occurs in multiple locations at the edge of the high bog (south, east and north). Dirt tracks on site are used to access peat cutting areas. The near by coniferous plantations are acting as a seed source for the non-native conifers taking root on the bog.

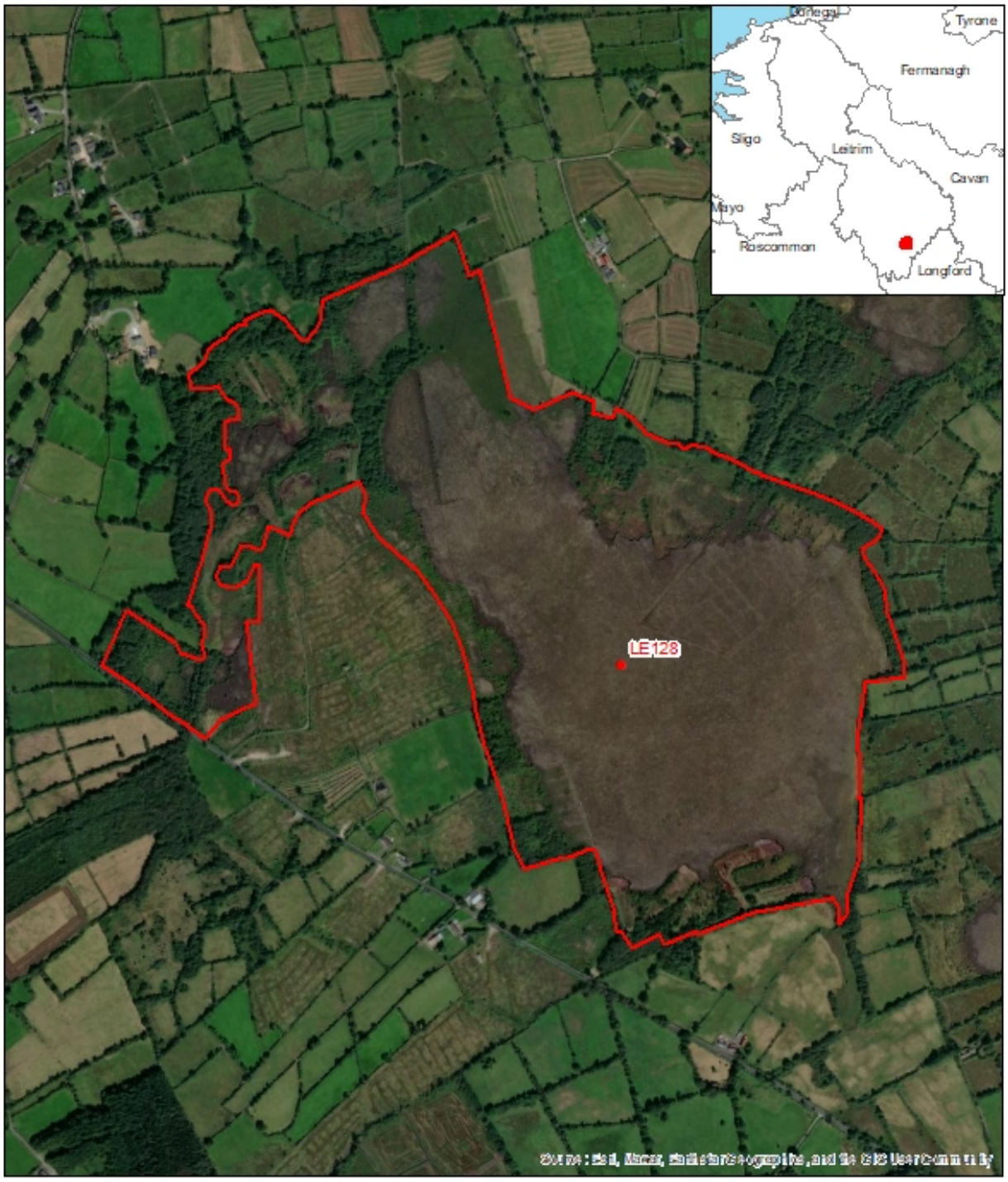
Flora on site - Latin & English species name	
Andromeda polifolia	Bog-rosemary
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Carex panicea	Carnation Sedge
Carex sp.	Sedge
Cladonia portentosa	Branching Lichen
Cladonia uncialis	Antler Lichen
Comarum palustre	Marsh Cinquefoil
Drosera anglica	Great Sundew
Drosera intermedia	Oblong-leaved Sundew
Drosera rotundifolia	Round-leaved Sundew

Erica tetralix	Cross-leaved Heath
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Juncus effusus	Soft-rush
Molinia caerulea	Purple Moor-grass
Myrica gale	Bog-myrtle
Narthecium ossifragum	Bog Asphodel
Picea sp.	Spruce
Pinus contorta	Lodgepole Pine
Pleurozium schreberi	Red-stemmed Feather Moss
Polytrichum commune	Common Haircap Moss
Potamogeton polygonifolius	Bog Pondweed
Pteridium aquilinum	Bracken
Rhynchospora alba	White Beak-sedge
Salix cinerea subsp. cinerea	Grey Willow
Sphagnum capillifolium subsp. rubellum	Red Bog Moss
Sphagnum divinum	Magellanic Bog-moss
Sphagnum papillosum	Papillose Bog Moss
Sphagnum subnitens	Lustrous Bog Moss
Sphagnum tenellum	Soft Bog Moss
Trichophorum cespitosum	Deergrass
Vaccinium oxycoccos	Cranberry

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



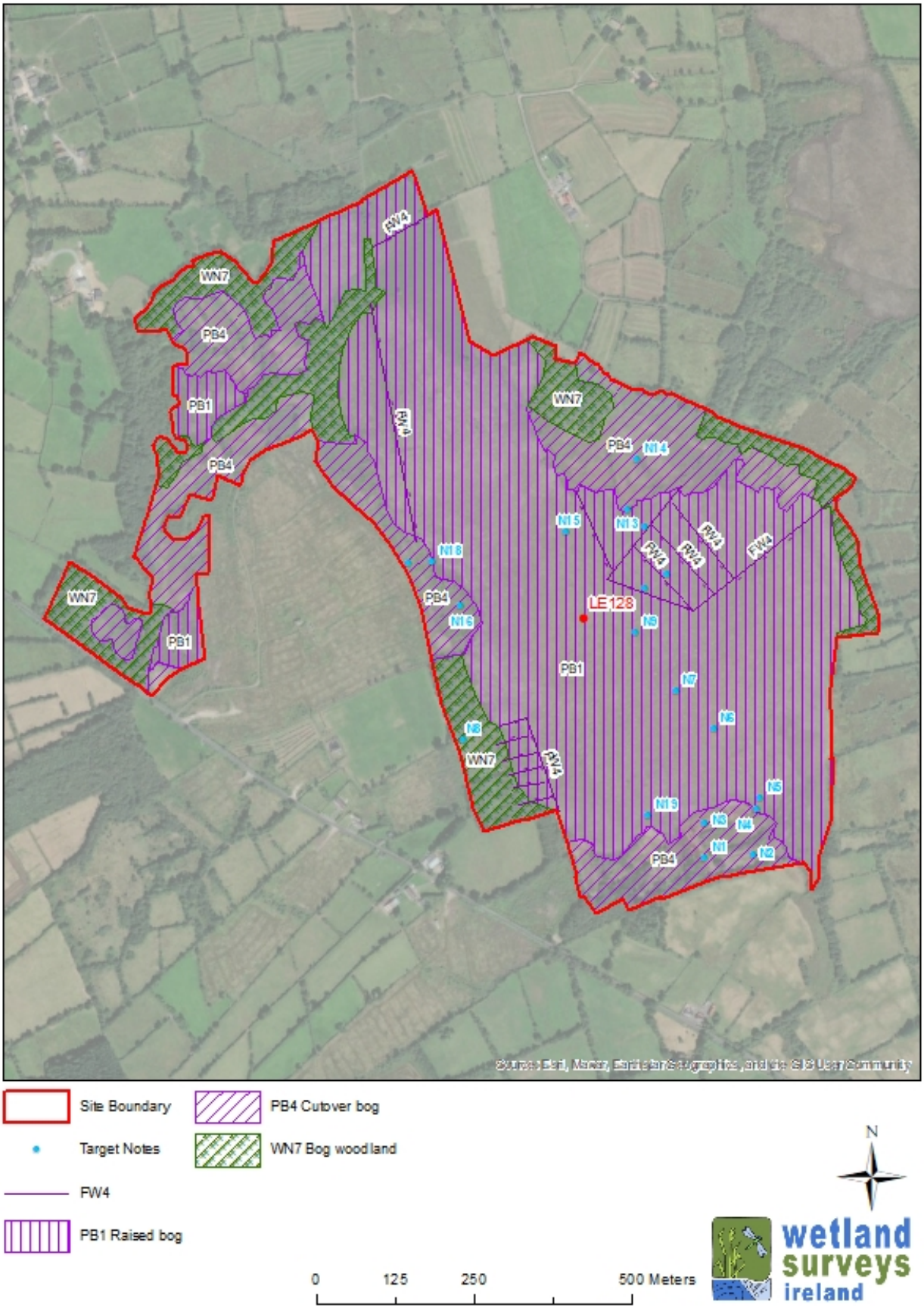
Site Boundary

N

0 125 250 500 750 Meters

wetland surveys ireland

GIS Habitat map of the site



Site Name: STONEPARK LOUGH

Site Code: LE324 **Area (ha):** 10.27 **Grid Ref:** 179298 332188 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
02/07/2024

