

County Longford

Wetlands Field Survey 2020

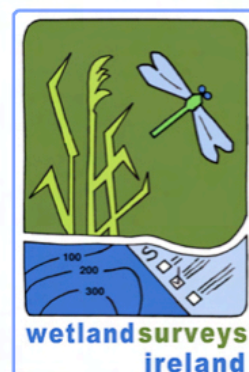


Report prepared for Longford County Council
by P. Crushell, M.C. Gallagher & P. Foss

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An Chomhairle Oidhreachta
The Heritage Council



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An Action of the County Longford Draft Heritage Plan 2015-2020

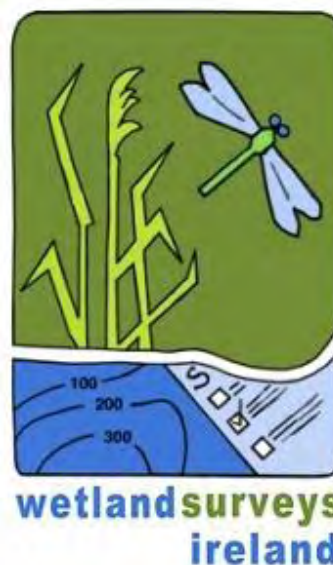
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County Longford Wetlands Field Survey 2020

This project involved a field survey of eleven freshwater wetlands in County Longford, located in the southern part of the county, with the aim of identifying the specific wetlands and ecological interest of each site. These sites had previously been identified as being of potential interest during the County Longford & Roscommon Wetland Study 2017 project. The sites were selected for survey due to the potential occurrence of notable wetland habitats. This report presents the results of the 2020 field survey and includes detailed site descriptions and habitat maps for each of the wetlands surveyed.

Acknowledgements

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

Executive Summary

1. The aim of the Longford Wetlands Field Survey 2020 (LFWS 2020) was to undertake a field survey of a selection of wetland sites previously identified during the 2017 Counties Longford & Roscommon Wetland Study project (Foss *et al.* 2017) for which little or no ecological information was available.
2. Eleven sites selected for survey included those that lie outside of designated areas but were deemed likely to contain habitats of biodiversity interest, located in the southern part of the county.
3. Field surveys were undertaken on all 11 sites. 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 Longford Wetland Survey (LFWS) database.
6. The information collected from the survey was used to update the 2017 Longford Wetlands Map (LFWM) GIS dataset and site database. Site records were updated for each of the sites surveyed in 2020.
7. The main findings to emerge from the 2020 wetlands survey is the identification of a number of important wetland sites (ranging from national to high local importance), including a turlough, a freshwater floodplain marsh, a lake, and a number of remnant raised bog sites.
8. The results of the 2020 field survey suggests that many important wetland sites may remain unidentified throughout county Longford 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 Longford.

1 Introduction and Background

In 2017 Longford County Council funded the production of a county Longford wetland GIS dataset and associated site database holding information on all known and potential freshwater wetlands in county Longford (Foss *et al.* 2017).

The Longford Wetlands Map (LFWM) project in 2017 identified more than 281 areas of wetlands which were mapped in a digital dataset (LFWM GIS dataset). In 2019, eighteen of these sites were surveyed as part of the Longford Wetlands Field Survey 2019 (Foss *et al.* 2019), with the view of improving the knowledge of the wetlands present on these sites. Following the LFWS 2019, a total of 178 sites identified during the Longford Wetlands Map (LFWM) project in 2017 remained without detailed background survey information.

The main aim of the current Longford Wetlands Field Survey 2020 (LFWS 2020) project was to carry out a survey of a selection of sites identified in the LFWM project, located in the southern section of the county, 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 Longford.

The outputs of the Longford Wetlands Field Survey 2020 should assist Longford 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 Longford.

1.1 Project summary

This LFWS 2020 project was undertaken between July and end of October 2020. Field surveys were completed during September 2020. The main elements project included:

- Eleven sites were selected from the Longford Wetlands Map (LFWM) GIS dataset for survey in 2020. Sites considered representative of the more common wetland habitats within the county were included (see Table 1).
- Following the site selection process, field maps of the sites were prepared.
- A Wetland Survey Database (LFWS), to hold survey information on sites examined in detail, was created. This database was linked to the original County Longford Wetlands Map (LFWM) site database where core information on wetland sites is held. Once survey information was inputted to the LFWS survey database, a complete site report was produced from data held within the two related databases.
- Field surveys of the eleven selected sites were undertaken during September 2020. 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 (LFWS), prepare habitat maps, and update the Longford Wetlands Map (LFWM) 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 Longford Wetlands Field Survey 2020 (LFWS 2020) GIS dataset and site database accompany this report.

2 Materials & Methods

2.1 Longford Wetlands Field Survey 2020 - Site Selection

At project commencement eleven sites located in the southern part of the county were selected from the Longford Wetland Map (LFWM) GIS dataset for survey. The selection of eleven 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 (see Table 1).

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 Longford Wetlands Field Survey 2020 - Field Survey

The field survey was undertaken during mid-September 2020. 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. 2017 for details). The survey card was designed specifically for use on this survey.

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

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

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

2.2.1 Consultation with Landowners

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

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

2.2.2 Habitat Classification

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

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

2.2.3 Site Conservation Assessment & Evaluation

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

2.2.4 Survey Constraints

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

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

Full walkover surveys of three sites were not possible due to access difficulties (Aghnagore Lake (Site 161), Ballynakill South (Site 164), and Ballynakill North (Site 165)).

These sites were surveyed visually from a distance with the use of binoculars and an un-manned aerial vehicle (UAV). These surveys allowed for a sufficient level of survey considering the dominant habitats type and land-use.

2.3 Longford Wetlands Field Survey Database – Structure and Content

A Longford Wetland Survey (LFWS) database holds survey data on sites from the present survey (together with data from LFWS 2019). This database was connected to the existing County Longford 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 LFWS database are detailed in Foss *et al.* (2017).

Initially the sites selected for survey had a site record created in the LFWS database. This updated version of the LFWS database (with the sites surveyed in 2020 added) was given the name Longford Wetland Map Version 3, and is included with this report as part of the final project deliverables.

2.4 Longford Wetlands Field Survey (LFWS) – GIS Dataset

The Longford Wetland Map (LFWM) GIS dataset created by Foss *et al.* (2017) (using ArcView 10.6 GIS software package on a Windows Operating System) was used throughout the LFWS 2020 for all site selection and mapping purposes.

See Foss *et al.* (2017) for further details on the structure and format of this LFWM GIS dataset.

All habitat maps produced during the LFWS 2020 project were added to this LFWM GIS dataset. In certain cases boundaries were also adjusted on sites based on field observations. The updated and revised version of the LFWM GIS dataset was delivered at the end of the project to Longford County Council, dated November 2020. A set of GIS files relevant only to this individual survey (LFWS 2020) are also included with this report.

3 Results

3.1 Longford Wetlands Field Survey 2020

The eleven 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 Longford Wetlands Field Survey 2020.

LFWS Site Code	Site Name	Centre Northing (IG)	Centre Easting (IG)
161	AGHNAGORE LAKE	275323	206502
164	BALLYNAKILL SOUTH	272178	204473
165	BALLYNAKILL NORTH	272668	204510
249	CARRIGEENS TURLOUGH cNHA	265100	201570
157	CLOONDARA SOUTH	277387	205650
218	CARROWMANAGH	269067	211095
237	DERRAGHAN BEG	262407	208113
239	DRUM LOUGH	259378	212783
240	LEDWITHSTOWN SOUTH	258420	210700
178	CLOONTIRM	273924	211512
273	CLOONANNY CUTOVER	268416	212061

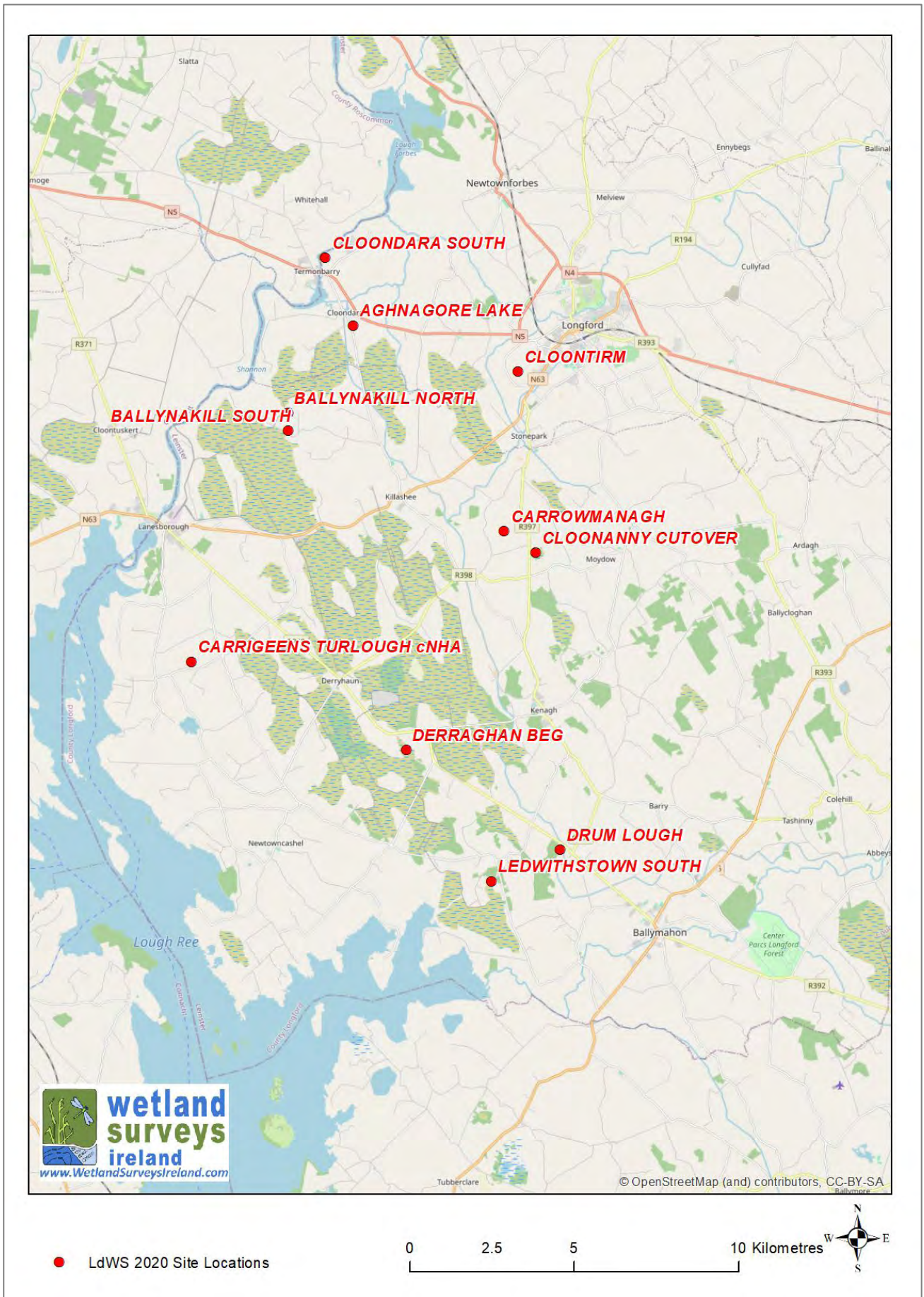


Figure 1: Location of sites selected for survey as part of the Longford Wetlands Field Survey 2020.

3.2 Wetland types recorded during LFWS Field Survey 2020

Eleven sites were surveyed as part of the LFWS 2020. The habitats present (both wetland and non-wetland) within and surrounding each wetland site were recorded using Fossitt (2000) based on field survey observations. Summary descriptions of these wetland types, with examples of where they can be seen in County Longford is provided in Foss *et al.* (2017), 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; raised bog, mesotrophic lake, wet woodland, and wet grassland.

Wetlands of lower ecological interest that were recorded during the survey included reclaimed cutover bog, agricultural grassland areas, and wet grassland. 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 3.2: Summary description of sites surveyed during the Longford Wetlands Field Survey 2020.

LFWS Site Code	LFWS Site Name	Survey site location	Site Description
157	CLOONDARA SOUTH	Floodplain marsh on eastern side of River Shannon 0.5km north-east of Termonbarry.	Central part of site dominated by marsh with abundance of wetland herbs, rushes, sedges and some grasses. Summer grazing within the site. A 20m wide band of reed swamp (not grazed) occurs along bank of river.
161	AGHNAGORE QUARRY LAKE	Former quarry with large lake located 1.5km southeast of Termonbarry.	Small part of the lake shore supports reed swamp. Elsewhere the lake has an abrupt steep rock edge bare of vegetation. Bare rock outcrops, scrub, and dry meadows occur elsewhere within the site.
164	BALLYNAKILL SOUTH - DERRYAROGUE CUTAWAY COMPLEX	Failed conifer plantation, located adjacent to a Bord na Móna works 5 km north-east of Lanesboro.	Failed conifer plantation on cutaway bog, dry Birch occurs throughout much of site. Part of site has been in-filled and is used for storage of organic manure. Limited wetland interest.
165	BALLYNAKILL NORTH	Wet grassland site located adjacent to a Bord na Móna works 5 km north-east of Lanesboro.	Small wet grassland area surrounded by improved agricultural grassland to east and industrial cutaway to west. Large drainage features associated with the Bord na Móna site borders the northern part of the site. Site has been drained in the past. Now comprises species poor wet grassland, used for grazing livestock.
178	CLOONTIRM	Small remnant raised bog located 2km southwest of Longford town.	Small area of remnant raised bog surrounded by cutover. The high bog is severely degraded with a dry firm surface. Raised bog flora persists although high quality indicators are lacking. Peat is actively being cut around the entire margin. Dry Birch woodland and scrub occurs on cutover along with bare peat fields, small secondary bog areas and <i>Juncus effusus</i> grasslands on peat soil.

