

WESTMEATH COUNTY COUNCIL

WESTMEATH WETLAND SURVEY 2020

FINAL REPORT

8TH JUNE 2021

Church Street, Moate, Co. Westmeath

T +353 86 1736075

info@blackthornecology.ie



TABLE OF CONTENTS

1	Introduction	1
1.1	Context	1
1.2	Aims and Objectives	1
2	Methods	3
2.1	Site Selection	3
2.2	Survey Methods	3
2.3	Conservation Status	5
3	Westmeath Wetlands	6
3.1	Overview	6
3.2	Site Descriptions	10
3.2.1	Archerstown Fen	10
3.2.2	Ballagh Bog	14
3.2.3	Ballykeeran Fen	16
3.2.4	Bishops Lough	19
3.2.5	Cloran Loughs	22
3.2.6	Kilrush Lower Fen	25
3.2.7	Lalistown Fen	28
3.2.8	Lisclogher Bog	32
3.2.9	Lough Patrick	36
3.2.10	Rathskeagh Lower Fen	39
3.2.11	Togherstown	42
3.2.12	Tullycross Cutover	46
4	References	49

Citation

Smith, G.F. and Hodd, R. (2021) Westmeath Wetland Survey 2020. Report prepared for Westmeath County Council.

1 INTRODUCTION

1.1 Context

Wetlands are arguably the habitats of the greatest biodiversity importance in Westmeath. Westmeath's wetlands support a diversity of species, many of which are rare or endangered. Westmeath supports a diverse range of wetland types. Lakes and their fringing habitats, including reedswamps, marshes and fens, are abundant in the county. Westmeath is also home to a significant area of peatlands, including raised bogs, alkaline or rich fens, and transition mires.

In addition to their nature conservation value, intact wetlands also provide many important ecosystem services, such as flood prevention, provision of clean water and carbon sequestration. Regrettably, however, only a fraction of the original wetland resource in the county remains. Wetland habitats in Westmeath have diminished as a result of agricultural improvement, conversion to forestry, peat extraction for fuel or compost, and water pollution. The value of wetlands in the county context is now recognised by Westmeath County Council. Policy P-WET1 commits the council "to ensure that floodplains, wetlands and watercourses are protected for their biodiversity and flood protection value". In particular, it is an objective (O-WET1) of WCC "to identify and map wetland sites of good ecological value and protect them for their biodiversity".

In response to this objective, the *Desktop Survey of Wetland Sites in County Westmeath* (Smith and D'Arcy, 2020) reviewed existing information on wetlands in the county. This incorporated the results of previous studies, such as the *Westmeath Fen Survey* (Natura Environmental Consultants, 2007) and the *Westmeath Peatland Survey* (Natura Environmental Consultants, 2005). A key output of this study was a GIS database of the location, extent, habitats and conservation value of all wetlands in the county. Following on from this research, Westmeath County Council commissioned a field survey of twelve wetland sites that have or had the potential to be of County Value for biodiversity, based on existing data.

1.2 Aims and Objectives

The primary aim of the project is to build on the 2019 desk-based survey of wetland sites to provide detailed and accurate knowledge of the wetlands in County Westmeath. This will be used to inform planning policy and prioritise future field work in the wetlands of the county. To achieve this, the key objectives are to:

- Carry out field surveys to gather baseline information on the type, extent and condition of selected wetland sites.
- Identify management issues and threats to conservation condition that affect the selected sites.

- Recommend conservation actions and priorities and any other future work that should be carried out at the sites.
- Raise awareness of the importance of wetlands by liaising with the public and landowners.

2 METHODS

2.1 Site Selection

The *Desktop Survey of Wetland Sites in County Westmeath* (Smith and D'Arcy, 2020) provides an indicative list of sites to be prioritised for field survey. The ten (10) County Value sites in this list were chosen for survey in this project. Among these were two sites that were assessed as being formerly of County Value, but appear to have been destroyed according to the latest available information (Ballagh Bog and Tullycross Cutover).

The two additional sites potentially of County Value that were chosen were Lislogher Bog and Cloran Loughs. Lislogher Bog was chosen as the site increased the geographical scope of the surveys to the south-east of the county. In addition, this site appears to be threatened by peat extraction activity. Furthermore, Lislogher Bog had the potential to support more acidic habitats, unlike most of the other sites, which appeared to support alkaline fen.

Cloran Loughs appeared to be quite interesting with the potential for a diversity of wetland types in the site, including transition mire, a habitat for which Westmeath is especially important and did not seem to be well represented in the remainder of the sites.

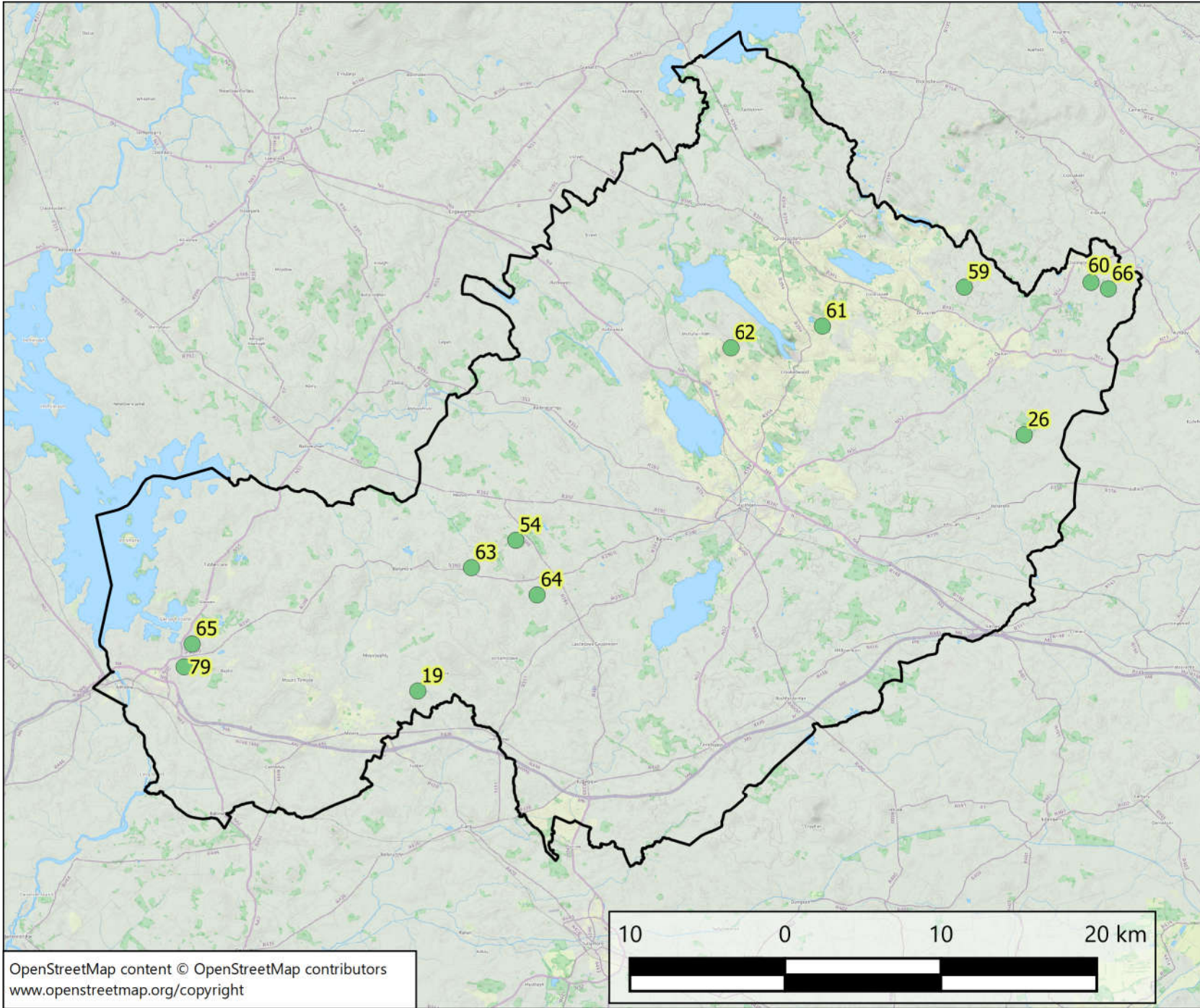
The selected survey sites are shown in the map overleaf. They span the breadth of the county and include most areas where county value wetlands are present. No sites were chosen in the northern end of the county where several county value turlough sites are present because they have been the subject of relatively recent field survey.

2.2 Survey Methods

Field survey methods followed the Heritage Council's *Best Practice Guidance* (Smith *et al.*, 2011). Prior to field survey, the Westmeath Wetland Survey GIS was reviewed to target where possible any potential habitats of high conservation interest. In addition, records of rare or protected species that may have been present were sought from NPWS and the National Biodiversity Data Centre.

In the field, habitats were mapped according to *A Guide to Habitats in Ireland* (Fossitt, 2000) and where appropriate Habitats Directive Annex I types (European Commission, 2013). Characteristic plant species were noted and any rare or protected species that were found were recorded. The conservation condition of the wetland habitats was evaluated, and ongoing or potential threats to biodiversity were recorded. Due to the limited resources available to the project, the 12 study sites were surveyed over a total of 10 field survey days. As a result, it was not possible to survey all parts of some of the sites, but those parts of the highest potential biodiversity interest were targeted where possible.

Landowners were contacted by post and informed about the project prior to field survey, with the assistance of Westmeath County Council. Where possible, contact was made with landowners on the day of the survey.