Survey Code:
LEWS2024

Site source information:
Detailed Wetland Survey undertaken
NPWS National Fen Survey recommended
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:
STONEPARK

Solid Geology:	**Subsoil type:**
Slishwood Division	Cut
Substrate type:	**Substrate stability:**
Peat	Firm

River catchment:
Garvogue

CORINE Habitats:
Land principally occupied by

Site Location

Small mesotrophic lake surrounded by a wetland complex, located approximately 1.3km north-west of Dromahair village, county Leitrim.

Site Description and Wetland Habitats Recorded

Mesotrophic lake with Nuphar lutea, Nymphaea alba, Potamogeton natans and Alisma plantago-aquatica, fringed with reed swamp dominated by Phalaris arundinacea and Phagmites australis. Transition mire (with abundant Equisetum fluviatile and Menyanthes trifoliata), fen (dominated by sedges and rushes) and wet grassland form the complex of habitats surrounding the lake, with an area of wet woodland to the east. Drainage is having a significant effect on the wetland hydrology, with 1m deep drains frequently occurring throughout the site.

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

No.	Category	Comment
N1	HABITAT	Poor fen, Carex dominated with Mentha aquatica, Juncus, Potentilla anserina, Trifolium repens
N10	HABITAT	More fen like here but drains still impacting hydrology
N11	HYDROLOGY	Drain here less than 1m and not to mineral layer.
N12	FLORA	Sphagnum spp, Carex echinata, C.nigra, and C.leporina are dominat sedges, Trifolium repens and grasses also present.
N13	HYDROLOGY	1m wide shallow drain with Carex rostrata and Comarum palustre.
N14	FLORA	Carex paniculata with Alnus glutinosa and Salix spp. scrub
N15	HABITAT	Carex dominated with Equisetum fluviatile, Juncus spp., Mentha aquatica and Eriophorum angustifolium
N16	HABITAT	Menyanthes trifoliata here, with high cover of Equisetum fluviatile
N17	HABITAT	Pteridium aquilinum and Ulex europaeus scrub
N18	HABITAT	Salix scrub with Molinia caerula and Carex paniculata
N19	HYDROLOGY	2m wide, 1m deep, wet vegetated drain
N2	HABITAT	Carex dominated fen
N3	FLORA	Carex paniculata along fence/old vegetated drain
N4	HABITAT	Poor fen. High cover of Juncus spp. and Carex including C.panicea, C.echinata and C. nigra. Mentha aquatica, Filipendula ulmaria, and Eriophorum angustifolium also present. This field hasn't been grazed by cattle yet this year.
N5	MANAGEMEN	Being grazed by cattle at time of survey

Management Recommendations following survey

Consider blocking drainage to improve the hydrological integrity of the wetland habitats and subsequently their condition.

Future Survey Recommendations
Hydrological assessment to determine best management practices for the site. A detailed survey of the fen and transition mire is recommended.

Landowner Information Comments
Spoke to landowner who granted access.

Description of potential EU Habitats Directive Annex 1 habitats
Some areas of transition mire to the north 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	
FW4 Drainage ditches	
GS4 Wet grassland	
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
WL1 Hedgerows
WL2 Treelines
WS1 Scrub

Landuse / Management Activity	Frequency of use
Grazing - cattle	3 Frequent (21-50%)
Grazing - sheep	3 Frequent (21-50%)
None	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
A04.02.02 non intensive sheep grazing	C = low	+1= natural positive influence
J02.05 Modification of hydrographic functioning,	B = medium	- 1 = reparable negative influence

Threats

A04.02.01 non intensive cattle grazing
A04.02.02 non intensive sheep grazing
H01.03 other point source pollution to surface water
H01.05 diffuse pollution to surface waters due to agricultural and forestry activities
J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments
Drainage is having a negative effect on the hydrology of the of the wetland habitats. Livestock grazing is having a positive effect on site vegetation at present. Nutrient and sediment input into the lake is likely from the surrounding agricultural land and drainage.

Flora on site - Latin & English species name

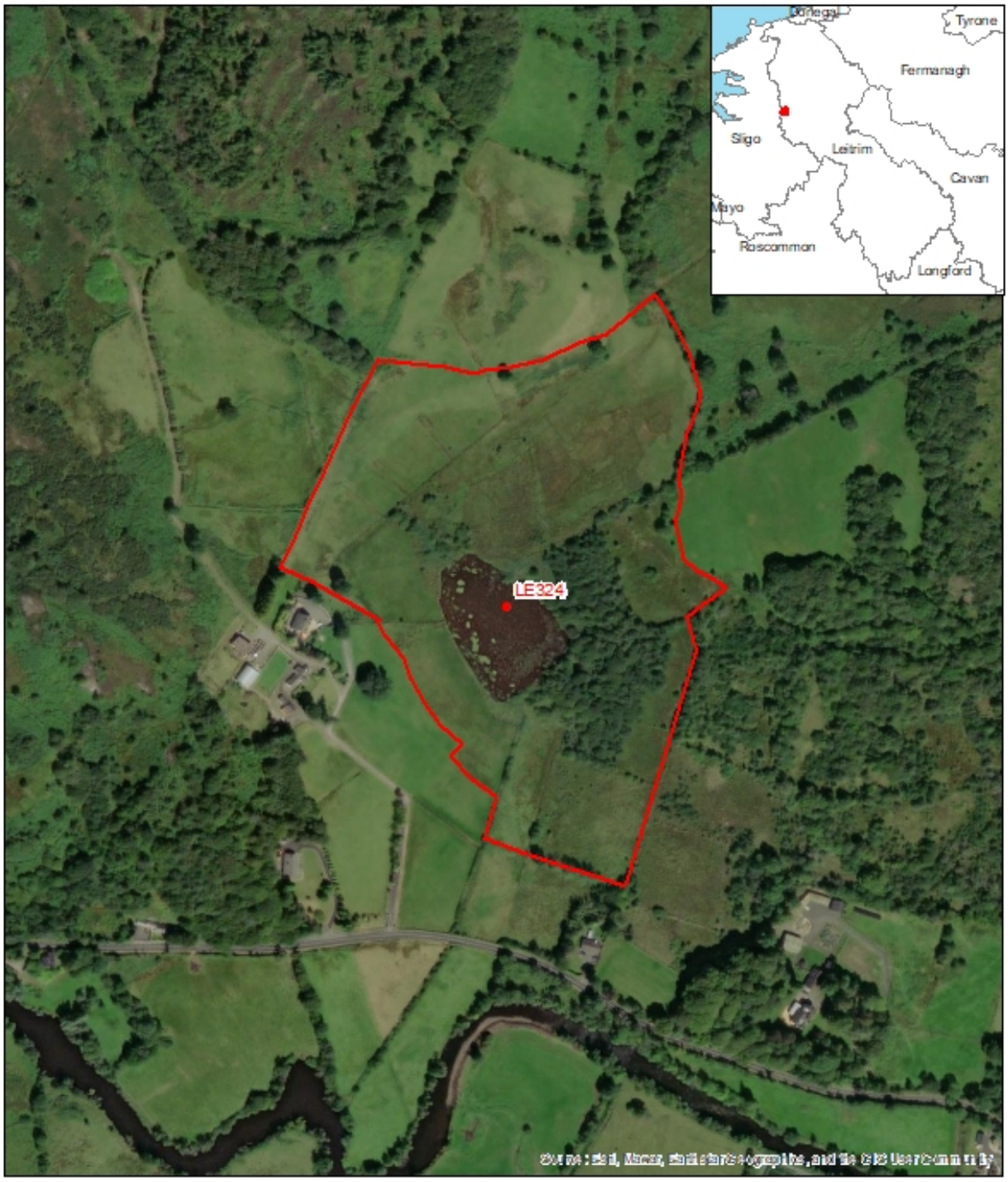
Alisma plantago-aquatica		Water-plantain
Alnus glutinosa		Alder
Angelica sylvestris		Wild Angelica
Calliergonella cuspidata		Pointed Spear Moss
Caltha palustris		Marsh-marigold
Carex echinata	189	Star Sedge