LFWS Site Code	LFWS Site Name	Survey site location	Site Description
218	CARROWMANAGH	Remnant raised bog located 5km south west of Longford town.	Small area of degraded raised bog occurs in central part of site. The surface is relatively dry and firm underfoot. Typical raised bog flora continues to dominate but with low moss cover. Occasional Birch and Gorse near the margins. Western side of bog continues to be cut, the cutover has been in-filled and is used for spreading and drying peat.
237	DERRAGHAN BEG	Small intact raised bog located 5km west of Keenagh.	Small raised bog surrounded mostly by agricultural grassland. Bog remains largely intact with no recent drainage or cutting. Bog divided by drain running north south. To east grazing livestock occurs, to west the bog is in better condition. An ESB high voltage 110kV line crosses this part of the bog. Bog would be suitable for conservation and restoration measures.
239	DRUM LOUGH	Small mesotrophic lake ca 4km south of Keenagh.	Lake with fringe of floating macrophytes and narrow transition of emergent reed swamp. Site is surrounded by semi-natural grassland to the east while to the west an expanse of Birch woodland occurs on old cutover. The Royal Canal occurs close by the lake to the south.
240	LEDWITHSTOWN SOUTH	Remnant raised bog located 5km southwest of Keenagh.	Remnant raised bog surrounded by extensive areas of cutover that is regenerating as dry woodland or secondary bog. The surface of the bog is relatively firm and dry with <i>Molinia</i> , <i>Calluna</i> , <i>Tormentil</i> , and <i>Cladonia portentosa</i> dominated vegetation. Absence of wet bog communities and <i>Sphagnum</i> cover (mostly <i>Sphagnum capillifolium</i>). Gorse scrub dominates the drier margins.
249	CARRIGEENS TURLOUGH cNHA	Turlough with distinctive karst features located 4km south of Lanesborough.	Large linear enclosed depression with a series of swallow holes at its northern extent. Blackthorn scrub occurs along the boundary. Some standing water within deepest swallow hole features. Elsewhere zonation is evident in the grassland vegetation. Site used for cattle grazing.
273	CLOONANNY CUTOVER	Small cutover raised bog located ca 6km south of Longford.	Cutover raised bog, cutting has continued in recent years. Narrow strip of degraded high bog remains. Remainder of the site is regenerating cutover on level terrain with abundant <i>Molinia caerulea</i> and <i>Calluna vulgaris</i> . Drains occur throughout.

3.3 Floral Observations

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

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

Japanese Knotweed (*Fallopia japonica*) – invasive species. Found amongst disturbed cutover bog at CLOONTRIM. Recommendations are made in the site report to eradicate this invasive non-native species.

3.4 Site Conservation Assessment

On completion of the LFWS 2020 field survey, each of the eleven 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 2020 is presented in Table 2 below.

CARRIGEENS TURLOUGH site is deemed to be of national conservation value due to the presence of Turlough habitat, a relatively rare occurrence in County Longford.

Two sites (DRUM LOUGH and DERRAGHAN BEG) are of County conservation value (C+) due to the occurrence of good quality habitats.

Two sites (LEDWITHSTOWN SOUTH and CLOONDARA SOUTH) are deemed to be of local high local conservation value (C). The remaining sites surveyed during the LFWS 2020 had a lower local conservation ranking.

Table 2: Conservation evaluation of sites surveyed during the LFWS 2020. Sites are ranked according to their conservation value.

LFWS Site Code	Site Name	Site Wetland Conservation Ranking	Presence of EU Annex Habitats
249	CARRIGEENS TURLOUGH cNHA	B Rating: Nationally Important	Turlough (3180)
237	DERRAGHAN BEG	C+ Rating: County Conservation value	Degraded raised bogs [7120]
239	DRUM LOUGH	C+ Rating: County Conservation value	None
157	CLOONDARA SOUTH	C Rating: Local conservation value (high value)	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]
240	LEDWITHSTOWN SOUTH	C Rating: Local conservation value (high value)	Degraded raised bogs [7120]
161	AGHNAGORE QUARRY LAKE	D Rating: Local conservation value (moderate value)	None
178	CLOONTIRM	D Rating: Local conservation value (moderate value)	Degraded raised bogs [7120]
218	CARROWMANAGH	D Rating: Local conservation value (moderate value)	Degraded raised bogs [7120]
273	CLOONANNY CUTOVER	D Rating: Local conservation value (moderate value)	None
164	BALLYNAKILL SOUTH - DERRYAROGUE CUTAWAY COMPLEX	E Rating: Local conservation value (low value)	None
165	BALLYNAKILL NORTH	E Rating: Local conservation value (low value)	None

3.5 Threats and Damage to County Longford Wetlands

The majority of, if not all, Irish wetland sites, and by extension those in county Longford, 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 3 below.

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

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

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

Reclamation 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 wetland habitat types listed under the EU Habitats Directive found that only a single habitat was in favourable conservation status, while twelve were 'unfavourable - inadequate' and thirteen habitat types were deemed to have a 'unfavourable – bad' conservation status overall. The trend for a number of habitats also suggests that their conservation status is in decline during the period 2013-2019.

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 Longford.

Table 3: Natura 2000 Impacts and Activities which are likely to have a negative effect on wetlands, and the wetland type most likely to be affected by these activities.

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

During the course of the LFWS 2020, 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 Longford include; drainage, peat extraction (historic, recent, and on-going), diffuse water pollution, dumping, and invasive non-native species.

4 Conclusions and Recommendations

4.1 *Distribution and Extent of the Longford Wetland Resource*

The results of the LFWS 2020 shows that the main GIS layer which was developed for the identification of potential wetlands in Longford (Longford & Roscommon Wetland Study, Foss *et al.* 2017) is a useful tool in identifying wetlands of ecological importance in the county.

Of the eleven sites identified in the LFWS project 2017 (Foss *et al.* 2017) which were surveyed during 2020, most supported wetland habitats of conservation significance.

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

4.2 *Site Designations*

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

4.3 *Planning Controls*

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

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

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

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

- The need for an appropriate buffer zone surrounding wetland sites
- The importance of hydrology in how wetland sites function and how indirect impacts on a wetland system can be caused by activities occurring at some distance from the wetland
- The cumulative effect of seemingly isolated losses of wetland habitats across the county
- The loss of wetland habitats as a result of fragmentation of sites and impacts on wetland hydrology
- The ecological value of wetland habitats adjacent to, and fringing lakes and ponds

- The ecological value of large areas of reed and tall sedge swamps, rivers and river flood plains in controlling and reducing the impacts of flooding events
- The wetland fauna, some of which are listed on Annex II of the Habitats Directive found in the county wetlands and the potential impacts on these species as well as their habitats
- The limited coverage provided in the initial NPWS NHA survey – this was never a comprehensive survey of the entire county – many sites of high nature conservation value remain undesignated
- The potential value of wetland sites which are outside statutory designated areas and the need for adoption of a precautionary approach when assessing applications that may impact on same.

4.4 Ongoing Maintenance of the County Longford Wetland Map Site Database

It is probable that additional third party survey information on wetland sites listed in the County Longford 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 Longford Wetland Survey GIS dataset and following the naming procedure described in Foss *et al.* 2017.

4.5 Ongoing Maintenance of the County Longford Wetland Map GIS Dataset

Coupled with ongoing updates of the County Longford Wetland survey and site database (Foss *et al.* 2017) it is recommended that the GIS layers are also regularly updated as new information becomes available.

4.6 Hydrological Assessment of Wetland Sites

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

4.7 Management and Restoration of Wetland Sites

Agricultural activities have the potential to adversely affect wetland habitats. Drainage, land reclamation, and enrichment from fertilizer application are among the agricultural activities that were recorded as damaging the integrity of wetland sites in County Longford 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 Longford should be explored. Payment for Results Agri-environmental Schemes such as the successful Burren Programme and other projects (Pearl Mussel Programme, Hen Harrier Project, and RBAPS) provide a good template which could be adapted to targeting improved management of wetland habitats within an agricultural landscape.

4.8 Control of invasive species in wetland sites

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

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

4.9 Local Authority Wetlands Policy

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

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

4.10 Water Framework Directive

As a member of the European Union, Ireland must, as of the 22nd December 2000 implement the Water Framework Directive (2000/60/EC). This directive provides a consolidated, strengthened framework for the protection and improvement of all of our waters - rivers, lakes, marine and ground waters, and of our water-dependent habitats and species. The aim of the Water Framework Directive is to prevent any deterioration in the existing status of our waters, including the protection of good and high status where it exists, and to ensure that all waters are restored to at least good status by 2015.

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

4.11 Public Information and Interpretation

Public awareness about the importance of wetlands in county Longford 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

5 Bibliography

The bibliography list is presented in alphabetical order by author. Code number appearing on the LHS is the reference/report code number in the LFWS Bibliography Database.

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

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

Appendix 2: Individual Site Reports from the Longford Wetlands Field Survey 2020

Sites are listed in alphabetical order by site name

LFWS Site Code	LFWS Site Name	Page
LF161	AGHNAGORE QUARRY LAKE	21
LF165	BALLYNAKILL NORTH	27
LF164	BALLYNAKILL SOUTH - DERRYAROGUE CUTAWAY COMPLEX	32
LF249	CARRIGEENS TURLOUGH cNHA	37
LF218	CARROWMANAGH	42
LF273	CLOONANNY CUTOVER	48
LF157	CLOONDARA SOUTH	53
LF178	CLOONTIRM	59
LF237	DERRAGHAN BEG	65
LF239	DRUM LOUGH	71
LF240	LEDWITHSTOWN SOUTH	76

Site Name: CLOONDARA SOUTH

Site Code: LF157 **Area (ha):** 9.02 **Grid Ref:** 205650 277387 **County:** LF



Site designation(s):

Undesignated site

Surveyed by:

Patrick Crushell

Date of wetland survey:

15/09/2020

Survey Code:

LFWS 2020

Site source information:

Detailed Wetland Survey undertaken

Site previously identified from assessment of aerial photography

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

CLOONDARA

Solid Geology:

Marine shelf facies

Subsoil type:

FenPt

Substrate type:

Mineral Soil

Substrate stability:

Firm

River catchment:

Shannon Up

CORINE Habitats:

Pastures

Site Location

Floodplain marsh on eastern side of River Shannon 0.5km north-east of Termonbarry.

Site Description and Wetland Habitats Recorded

Central part of site dominated by marsh with abundance of wetland herbs, rushes, sedges and some grasses. Summer grazing within the site. A 20m wide band of reed swamp (not grazed) occurs along bank of river.

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

No.	Category	Comment
N1	Habitat	Improved pasture, small areas of Juncus dominated wet grassland with Yellow Flag Iris.
N2	Habitat	Stone wall and hawthorn hedgerow.
N3	Habitat	Narrow band (ca 20m) of reed swamp dominated by Glyceria maxima along the river.
N4	Habitat	Freshwater marsh with Yellow Flag iris, Juncus effusus and an abundance of wetland herbs. Progressively wetter towards river. Summer grazing. Transitions to wet grassland further east.

Management Recommendations following survey

None

Future Survey Recommendations

None

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels

Main Fossitt habitats on site

BL1 Stone walls and other stonework
 FS1 Reed and large sedge swamps
 GA1 Improved agricultural grassland
 GM1 Marsh
 GS4 Wet grassland
 WL1 Hedgerows

EU Habitats Directive habitats on site

6430 Hydrophilous tall herb fringe communities of

Fossitt habitats surrounding site

FS1 Reed and large sedge swamps
 FW2 Depositing/lowland rivers
 GA1 Improved agricultural grassland
 WD1 (Mixed) broadleaved woodland
 WL1 Hedgerows

Landuse / Management Activity

Grazing - cattle

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

X No threats or pressures

Intensity**Impact****Threats**

X No threats or pressures

Damaging Operations Comments

Grazing in grassland part of site. Summer grazing within wet grassland and marsh habitat.