Legend

- Survey sites
- County Boundary

Wetland Study Site Locations

Westmeath Wetland Survey
2020

Scale 1:350,000
08-06-2021
Rev 0



2.3 Conservation Status

The conservation value of each site was assessed using the scale in the desktop survey, which was adapted from the Map of Irish Wetlands (Foss and Crushell, 2020) ranking:

- **A** = Internationally important [SACs and SPAs]
- **B** = Nationally important [NHAs and pNHAs]
- **B/C+** = County/National conservation value
- **C+** = County conservation value
- **C** = High local conservation value
- **D** = Moderate local conservation value
- **E** = Low local conservation value
- **F** = Unknown conservation value, survey required
- **X** = Former wetland site that appears to have been destroyed

Sites ranked B/C+ are the best undesignated sites in the county. They were not designated as NHAs or formally proposed for designation (pNHAs) at the time of survey, but are considered worthy of consideration as NHAs should the opportunity arise.

Conservation condition was ranked on a four-point scale:

- **Good:** There are few or no threats to conservation value, and the site's conservation value is likely to remain stable or improve in the near future.
- **Inadequate:** Threats and pressures on the site's conservation value are moderate, and the site's conservation value is likely to slowly decline over the near future.
- **Poor:** Threats and pressures on the site's conservation value are major, and the site's conservation value is likely to steadily decline over the near future.
- **Very poor:** Ongoing and recent threats and pressures on the site's conservation value are severe, which has caused or is causing a significant decrease or elimination of the site's conservation value. This situation is unlikely to change without substantial restoration work.

3 WESTMEATH WETLANDS

3.1 Overview

Of the twelve sites that were surveyed, four were considered to be of County/National Value for biodiversity (B/C+) and two were considered to be of County Value (Table 1). One site, Ballagh Bog, was confirmed to be extinct, with no wetland habitat remaining.

Table 1. Site summaries and conservation value

Site Name	Site Number	Conservation Value	Description
ARCHERSTOWN FEN	59	C+	The site contains remnant raised bog, some of which is still wet with well-developed pools, and cutover bog that has developed into a mosaic of habitats. These include calcareous fen, transition mire, wet willow woodland and bog woodland.
BALLAGH BOG	19	X	Ballagh Bog is no longer a wetland. It was formerly considered to be a fen of County Value but was afforested in 2004. It is now drained and supports commercial conifer and broadleaf forestry.
BALLYKEERAN FEN	65	C	This site was probably once a bog, but the central area now supports conifer plantation and native birch woodland. The surrounding fields are wet grassland, some of which are species-rich with some typical calcareous fen plants.
BISHOPS LOUGH	61	C	Bishop's Lough is the largest of a series of six small lakes in a valley, which would have originally been surrounded by extensive wetlands. Most of the former wetlands are now conifer forestry or drained pasture. There is some good willow-alder-ash wet woodland and small areas of other wetland types, including reedswamp, tussock-sedge swamp and wet grassland.
CLORAN LOUGHS	66	D	The site is a series of kettlehole lakes with fringing reedswamp and wet woodland and also a small area of fen. The majority of the site is wet grassland, much of which is semi-improved.
KILRUSH LOWER FEN	60	B/C+	This site comprises wet willow-alder woodland that contains two areas of open, mossy transition mire. The western part of the site includes species-rich wet grassland.

Site Name	Site Number	Conservation Value	Description
LALISTOWN FEN	64	B/C+	The northern part of Lalistown Fen is a complex patchwork of alkaline fen, wet grassland and wet woodland in hollows amongst higher rocky ground occupied by scrubby ash and hawthorn woodland. The southern end of the site is cutover bog with numerous pockets of alkaline fen vegetation where old peat harvesting has reached lime-rich groundwater.
LISCLOGHER BOG	26	B/C+	Lisclogher Bog consists mainly of degraded raised bog and cutover. There is a small lake surrounded by wet, <i>Sphagnum</i> -rich bog woodland and transition mire.
LOUGH PATRICK	62	B/C+	Lough Patrick is a small lake fringed by reedswamp and transition mire, in turn surrounded by wet grassland and alkaline fen. Much of the latter has been drained and degraded. The rare and protected varnished hook-moss occurs here in one of only two Westmeath sites.
RATHSKEAGH LOWER FEN	63	C+	This site is an extensive area of alkaline fen and fringing wet grassland. The fen in the west of the site is of good quality, but areas in the north-east are being lost to infilling and agricultural improvement.
TOGHERSTOWN	54	D	This site was formerly alkaline fen, but most wetland habitat has been lost through agricultural improvement and afforestation. Some areas of wet grassland remain, along with a stand of wet pedunculate oak-ash woodland.
TULLYCROSS CUTOVER	79	E	This site was formerly a raised bog of County value with a very wet central area of interconnecting pools. It is now mostly industrial cutaway and cutover bog, and most of its biodiversity value has been lost.

The most abundant wetland habitat types in the twelve surveyed sites were cutover bog, wet grassland and raised bog. The areas occupied by these and other wetland habitats, according to the Heritage Council classification (Fossitt, 2000), are summarised in Table 2. Some related habitats are considered together where one or both have a relatively low abundance.

Table 2. Breakdown of wetland habitat types in surveyed sites

Habitat	Fossitt Code	Area (ha)
Cutover bog	PB4	128.6
Wet grassland	GS4	64.5
Raised bog	PB1	36.5
Bog woodland	WN7	29.1
Wet woodland	WN6, WN4	23.3
Rich fen	PF1	19.5
Lakes	FL1, FL4	13.8
Swamps	FS1, FS2	3.6
Transition mire	PF3	3.5
Other	ED3, GM1, PF2	1.7

A total of 26.3 ha of Habitats Directive Annex I habitats (European Commission, 2013) were mapped. Alkaline fens were the most abundant, totalling 11.2 ha. The total for Rhynchosporion depressions is an overestimate, as this area is the total area over which they occur, usually as isolated patches within a larger habitat matrix.

Table 3. Total area of Annex I habitats mapped in surveyed sites

Annex I Habitat	Code	Area (ha)
Alkaline fen	7230	11.2
Rhynchosporion depressions	7150	8.3
Transition mire	7140	3.2
Alluvial woodland	91E0	2.0
Bog woodland	91D0	1.6

New populations of two rare plant species were found. A new location for round-leaved wintergreen (*Pyrola rotundifolia* subsp. *rotundifolia*) was found at Lalistown Fen. This species is considered Near Threatened in Ireland (Wyse Jackson *et al.*, 2016). Westmeath is particularly important for this species, as much if not most of its Irish population is found in the county.



Round-leaved wintergreen at Lalistown Fen



Varnished hook moss at Lough Patrick

A second Westmeath location for varnished hook moss (*Hamatocaulis vernicosus*) found at Lough Patrick. This species is Near Threatened in Ireland (Lockhart *et al.*, 2012) and is listed on Annex II of the Habitats Directive. Its only other Westmeath site is Scragh Bog, which is only 3.6 km south of Lough Patrick.

3.2 Site Descriptions

3.2.1 Archerstown Fen

Site Name:	Archerstown Fen
Site Code:	59
Area:	24.6 ha
Conservation Value:	County Value (C+)
Conservation Condition:	Inadequate
Main Wetland Habitats:	Raised bog, cutover bog, wet willow-alder-ash woodland, bog woodland, rich fen
Notable Features:	Annex I habitats: <i>Rhynchosporion</i> depressions (7150), alkaline fen (7230); potential for active raised bog (7110) and degraded raised bog (7120)
Threats and Pressures:	<ul style="list-style-type: none"> • Drainage • Recent drainage work • Invasive species • Peat extraction (historical)
Conservation Recommendations:	<ul style="list-style-type: none"> • Restore hydrology • Control invasive species

This site is divided by a minor road running from east to west, with a house and a rough field just south of the road, which are not part of the wetland site. Most of the site is cutover raised bog, much of which has reverted to secondary habitats. The majority of the remnant, uncut raised bog is located to the south of the road and is slowly being colonised by downy birch (*Betula pubescens*). The middle of the remnant bog is still relatively wet and free of significant



Raised bog with cutover bog in foreground

cover of colonising trees, and contains some pool systems containing the bog mosses *Sphagnum cuspidatum* and *S. medium*, great sundew (*Drosera anglica*), round-leaved sundew (*D. rotundifolia*) and bog asphodel (*Narthecium ossifragum*). Hare's-tail bog-cotton (*Eriophorum vaginatum*) and northern deergrass (*Trichopohrum germanicum*) are frequent in this area of bog, with cranberry (*Vaccinium oxycoccos*) abundant in parts. Wet hollows from which peat has been excavated have developed into the Habitats Directive Annex I habitat

Rhynchosporion depressions, with abundant white beak-sedge (*Rhynchospora alba*) and a carpet of *Sphagnum*. Where the bog surface is drier, the vegetation is dominated by heather (*Calluna vulgaris*), purple moor-grass (*Molinia caerulea*), the bog moss *Sphagnum rubellum* and reindeer lichen (*Cladonia portentosa*). There is the potential for Annex I active raised bog and/or degraded raised bog habitat to occur; confirmation will require specialist ecological and hydrological investigation.

There is an area of rich fen to the north of the road, much of which occurs under moderately dense common reed (*Phragmites australis*), with good cover of sedges, particularly common sedge (*Carex nigra*) and bottle sedge (*C. rostrata*), over a dense carpet of the moss *Calliergonella cuspidata*. There is also good cover of forb species, particularly bogbean (*Menyanthes trifoliata*) and marsh cinquefoil (*Comarum palustre*). A small area of fen



Annex I alkaline fen at Archerstown

corresponding to Annex I alkaline fen also occurs to the north of the road, dominated by black bog-rush (*Schoenus nigricans*) tussocks, underlain by discontinuous cover of the brown mosses *Campyllum stellatum*, *Ctenidium molluscum* and *Scorpidium scorpioides*. There are small, dense stands of great fen-sedge (*Cladium mariscus*) associated with the fen area. In deep, water-filled cuttings, alongside both the fen and bog areas, transition mire has developed, with lesser tussock-sedge, bottle sedge and slender sedge, as well as bogbean, prominent over a mat of *Calliergonella cuspidata*.