Carex lepidocarpa	Long-stalked Yellow-sedge
Carex leporina	Oval Sedge
Carex nigra	Common Sedge
Carex paniculata	Greater Tussock-sedge
Carex rostrata	Bottle Sedge
Comarum palustre	Marsh Cinquefoil
Equisetum fluviatile	Water Horsetail
Eriophorum angustifolium	Common Cottongrass
Filipendula ulmaria	Meadowsweet
Galium palustre	Marsh-bedstraw
Holcus lanatus	Yorkshire-fog
Hydrocotyle vulgaris	Marsh Pennywort
Iris pseudacorus	Yellow Iris
Juncus articulatus	Jointed Rush
Juncus conglomeratus	Compact Rush
Juncus effusus	Soft-rush
Lychnis flos-cuculi	Ragged-Robin
Lythrum salicaria	Purple-loosestrife
Mentha aquatica	Water Mint
Menyanthes trifoliata	Bogbean
Molinia caerulea	Purple Moor-grass
Nuphar lutea	Yellow Water-lily
Nymphaea alba	White Water-lily
Phalaris arundinacea	Reed Canary-grass
Phragmites australis	Common Reed
Potamogeton natans	Broad-leaved Pondweed
Potentilla anserina	Silverweed
Potentilla erecta	Tormentil
Pteridium aquilinum	Bracken
Rhytidiadelphus squarrosus	Springy Turf-Moss
Salix aurita	Eared Willow
Salix cinerea subsp. cinerea	Grey Willow
Schoenoplectus lacustris	Common Club-rush
Sphagnum denticulatum	Cow-horn Bog Moss
Trifolium repens	White Clover
Typha latifolia	Bulrush
Ulex europaeus	Gorse
Valeriana officinalis	Common Valerian

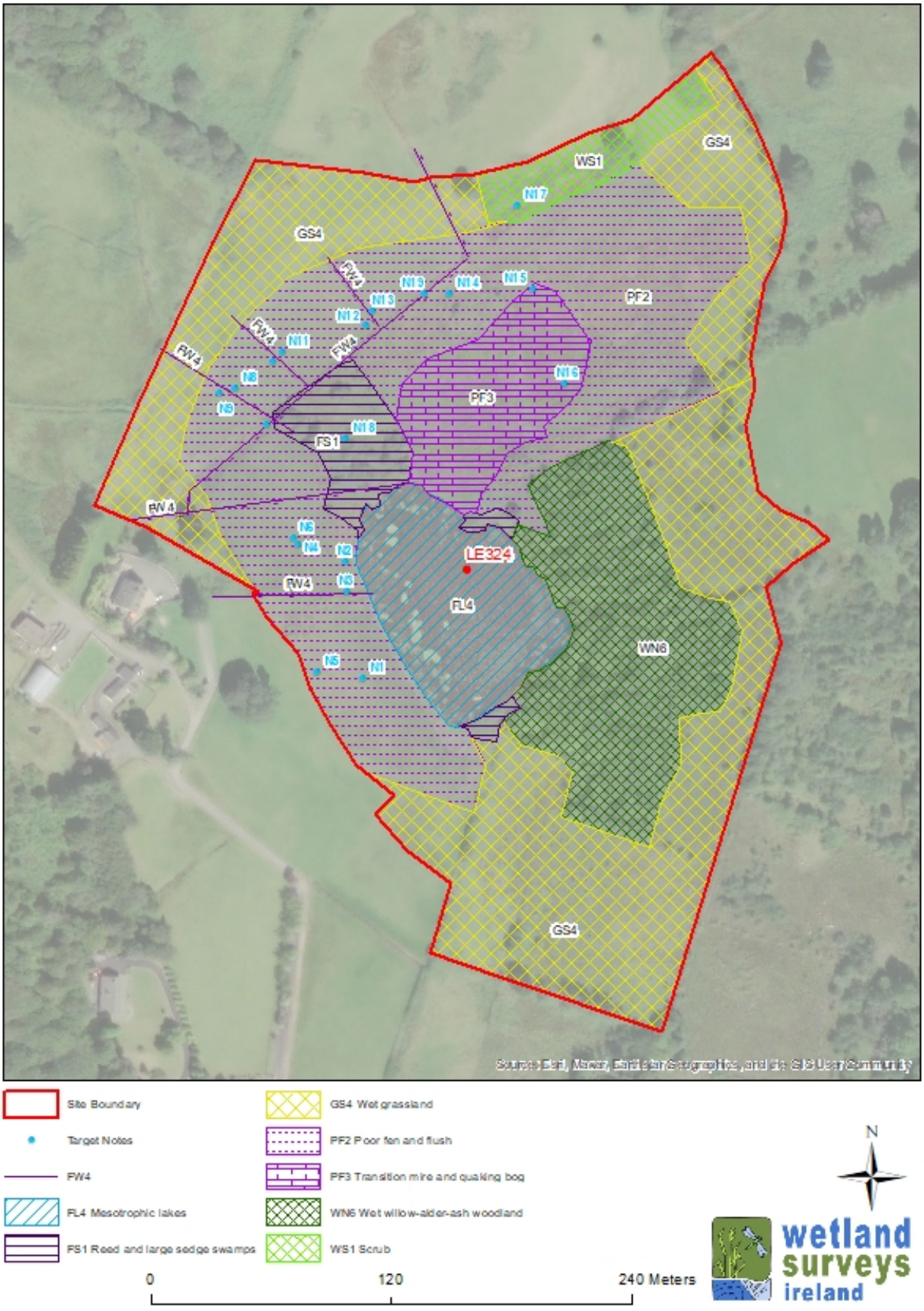
Fauna on site - English and Latin species name

Dragon and Damselflies

Aerial Photograph showing location of the site

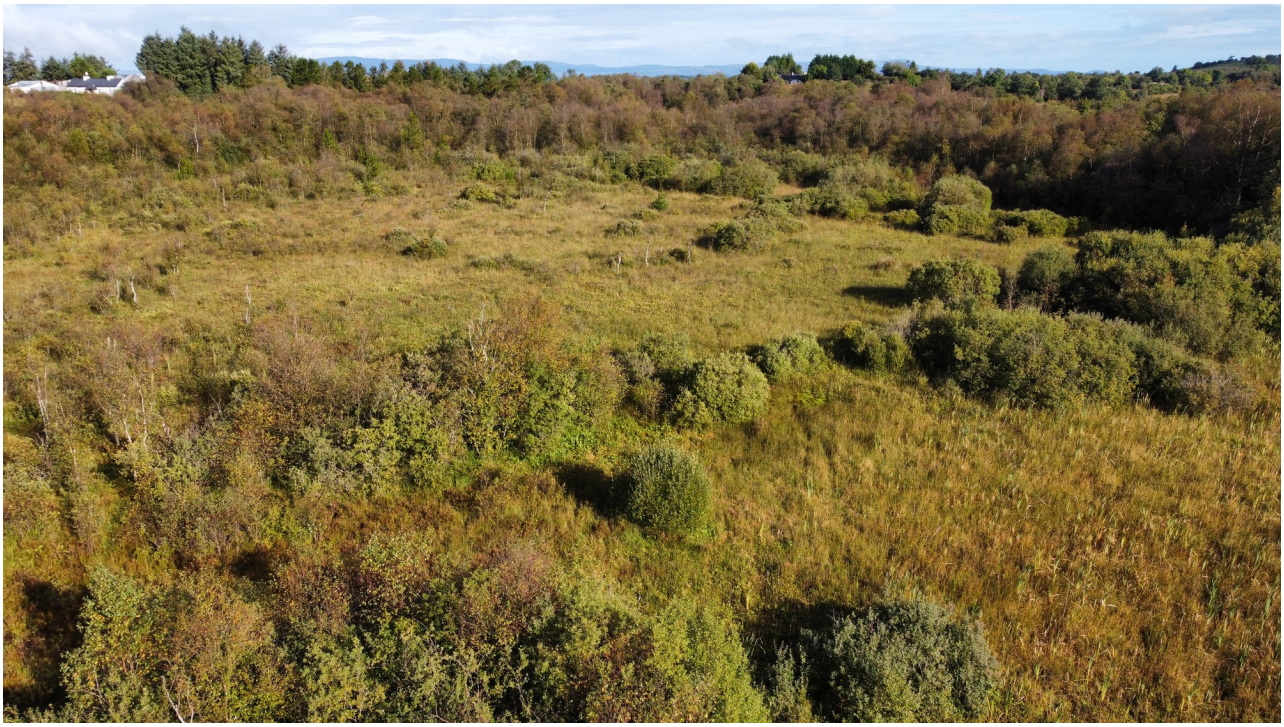


GIS Habitat map of the site



Site Name: SUNNAGH MORE SOUTH

Site Code: LE120 **Area (ha):** 13.52 **Grid Ref:** 215796 297472 **County:** LE



Site designation(s):
Undesignated site

Surveyed by:
Adam Vanmechelen & Poppy Overy

Date of wetland survey:
12/09/2024

Survey Code:
LEWS2024

Site source information:
Additional Survey may be required
Detailed Wetland Survey undertaken
NPWS National Fen Survey recommended
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:
SUNNAGH MORE

Solid Geology:	**Subsoil type:**
Derryveeny Formation	Cut
Substrate type:	**Substrate stability:**
Peat	Soft

River catchment:
Shannon Upr

CORINE Habitats:
Pastures

Site Location

Peatland complex surrounded by Wet grassland, located approximately 6.2km east of Mohill.