Flora on site - Latin & English species name

<i>Alnus glutinosa</i>	Alder
<i>Angelica sylvestris</i>	Wild Angelica
<i>Berula erecta</i>	Lesser Water-parsnip
<i>Calliergonella cuspidata</i>	Pointed Spear Moss
<i>Caltha palustris</i>	Marsh-marigold
<i>Cardamine pratensis</i>	Cuckooflower
<i>Carex rostrata</i>	Bottle Sedge
<i>Cirsium palustre</i>	Marsh Thistle
<i>Crataegus monogyna</i>	Hawthorn
<i>Deschampsia cespitosa</i>	Tufted Hair-grass
<i>Equisetum fluviatile</i>	Water Horsetail
<i>Filipendula ulmaria</i>	Meadowsweet
<i>Fraxinus excelsior</i>	Ash
<i>Galium palustre</i>	Marsh-bedstraw
<i>Glyceria maxima</i>	Reed Sweet-grass
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Hypericum tetrapterum</i>	Square-stalked St John's-wort
<i>Iris pseudacorus</i>	Yellow Iris
<i>Juncus articulatus</i>	Jointed Rush
<i>Juncus effusus</i>	Soft-rush
<i>Juncus inflexus</i>	Hard Rush
<i>Lemna minor</i>	Common Duckweed
<i>Lycopus europaeus</i>	Gypsywort
<i>Lysimachia nummularia</i>	Creeping-Jenny
<i>Mentha aquatica</i>	Water Mint
<i>Potentilla anserina</i>	Silverweed
<i>Prunus spinosa</i>	Blackthorn
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Ranunculus flammula</i>	Lesser Spearwort
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rosa canina</i>	Dog-rose
<i>Rubus fruticosus agg.</i>	Blackberry
<i>Rumex acetosa</i>	Common Sorrel
<i>Salix cinerea subsp. oleifolia</i>	Rusty Willow
<i>Senecio aquaticus</i>	Marsh Ragwort
<i>Sparganium erectum</i>	Branched Bur-reed
<i>Stachys palustris</i>	Marsh Woundwort
<i>Stellaria palustris</i>	Marsh Stitchwort
<i>Succisa pratensis</i>	Devil's-bit Scabious
<i>Valeriana officinalis</i>	Common Valerian
<i>Veronica scutellata</i>	Marsh Speedwell
<i>Viola palustris</i>	Marsh Violet

Fauna on site - English and Latin species name

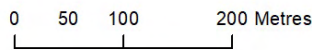
Chaffinch	<i>Fringilla coelebs</i>
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Common Snipe	<i>Gallinago gallinago</i>
Dragon and Damselflies various	
Green-veined White	<i>Pieris napi</i>
Hooded Crow	<i>Corvus cornix</i>
Mistle thrush	<i>Turdus viscivorus</i>
Wood Pigeon	<i>Columba palumbus</i>

Aerial Photograph showing location of the site

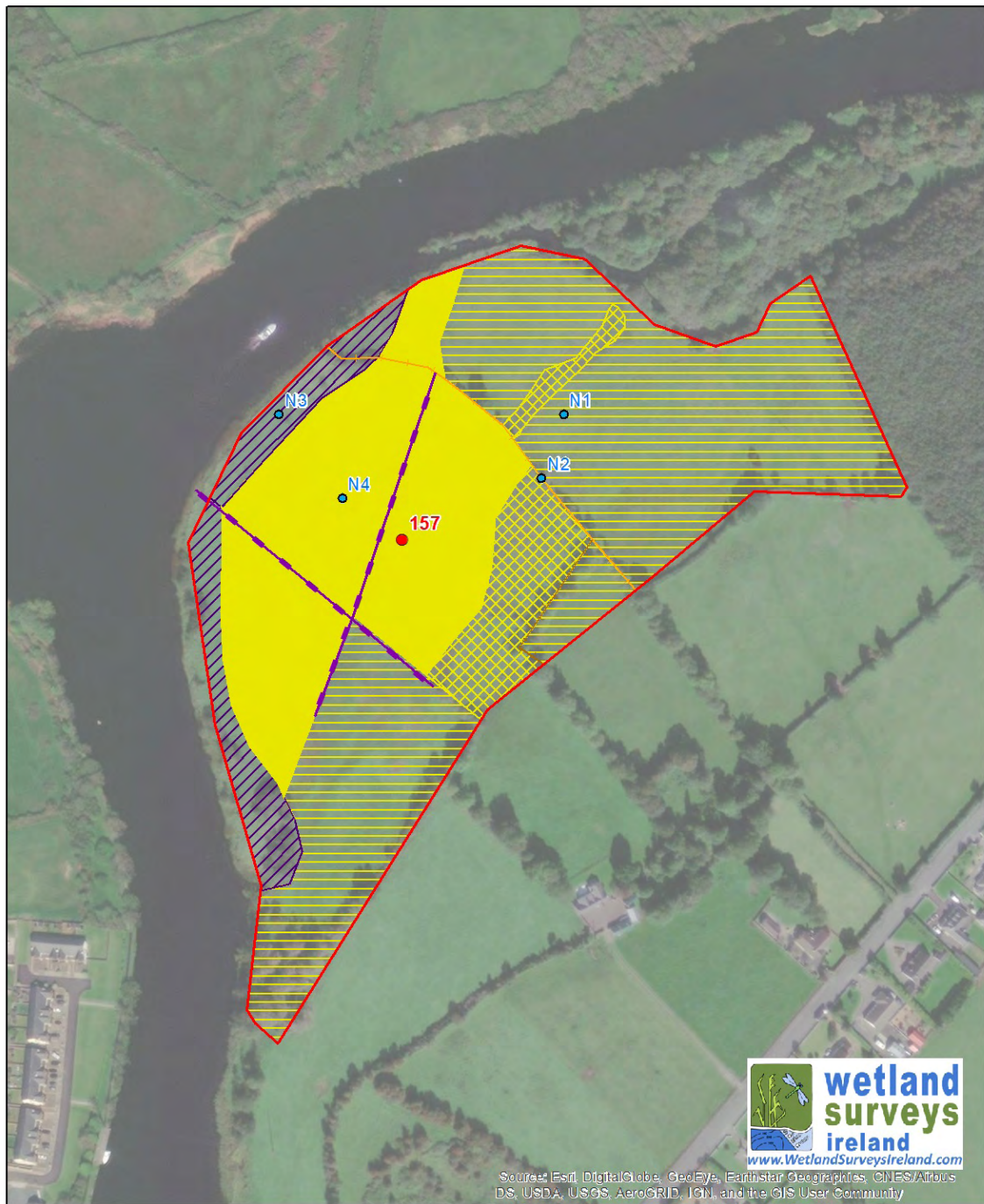


- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020



NPWS NHA site boundary.

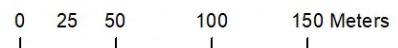
GIS Habitat map of the site



- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020
- Survey Notes
- FW4 Drainage ditch
- WL1 / BL1 Hedgerow / stone wall
- WL2 Treeline
- ▨ FS1 Reed and large sedge swamp
- ▨ GA1 Improved agricultural grassland
- GM1 Marsh
- ▨ GS4 Wet grassland



Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Site Name: AGHNAGORE QUARRY LAKE

Site Code: LF161 **Area (ha):** 2.69 **Grid Ref:** 206502 275323 **County:** LF



Site designation(s):

Undesignated site

Surveyed by:

Patrick Crushell

Date of wetland survey:

16/09/2020

Survey Code:

LFWS 2020

Site source information:

Additional Survey may be required

Preliminary Wetland field inspection undertaken

Site previously identified from assessment of aerial photography

Wetland Present on the Site

YES

Conservation ranking after survey:

D Rating: Local conservation value (moderate value)

Townland:

AGHNAGORE

Solid Geology:

Marine shelf facies

Subsoil type:

KaRck

Substrate type:

Bedrock

Loose Rock

Mineral Soil

Substrate stability:

Very firm

River catchment:

Shannon Upr

CORINE Habitats:

Pastures

Site Location

Former quarry with large lake located 1.5km southeast of Termonbarry.

Site Description and Wetland Habitats Recorded

Small part of the lake shore supports reed swamp. Elsewhere the lake has an abrupt steep rock edge bare of vegetation. Bare rock outcrops, scrub, and dry meadows occur elsewhere within the site.

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

No.	Category	Comment
NA		None

Management Recommendations following survey

None

Future Survey Recommendations

None

Landowner Information Comments

Surveyed from a distance as surveyors were unable to request permission to enter the site.

Description of potential EU Habitats Directive Annex 1 habitats

None

Main Fossitt habitats on site

ED3 Recolonising bare ground
ER2 Exposed calcareous rock
FL8 Other artificial lakes and ponds
FS1 Reed and large sedge swamps
GS2 Dry meadows and grassy verges
WL2 Treelines
WS1 Scrub

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces
GA1 Improved agricultural grassland
WL1 Hedgerows

Landuse / Management Activity

Boating

Frequency of use

2 Occasional (5-20%)

Impacting Activity (EU code and title)

X No threats or pressures

Intensity**Impact****Threats**

X No threats or pressures

Damaging Operations Comments

Former quarry, no current land use. Kayaks present within the site suggesting occasional recreational use.

Flora on site - Latin & English species name

<i>Acer pseudoplatanus</i>	Sycamore
<i>Betula pubescens</i>	Downy Birch
<i>Cirsium arvense</i>	Creeping Thistle
<i>Fraxinus excelsior</i>	Ash
<i>Hedera helix</i>	Ivy
<i>Rubus fruticosus agg.</i>	Blackberry

Salix cinerea subsp. cinerea

Grey Willow

Schoenoplectus lacustris

Common Club-rush

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



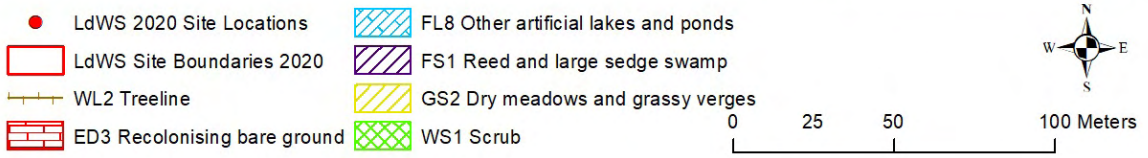
- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020

0 25 50 100 Metres



NPWS NHA site boundary.

GIS Habitat map of the site



Site Name: BALLYNAKILL SOUTH - DERRYAROGUE CUTAWAY COMPLEX

Site Code: LF164 **Area (ha):** 2.90 **Grid Ref:** 204473 272178 **County:** LF



Site designation(s):

Undesignated site

Surveyed by:

Patrick Crushell

Date of wetland survey:

16/09/2020

Survey Code:

LFWS 2020

Site source information:

Limited site inspection only

Site previously identified from assessment of aerial photography

Wetland Present on the Site

YES

Conservation ranking after survey:

E Rating: Local conservation value (low value)

Townland:

BALLYNAKILL

Solid Geology:

Marine shelf facies

Subsoil type:

Cut

Substrate type:

Made Ground

Peat

Substrate stability:

Firm

River catchment:

Shannon Up

CORINE Habitats:

Pastures

Site Location

Failed conifer plantation, located adjacent to a bord na móna works 5 km north-east of Lanesboro.

Site Description and Wetland Habitats Recorded

Failed conifer plantation on cutaway bog, dry birch occurs throughout much of site. Part of site has been in-filled and is used for storage of organic manure. Limited wetland interest.

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

No.	Category	Comment
N9	General	Birch dominated woodland site with some willow. Large drains surround site. Dense bramble occurs in understory which prevents access. Nettles cover a large area likely to be discarded organic manure. Low wetland interest.

Management Recommendations following survey

None

Future Survey Recommendations

None

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

None

Main Fossitt habitats on site

BL3 Buildings and artificial surfaces

ED Disturbed ground

FW4 Drainage ditches

GA1 Improved agricultural grassland

PB4 Cutover bog

WS1 Scrub

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

GA1 Improved agricultural grassland

PB4 Cutover bog

Landuse / Management Activity

Peat cutting (mechanical)

Meadow - use unknown

Frequency of use

3 Frequent (21-50%)

2 Occasional (5-20%)

Impacting Activity (EU code and title)

C01.03.02 mechanical removal of peat

J02.05 Modification of hydrographic functioning,

Intensity

A = high

A = high

Impact

- 2 = irreparable negative influence

- 1 = reparable negative influence

Threats

C01.03 Peat extraction

J02.01 Landfill, land reclamation and drying out, general

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments**Flora on site - Latin & English species name**

Betula pubescens

Downy Birch

Calystegia sepium

Hedge Bindweed

Cirsium arvense

Creeping Thistle

Cirsium vulgare

Spear Thistle

Epilobium hirsutum

Great Willowherb

<i>Pteridium aquilinum</i>	Bracken
<i>Rubus fruticosus</i> agg.	Blackberry
<i>Rumex</i> sp.	Dock
<i>Salix cinerea</i> subsp. <i>oleifolia</i>	Rusty Willow
<i>Sonchus oleraceus</i>	Smooth Sow-thistle
<i>Urtica dioica</i>	Common Nettle

Fauna on site - English and Latin species name

No faunal observations were made

Aerial Photograph showing location of the site



- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020

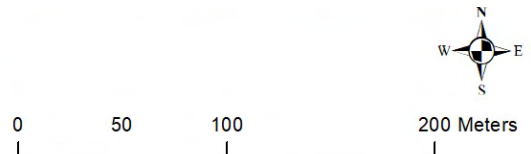


NPWS NHA site boundary.

GIS Habitat map of the site



- LdWS 2020 Site Locations
- WN7 Bog woodland
- LdWS Site Boundaries 2020
- Survey Notes



Site Name: BALLYNAKILL NORTH

Site Code: LF165 **Area (ha):** 4.59 **Grid Ref:** 204510 272668 **County:** LF



Site designation(s):

Undesignated site

Surveyed by:

Patrick Crushell

Date of wetland survey:

16/09/2020

Survey Code:

LFWS 2020

Site source information:

Detailed Wetland Survey undertaken

Site previously identified from assessment of aerial photography

Wetland Present on the Site

YES

Conservation ranking after survey:

E Rating: Local conservation value (low value)

Townland:

BALLYNAKILL

Solid Geology:

Marine shelf facies

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Soft Ground

River catchment:

Shannon Up

CORINE Habitats:

Pastures

Site Location

Wet grassland site located adjacent to a bord na mona works 5 km north-east of Lanesboro.

Site Description and Wetland Habitats Recorded

Small wet grassland area surrounded by improved agricultural grassland to east and industrial cutaway to west. Large drainage features associated with the bord na mona site borders the northern part of the site. Site has been drained in the past. Now comprises species poor wet grassland, used for grazing livestock.