Wet willow-alder-ash woodland has developed extensively, dominated by grey willow (*Salix cinerea*), in mosaic with bog woodland, characterised by downy birch, mainly at the edge of the more intact areas of bog. The woodland ground flora is mostly poor, dominated by bramble (*Rubus fruticosus* agg.) or purple moor-grass, but in some parts, it is more diverse with wild angelica (*Angelica sylvestris*), meadowsweet (*Filipendula ulmaria*) and water mint (*Mentha aquatica*), which may eventually develop into Annex I alluvial woodland, but cannot currently be considered as the Annex habitat. Small areas of purple moor-grass-dominated wet grassland have developed, and contain abundant devil's-bit scabious (*Succisa pratensis*) in places, which may be potential habitat for marsh fritillary butterfly. Other habitats occurring in mosaic are marsh, tall herb swamp, scrub and dense bracken.

Few immediate threats to the site were noted. A deep, wide drain has recently been dug just north of the road, which is probably adding to the already widespread drying out of the site. A number of non-native species were noted across the site. A cluster of plants of Wilson's honeysuckle (*Lonicera nitida*) were encountered in wet woodland, as were scattered beech (*Fagus sylvatica*) saplings. A handful of young lodgepole pine (*Pinus contorta*) grow on the surface of the open bog area. A single animal path was encountered through the bog, but there were no signs of damage due to grazing.



Wet willow woodland



Archerstown Fen Habitats

Scale: 1:4500









Westmeath Wetlands Survey 2020

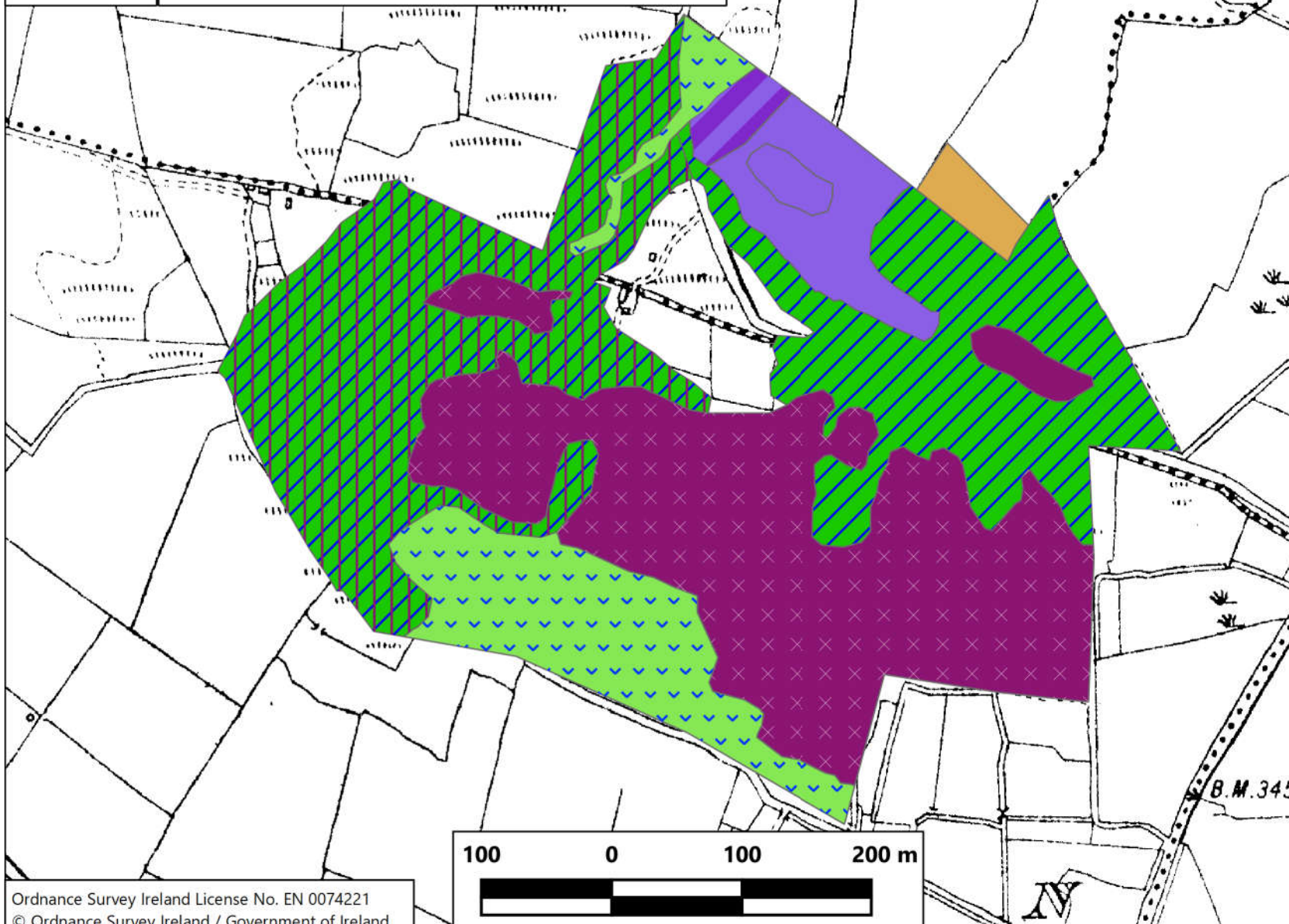
01-06-2021

Rev0

Legend

Habitat types

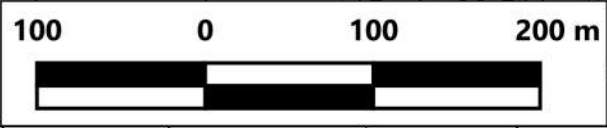
-  Bog woodland / Wet willow woodland (WN7/WN6)
-  Raised bog (PB1)
-  Raised bog / Cutover bog (PB1/PB4)
-  Rich fen (PF1)
-  Tall herb swamp (FS2)
-  Transition mire / Rich fen (PF3/PF1)
-  Wet grassland (GS4)
-  Wet willow-alder-ash woodland (WN6)



B.M. 345



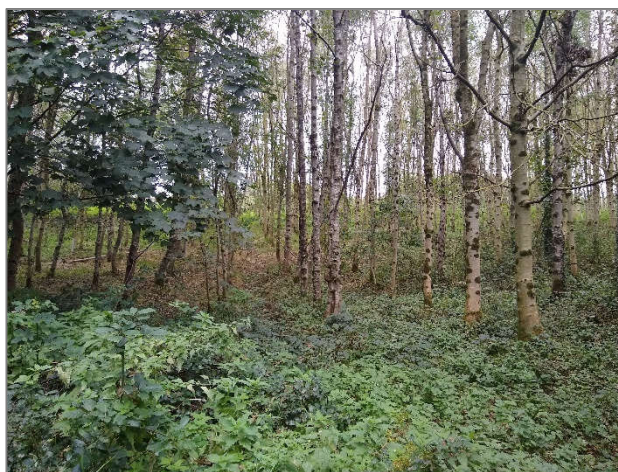
Ordnance Survey Ireland License No. EN 0074221
© Ordnance Survey Ireland / Government of Ireland



3.2.2 Ballagh Bog

Site Name:	Ballagh Bog
Site Code:	19
Area:	5.2 ha
Conservation Value:	Extinct (X)
Conservation Condition:	Very poor
Main Wetland Habitats:	None
Notable Features:	None
Threats and Pressures:	<ul style="list-style-type: none"> • Drainage • Past afforestation
Conservation Recommendations:	<ul style="list-style-type: none"> • None

This site no longer contains any wetland habitat, and has been drained and completely afforested in 2004. According to the National Parks and Wildlife Service (NPWS) Fen Study Database (Foss, 2007), the site was a fen formerly of County Value for biodiversity. The northern part of the site consists of planted stands of ash (*Fraxinus excelsior*), alder (*Alnus glutinosa*) and sycamore (*Acer pseudoplatanus*), with the southern area



Forestry plantation at Ballagh Bog

occupied by a Sitka spruce (*Picea sitchensis*) plantation. There are areas of bramble, gorse (*Ulex europaeus*) and grey willow scrub between the blocks of forestry and around the edge of the site. There are drains throughout the site, particularly in the southern part, with a large, deep drain running through the middle of the site, indicating that it would have been wetland habitat prior to being planted up. A number of wetland species were noted persisting at the edge of the forestry, including purple moor-grass and remote sedge (*Carex remota*). The spring previously recorded in the northwest of the site is no longer present.