Site Description and Wetland Habitats Recorded

The south and north sections of the site support cutover bog and bog woodland, whilst the centre of the site is dominated by transition mire where Equisetum fluviatile, Sphagnum spp., Menyanthes trifoliata and Carex spp. are abundant. The bog woodland in the south is not thought to be annex quality as the substrate is relatively dry, and the understory is dominated by Rubus fruticosus and Pteridium aquilinum. Towards the centre of the site, adjacent to the transition mire the bog woodland is likely to be of better quality. The cutover bog has an abundant cover of Sphagnum spp. with Molinia caerulea and Calluna vulgaris dominating the vascular vegetation, Betula pubescens saplings are common across the peatland. Patches of scrub occur across the site dominated by Ulex europaeus.

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

No.	Category	Comment
N1	HABITAT	Cutover bog, Molinia caerula is dominant with Betula pubescens saplings becoming abundant.
N2	INVASIVE	Invasive - Prunus laurocerasus
N3	INVASIVE	Invasive - Prunus laurocerasus
N4	HABITAT	Transition mire and quaking bog, with abundant Sphagnum spp., Equisetum fluviatile and Menyanthes trifoliata.
N5	HABITAT	Transition mire with Scrub.

Management Recommendations following survey

The control and removal of invasive species is a priority. A Prunus laurocerasus management plan should be put in place. Consider actions to raise water table such as blocking internal drains as this would likely enhance the quality of the bog.

Future Survey Recommendations

A detailed fen survey of the transition mire is recommended and a more detailed survey of the Bog woodland should be considered to determine the condition of its full extent. Consider a hydrological survey to better inform actions and management onsite. Establish extent of rhododendron and other invasive species.

Landowner Information Comments

Spoke with landowner of the peatland, they gladly granted access but said there's no maintained entrance so had to climb in from the road.

Description of potential EU Habitats Directive Annex 1 habitats

Good quality Transition mire is present at the centre of the site. The site also supports Bog woodland dominated with Birch, the area to the south of the site does not conform to the EU Habitats Directive priority habitat type, but parts of the woodland in the centre may correspond.

Main Fossitt habitats on site

BL3 Buildings and artificial surfaces

FW4 Drainage ditches

PB4 Cutover bog

PF3 Transition mire & quaking bog

WL1 Hedgerows

WN6 Wet willow-alder-ash woodland

WN7 Bog woodland

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

EU Habitats Directive habitats on site

7140 Transition mires and quaking bogs

91D0 *Bog woodland

FW4 Drainage ditches

GA1 Improved agricultural grassland

GS4 Wet grassland

WL1 Hedgerows

WL2 Treelines

Landuse / Management Activity	Frequency of use
Grazing - cattle	1 Rare (<5%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A04.02.01 non intensive cattle grazing	C = low	- 1 = reparable negative influence
D02 Utility and service lines	C = low	Unknown
J02.05 Modification of hydrographic functioning,	C = low	- 1 = reparable negative influence

Threats

A04.02.01 non intensive cattle grazing

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

The site has power line running through it and cattle grazing likely effects the edge of site. Open drains occur at the boundary of the site and old vegetated drainage occurs throughout the site, these will be impacting the site hydrology.

Flora on site - Latin & English species name

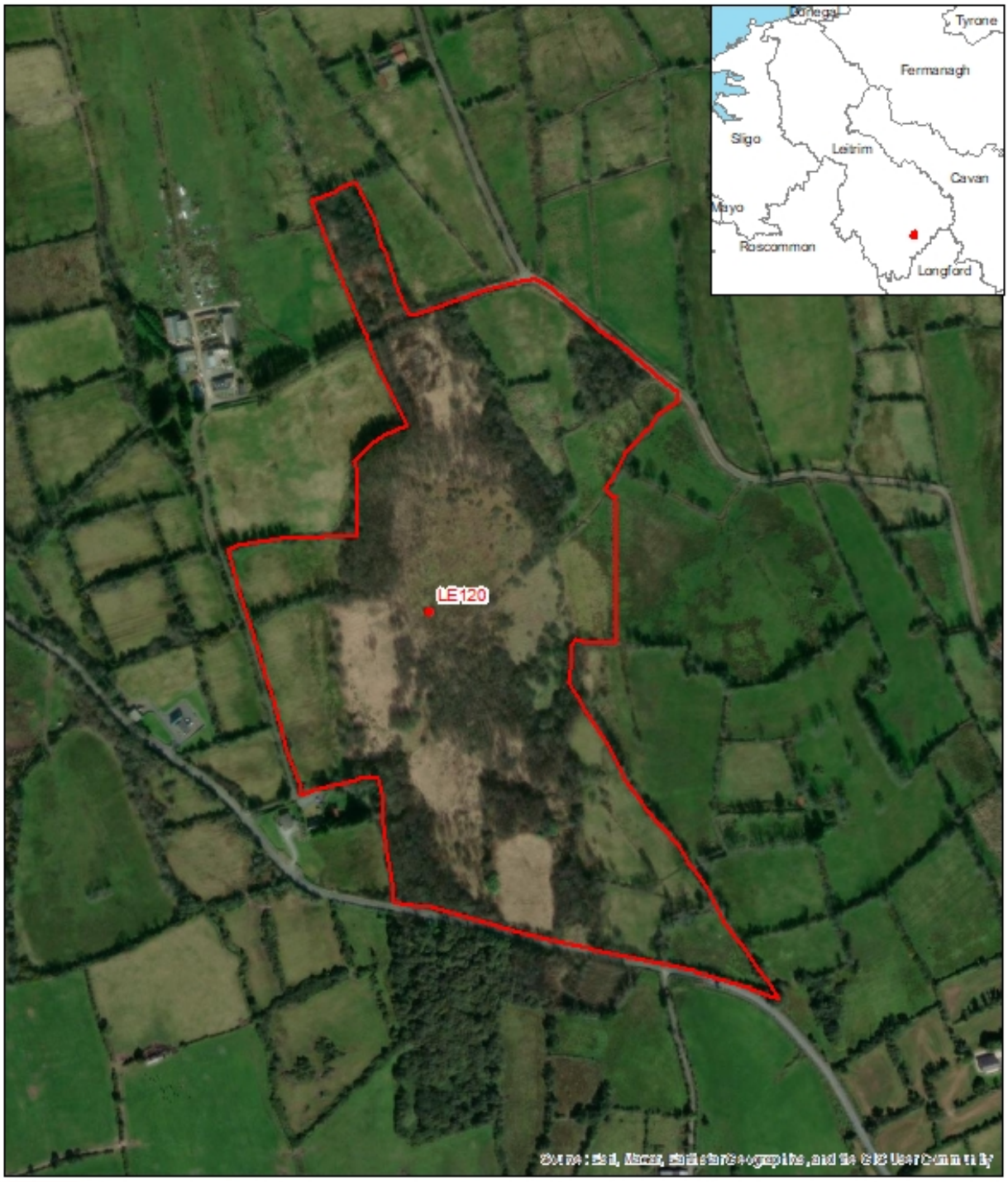
Anthoxanthum odoratum	Sweet Vernal-grass
Aulacomnium palustre	Bog Bead-moss
Betula pubescens	Downy Birch
Calliergon giganteum	Moss
Calliergonella cuspidata	Pointed Spear Moss
Calluna vulgaris	Ling Heather
Carex echinata	Star Sedge
Carex rostrata	Bottle Sedge
Carex sp.	Sedge
Comarum palustre	Marsh Cinquefoil
Epilobium palustre	Marsh Willowherb
Equisetum fluviatile	Water Horsetail
Erica tetralix	Cross-leaved Heath
Filipendula ulmaria	Meadowsweet
Galium palustre	Marsh-bedstraw
Hedera helix	Ivy
Holcus lanatus	Yorkshire-fog
Ilex aquifolium	Holly
Juncus articulatus	Jointed Rush
Juncus conglomeratus	Compact Rush
Menyanthes trifoliata	Bogbean
Molinia caerulea	Purple Moor-grass
Pinus contorta	Lodgepole Pine
Polytrichum commune	Common Haircap Moss
Potentilla erecta	Tormentil
Prunus laurocerasus	Cherry Laurel
Pteridium aquilinum	Bracken
Rubus fruticosus agg.	Blackberry