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

No.	Category	Comment
NA		None

Management Recommendations following survey

None

Future Survey Recommendations

None

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

None

Main Fossitt habitats on site

FW4 Drainage ditches

GS4 Wet grassland

WS1 Scrub

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

FW4 Drainage ditches

GA1 Improved agricultural grassland

PB4 Cutover bog

WL1 Hedgerows

WS1 Scrub

Landuse / Management Activity

Grazing - cattle

Frequency of use

3 Frequent (21-50%)

Impacting Activity (EU code and title)

J02.05 Modification of hydrographic functioning,

Intensity

A = high

Impact

- 1 = reparable negative influence

Threats

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

Site is of low wetland interest. Drainage and agriculture are occurring on and surrounding the site.

Flora on site - Latin & English species name

<i>Agrostis stolonifera</i>	Creeping Bent
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Betula pubescens</i>	Downy Birch
<i>Calystegia sepium</i>	Hedge Bindweed
<i>Comarum palustre</i>	Marsh Cinquefoil
<i>Crataegus monogyna</i>	Hawthorn
<i>Dactylis glomerata</i>	Cock's-foot
<i>Deschampsia cespitosa</i>	Tufted Hair-grass

<i>Epilobium hirsutum</i>	Great Willowherb
<i>Filipendula ulmaria</i>	Meadowsweet
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Iris pseudacorus</i>	Yellow Iris
<i>Juncus effusus</i>	Soft-rush
<i>Potentilla erecta</i>	Tormentil
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rubus fruticosus</i> agg.	Blackberry
<i>Salix cinerea</i> subsp. <i>cinerea</i>	Grey Willow
<i>Sonchus asper</i>	Prickly Sow-thistle
<i>Urtica dioica</i>	Common Nettle

Fauna on site - English and Latin species name

Dragon and Damselflies various

Aerial Photograph showing location of the site



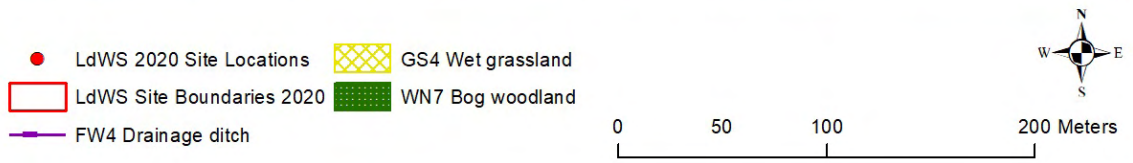
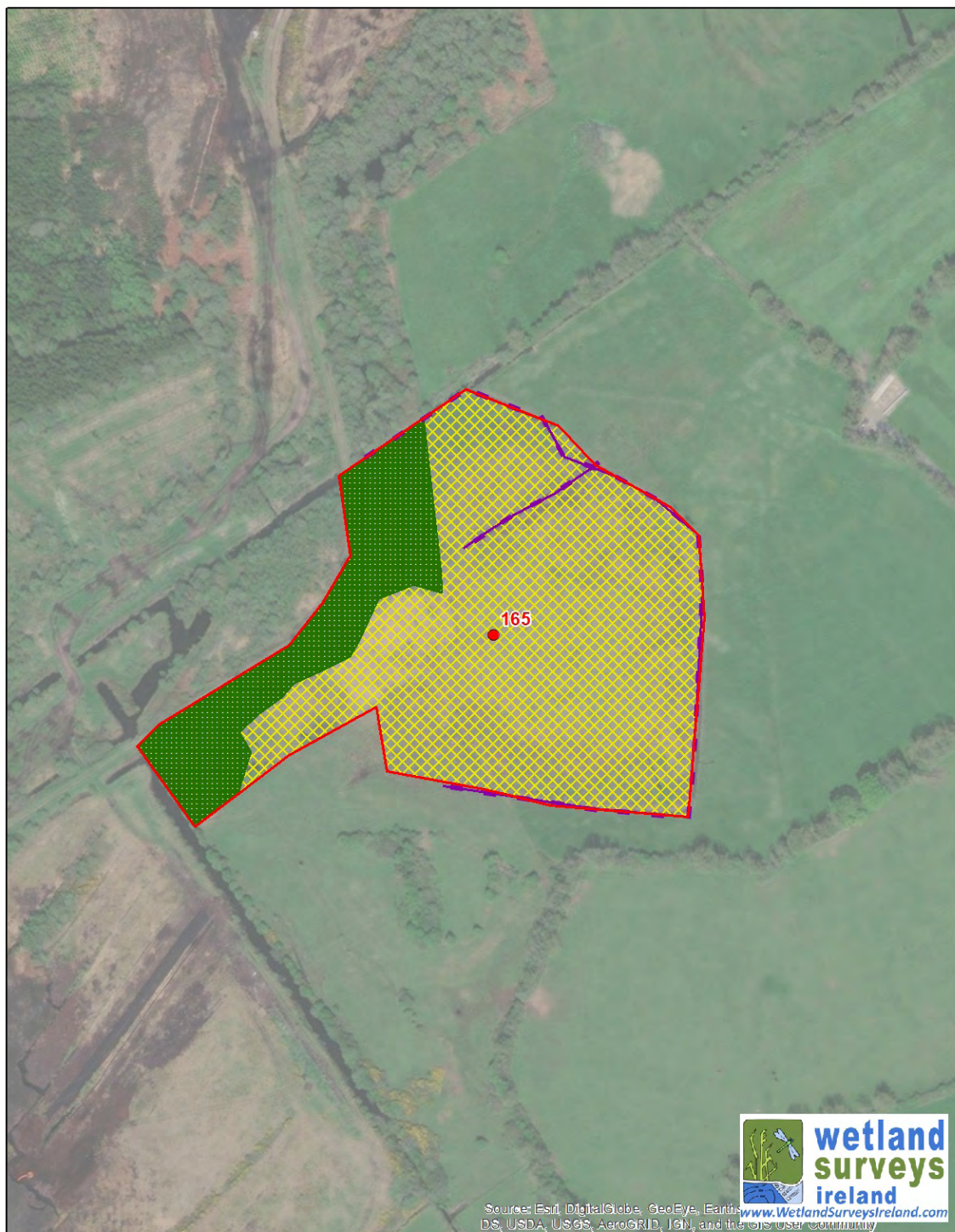
- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020

0 50 100 200 Metres



NPWS NHA site boundary.

GIS Habitat map of the site



Site Name: CLOONTIRM

Site Code: LF178 **Area (ha):** 52.00 **Grid Ref:** 211512 273924 **County:** LF



Site designation(s):

Undesignated site

Surveyed by:

Patrick Crushell

Date of wetland survey:

15/09/2020

Survey Code:

LFWS 2020

Site source information:

Detailed Wetland Survey undertaken

Site previously identified from assessment of aerial photography

Wetland Present on the Site

YES

Conservation ranking after survey:

D Rating: Local conservation value (moderate value)

Townland:

CLOONTIRM

Solid Geology:

Navan Group

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Firm

River catchment:

Shannon Up

CORINE Habitats:

Peat bogs

Site Location

Small remnant raised bog located 2km southwest of Longford town.

Site Description and Wetland Habitats Recorded

Small area of remnant raised bog surrounded by cutover. The high bog is severely degraded with dry firm surface. Raised bog flora persists although high quality indicators are lacking. Peat is actively being cut around the entire margin. Dry birch woodland and scrub occurs on cutover along with bare peat fields, small secondary bog areas and *Juncus effusus* grasslands on peat soil.

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

No.	Category	Comment
N1	Ownership	Access via turbary road.
N2	Habitat	Arable land, remove from site.
N3	Management	Peat spreading field.
N4	Habitat	Series of wet grassland fields on cutover, use road as site boundary here.
N5	Habitat	Exclude area of improved pasture.
N6	Management	Construction materials storage yard.
N7	Habitat	Mature spruce plantation.
N8	Habitat	Exclude area of improved pasture.
N9	Invasive	Japanese knotweed occurring at base of freshly cut face bank.
N10	Habitat	Pond created in cutover, used by duck and by local hunters.

Management Recommendations following survey

Potential for restoration work on the cutover in the long term once peat cutting ceases.

Future Survey Recommendations

None

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

Although a remnant of raised bog occurs, it does not correspond with EU Habitat Annex 1 active raised bog. The main habitat on the site consists of Annex I Habitat Type 7120 Degraded raised bogs still capable of natural regeneration, although the bog is severely degraded and unlikely to be restorable to active raised bog in medium term.

Main Fossitt habitats on site

FW4 Drainage ditches

GS4 Wet grassland

PB1 Raised bogs

EU Habitats Directive habitats on site

7120 Degraded raised bogs still capable of natural

PB4 Cutover bog
 WD4 Conifer plantation
 WN7 Bog woodland
 WS1 Scrub

Fossitt habitats surrounding site

BC1 Arable crops
 BL3 Buildings and artificial surfaces
 FW4 Drainage ditches
 GA1 Improved agricultural grassland
 WL1 Hedgerows

Landuse / Management Activity

Peat cutting (mechanical)

Frequency of use

4 Dominant (>50%)

Impacting Activity (EU code and title)

C01.03.02 mechanical removal of peat

Intensity

A = high

Impact

- 2 = irreparable negative influence

Threats

C01.03.02 mechanical removal of peat

Damaging Operations Comments

None

Flora on site - Latin & English species name

<i>Andromeda polifolia</i>	Bog-rosemary
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass
<i>Berula erecta</i>	Lesser Water-parsnip
<i>Betula pubescens</i>	Downy Birch
<i>Calluna vulgaris</i>	Ling Heather
<i>Carex panicea</i>	Carnation Sedge
<i>Cladonia floerkeana</i>	Matchstick Lichen, Devil's matchsticks
<i>Cladonia portentosa</i>	Branching Lichen
<i>Drosera rotundifolia</i>	Round-leaved Sundew
<i>Erica tetralix</i>	Cross-leaved Heath
<i>Eriophorum angustifolium</i>	Common Cottongrass
<i>Fallopia japonica</i>	Japanese Knotweed
<i>Glyceria fluitans</i>	Floating Sweet-grass
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Juncus effusus</i>	Soft-rush
<i>Lemna minor</i>	Common Duckweed
<i>Medicago lupulina</i>	Black Medick
<i>Molinia caerulea</i>	Purple Moor-grass
<i>Narthecium ossifragum</i>	Bog Asphodel
<i>Pericaria maculosa</i>	Redshank
<i>Potentilla erecta</i>	Tormentil
<i>Pteridium aquilinum</i>	Bracken
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rhynchospora alba</i>	White Beak-sedge
<i>Rubus fruticosus agg.</i>	Blackberry

<i>Rumex acetosella</i>	Sheep's Sorrel
<i>Salix cinerea subsp. cinerea</i>	Grey Willow
<i>Sphagnum capillifolium</i>	Acute-leaved Bog Moss
<i>Sphagnum papillosum</i>	Papillose Bog Moss
<i>Stachys palustris</i>	Marsh Woundwort
<i>Trichophorum cespitosum</i>	Deergrass
<i>Typha latifolia</i>	Bulrush
<i>Ulex europaeus</i>	Gorse
<i>Verbena bonariensis</i>	

Fauna on site - English and Latin species name

Common Frog	<i>Rana temporaria</i>
Common Kestrel	<i>Falco tinnunculus</i>
Dragon and Damselflies various	
Green-veined White	<i>Pieris napi</i>
Grey Heron	<i>Ardea cinerea</i>
Mallard	<i>Anas platyrhynchos</i>
Meadow Pipit	<i>Anthus pratensis</i>
Moorhen	<i>Gallinula chloropus</i>
Wren	<i>Troglodytes troglodytes</i>

Aerial Photograph showing location of the site



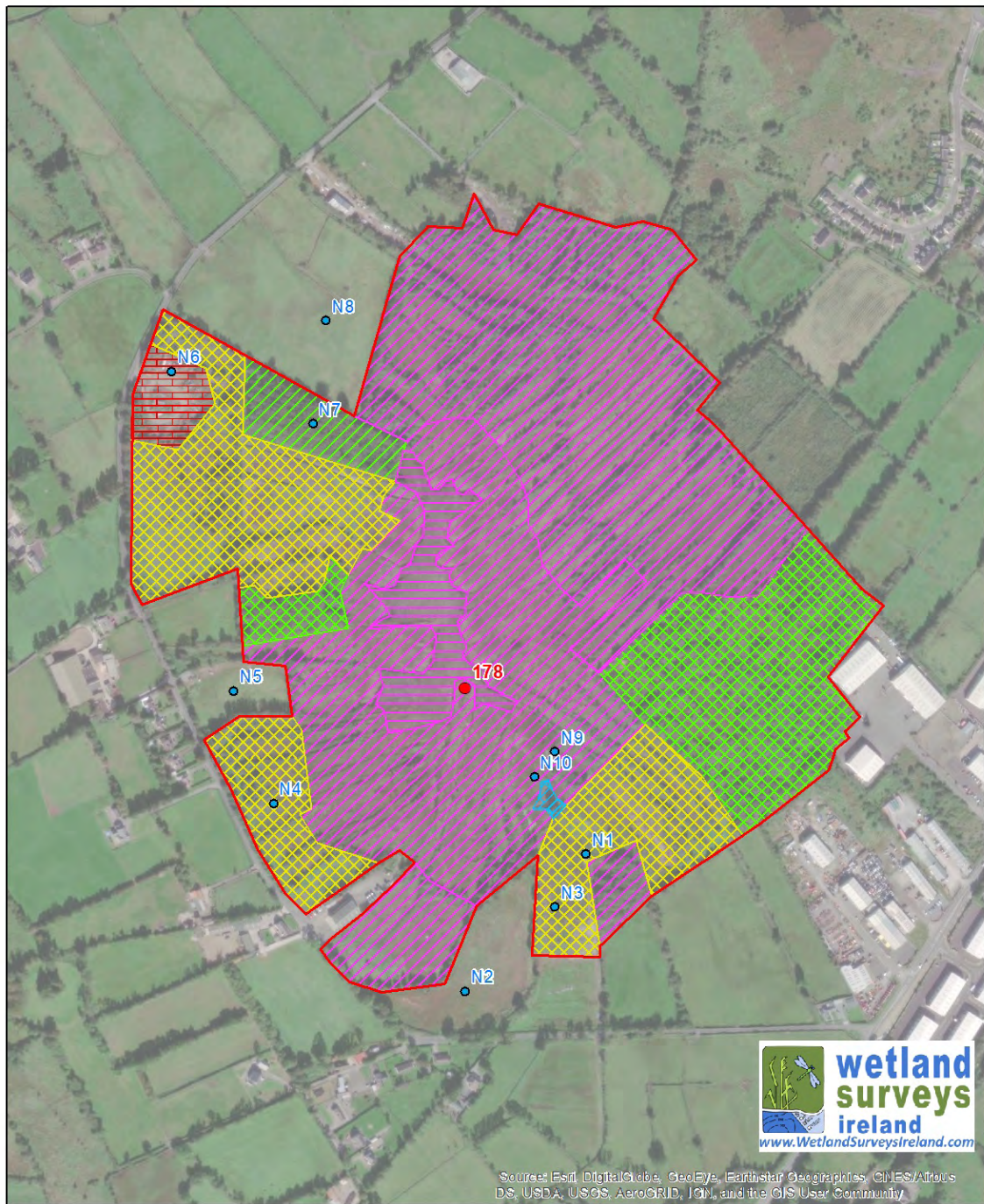
- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020