Ballagh Bog Habitats

Scale: 1:3000




Westmeath Wetlands Survey 2020

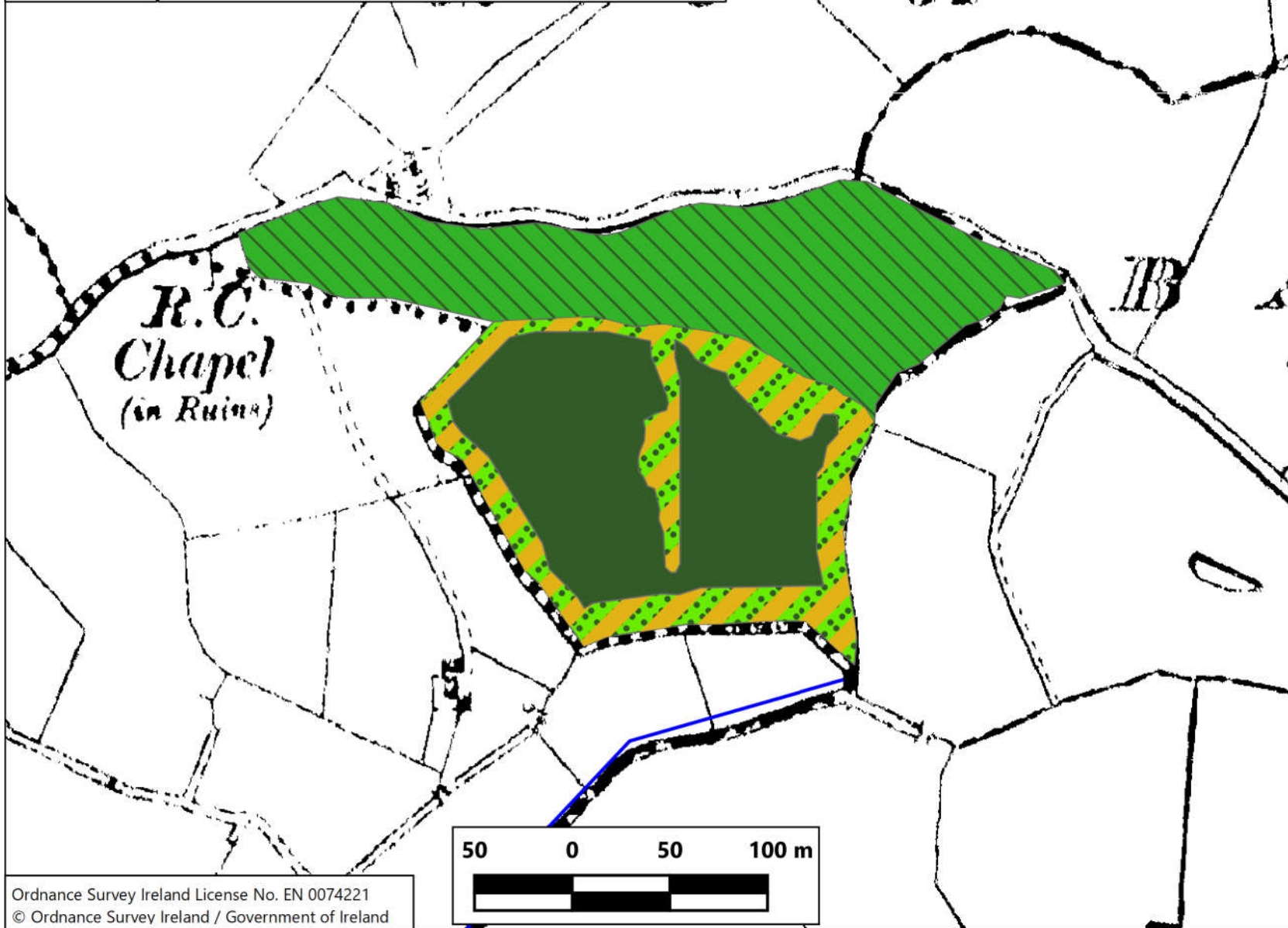
01-06-2021

Rev0

Legend

Habitat types

-  Broadleaved woodland (WD1)
-  Conifer plantation (WD4)
-  Scrub / Dry meadows (WS1/GS2)



Ordnance Survey Ireland License No. EN 0074221
© Ordnance Survey Ireland / Government of Ireland



3.2.3 Ballykeeran Fen

Site Name:	Ballykeeran Fen
Site Code:	65
Area:	24.8
Conservation Value:	High Local Value (C)
Conservation Condition:	Inadequate
Main Wetland Habitats:	Wet grassland, bog woodland, rich fen
Notable Features:	Good marsh fritillary potential, red squirrel
Threats and Pressures:	<ul style="list-style-type: none"> • Drainage • Past afforestation • Undergrazing
Conservation Recommendations:	<ul style="list-style-type: none"> • Restore hydrology • Maintain low-intensity grazing

This site occupies low-lying ground in which raised bog and fen formerly developed. Deep, wide drainage ditches run throughout the whole site. The centre of the site is a maturing Sitka spruce plantation that appears to have been planted on cutover bog. It is dense, unthinned and no longer provides wetland habitat. A red squirrel was seen here, however, during the field surveys. To the west and south, the plantation is fringed by bog woodland on cutover bog dominated by downy birch with an understorey of grey willow in places. Some parts of the woodland are grazed by horses. The field layer is species-poor, as is typical on dry, drained peat. Bramble is the most abundant with frequent ivy (*Hedera hibernica*), creeping bent (*Agrostis stolonifera*) and bracken (*Pteridium aquilinum*). Older sections of the birch woodland also support ash, pedunculate



Young bog woodland with downy birch and bracken

oak (*Quercus robur*) and Scots pine (*Pinus sylvestris*), especially along drain banks. Some of these may have been planted in the past. Hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*), rowan (*Sorbus aucuparia*) and holly (*Ilex aquifolium*) are also present in the understorey of the older birch woodlands in the site. The field layer is also a little more species-rich, although bramble still dominates, with the typical woodland species broad buckler fern and the mosses *Thuidium tamariscinum* and *Eurhynchium striatum* also present.

Peaty but calcareous wet grassland encircles the wooded area. Some areas supported abundant devil's-bit scabious and appeared to have a sward structure that might favour the rare marsh fritillary butterfly. Other typical flora included meadowsweet, tormentil (*Potentilla erecta*), silverweed (*P. anserina*), glaucous sedge (*Carex flacca*), common yellow sedge (*C. demissa*). Peaty hollows support jointed rush (*Juncus articulatus*) and star sedge (*Carex echinata*). Other



Species-rich wet grassland with devil's-bit scabious

fields are less diverse, particularly those that have been undergrazed and have become tussocky and encroached upon by scrub. These rougher wet grasslands supported common rush (*Juncus effusus*), compact rush (*J. conglomeratus*), false oat-grass (*Arrhenatherum elatius*), Yorkshire fog (*Holcus lanatus*), creeping bent, creeping buttercup (*Ranunculus repens*), marsh thistle (*Cirsium palustre*) and meadowsweet. Semi-improved and species-poor rushy pastures are abundant in the area, but have been excluded from the wetland site.

An area flagged as potential rich fen by the Westmeath Fen Study (Natura Environmental Consultants, 2007) could not be accessed on the day due to uncrossable drains. There are also further areas to the south-east of the site at present that may support additional wet grassland or fen.



Ballykeeran Fen Habitats

Scale: 1:4500









Westmeath Wetlands Survey 2020

01-06-2021

Rev0

Legend

Habitat types

-  Freshwater marsh (GM1)
-  Wet grassland (GS4)
-  Wet grassland / Scrub (GS4/WS1)
-  Wet grassland - Rich fen (PF1-GS4)
-  Conifer plantation (WD4)
-  Bog woodland (WN7)
-  Immature woodland (WS2)
-  Watercourses



Ordnance Survey Ireland License No. EN 0074221
© Ordnance Survey Ireland / Government of Ireland



3.2.4 Bishops Lough

Site Name:	Bishops Lough
Site Code:	61
Area:	33.6 ha
Conservation Value:	High Local Value (C)
Conservation Condition:	Poor
Main Wetland Habitats:	Lakes, wet grassland, wet willow-alder-ash woodland, reedswamp
Notable Features:	Annex I alluvial woodland
Threats and Pressures:	<ul style="list-style-type: none"> • Invasive species • Drainage • Past afforestation
Conservation Recommendations:	<ul style="list-style-type: none"> • Control invasive species • Restore hydrology

This site is a series of lakes scattered along a valley floor. Most of the former wetland was afforested with conifers, mainly Norway spruce (*Picea abies*), in 1991 or reclaimed and drained as grazing land. The pastures are now either wet grassland or dry meadows. The latter and the more improved examples of the former have been excluded from the site, along with the conifer plantations. There is a strip of semi-natural wetland habitat between



Annex I alluvial woodland at Bishops Lough

the forestry and grassland, alongside the lakes. More significantly, there is an area of wet willow-alder-ash woodland, corresponding to Habitats Directive Annex I alluvial woodland, along the northern shore of the largest lake, Bishop's Lough. The upper part of this woodland is quite dry, with sycamore and hazel that is likely to have been coppiced in the past, over an understory of bramble. Closer to the lakeshore, the woodland becomes much wetter in character, with a canopy of ash, alder (*Alnus glutinosa*), grey willow and downy birch. This woodland has a rich ground flora, with species present including purple moor-grass, common reed, tufted sedge (*Carex elata*), lesser pond sedge (*C. acutiformis*), meadowsweet, wild angelica, water mint, yellow flag (*Iris pseudacorus*), false brome (*Brachypodium sylvaticum*),

marsh horsetail (*Equisetum palustre*), great fen-sedge, and the mosses *Calliergonella cuspidata*, *Kindbergia praelonga*, *Oxyrrhynchium speciosum* and *Plagiomnium ellipticum*. The landowner also reported seeing lesser twayblade (*Neottia ovata*), an orchid, and a species of spotted orchid (*Dactylorhiza* sp.) in this woodland. The non-native and potentially invasive grey alder (*Alnus incana*) was observed self-seeding in parts of the wet woodland.

The margins of all of the lakes consist of reed and large sedge swamps, typically dominated by a mix of great fen-sedge and common reed, with an outer band of common club-rush (*Schoenoplectus lacustris*) before open water. There is also mare's tail (*Hippuris vulgaris*), bogbean and bulrush (*Typha latifolia*) amongst the taller swamp vegetation. All of the lakes contain the highly invasive aquatic plant, parrot's feather (*Myriophyllum aquaticum*), and it forms dense mats in the smaller lakes. East of



View of Bishop's Lough with floating mat of parrot's feather and fringing wetlands

Bishop's Lough, the wetland habitat forms a narrow strip to the north of the stream between the lakes and around the lakes. This consists of a mosaic of habitats, primarily wet woodland, wet grassland, dry meadows and reed and tall sedge swamps. In places the wet grassland is dominated by purple moor-grass, with devil's-bit scabious, marsh cinquefoil, meadowsweet, marsh marigold (*Caltha palustris*) and the moss *Climacium dendroides*, while in others it is drier in character, containing red fescue (*Festuca rubra*) and false oat-grass, alongside Yorkshire fog and fen bedstraw (*Galium uliginosum*). There are also areas of large sedge swamp dominated by large tussocks of greater tussock sedge (*Carex paniculata*), with bogbean and marsh cinquefoil. Many thalli of the aquatic liverwort *Ricciocarpus natans* were found in wet woodland alongside the southeasternmost lake, and in the stream downstream of this, water dock (*Rumex hydrolapathum*) was also found in this area.