Salix cinerea subsp. cinerea	Grey Willow
Sphagnum denticulatum	Cow-horn Bog Moss
Sphagnum fallax	Flat-topped Bog Moss
Sphagnum papillosum	Papillose Bog Moss
Sphagnum rubellum	
Succisa pratensis	Devil's-bit Scabious
Typha latifolia	Bulrush
Ulex europaeus	Gorse
Vaccinium myrtillus	Bilberry

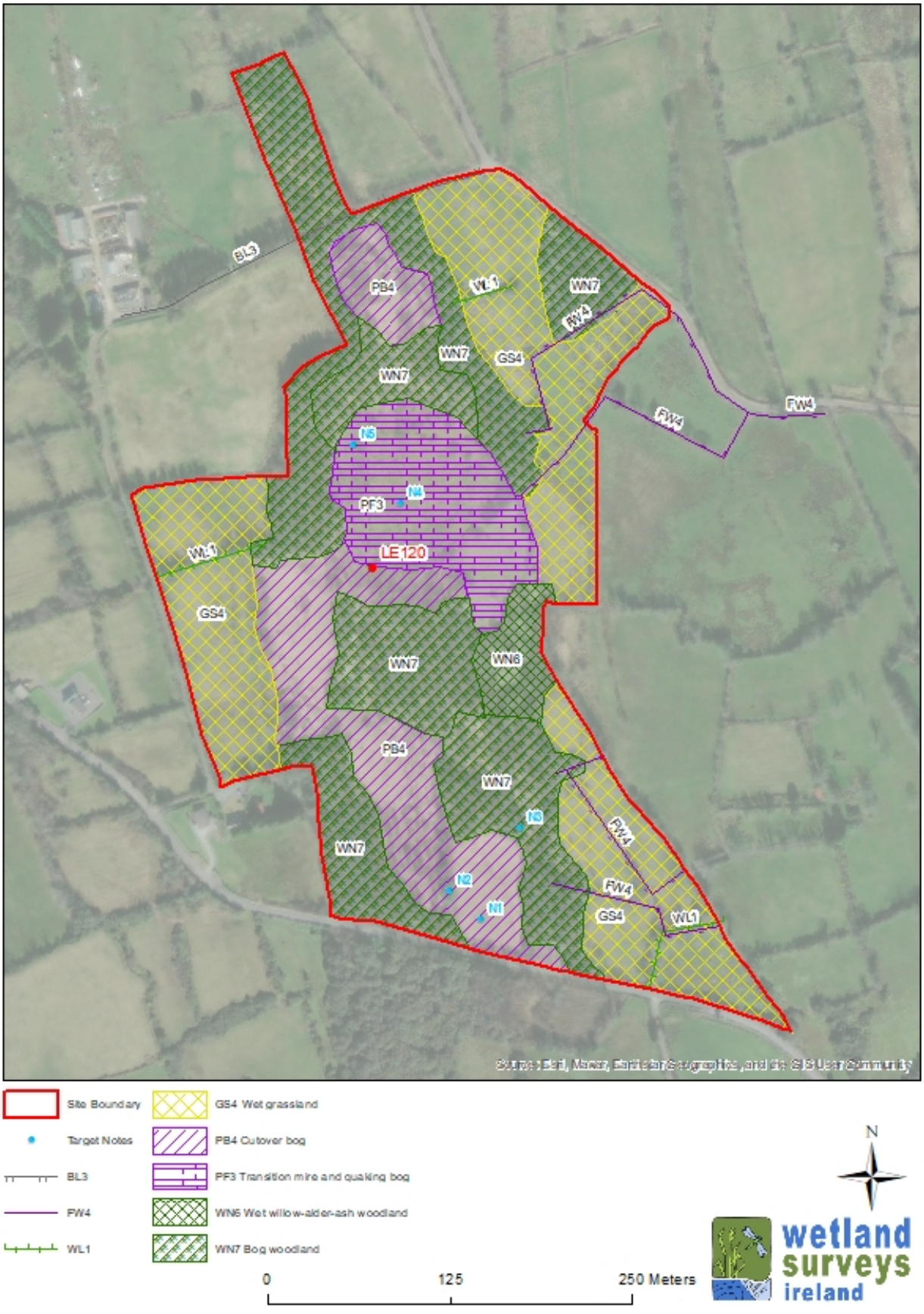
Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: TOWNPARKS WETLAND

Site Code: LE396 **Area (ha):** 11.44 **Grid Ref:** 194195 300308 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
19/06/2024

Survey Code:
LEWS2024

Site source information:
Detailed Wetland Survey undertaken
Site owned by County Council and recommended for survey
UAV survey undertaken

Wetland Present on the Site
YES

Conservation ranking after survey:
C Rating: Local conservation value (high value)

Townland:
TOWNPARKS

Solid Geology:
Carboniferous limestone
Croghan Limestone Formation

Subsoil type:
Cutover raised peat

Substrate type:
Mineral Soil
Peat

Substrate stability:
Soft

River catchment:
Shannon

CORINE Habitats:

Site Location

The site is located within the town of Carrick-on-Shannon near Hartley Buisness Park, the wetland is divided by a road.

Site Description and Wetland Habitats Recorded

The site is dominated by overgrown wet grassland characterized by rushes, sedges and grasses. Large drains are affecting the site hydrology, but the vegetation still suggests a very variable water table. A wetter patch on the west side of the road supports a pocket of reed and large sedge swamp, dominated by the near threatened (Wyse Jackson et al. 2016) sedge, Carex acuta. Herbs onsite include Iris pseudacorus, Lathyrus pratensis, Ranunculus spp. and Filipendula ulmaria. Drier areas around the edge of the site have encroaching scrub.

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

No.	Category	Comment
N1	HABITAT	Overgrown/abandoned - Carex acuta dominates here with Iris pseudacorus, Juncus spp., and Filipendula ulmaria.
N2	HABITAT	Drier here dominated by Holcus lanatus and Ranunculus spp.
N3	FLORA	Carex hirta, Ranunculus repens and grasses.
N4	FLORA	Urtica dioica with grasses and Ranunculus spp.
N5	HABITAT	Carex nigra with Juncus spp. and Lathyrus pratensis.
N6	FLORA	Iris pseudacorus dominated.
N7	GENERAL	Sloping, drier.
N8	GENERAL	Sloping, drier.
N9	HABITAT	Overgrown wet grassland, dominated by grasses and rushes with wetter patches supporting abundant Iris pseudacorus. There's potential the site had more marsh or fen characteristics prior to drainage but it is now significantly impacted.

Management Recommendations following survey

Following the hydrology survey consider blocking drains, develop and implement an extensive management plan which includes grazing or mowing to improve vegetation composition and structure.

Future Survey Recommendations

Consider completing a hydrological survey to better understand how the water moves through the site. There is a potential that some of the drains could be blocked or partially blocked without significantly increasing the risk of flooding.

Landowner Information Comments

No permission required, Leitrim County Council owners.

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

BL3 Buildings and artificial surfaces

FS1 Reed and large sedge swamps

FW4 Drainage ditches

GS4 Wet grassland

EU Habitats Directive habitats on site

None noted

WL1 Hedgerows

WS1 Scrub

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA2 Amenity grassland (improved)

WL1 Hedgerows

WL2 Treelines

Landuse / Management Activity	Frequency of use
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A04.03 abandonment of pastoral systems, lack of	B = medium	- 1 = reparable negative influence
E03.01 disposal of household waste	C = low	- 1 = reparable negative influence
J02.05 Modification of hydrographic functioning,	A = high	- 1 = reparable negative influence

Threats

A03.02 abandonment / lack of mowing

E03.01 disposal of household waste

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

Extensive drains on site have affected the hydrology, and the lack of grazing/mowing has resulted in loss of species richness and structure variation.