0 50 100 200 300 Metres

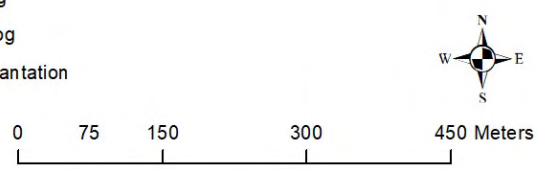


NPWS NHA site boundary.

GIS Habitat map of the site



- LdWS 2020 Site Locations
- ▭ LdWS Site Boundaries 2020
- Survey Notes
- ▭ ED3 Recolonising bare ground
- ▭ FL8 Other artificial lakes and ponds
- ▭ GS4 Wet grassland
- ▭ PB1 Raised bog
- ▭ PB4 Cutover bog
- ▭ WD4 Conifer plantation
- ▭ WS1 Scrub



Site Name: CARROWMANAGH

Site Code: LF218 **Area (ha):** 24.10 **Grid Ref:** 211095 269067 **County:** LF



Site designation(s):

Undesignated site

Surveyed by:

Patrick Crushell

Date of wetland survey:

15/09/2020

Survey Code:

LFWS 2020

Site source information:

Detailed Wetland Survey undertaken

Site previously identified from assessment of aerial photography

Wetland Present on the Site

YES

Conservation ranking after survey:

D Rating: Local conservation value (moderate value)

Townland:

CARROWMANAGH

Solid Geology:

Visean basinal limestone "Calp"

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Firm

River catchment:

Shannon Up

CORINE Habitats:

Peat bogs

Site Location

Remnant raised bog located 5km south west of Longford town.

Site Description and Wetland Habitats Recorded

Small area of degraded raised bog occurs in central part of site. The surface is relatively dry and firm underfoot. Typical raised bog flora continues to dominate but with low moss cover. Occasional Birch and Gorse near the margins. Western side of bog continues to be cut, the cutover has been infilled and is used for spreading and drying peat.

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

No.	Category	Comment
N1	General	Access road, steep soil embankments both sides.
N2	General	Extensive level area of cutover that has been infilled with mineral fill, used for spreading peat.
N3	Management	3m facebank, with single crossing point. Freshly cut. Drain along base flows north.
N4	Habitat	Birch woodland on cutover, surveyed from a distance.
N5	Management	Drains cross bog, not recently maintained.

Management Recommendations following survey

Long term restoration may be possible once peat cutting ceases.

Future Survey Recommendations

None

Landowner Information Comments

Bog is owned by local residents.

Description of potential EU Habitats Directive Annex 1 habitats

The main habitat on the site consists of Annex I Habitat Type 7120 Degraded raised bogs still capable of natural regeneration, that would, however, be very difficult to restore.

Main Fossitt habitats on site

PB1 Raised bogs

PB4 Cutover bog

WN7 Bog woodland

WS1 Scrub

Fossitt habitats surrounding site

ED3 Recolonising bare ground

GA1 Improved agricultural grassland

PB4 Cutover bog

WL1 Hedgerows

EU Habitats Directive habitats on site

7120 Degraded raised bogs still capable of natural

Landuse / Management Activity

Peat cutting (mechanical)

Frequency of use

3 Frequent (21-50%)

Impacting Activity (EU code and title)

C01.03 Peat extraction

J02.01 Landfill, land reclamation and drying out,

Intensity

A = high

A = high

Impact

- 2 = irreparable negative influence

Unknown

Threats

C01.03 Peat extraction

J02.01 Landfill, land reclamation and drying out, general

Damaging Operations Comments

None

Flora on site - Latin & English species name

<i>Agrostis stolonifera</i>	Creeping Bent
<i>Alisma plantago-aquatica</i>	Water-plantain
<i>Andromeda polifolia</i>	Bog-rosemary
<i>Betula pubescens</i>	Downy Birch
<i>Bidens cernua</i>	Nodding Bur-marigold
<i>Calluna vulgaris</i>	Ling Heather
<i>Carex panicea</i>	Carnation Sedge
<i>Cladonia portentosa</i>	Branching Lichen
<i>Erica tetralix</i>	Cross-leaved Heath
<i>Eriophorum angustifolium</i>	Common Cottongrass
<i>Eriophorum vaginatum</i>	Hare's-tail Cottongrass
<i>Juncus effusus</i>	Soft-rush
<i>Juncus inflexus</i>	Hard Rush
<i>Lemna minor</i>	Common Duckweed
<i>Mentha aquatica</i>	Water Mint
<i>Molinia caerulea</i>	Purple Moor-grass
<i>Myrica gale</i>	Bog-myrtle
<i>Narthecium ossifragum</i>	Bog Asphodel
<i>Polygonum persicaria</i>	Redshank
<i>Potentilla anserina</i>	Silverweed
<i>Ranunculus sceleratus</i>	Celery-leaved Buttercup
<i>Rhynchospora alba</i>	White Beak-sedge
<i>Salix aurita</i>	Eared Willow
<i>Salix cinerea subsp. cinerea</i>	Grey Willow
<i>Sphagnum capillifolium</i>	Acute-leaved Bog Moss
<i>Sphagnum papillosum</i>	Papillose Bog Moss
<i>Sphagnum tenellum</i>	Soft Bog Moss
<i>Stachys palustris</i>	Marsh Woundwort
<i>Succisa pratensis</i>	Devil's-bit Scabious
<i>Trichophorum cespitosum</i>	Deergrass
<i>Ulex europaeus</i>	Gorse

Fauna on site - English and Latin species name

Meadow Pipit	<i>Anthus pratensis</i>
Pied wagtail	<i>Motacilla alba yarrellii</i>
Pond Skater species	<i>Gerris spp.</i>

Aerial Photograph showing location of the site



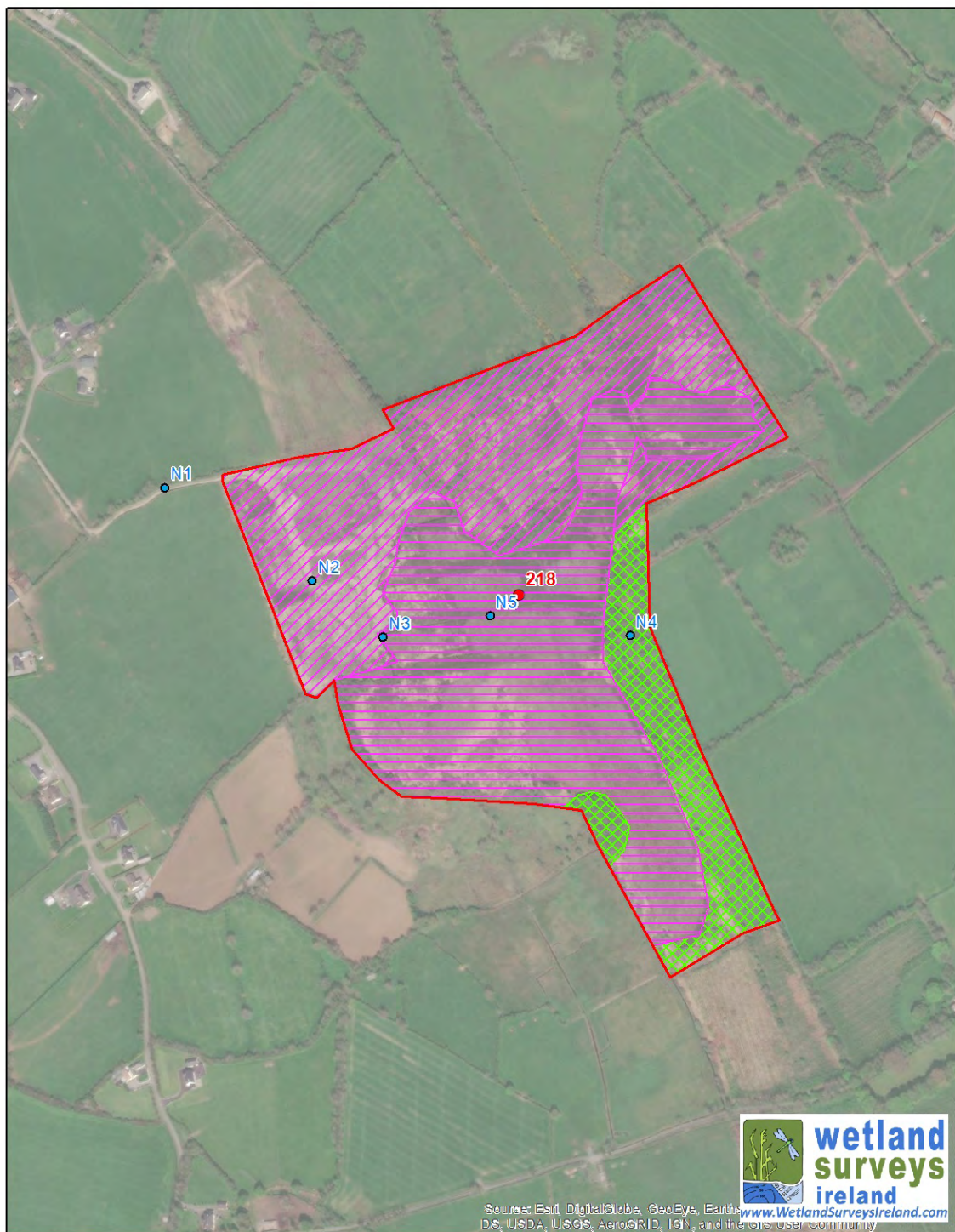
- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020

0 50 100 200 Metres

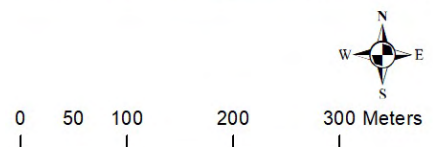


NPWS NHA site boundary.

GIS Habitat map of the site



- LdWS 2020 Site Locations
- ▭ LdWS Site Boundaries 2020
- Survey Notes
- ▨ PB1 Raised bog
- ▨ PB4 Cutover bog
- ▨ WS1 Scrub



Site Name: DERRAGHAN BEG

Site Code: LF237 **Area (ha):** 36.10 **Grid Ref:** 208113 262407 **County:** LF



Site designation(s):

Undesignated site

Surveyed by:

Patrick Crushell

Date of wetland survey:

16/09/2020

Survey Code:

LFWS 2020

Site source information:

Detailed Wetland Survey undertaken

Site previously identified from assessment of aerial photography

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:

DERRAGHAN BEG

Solid Geology:

Marine shelf facies

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Soft Ground

River catchment:

Shannon Up

CORINE Habitats:

Peat bogs

Site Location

Small intact raised bog located 5km west of Keenagh.

Site Description and Wetland Habitats Recorded

Small raised bog surrounded mostly by agricultural grassland. Bog remains largely intact with no recent drainage or cutting. Bog divided by drain running north south. To east grazing livestock occurs, to west bog in better condition. An ESB high voltage 110kV line crosses this part of the bog. Bog would be suitable for conservation and restoration measures.

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

No.	Category	Comment
N1	Habitat	Tall heather on dry form peat.
N2	Habitat	Eastern section of bog grades into improved pasture. Bog is grazed by cattle. Molinia is abundant along with Myrica gale. Firm peat, Sphagnum palustre present.
N3	Damage	Drain divides bog. Clear effect on surrounding vegetation. 1.5m deep by 1.5m wide, suitable to block.
N4	General	Bog to west of drain in better condition, possible due to no grazing. Corresponds with sub-marginal ecotope, 9/7/6.
N5	Habitat	Cutover with regenerating bog, abundant Molinia caerulea, Birch saplings throughout.
N6	Management	ESB 110kV line passes through site at this location. There are approx 4 polesets occurring within the site.
N7	General	Abrupt transition from high bog into improved pasture, transitional area comprises dense Molinia caerulea.
N8	Management	Very large (likely OPW) drainage channel running parallel to length of bog, ca 6m deep, 4 m wide. Ridge on eastern side likely to be rock and material excavated from channel.