The reclaimed wet grassland on the southern side of the stream is grazed by sheep and horses and is characterised by common rush, purple moor-grass and common sedge. The south-eastern portion of the site is wet grassland grazed by cattle, with small patches of scrub and swamp. The wet grassland is heavily poached, and contains common rush, meadowsweet, common sedge, carnation sedge (*Carex panicea*), false fox sedge (*Carex otrubae*), water mint, creeping buttercup, purple moor-grass, cock's-foot (*Dactylis glomerata*), marsh thistle and the moss *Calliergonella cuspidata*. The area of swamp is dominated by greater tussock-sedge and common reed.



Bishop's Lough Habitats

Westmeath Wetlands Survey 2020









Scale: 1:8500

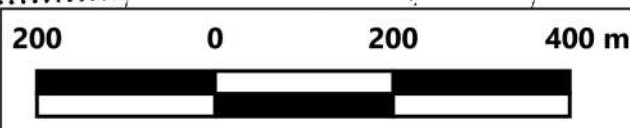
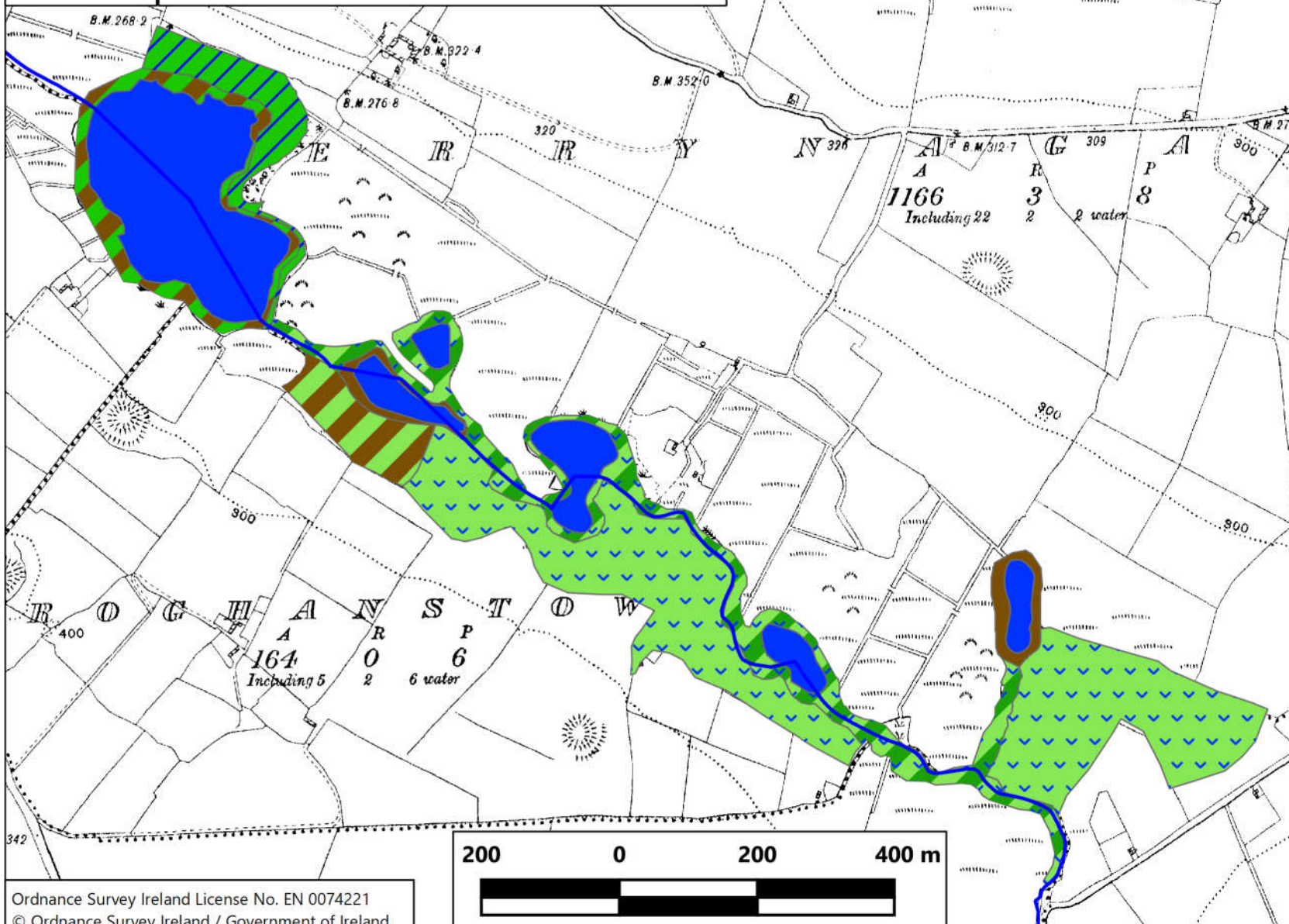
01-06-2021

Rev0

Legend

Habitat types

-  Mesotrophic lakes (FL4)
-  Reed and large sedge swamp (FS1)
-  Reedswamp / Wet willow woodland (FS1/WN6)
-  Wet grassland (GS4)
-  Wet grassland / Reedswamp (GS4/FS1)
-  Wet willow-alder-ash woodland (WN6)
-  Wet grassland / Scrub (GS4/WS1)
-  Watercourses



Ordnance Survey Ireland License No. EN 0074221
© Ordnance Survey Ireland / Government of Ireland



3.2.5 Cloran Loughs

Site Name:	Cloran Loughs
Site Code:	66
Area:	10.5 ha
Conservation Value:	Moderate Local Value (D)
Conservation Condition:	Inadequate
Main Wetland Habitats:	Lakes, wet grassland, wet willow-alder-ash woodland, poor fen
Notable Features:	None
Threats and Pressures:	<ul style="list-style-type: none"> • Drainage • Overgrazing
Conservation Recommendations:	<ul style="list-style-type: none"> • Restore hydrology • Maintain low-intensity grazing • Implement low-intensity silvicultural systems

This site consists of a series of kettlehole lakes, set within an undulating agricultural landscape. The majority of the area is of little ecological interest, and consists of a mix of low biodiversity wet grassland, dominated by common rush, and improved agricultural grassland, all of which is heavily grazed by sheep. These areas have been excluded from the original site boundary. A higher diversity of habitats exists around the lakes, which have a



Lake and fringing swamp with great fen-sedge

fringe of reed and large sedge swamp, dominated by common reed and great fen-sedge. There is also a fringe of woodland, which is mostly wet willow-alder-ash woodland with a canopy of grey willow, birch and ash. There is an area of mixed broadleaf/conifer woodland with some wetland flora dominated by a mix of non-native tree species, including beech, Scots pine, Sitka spruce, sycamore and horse-chestnut (*Aesculus hippocastanum*).

There is an area of wet grassland immediately south of the largest lough that contains elements of rich fen, with species present including long-stalked yellow sedge (*Carex lepidocarpa*) and blunt-flowered rush (*Juncus subnodulosus*), alongside lesser tussock sedge, star sedge, common reed and a range of wet grassland species. There is a small area of poor fen, heavily poached and grazed by cattle, north of the largest lough. It is characterised by bottle sedge



Transitional wet grassland – rich fen

alongside water mint, sharp-flowered rush (*Juncus acutiflorus*), hard rush (*J. inflexus*), and the mosses *Calliergon cordifolium* and *Calliergonella cuspidata*. This is contiguous with a larger area of wet grassland, which is dominated by dense common rush, with Yorkshire fog, meadowsweet, silverweed, dandelion (*Taraxacum officinalis* agg.), carnation sedge, and the mosses *Calliergonella cuspidata* and *Climacium dendroides*. Fauna observed on the site include frog and snipe.