Flora on site - Latin & English species name

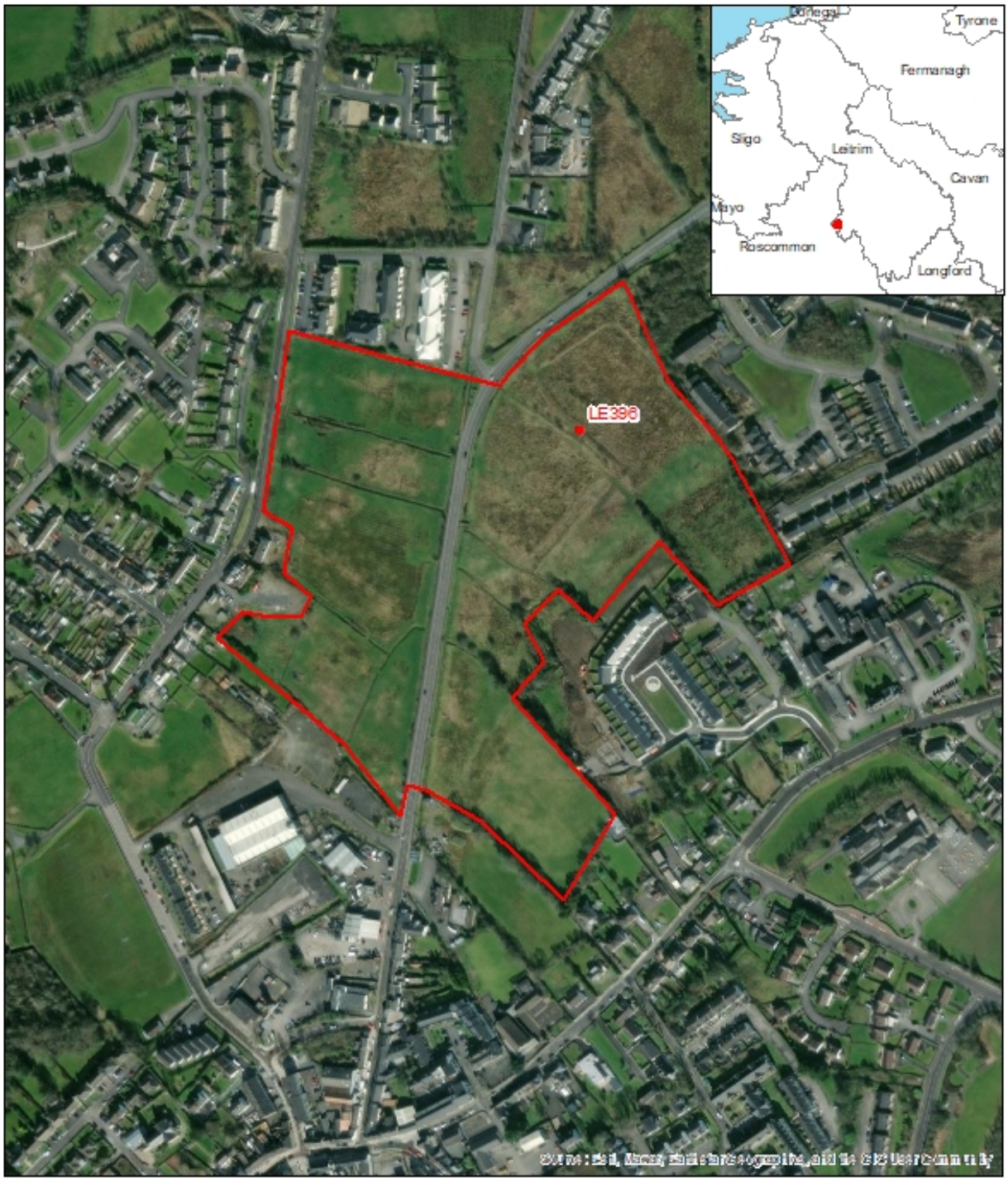
Alopecurus geniculatus	Marsh Foxtail
Angelica sylvestris	Wild Angelica
Anthoxanthum odoratum	Sweet Vernal-grass
Arrhenatherum elatius	False Oat-grass
Carex acuta	Slender Tufted-sedge
Carex disticha	Brown Sedge
Carex hirta	Hairy Sedge
Carex nigra	Common Sedge
Carex rostrata	Bottle Sedge
Cirsium palustre	Marsh Thistle
Crataegus monogyna	Hawthorn
Epilobium hirsutum	Great Willowherb
Epilobium sp.	Willowherb
Equisetum fluviatile	Water Horsetail
Equisetum telmateia	Great Horsetail
Filipendula ulmaria	Meadowsweet
Galium palustre	Marsh-bedstraw
Heracleum sphondylium	Hogweed
Holcus lanatus	Yorkshire-fog
Iris pseudacorus	Yellow Iris
Juncus acutiflorus	Sharp-flowered Rush
Juncus effusus	Soft-rush
Lathyrus pratensis	Meadow Vetchling
Lemna minor	Common Duckweed
Lychnis flos-cuculi	Ragged-Robin
Potentilla anserina	Silverweed

Ranunculus acris	Meadow Buttercup
Ranunculus repens	Creeping Buttercup
Rubus fruticosus agg.	Blackberry
Rumex acetosa	Common Sorrel
Salix cinerea subsp. cinerea	Grey Willow
Stellaria graminea	Lesser Stitchwort
Typha latifolia	Bulrush
Urtica dioica	Common Nettle
Valeriana officinalis	Common Valerian

Fauna on site - English and Latin species name

BUTTERFLIES
Dragon and Damselflies

Aerial Photograph showing location of the site



GIS Habitat map of the site

Leitrim Co Co Map of proposed site

Site Name: TULLINLOUGHAN LOUGH

Site Code: LE335 **Area (ha):** 2.05 **Grid Ref:** 189932 331964 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Joe O'Sullivan & Poppy Overy

Date of wetland survey:
02/07/2024

Survey Code:
LEWS2024

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:
TULLINLOUGHAN

Solid Geology:
Namurian sandstone, shale

Subsoil type:
Water

Substrate type:
Peat

Substrate stability:
Some quaking

River catchment:
Garvogue

CORINE Habitats:
Coniferous forest

Site Location

Horseshoe shaped lake due to the northeast side infilling with transition mire, located 8km south of Manorhamilton.

Site Description and Wetland Habitats Recorded

The site contains a dystrophic lake which is an Annex I habitat, the open water is fringed by Juncus effusus with an abrupt edge to the blanket bog. The northeast side of the lake is infilling, creating poor fen dominated by Carex rostrata, Eriophorum spp., Sphagnum spp. and Juncus effusus.

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

No.	Category	Comment
N1	HABITAT	Dystrophic lake
N2	HABITAT	Infilling lake, in a depression. Quaking with high cover of Sphagnum mosses and sedges (abundant Sphagnum fallax and Carex rostrata). Also good cover of rushes and some areas of grass. Eriophorum spp. are abundant in places.
N3	HABITAT	Carex rostrata and Sphagnum fallax dominate with high cover of Eriophorum angustifolium
N4	FLORA	Small patch with Luzula sp. here. Small spruce and birch sapling in proximity.
N5	HABITAT	Less Sphagnum, high cover of non sphagnum mosses including, Rhytidiadelphus loreus and Pleurozium schreberi. Abundant Eriophorum vaginatum and Calluna vulgaris forming hummocks with Empetrum nigrum
N6	HABITAT	Back to Carex rostrata, Eriophorum angustifolium and Sphagnum. Betula and comfier seedlings
N7	HABITAT	Sphagnum spp. and Juncus spp. dominate.
N8	HABITAT	Juncus spp. and Sphagnum spp. along fringe.
N9	HABITAT	Shallower peat here, less than 1m, vegetation changes where it's shallower.

Management Recommendations following survey

Consider removing the non-native tree saplings. Liaise with the forestry owner to develop a plan for forestry management that will have minimal impact on the wetland habitats.

Future Survey Recommendations

None.

Landowner Information Comments

None.

Description of potential EU Habitats Directive Annex 1 habitats

The lake corresponds to the EU Annex I habitat 3160 Natural dystrophic lakes and ponds.

Main Fossitt habitats on site

FL1 Dystrophic lakes

PB2 Upland blanket bog

PF2 Poor fen and flush

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

FW4 Drainage ditches

PB2 Upland blanket bog

WD4 Conifer plantation

EU Habitats Directive habitats on site

3160 Natural dystrophic lakes and ponds

Landuse / Management Activity	Frequency of use
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
H01.05 diffuse pollution to surface waters due to	D = unknown	- 1 = reparable negative influence

Threats

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

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

Damaging Operations Comments

There is a coniferous plantation adjacent to the lake which poses a threat as a source of nutrient and sediment pollution, and as a seed source for non-native tree species to colonise any drier areas of peatland.