Management Recommendations following survey

Block central drain. Very large arterial drain runs parallel to eastern side of bog.

Future Survey Recommendations

None

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

The main habitat on the site consists of Annex I Habitat Type 7120 Degraded raised bogs still capable of natural regeneration.

Main Fossitt habitats on site**Fossitt habitats surrounding site**

BL3 Buildings and artificial surfaces
GA1 Improved agricultural grassland
GS4 Wet grassland
PB4 Cutover bog
WD4 Conifer plantation
WL1 Hedgerows

EU Habitats Directive habitats on site

7120 Degraded raised bogs still capable of natural

Landuse / Management Activity

Grazing - cattle

Frequency of use

Impacting Activity (EU code and title)	Intensity	Impact
A04.02.01 non intensive cattle grazing	C = low	- 1 = reparable negative influence
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

None

Flora on site - Latin & English species name

<i>Achillea millefolium</i>	Yarrow
<i>Agrostis stolonifera</i>	Creeping Bent
<i>Andromeda polifolia</i>	Bog-rosemary
<i>Badhamia lilacena</i>	Yellow slime mould
<i>Betula pubescens</i>	Downy Birch
<i>Calluna vulgaris</i>	Ling Heather
<i>Carex panicea</i>	Carnation Sedge
<i>Cirsium arvense</i>	Creeping Thistle
<i>Cladonia portentosa</i>	Branching Lichen
<i>Dactylis glomerata</i>	Cock's-foot
<i>Drosera rotundifolia</i>	Round-leaved Sundew
<i>Erica tetralix</i>	Cross-leaved Heath
<i>Eriophorum angustifolium</i>	Common Cottongrass
<i>Eriophorum vaginatum</i>	Hare's-tail Cottongrass
<i>Filipendula ulmaria</i>	Meadowsweet
<i>Juncus effusus</i>	Soft-rush
<i>Lichenomphalia umbellifera</i>	Fungus
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Molinia caerulea</i>	Purple Moor-grass
<i>Myrica gale</i>	Bog-myrtle
<i>Narthecium ossifragum</i>	Bog Asphodel
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Plantago major</i>	Greater Plantain
<i>Potentilla anserina</i>	Silverweed
<i>Potentilla anserina</i>	Silverweed
<i>Potentilla erecta</i>	Tormentil
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rumex acetosa</i>	Common Sorrel
<i>Salix cinerea subsp. cinerea</i>	Grey Willow
<i>Sphagnum capillifolium</i>	Acute-leaved Bog Moss
<i>Sphagnum cuspidatum</i>	Feathery Bog Moss
<i>Sphagnum fallax</i>	Flat-topped Bog Moss
<i>Sphagnum magellanicum</i>	Magellan's Bog Moss
<i>Sphagnum palustre</i>	Blunt-leaved Bog Moss
<i>Sphagnum subnitens</i>	Lustrous Bog Moss
<i>Stellaria media</i>	Common Chickweed

<i>Trichophorum cespitosum</i>	Deergrass
<i>Trifolium pratense</i>	Red Clover
<i>Trifolium repens</i>	White Clover
<i>Ulex europaeus</i>	Gorse

Fauna on site - English and Latin species name

Meadow Pipit	<i>Anthus pratensis</i>
Small Tortoiseshell	<i>Aglais urticae</i>
Wren	<i>Troglodytes troglodytes</i>

Aerial Photograph showing location of the site



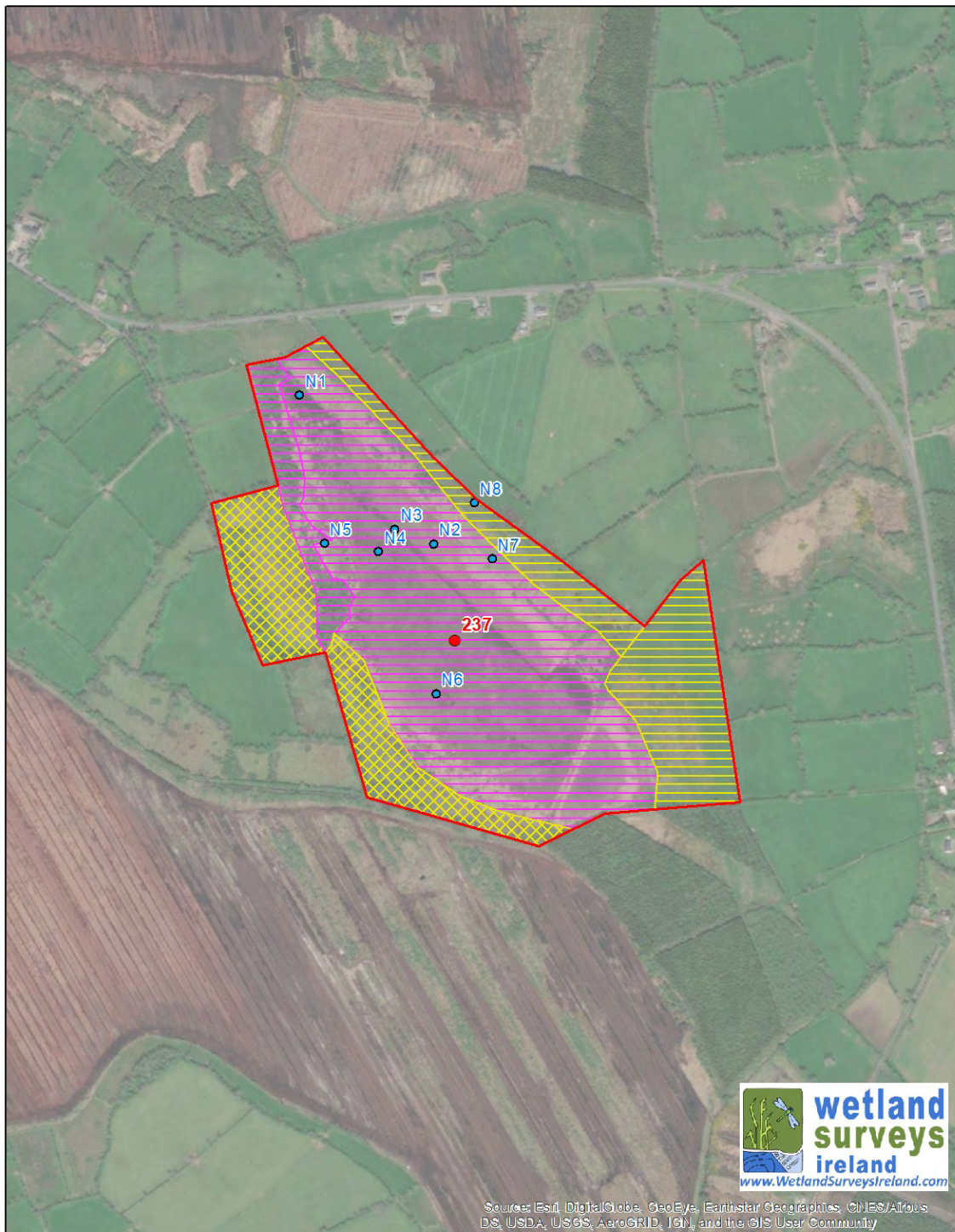
- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020

0 50 100 200 300 Metres



NPWS NHA site boundary.

GIS Habitat map of the site



Site Name: DRUM LOUGH

Site Code: LF239 **Area (ha):** 2.25 **Grid Ref:** 212783 259378 **County:** LF



Site designation(s):

Undesignated site

Surveyed by:

Patrick Crushell

Date of wetland survey:

16/09/2020

Survey Code:

LFWS 2020

Site source information:

Detailed Wetland Survey undertaken

Site previously identified from assessment of aerial photography

Wetland Present on the Site

YES

Conservation ranking after survey:

C+ Rating: County Conservation value

Townland:

MULLAWORNIA

Solid Geology:

Visean basinal limestone "Calp"

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Soft Ground

River catchment:

Inny

CORINE Habitats:

Coniferous forest

Site Location

Small mesotrophic lake ca 4km south of Keenagh.

Site Description and Wetland Habitats Recorded

Lake with fringe of floating macrophytes and narrow transition of emergent reed swamp. Site is surrounded by semi-natural grassland to east while to the west an expanse of birch woodland occurs on old cutover. The Royal Canal occurs close by the lake to the south.

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

No.	Category	Comment
N1	General	Royal canal, fringing wetland vegetation. Greenway establishes along the canal tow path.
N2	General	Access down to site via steep grassland field. Peaty soil, archaeological feature within field.
N3	Habitat	Low lying wet marsh area extends back into wet grassland.
N4	Habitat	Very wet ground conditions fed by spring, with peaty soil. Wet grassland throughout.
N5	General	Access to woodland site via track
N6	Habitat	Conifer plantation with abundance of birch and willow. Band of deciduous birch woodland approaching lake.

Management Recommendations following survey

None

Future Survey Recommendations

None

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

None

Main Fossitt habitats on site

FL4 Mesotrophic lakes

FS1 Reed and large sedge swamps

GS4 Wet grassland

WN6 Wet willow-alder-ash woodland

WS1 Scrub

Fossitt habitats surrounding site

FW4 Drainage ditches

GA1 Improved agricultural grassland

GS4 Wet grassland

WN7 Bog woodland

WS1 Scrub

EU Habitats Directive habitats on site

None noted

Landuse / Management Activity

Grazing - cattle

Frequency of use

2 Occasional (5-20%)

Impacting Activity (EU code and title)

A04.02.01 non intensive cattle grazing

Intensity

C = low

Impact

- 1 = reparable negative influence

Threats

A04.02.01 non intensive cattle grazing

B02 Forest and Plantation management & use

Damaging Operations Comments

Cattle grazing surrounding grasslands and accessing the lake for drinking.

Flora on site - Latin & English species name

	Autumn hawkbit
<i>Acer pseudoplatanus</i>	Sycamore
<i>Alnus glutinosa</i>	Alder
<i>Angelica sylvestris</i>	Wild Angelica
<i>Calystegia sepium</i>	Hedge Bindweed
<i>Carex paniculata</i>	Greater Tussock-sedge
<i>Carex rostrata</i>	Bottle Sedge
<i>Cirsium palustre</i>	Marsh Thistle
<i>Crataegus monogyna</i>	Hawthorn
<i>Deschampsia cespitosa</i>	Tufted Hair-grass
<i>Epilobium hirsutum</i>	Great Willowherb
<i>Equisetum fluviatile</i>	Water Horsetail
<i>Filipendula ulmaria</i>	Meadowsweet
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Iris pseudacorus</i>	Yellow Iris
<i>Juncus effusus</i>	Soft-rush
<i>Juncus inflexus</i>	Hard Rush
<i>Mentha aquatica</i>	Water Mint
<i>Menyanthes trifoliata</i>	Bogbean
<i>Nasturtium officinale</i>	Water-cress
<i>Nuphar lutea</i>	Yellow Water-lily
<i>Nymphaea alba</i>	White Water-lily
<i>Phalaris arundinacea</i>	Reed Canary-grass
<i>Phragmites australis</i>	Common Reed
<i>Picea sitchensis</i>	Sitka Spruce
<i>Polygonum persicaria</i>	Redshank
<i>Potentilla anserina</i>	Silverweed
<i>Ranunculus acris</i>	Meadow Buttercup
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rubus fruticosus agg.</i>	Blackberry
<i>Rubus fruticosus agg.</i>	Blackberry
<i>Rumex acetosa</i>	Common Sorrel
<i>Salix cinerea subsp. cinerea</i>	Grey Willow
<i>Schoenus nigricans</i>	Black Bog-rush
<i>Senecio jacobaea</i>	Common Ragwort
<i>Sparganium erectum</i>	Branched Bur-reed
<i>Succisa pratensis</i>	Devil's-bit Scabious
<i>Trifolium pratense</i>	Red Clover
<i>Ulex europaeus</i>	Gorse

<i>Urtica dioica</i>	Common Nettle
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<i>Veronica beccabunga</i>	Brooklime
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Fauna on site - English and Latin species name

Coarse fish various	NA
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Dragon and Damselflies various	
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Mallard	<i>Anas platyrhynchos</i>
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Aerial Photograph showing location of the site



- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020

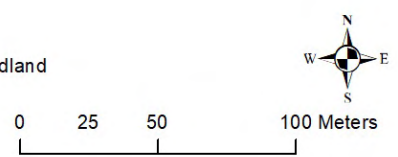


NPWS NHA site boundary.

GIS Habitat map of the site



- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020
- Survey Notes
- ▨ FL4 Mesotrophic lakes
- ▨ FS1 Reed and large sedge swamp
- GM1 Marsh
- ▨ GS4 Wet grassland
- ▨ WN6 Wet willow-alder-ash woodland
- ▨ WS1 Scrub



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Site Name: LEDWITHSTOWN SOUTH

Site Code: LF240 **Area (ha):** 25.10 **Grid Ref:** 210700 258420 **County:** LF



Site designation(s):

Undesignated site

Surveyed by:

Patrick Crushell

Date of wetland survey:

16/09/2020

Survey Code:

LFWS 2020

Site source information:

Detailed Wetland Survey undertaken

Site previously identified from assessment of aerial photography

Wetland Present on the Site

YES

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

LEDWITHSTOWN

Solid Geology:

Visean basinal limestone "Calp"

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

River catchment:

Shannon Upr

CORINE Habitats:

Peat bogs

Site Location

Remnant raised bog located 5km southwest of Keenagh.