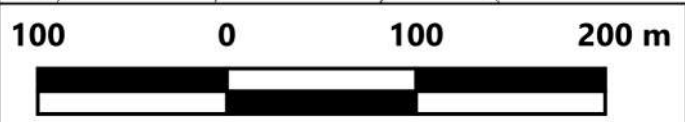
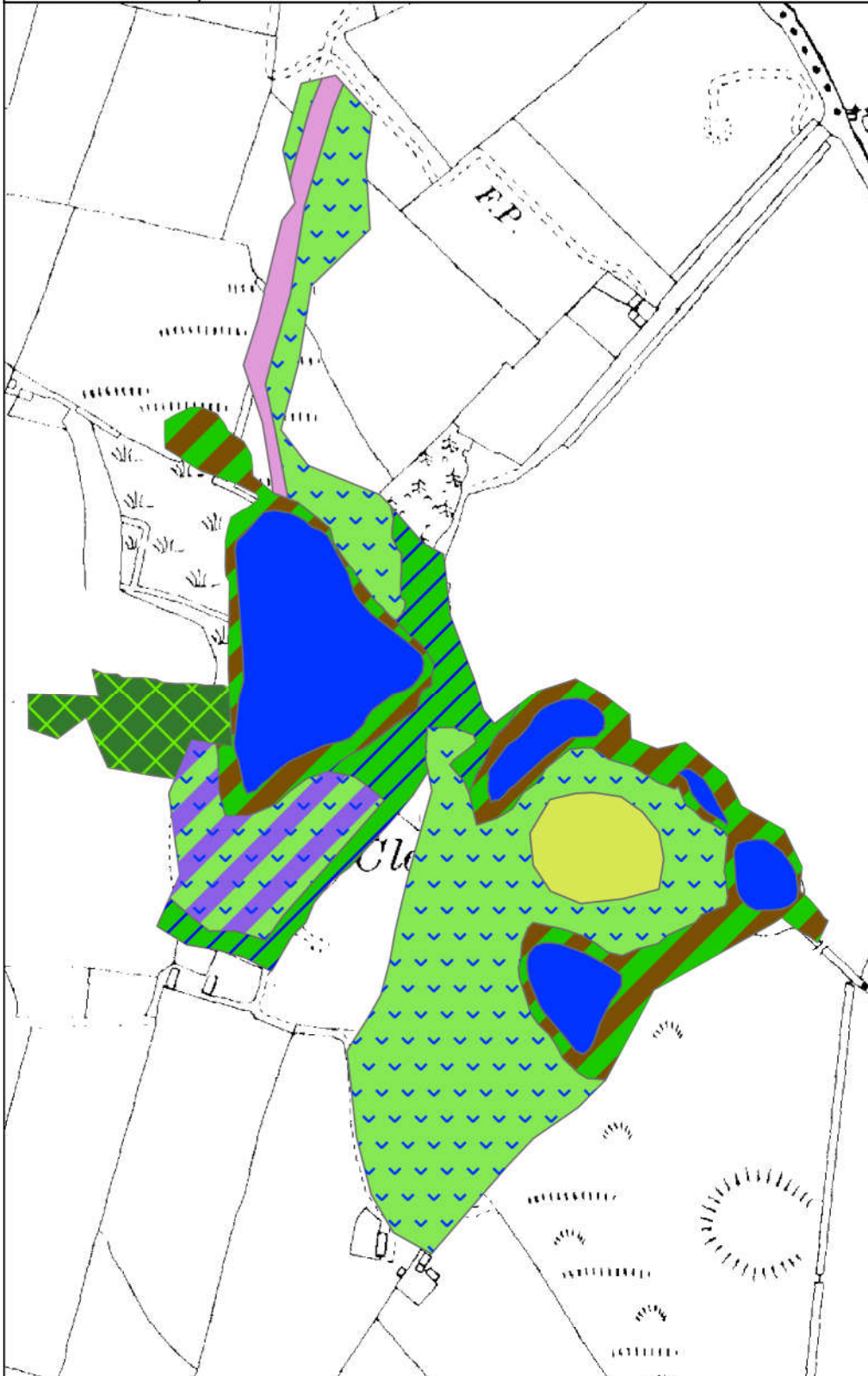
Cloran Loughs Habitats
Westmeath Wetland Survey 2020

Scale: 1:4000
01-06-2021
Rev 0

Legend

Habitat types

-  Mesotrophic lakes (FL4)
-  Improved agricultural grassland (GA1)
-  Wet grassland (GS4)
-  Rich fen - wet grassland (GS4-PF1)
-  Poor fen and flush (PF2)
-  Mixed broadleaved/conifer woodland (WD2)
-  Wet willow-alder-ash woodland (WN6)
-  Wet willow woodland / Reeds swamp (WN6/FS1)



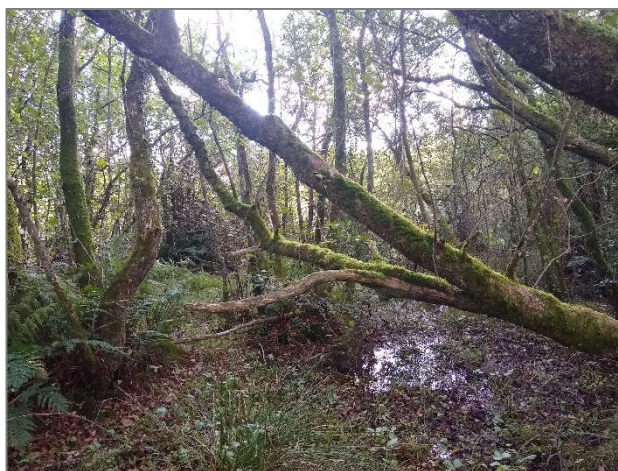
Ordnance Survey Ireland License No. EN 0074221
© Ordnance Survey Ireland / Government of Ireland



3.2.6 Kilrush Lower Fen

Site Name:	Kilrush Lower Fen
Site Code:	60
Area:	9.6 ha
Conservation Value:	County/National Value (B/C+)
Conservation Condition:	Good
Main Wetland Habitats:	Transition mire, wet woodland, wet grassland
Notable Features:	Annex I transition mire
Threats and Pressures:	<ul style="list-style-type: none"> • Drainage • Invasive species
Conservation Recommendations:	<ul style="list-style-type: none"> • Restore hydrology • Control invasive species • Consider NHA designation

This is primarily an area of woodland, transition mire and wet grassland, surrounded mainly by improved grassland. Much of the site is on slightly elevated ground and supports a mosaic of mixed broadleaf woodland and oak-ash-hazel woodland, dominated by beech and ash. There is the non-native cherry laurel in places in this woodland. This grades into wet willow-alder-ash woodland, with a canopy of grey willow and occasional alder, and a ground flora



Wet willow-alder-ash woodland at Kilrush Lower

including wild angelica, water mint, yellow flag, broad buckler fern, common valerian (*Valeriana officinalis*), lesser spearwort (*Ranunculus flammula*), spotted orchids (*Dactylorhiza* sp.), and the mosses *Calliergonella cuspidata* and *Leptodictyon riparium*. This woodland is very wet in parts, with pools containing duckweed (*Lemna* spp.) and floating areas with a thin scraw, supporting bogbean. Native dogwood (*Cornus sanguinea*) occurs in places in the drier parts of the wet willow woodland.

There are two open areas of transition mire (corresponding to the Habitats Directive Annex I habitat of the same name) amongst the woodland, forming a wet mossy lawn. Bottle sedge occurs throughout this area, with bogbean, marsh cinquefoil and the moss *Aulacomnium palustre*, as well as marsh lousewort (*Pedicularis palustris*) and water horsetail (*Equisetum fluviatile*) in places. Across most of this area, there is a dense continuous cover of *Calliergonella cuspidata* and *Rhytidiadelphus squarrosus*. There are frequent bushes of grey willow, alder and birch colonising. In the centre of the northern area of transition mire, the moss layer is dominated by the bog mosses *Sphagnum palustre*, *S. fallax* and *S. squarrosum*, alongside lesser tussock sedge and other species indicative of more acidic conditions, including star sedge, common bog cotton (*Eriophorum angustifolium*) and the bog mosses *Sphagnum capillifolium* and *S. inundatum*. A frog was observed here.



Annex I transition mire with well-developed *Sphagnum* layer

The remaining open areas are mainly wet grassland with tufted hair-grass (*Deschampsia caespitosa*), common rush, purple moor-grass, purple loosestrife (*Lythrum salicaria*), devil's-bit scabious, meadowsweet and yellow flag. Much of this is drained by a large ditch and grazed by sheep, and it occurs in parts in mosaic with improved grassland, scrub, dense bracken and calcareous grassland, characterised by quaking grass (*Briza media*), glaucous sedge, yellow rattle



Wet grassland with scrub development

(*Rhinanthus minor*) and orchid species. There is an area of young wet woodland in the north-west of the site, with a canopy of grey willow and downy birch and an understory mainly of bramble and yellow flag with wild angelica and devil's-bit scabious in the wetter parts. There are drains through most of this area of woodland.