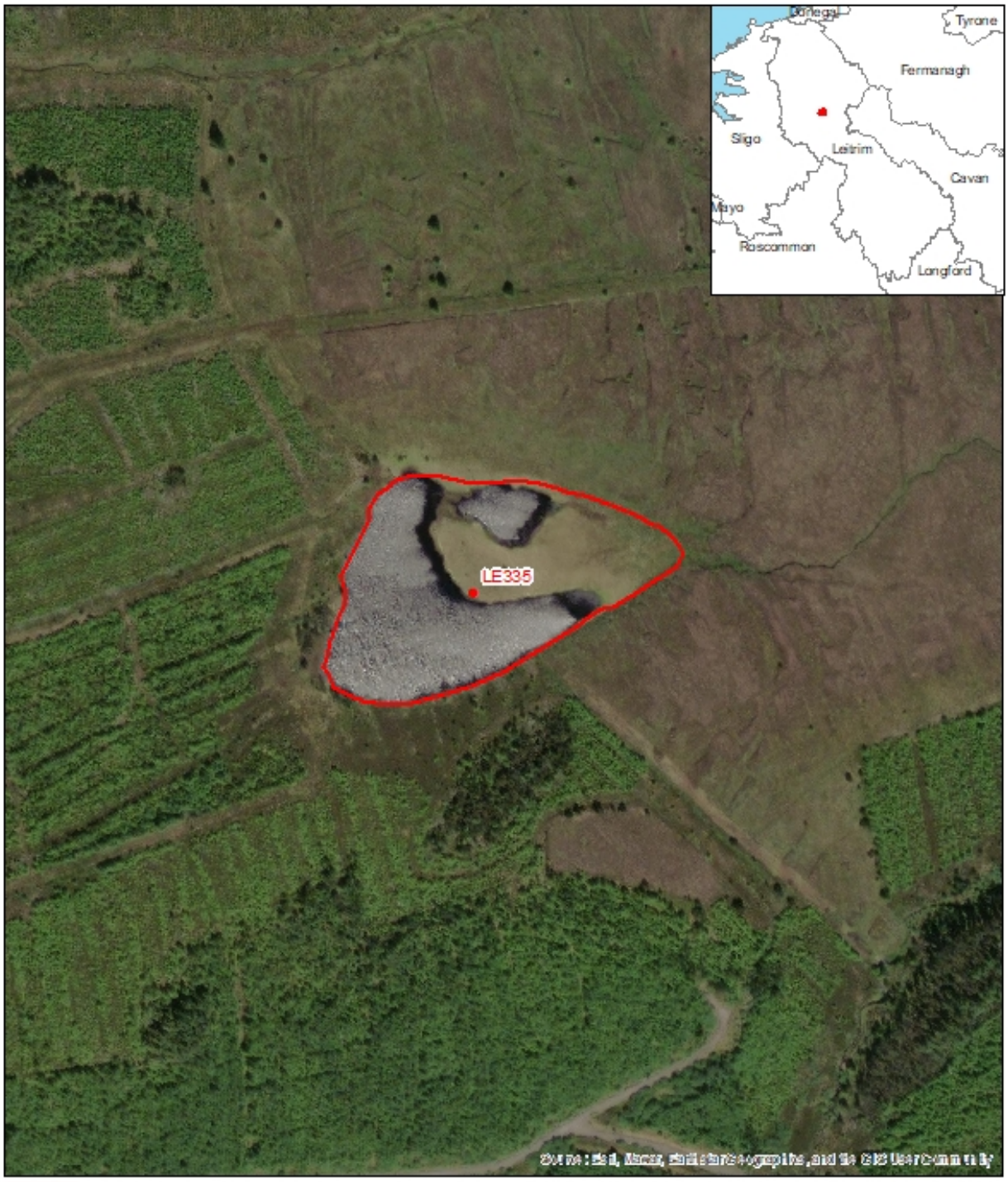
Flora on site - Latin & English species name

Anthoxanthum odoratum	Sweet Vernal-grass
Betula pubescens	Downy Birch
Calluna vulgaris	Ling Heather
Carex rostrata	Bottle Sedge
Empetrum nigrum	Crowberry
Eriophorum angustifolium	Common Cottongrass
Eriophorum vaginatum	Hare's-tail Cottongrass
Juncus effusus	Soft-rush
Luzula sylvatica	Great Wood-rush
Menyanthes trifoliata	Bogbean
Molinia caerulea	Purple Moor-grass
Picea sp.	Spruce
Pinus sp.	Pine
Pleurozium schreberi	Red-stemmed Feather Moss
Rhytidiadelphus loreus	Little Shaggy-Moss
Salix cinerea subsp. cinerea	Grey Willow
Sphagnum fallax	Flat-topped Bog Moss
Sphagnum palustre	Blunt-leaved Bog Moss
Sphagnum sp.	Bog Moss
Vaccinium myrtillus	Bilberry

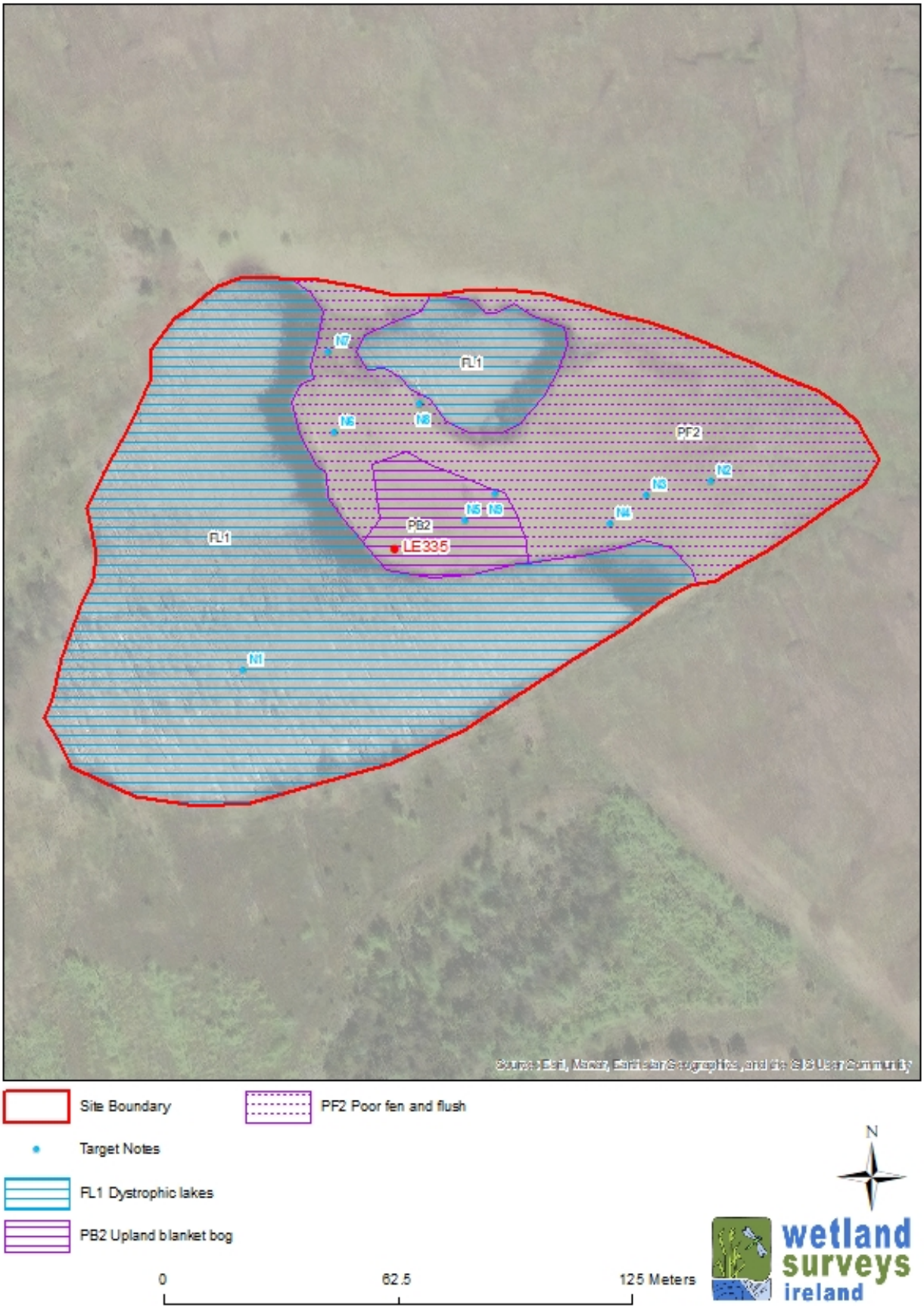
Fauna on site - English and Latin species name

Dragon and Damselflies

Aerial Photograph showing location of the site



GIS Habitat map of the site



Site Name: WOODFORD LOUGHS NORTH AND SOUTH

Site Code: LE168 **Area (ha):** 6.67 **Grid Ref:** 220445 312036 **County:** LE

Site designation(s):
Undesignated site

Surveyed by:
Adam Vanmechelen & Poppy Overy

Date of wetland survey:
11/09/2024

Survey Code:
LEWS2024

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:
WOODFORD DEMESNE

Solid Geology:
Marine shelf facies

Subsoil type:
Water

Substrate type:
Mineral Soil
Peat

Substrate stability:
Soft

River catchment:
Erne

CORINE Habitats:
Pastures

Site Location

Small lake on the river connecting Ballymagauran Lough (county Cavan) and Garadice Lough (county Leitrim), located approximately 7.4km east of Ballinamore.