Site Description and Wetland Habitats Recorded

Remnant raised bog surrounded by extensive areas of cutover that is regenerating as dry woodland or secondary bog. The surface of the bog is relatively firm and dry with *Molinia*, *Calluna*, *Tormentil*, and *Cladonia portentosa* dominated vegetation. Absence of wet bog communities and *Sphagnum* cover is mostly *Sphagnum capillifolium*. Gorse scrub dominates the drier margins.

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

No.	Category	Comment
N1	Habitat	Wet grassland, <i>Filipendula ulmaria</i> , <i>Cirsium palustre</i> , <i>Juncus effusus</i> , <i>Holcus lanatus</i> .
N2	Habitat	Wet willow and birch woodland.
N3	Habitat	Wet grassland and marsh surrounded by wet woodland.
N4	Habitat	Birch, willow and alder woodland, mostly dry with bramble understory.
N5	Management	Access to site from main road, drop of 4 m from road, through gorse scrub, no marginal drain.
N6	Habitat	Raised bog with abundance of <i>Molinia caerulea</i> . <i>Calluna vulgaris</i> , <i>Erica tetralix</i> , <i>Cladonia portentosa</i> , <i>Narthecium ossifragum</i> , <i>Potentilla erecta</i> .
N7	General	Conifer plantation, remove from site.
N8	Habitat	Cutover bog with wet grassland, tall rushes and meadowsweet. Surveyed from distance, bramble scrub prevented access.
N9	Habitat	Dry birch woodland with bramble understory, on slope from bog, fence separates from bog to west.
N10	Habitat	Large drain with sand, gravel substrates separates the two lines of bog.
N11	Habitat	Similar to bog to east with higher cover of <i>Molinia caerulea</i> .
N12	Habitat	Bramble thicket
N13	Habitat	Dense gorse scrub
N14	Habitat	Dense Bracken and gorse.

Management Recommendations following survey

None

Future Survey Recommendations

None

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

Some of the site consists of Annex I Habitat Type 7120 Degraded raised bogs still capable of natural regeneration.

Main Fossitt habitats on site

PB1 Raised bogs

WN7 Bog woodland

WS1 Scrub

EU Habitats Directive habitats on site

7120 Degraded raised bogs still capable of natural

Fossitt habitats surrounding site

BL3 Buildings and artificial surfaces

GA1 Improved agricultural grassland

GS4 Wet grassland

PB4 Cutover bog

WD4 Conifer plantation

WN7 Bog woodland

WS1 Scrub

Landuse / Management Activity

Forestry

Frequency of use

2 Occasional (5-20%)

Impacting Activity (EU code and title)

J02.05 Modification of hydrographic functioning,

Intensity

A = high

Impact

- 1 = reparable negative influence

Threats

B02 Forest and Plantation management & use

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

No active landuse on site. Remnant high bog, remainder of site exploited and effects of past drainage continue.

Flora on site - Latin & English species name

<i>Andromeda polifolia</i>	Bog-rosemary
<i>Aulacomnium palustre</i>	Moss
<i>Betula pubescens</i>	Downy Birch
<i>Calluna vulgaris</i>	Ling Heather
<i>Carex panicea</i>	Carnation Sedge
<i>Cladonia portentosa</i>	Branching Lichen
<i>Dryopteris dilatata</i>	Broad Buckler-fern
<i>Erica tetralix</i>	Cross-leaved Heath
<i>Eriophorum angustifolium</i>	Common Cottongrass
<i>Eriophorum vaginatum</i>	Hare's-tail Cottongrass
<i>Filipendula ulmaria</i>	Meadowsweet
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Juncus effusus</i>	Soft-rush
<i>Menyanthes trifoliata</i>	Bogbean
<i>Molinia caerulea</i>	Purple Moor-grass
<i>Myrica gale</i>	Bog-myrtle
<i>Narthecium ossifragum</i>	Bog Asphodel
<i>Rubus fruticosus agg.</i>	Blackberry
<i>Salix cinerea subsp. cinerea</i>	Grey Willow

<i>Sphagnum capillifolium</i>	Acute-leaved Bog Moss
<i>Sphagnum cuspidatum</i>	Feathery Bog Moss
<i>Sphagnum imbricatum</i>	
<i>Succisa pratensis</i>	Devil's-bit Scabious
<i>Trichophorum cespitosum</i>	Deergrass
<i>Ulex europaeus</i>	Gorse
<i>Viburnum opulus</i>	Guelder-rose

Fauna on site - English and Latin species name

Brimstone	<i>Gonepteryx rhamni</i>
Common Buzzard	<i>Buteo buteo</i>
No faunal observations were made	

Aerial Photograph showing location of the site



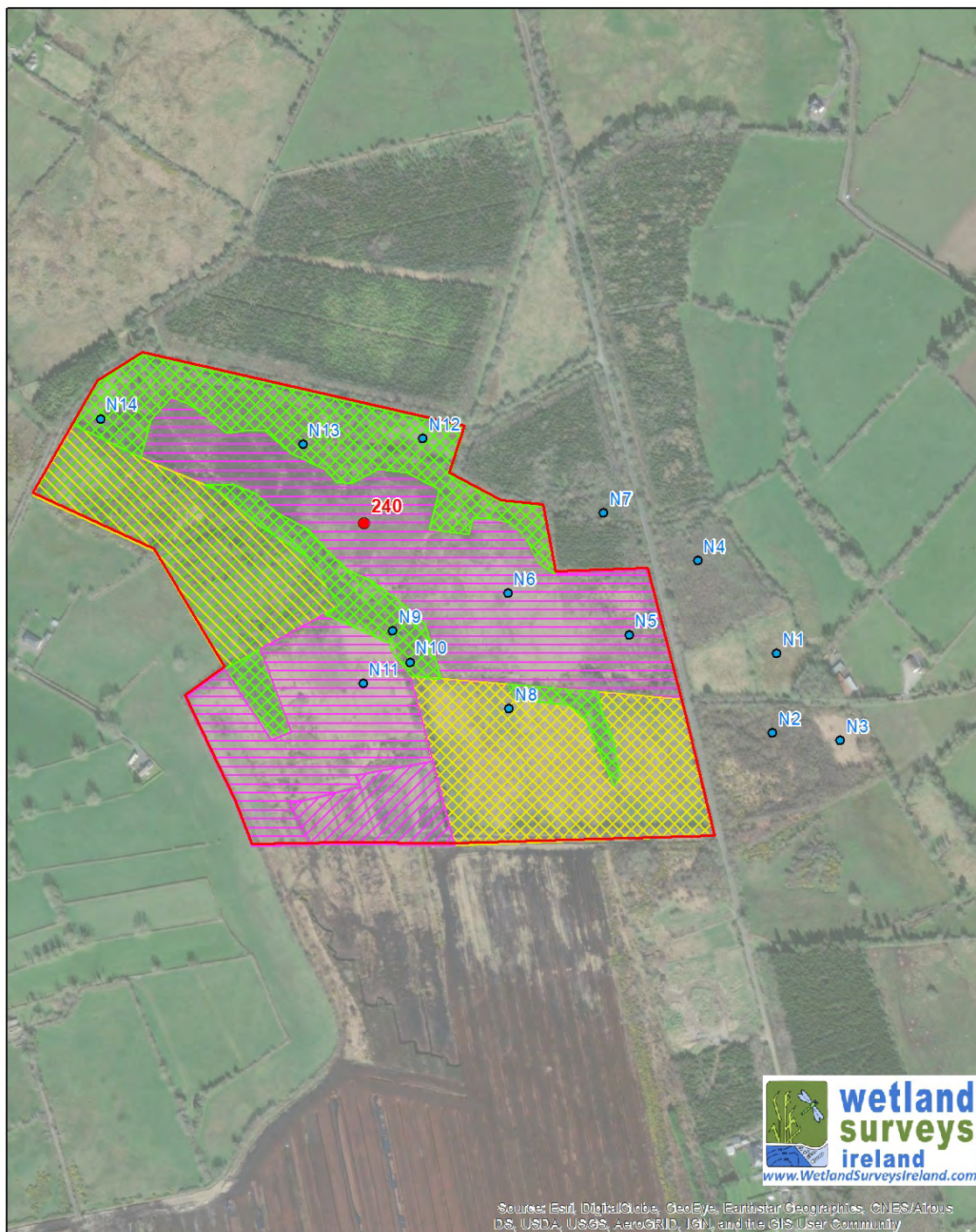
- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020

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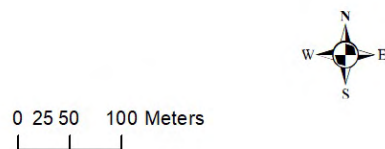


NPWS NHA site boundary.

GIS Habitat map of the site



- LdWS 2020 Site Locations
- ▭ LdWS Site Boundaries 2020
- Survey Notes
- ▭ GS4 / WS1 Wet grassland / scrub
- ▭ GS4 Wet grassland
- ▭ PB1 Raised bog
- ▭ PB4 Cutover bog
- ▭ WS1 Scrub



Site Name: CARRIGEENS TURLOUGH cNHA

Site Code: LF249 **Area (ha):** 16.00 **Grid Ref:** 201570 265100 **County:** LF



Site designation(s):

cNHA

Surveyed by:

Patrick Crushell

Date of wetland survey:

15/09/2020

Survey Code:

LFWS 2020

Site source information:

Detailed Wetland Survey undertaken

Site previously reported from literature

Wetland Present on the Site

YES

Conservation ranking after survey:

B Rating: Nationally Important

Townland:

CARRIGEENS

Solid Geology:

Marine shelf facies

Subsoil type:

L

Substrate type:

Bedrock

Loose Rock

Mineral Soil

Substrate stability:

Very firm

River catchment:

Shannon Up

CORINE Habitats:

Pastures

Site Location

Turlough with distinctive karst features located 4km south of Lanesborough.

Site Description and Wetland Habitats Recorded

Large linear enclosed depression with a series of swallow holes at its northern extent. Blackthorn scrub occurs along the boundary. Some standing water within deepest swallow hole features. Elsewhere zonation is evident in the grassland vegetation. Site used for cattle grazing.

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

No.	Category	Comment
N1	Habitat	Small enclosed rocky depression of ash woodland with willow, hawthorn and blackthorn. Include within site.
N1	General	Rocky depression, shallow water ca 0.5m, flood-line on surrounding scrub indicates the water level can raise 4-5m above current level.
N2	General	One of at least 5 swallow holes in this part of the site. Standing water remains within two of the larger ones.
N3	Habitat	Small farm pond surrounded by rushes and iris.
N4	General	Turlough extends to here, swallow hole with moss covered rocks.
N5	Invasive	Snowberry occurs along roadside.

Management Recommendations following survey

Assess whether grazing and nutrient intensity is giving rise to water quality issues.

Future Survey Recommendations

None

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

This site contains a good example of a Turlough (3180) which is a priority habitat listed under Annex I of the EU Habitats Directive.

Main Fossitt habitats on site	EU Habitats Directive habitats on site
ER2 Exposed calcareous rock	3180 *Turloughs
FL6 Turloughs	
GA1 Improved agricultural grassland	
WS1 Scrub	
Fossitt habitats surrounding site	
BL3 Buildings and artificial surfaces	
GA1 Improved agricultural grassland	
WL1 Hedgerows	
WS1 Scrub	

Landuse / Management Activity

Grazing - cattle

Frequency of use

4 Dominant (>50%)

Impacting Activity (EU code and title)

A04.01.01 intensive cattle grazing

H01 Pollution to surface waters (limnic & terrestrial)

Intensity

A = high

B = medium

Impact

Unknown

Unknown

Threats

H01 Pollution to surface waters (limnic & terrestrial)

Damaging Operations Comments

Field used for grazing cattle. Likely to be giving rise to enrichment due to diffuse runoff.