Kilrush Lower Fen Habitats

Scale: 1:4000







Westmeath Wetlands Survey 2020

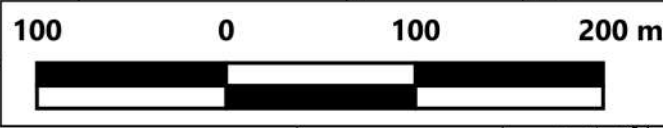
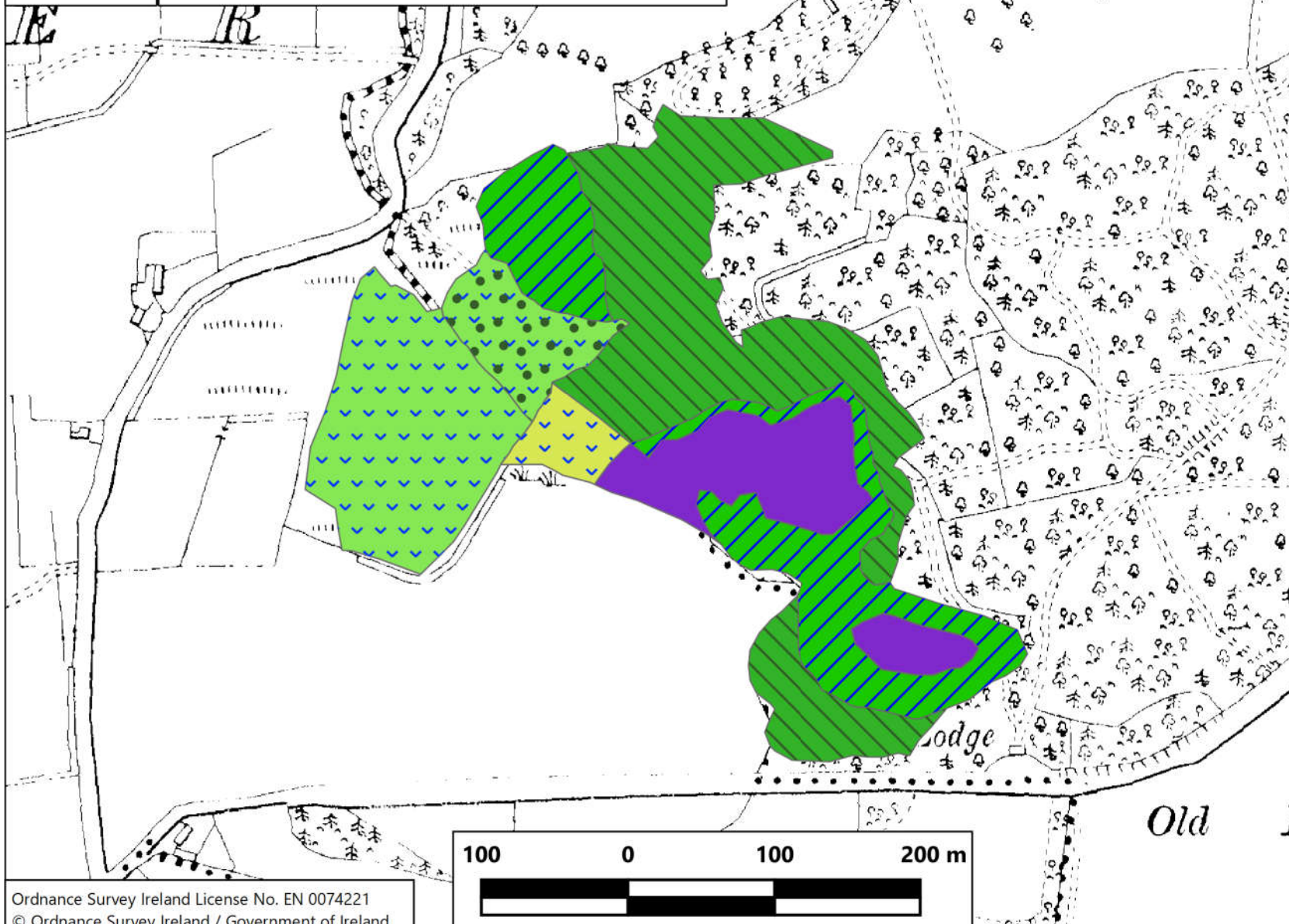
01-06-2021

Rev0

Legend

Habitat types

-  Wet grassland (GS4)
-  Wet grassland / Scrub (GS4/WS1)
-  Semi-improved wet grassland (GS4-GA1)
-  Transition mire (PF3)
-  Broadleaved woodland (WD1)
-  Wet willow-alder-ash woodland (WN6)



3.2.7 Lalistown Fen

Site Name:	Lalistown Fen
Site Code:	64
Area:	20.9 ha
Conservation Value:	County/National Value (B/C+)
Conservation Condition:	Inadequate
Main Wetland Habitats:	Rich fen, wet woodland, bog woodland, cutover bog
Notable Features:	Annex I alkaline fen, round-leaved wintergreen
Threats and Pressures:	<ul style="list-style-type: none"> • Drainage • Peat extraction (historical) • Undergrazing • Invasive species • Recent afforestation (adjacent to site)
Conservation Recommendations:	<ul style="list-style-type: none"> • Restore hydrology • Control invasive species • Maintain low-intensity grazing • Consider NHA designation

This site is a complex mosaic of habitats consisting of two sections. The northern section is characterised by pockets of rich fen, wet grassland and other wetlands broken up by woodland, scrub and calcareous grassland on rocky knolls and ridges. The southern section is abandoned cutover raised bog, some of which has become colonised by bog woodland and wet willow woodland.

In the northern section, most of the wetlands have been drained and many are rather rank, species-poor and undergrazed. Encroachment by bramble, willow and gorse (*Ulex europaeus*) scrub is common. The pockets of rich fen, wet grassland and habitats transitional between the two are mainly dominated by purple moor-grass. In the better developed fens, it is accompanied by creeping bent (*Agrostis stolonifera*), meadowsweet, wild angelica and glaucous sedge, along with some red fescue, marsh thistle and greater bird's-foot trefoil



Rich fen at Lalistown

(*Lotus pedunculatus*). In addition to these species, flushed areas also support abundant jointed rush or sometimes blunt-flowered rush with widespread water mint and the moss *Calliergonella cuspidata*. The best area of rich fen is in the southern part of the section at the base of a hillock supporting calcareous grassland, which has been retained in the wetland site as an integral part of the habitat complex. This fen is an example of Habitats Directive Annex I alkaline fen and is lightly cattle-grazed. Here, purple moor-grass, red fescue and glaucous sedge are the most abundant species, accompanied by meadowsweet, devil's-bit scabious, long-stalked yellow sedge, jointed rush, tormentil and the mosses *Calliergonella cuspidata* and *Hylocomium splendens*. Also present are marsh lousewort, red clover (*Trifolium pratense*), common valerian, marsh thistle, quaking grass, wild angelica, spotted orchids (*Dactylorhiza* sp.) and the brown moss *Campyllum stellatum*. Towards the east, the habitat becomes more acidic in character with heather in drier patches and bottle sedge frequent in wet hollows. Birch and gorse scrub is frequent at the transition to wet woodland, which comprises mainly downy birch and grey willow.

Wet grassland and grassland transitional to fen are characterised by an abundance of grasses other than purple moor-grass, including creeping bent, Yorkshire fog and red fescue. Common rush is frequent in some places. Young, scrubby wet willow-alder-ash woodland has also developed in patches. Grey willow, ash and hawthorn are typical, along with a little gorse. The field layer is mainly grassy, with creeping bent, Yorkshire fog and cock's-foot, interspersed with patches of bramble. Drier woodland on rocky knolls and ridges comprises mainly scrubby ash and hawthorn with gorse at the edges.

The main habitat in the southern section is raised bog that has been hand-cut for turf in the distant past. It is quite dry and species poor, dominated mostly by heather and purple moor-grass. An interesting feature, however, is that shallow (30-50 cm only) old drains and turf-cutting pits in the bog intercept lime-rich groundwater and have developed an alkaline fen flora. These include long-stalked yellow sedge and the brown mosses *Scorpidium scorpioides*, *S. cossonii* and *Campyllum stellatum*. Other wet hollows support a less alkaline flora, including bottle sedge, devil's-bit scabious and the moss



Cutover bog with wet fen hollows in foreground and dry heather vegetation in middle ground

Aulacomnium palustre. A population of approximately 20 plants of the Near Threatened (Wyse Jackson *et al.*, 2016) round-leaved wintergreen (*Pyrola rotundifolia* subsp. *rotundifolia*) occurs in one of these spots. Towards the south, turf-pits become larger and more frequent such that the habitat is a mosaic of dry, purple moor-grass dominated cutover bog on higher ground and alkaline fen with black bog-rush, *Scorpidium cossonii* and *Campylium stellatum* in hollows. Two Snipe were flushed in the cutover bog.

To the north of the cutover bog is dry, birch-dominated bog woodland with a field layer dominated by bramble and bracken with some patches of bilberry (*Vaccinium myrtillus*). Scots pine is frequent in places. A stand of mature cherry laurel, a non-native species, was present along a ride and is spreading into the woodland.



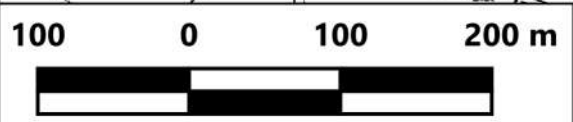
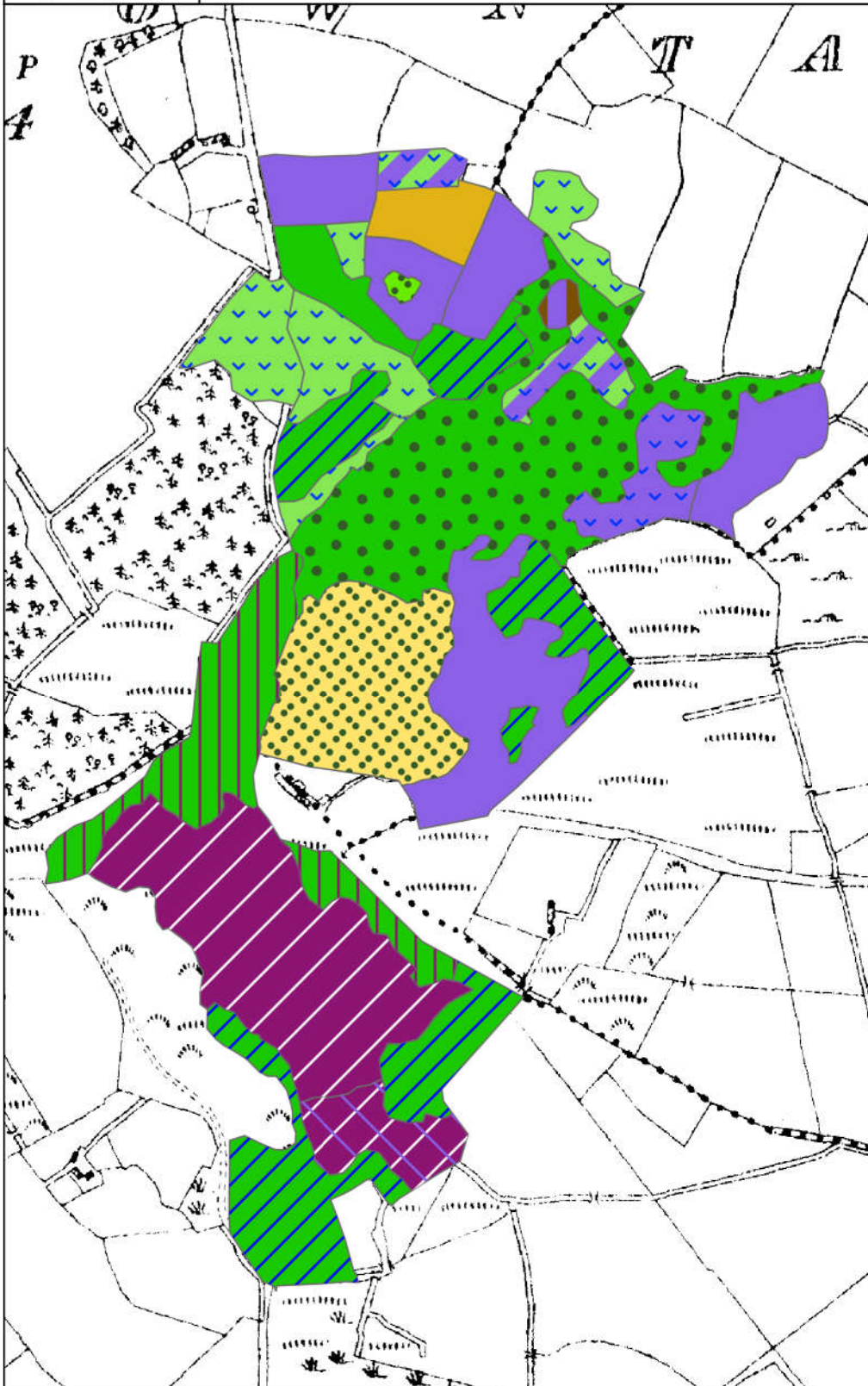
Lalistown Fen Habitats
Westmeath Wetland Survey 2020