Site Description and Wetland Habitats Recorded

Mesotrophic lake with Nuphar lutea, fringed with reed swamp dominated by Phragmites australis, Schoenoplectus lacustris and Sparganium erectum. Wet woodland borders the swamp on the east side of the lake with Salix spp. and Alnus glutinosa dominating. Wet grassland borders the swamp on the northwest side of the lake where rushes and grasses are abundant.

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

No.	Category	Comment
N1	HABITAT	Moderately species rich Wet grassland. Dominanted by Juncus spp. with frequent herbs.
N2	HABITAT	Small Mesotrophic lake on the river connecting Ballymagauran Lough (county Cavan) and Garadice Lough (county Leitrim).
N3	HABITAT	Wet woodland dominated by Salix spp. and Alnus glutinosa.
N4	HABITAT	Reed swamp dominated by Phragmites australis and Schoenoplectus lacustris.

Management Recommendations following survey

A slight increase in the grazing or mowing of the Wet grassland would improve vegetation structure and species richness. Ensure there is an adequate buffer all the way around the lake to reduce the nutrient and sediment impacts (livestock currently have direct access to the lake on the northwest of the lake).

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

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

FW2 Depositing/lowland rivers

GS4 Wet grassland

WN6 Wet willow-alder-ash woodland

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

WL1 Hedgerows

WL2 Treelines

WN Semi-natural woodland

EU Habitats Directive habitats on site

None noted

Landuse / Management Activity	Frequency of use
Grazing - cattle	1 Rare (<5%)
None	4 Dominant (>50%)

Impacting Activity (EU code and title)	Intensity	Impact
A04.02.01 non intensive cattle grazing	C = low	+1= natural positive influence
H01.03 other point source pollution to surface water	C = low	- 1 = reparable negative influence

Threats

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

H01.06 diffuse pollution to surface waters due to transport and infrastructure without connection to

Damaging Operations Comments

Diffuse pollution poses a threat to the lake due to the surrounding agricultural land and nearby road. Livestock also currently have direct access to the lake on the northwest side which is likely impacting the nutrient and sediment levels in the lake.

Flora on site - Latin & English species name

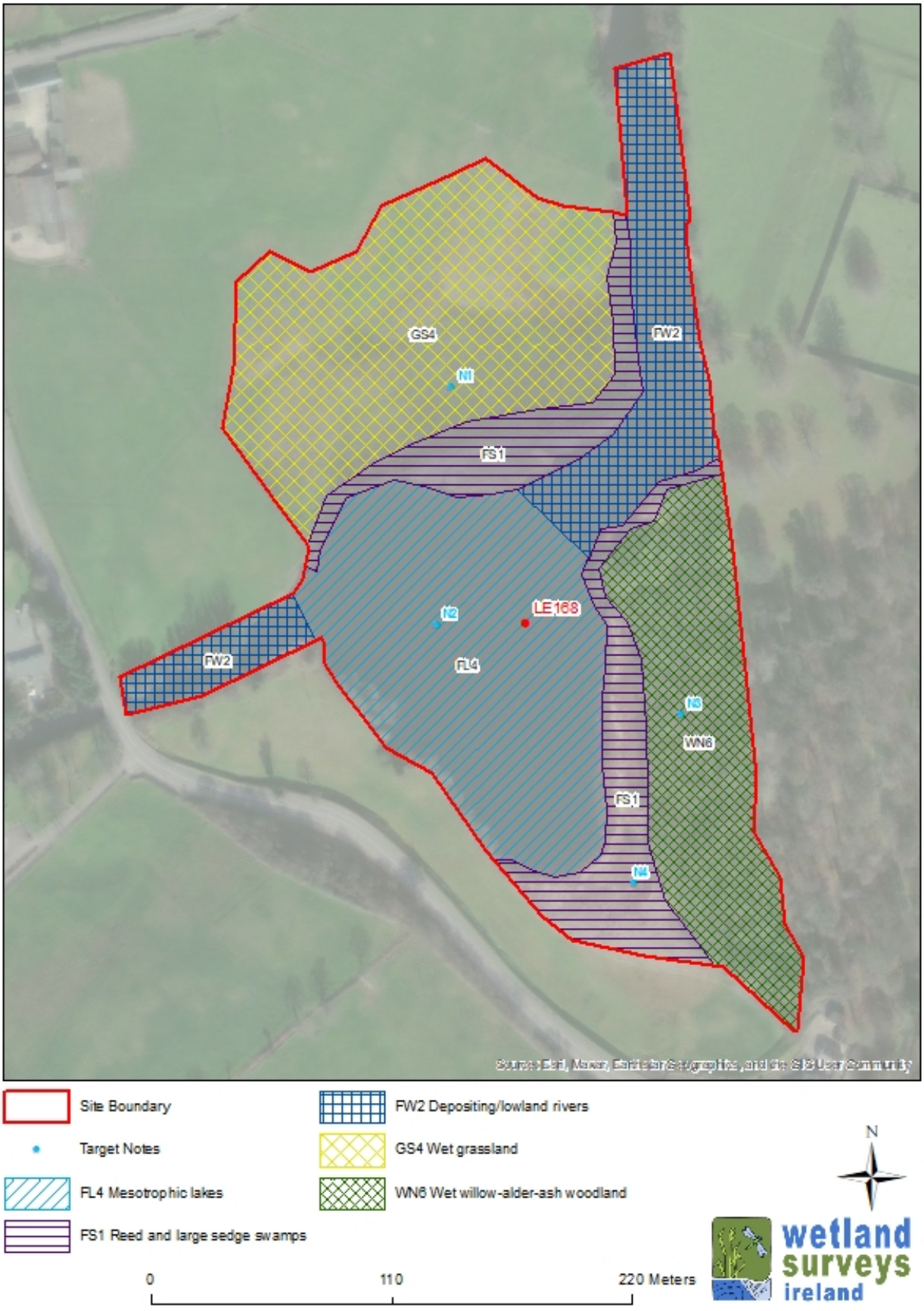
Alnus glutinosa	Alder
Arrhenatherum elatius	False Oat-grass
Betula pubescens	Downy Birch
Carex nigra	Common Sedge
Carex rostrata	Bottle Sedge
Deschampsia cespitosa	Tufted Hair-grass
Eleocharis palustris	Common Spike-rush
Equisetum fluviatile	Water Horsetail
Fraxinus excelsior	Ash
Holcus lanatus	Yorkshire-fog
Ilex aquifolium	Holly
Juncus articulatus	Jointed Rush
Juncus effusus	Soft-rush
Lotus corniculatus	Common Bird's-foot-trefoil
Lychnis flos-cuculi	Ragged-Robin
Mentha aquatica	Water Mint
Nuphar lutea	Yellow Water-lily
Phalaris arundinacea	Reed Canary-grass
Phragmites australis	Common Reed
Ranunculus acris	Meadow Buttercup
Ranunculus flammula	Lesser Spearwort
Ranunculus repens	Creeping Buttercup
Salix cinerea subsp. cinerea	Grey Willow
Schoenoplectus lacustris	Common Club-rush
Sparganium erectum	Branched Bur-reed
Stachys palustris	Marsh Woundwort
Trifolium repens	White Clover

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site

GIS Habitat map of the site



County Leitrim Wetlands Field Survey III 2024

Data Deliverables Contents

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

Contents:

1. **County Leitrim Wetlands Field Survey III 2024.** 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 2024 Version 4.0; Leitrim Wetland Survey Database 2023 Version 3.0** (requires Filemaker Pro to view).

3. **Excel tables to accompany the County Leitrim Wetlands Field Survey III 2024 report**

   LEWS_Survey_Database_Site_Summary: Summary information on sites survey during the LEWS 2024, including site location, and table with site description and conservation ranking.

4. **GIS files from the County Leitrim Wetlands Field Survey 2024.**

   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 2024