Flora on site - Latin & English species name

<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Carex nigra</i>	Common Sedge
<i>Carex sp.</i>	Sedge
<i>Cinclidotus fontinaloides</i>	Smaller Lattice-moss
<i>Cirsium arvense</i>	Creeping Thistle
<i>Corylus avellana</i>	Hazel
<i>Crataegus monogyna</i>	Hawthorn
<i>Filipendula ulmaria</i>	Meadowsweet
<i>Fontinalis antipyretica</i>	Greater water-moss
<i>Fraxinus excelsior</i>	Ash
<i>Geranium robertianum</i>	Herb-Robert
<i>Hedera helix</i>	Ivy
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Hypochaeris radicata</i>	Cat's-ear
<i>Lapsana communis</i>	Nipplewort
<i>Lolium perenne</i>	Perennial Rye-grass
<i>Mentha aquatica</i>	Water Mint
<i>Origanum vulgare</i>	Wild Marjoram
<i>Plantago lanceolata</i>	Ribwort Plantain
<i>Polygonum persicaria</i>	Redshank
<i>Potentilla anserina</i>	Silverweed
<i>Prunus spinosa</i>	Blackthorn
<i>Ranunculus repens</i>	Creeping Buttercup
<i>Rorripa sp.</i>	Yellow Cress
<i>Rosa canina</i>	Dog-rose
<i>Rubus fruticosus agg.</i>	Blackberry
<i>Rumex acetosa</i>	Common Sorrel
<i>Rumex crispus</i>	Curled dock
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Sambucus nigra</i>	Elder
<i>Scorzoneroideis autumnalis</i>	Autumn Hawkbit
<i>Urtica dioica</i>	Common Nettle
<i>Viburnum opulus</i>	Guelder-rose

Fauna on site - English and Latin species name

Green-veined White	<i>Pieris napi</i>
Grey Heron	<i>Ardea cinerea</i>
Mallard	<i>Anas platyrhynchos</i>
Small Tortoiseshell	<i>Aglais urticae</i>

Aerial Photograph showing location of the site



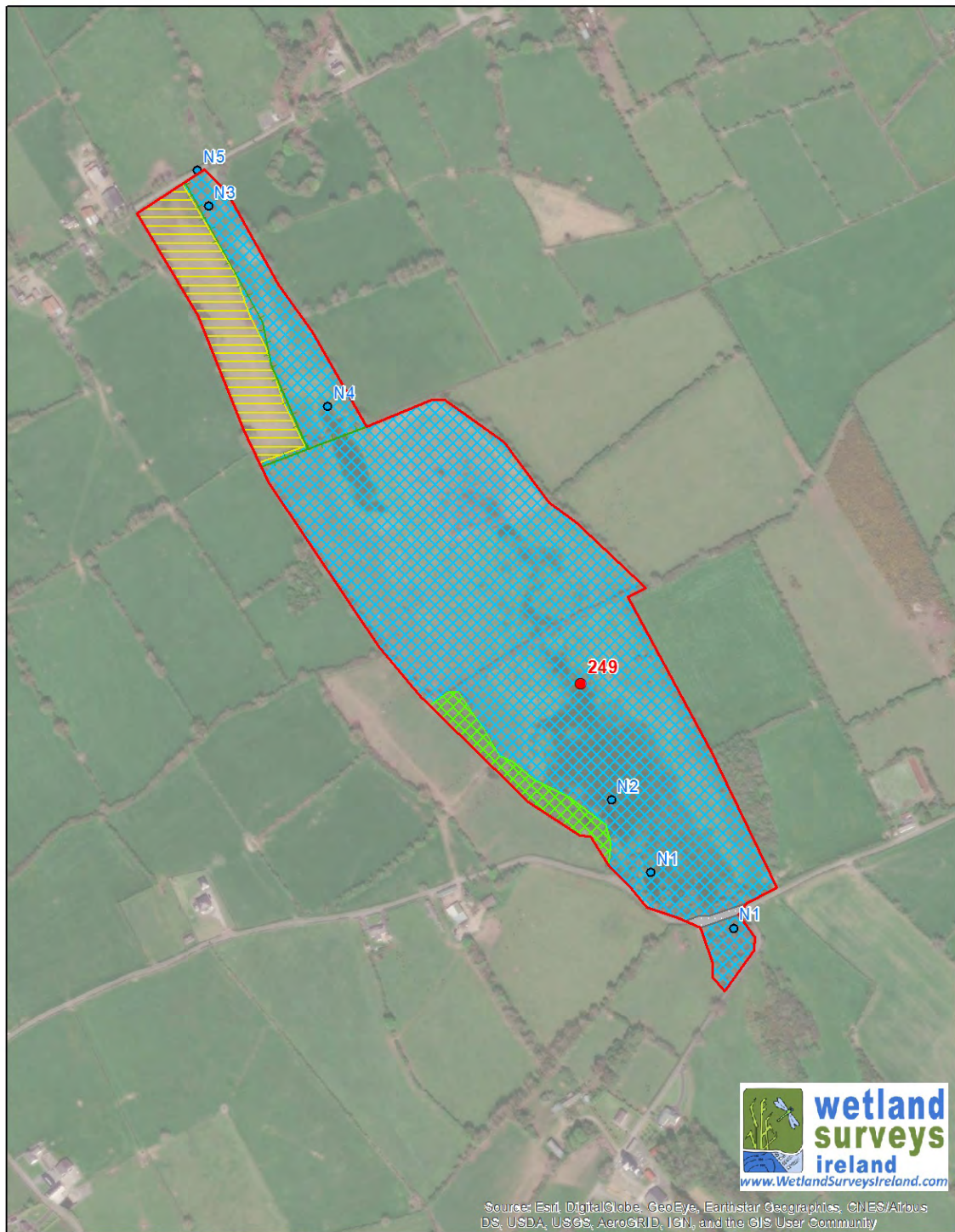
- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020

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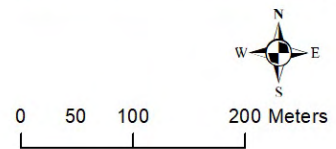


NPWS NHA site boundary.

GIS Habitat map of the site



- LdWS 2020 Site Locations
- ▭ LdWS Site Boundaries 2020
- Survey Notes
- WL1 Hedgerow
- ▭ BL3 Buildings and artificial surfaces
- ▭ FL6 Turloughs
- ▭ GA1 Improved agricultural grassland
- ▭ WS1 Scrub



Site Name: CLOONANNY CUTOVER

Site Code: LF273 **Area (ha):** 6.98 **Grid Ref:** 212061 268416 **County:** LF



Site designation(s):

Undesignated site

Surveyed by:

Patrick Crushell

Date of wetland survey:

17/09/2020

Survey Code:

LFWS 2020

Site source information:

Detailed Wetland Survey undertaken

Site previously reported from literature

Wetland Present on the Site

No Data - wetland possible

Conservation ranking after survey:

C Rating: Local conservation value (high value)

Townland:

CLOONANNY

Solid Geology:

Visean basinal limestone "Calp"

Subsoil type:

Cut

Substrate type:

Peat

Substrate stability:

Firm

River catchment:

Shannon Up

CORINE Habitats:

Peat bogs

Site Location

Small cutover raised bog located ca 6km south of Longford.

Site Description and Wetland Habitats Recorded

Cutover raised bog, cutting continued in recent years. Narrow strip of degraded high bog remains. Remainder of the site is regenerating cutover on level terrain with abundant *Molinia caerulea* and *Calluna vulgaris*. Drains occur throughout.

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

No.	Category	Comment
N1	Habitat	Species poor wet grassland
N2	General	Access to bog via track through conifer plantation. Machine to cut turf accessed here in recent years.
N3	Habitat	Old drain, 2m deep, 1m wide, along bog margin. Vegetated and part functioning
N4	Habitat	Drain, part vegetated. Would benefit from blocking.
N5	Habitat	Raised bog, old facebank, 4m high. On high bog tall heather dominates.
N6	Damage	Facebank cut in recent years. Small strip of high bog remains.

Management Recommendations following survey

Potential to restore by blocking drains on the cutover.

Future Survey Recommendations

None

Landowner Information Comments

None

Description of potential EU Habitats Directive Annex 1 habitats

None

Main Fossitt habitats on site

GS4 Wet grassland

PB4 Cutover bog

EU Habitats Directive habitats on site

None noted

Fossitt habitats surrounding site

FW4 Drainage ditches

GA1 Improved agricultural grassland

GS4 Wet grassland

WD4 Conifer plantation

Landuse / Management Activity

Peat cutting (hand)

Forestry

Frequency of use

4 Dominant (>50%)

3 Frequent (21-50%)

Impacting Activity (EU code and title)

C01.03 Peat extraction

B01 forest planting on open ground

J02.05 Modification of hydrographic functioning,

Intensity

A = high

B = medium

A = high

Impact

- 2 = irreparable negative influence

- 1 = reparable negative influence

- 1 = reparable negative influence

Threats

B02 Forest and Plantation management & use

J02.05 Modification of hydrographic functioning, general

Damaging Operations Comments

None

Flora on site - Latin & English species name

<i>Aulacomnium palustre</i>	Moss
<i>Betula pubescens</i>	Downy Birch
<i>Calluna vulgaris</i>	Ling Heather
<i>Cladonia portentosa</i>	Branching Lichen
<i>Dryopteris dilatata</i>	Broad Buckler-fern
<i>Erica tetralix</i>	Cross-leaved Heath
<i>Eriophorum angustifolium</i>	Common Cottongrass
<i>Eriophorum vaginatum</i>	Hare's-tail Cottongrass
<i>Hypnum jutlandicum</i>	Moss
<i>Juncus effusus</i>	Soft-rush
<i>Molinia caerulea</i>	Purple Moor-grass
<i>Narthecium ossifragum</i>	Bog Asphodel
<i>Pinus sp.</i>	
<i>Potentilla erecta</i>	Tormentil
<i>Pteridium aquilinum</i>	Bracken
<i>Salix cinerea subsp. cinerea</i>	Grey Willow
<i>Sphagnum capillifolium</i>	Acute-leaved Bog Moss
<i>Sphagnum palustre</i>	Blunt-leaved Bog Moss
<i>Sphagnum subnitens</i>	Lustrous Bog Moss
<i>Sphagnum tenellum</i>	Soft Bog Moss
<i>Trichophorum cespitosum</i>	Deergrass
<i>Ulex europaeus</i>	Gorse

Fauna on site - English and Latin species name

Common Snipe	<i>Gallinago gallinago</i>
Dragon and Damselflies various	
Meadow Pipit	<i>Anthus pratensis</i>

Aerial Photograph showing location of the site

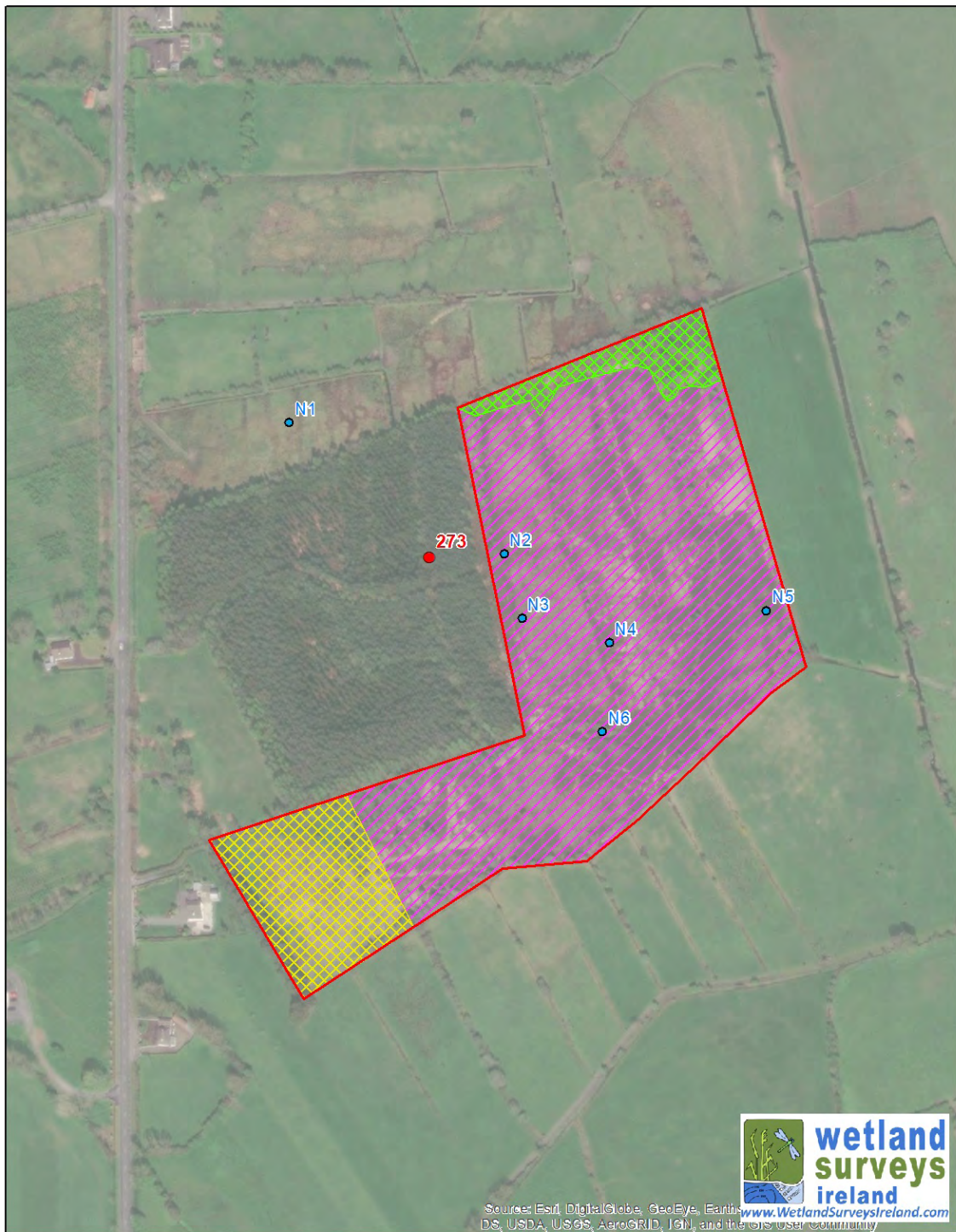


- LdWS 2020 Site Locations
- LdWS Site Boundaries 2020



NPWS NHA site boundary.

GIS Habitat map of the site



County Longford Wetlands Field Survey 2020

CD ROM Contents

by Patrick Crushell, Mary Catherine Gallagher & Peter Foss

Contents:

1. **County Longford Wetlands Field Survey 2020.** Main survey report and individual site reports prepared by Patrick Crushell, Mary Catherine Gallagher & Peter Foss (In PDF format, requires Adobe Acrobat to view).
2. **Longford Wetland Site Database 2020 Version 3.0; Longford Wetland Survey Database 2020 Version 2.0** (requires Filemaker Pro to view).
3. **Excel tables to accompany the County Longford Wetlands Field Survey 2020 report**

LFWS_Survey_Database_Site_Summary: Summary information on sites survey during the LFWS 2020, including site location, and table with site description and conservation ranking.
4. **GIS Shape files from the County Longford Wetlands Field Survey 2020.**
 - a. ArcView GIS dataset (Requires ArcView GIS Software)
 - b. MapInfo GIS dataset (Requires MapInfo GIS Software)

An Action of the County Longford Draft Heritage Plan 2015-2020