Scale: 1:5000
01-06-2021
Rev 0

Legend

Habitat types

-  Dry calcareous grassland / Scrub (GS1/WS1)
-  Dry meadows (GS2)
-  Wet grassland (GS4)
-  Rich fen - wet grassland (GS4-PF1)
-  Cutover bog (PB4)
-  Cutover bog / Alkaline fen mosaic (PB4/PF1)
-  Rich fen (PF1)
-  Rich fen - Reeds swamp (PF1-FS1)
-  Wet grassland - Rich fen (PF1-GS4)
-  Oak-ash-hazel woodland (WN2)
-  Oak-ash-hazel woodland / Scrub mosaic (WN2/WS1)
-  Wet willow-alder-ash woodland (WN6)
-  Bog woodland (WN7)
-  Scrub (WS1)



Ordnance Survey Ireland License No. EN 0074221
© Ordnance Survey Ireland / Government of Ireland



3.2.8 Lisclogher Bog

Site Name:	Lisclogher Bog
Site Code:	26
Area:	41.0 ha
Conservation Value:	County/National Value (B/C+)
Conservation Condition:	Inadequate
Main Wetland Habitats:	Raised bog, bog woodland, lake, transition mire
Notable Features:	Annex I habitats: bog woodland, transition mire; first Westmeath site for the liverwort <i>Scapania gracilis</i>
Threats and Pressures:	<ul style="list-style-type: none"> • Drainage • Peat extraction (adjacent to site)
Conservation Recommendations:	<ul style="list-style-type: none"> • Restore hydrology • Consider NHA designation

The majority of this site is degraded raised bog, with a small lake in the centre and a fringe of woodland, and is part of an extensive, now mostly cutover, area of raised bog. The southern and south-eastern parts of the site have extensive drain systems, with areas of bare peat. This area is dominated by heather, with some northern deergrass, *Hypnum jutlandicum*, bog myrtle (*Myrica gale*) and, in wetter areas and along drains, white beak-sedge (*Rhynchospora alba*),



Dry, drained raised bog

and the bog mosses *Sphagnum cuspidatum* and *Sphagnum papillosum*. There are frequent plants of Scots pine and downy birch colonising the bog surface. There are two areas of less impacted raised bog to the north of this, with few drains present. These areas have a consistent suite of species indicative of higher quality bog present, including hare's-tail bog-cotton, common bog-cotton, the bog mosses *Sphagnum medium*, *Sphagnum rubellum* and reindeer lichen. Notable species present in these areas are bog rosemary (*Andromeda polifolia*), cranberry and common cow-wheat (*Melampyrum pratense*). Small Scots pine trees occur throughout these areas of bog. The liverwort *Scapania gracilis* was found in a hummock in

the northern area of bog; although common in more upland counties, this is a new species for Westmeath.

A variety of vegetation encircles Bracklin Lough, in the centre of the site, the surrounds of which are mainly wooded. The outer, higher area of bog woodland is dominated by a canopy of Scots pine, with a well-developed ground layer of heather and bilberry. This transitions into a wetter type of bog woodland that corresponds to Habitats Directive Annex I bog woodland (91D0) towards the lake.



Annex I bog woodland

The wet bog woodland consists of downy birch and is underlain by a dense carpet of bog mosses, dominated by *Sphagnum palustre*, alongside *S. rubellum*, *S. fallax*, *S. fimbriatum* and *S. angustifolium*, with tussocks of *Molinia caerulea* frequent. Narrow buckler fern (*Dryopteris carthusiana*) was found in places. A range of tree species are scattered through the woodland, including Scots pine, alder, grey willow, holly (*Ilex aquifolium*), rowan, oak (*Quercus* sp.), with occasional beech and European silver fir (*Abies alba*). A dense stand of the invasive alien rhododendron (*Rhododendron ponticum*) occurs within the bog woodland to the west of the lake, and there are occasional bushes of the invasive cherry laurel present.

The area at the north-western corner of the lake is more open, with an area of raised bog merging into transition mire (corresponding to Annex I transition mire (7140)), which in turn merges into bog woodland to the south. The area of raised bog has frequent tussocks of hare's-tail bog-cotton, over a carpet of *Sphagnum fallax* with strong patches of *Aulacomnium palustre*. Crowberry (*Empetrum nigrum*) and cranberry are abundant. This area is separated from the lake shore by a narrow band of reed



Annex I transition mire at the edge of Bracklyn Lough

and large sedge swamp, dominated by great fen-sedge. The vegetation changes to transition mire southwards along the lakeshore, with bottle sedge abundant over a carpet of *Sphagnum fallax*, with some *S. angustifolium* and cranberry. There is a very wet, floating area of transition mire along the margin of the lake, with the moss *Drepanocladus aduncus*, bogbean and marsh

cinquefoil alongside bottle sedge and *S. fallax*. Downy birch is frequent in the southernmost part of the transition mire and it merges into the bog woodland.

There is a fringe of woodland around the western, northern and eastern parts of the site. The south-western fringing area of woodland is relatively dry, non-annex bog woodland, with a canopy of downy birch alongside holly and rowan, with a shrub and ground layer of bramble, bracken, bilberry, broad buckler fern and creeping mosses including *Thuidium tamariscinum* and *Hypnum jutlandicum*. The area of woodland fringing the northern area of raised bog on three sides is dominated by an open canopy of mature Scots pine with an understory of birch. The shrub layer is very well developed, with heather and bilberry alongside bracken. There is a carpet of crowberry along the margin of the woodland in many parts. There is an old broken-down fence along the edge of this woodland at the northern edge of the bog. There is little sign of grazing animals across the site, aside from occasional deer paths.



Lisclogher Bog Habitats

Westmeath Wetlands Survey 2020


Scale: 1:7500

01-06-2021

Rev0

Legend

Habitat types

-  Acid oligotrophic lake (FL1)
-  Raised bog (PB1)
-  Transition mire (PF3)
-  Bog woodland (WN7)



Ordnance Survey Ireland License No. EN 0074221
© Ordnance Survey Ireland / Government of Ireland



3.2.9 Lough Patrick

Site Name:	Lough Patrick
Site Code:	62
Area:	19.6 ha
Conservation Value:	County/National Value (B/C+)
Conservation Condition:	Inadequate
Main Wetland Habitats:	Lake, wet grassland, rich fen, transition mire, reedswamp
Notable Features:	Varnished hook-moss (Near Threatened, Annex II species); Annex I habitats: alkaline fen, transition mire
Threats and Pressures:	<ul style="list-style-type: none"> • Drainage • Eutrophication
Conservation Recommendations:	<ul style="list-style-type: none"> • Restore hydrology • Maintain low-intensity grazing • Consider NHA designation

Lough Patrick is a small lake in a shallow bowl surrounded by a diversity of wetland habitats. The lake itself was probably a nutrient-poor limestone/marl lake in the past, but algae growth suggests that it has suffered some enrichment. The shallow water supports a range of aquatic plants, including ivy-leaved duckweed (*Lemna trisulca*), curled pondweed (*Potamogeton crispus*), the non-native Canadian waterweed (*Elodea canadensis*) and the moss *Fontinalis antipyretica*. Emergent aquatics along the fringe include bulrush, common club-rush, bottle sedge, marsh cinquefoil, bogbean and fool's watercress (*Apium nodiflorum*). The emergent aquatic zone gives way to a dense 10-20 m band of reed and large sedge swamp, comprising bulrush and common club-rush. Waterbirds noted during the field survey included two Mute Swan and a cygnet, Coot and Mallard. Several Snipe were flushed in the surrounding wetlands.



Lough Patrick and fringing reed and large sedge swamp

Ringed the lake and its fringing swamp is a quaking mat of fen vegetation that corresponds to Habitats Directive Annex I transition mire. Bottle sedge is the dominant species,

accompanied by abundant mosses, mainly *Calliergonella cuspidata* and *Calliergon cordifolium*. Other typical species include water mint, wild angelica, marsh cinquefoil, marsh bedstraw (*Galium palustre*), bulrush, common valerian, ragged robin (*Silene flos-cuculi*), water horsetail, red fescue and *Calliergon giganteum*. Slightly further away from the lake coarser vegetation with abundant greater tussock-sedge occurs. Further away from the lake, the transition mire gives way to rich fen, wet grassland, or a habitat intermediate between the two.

To the west of the lake at the transition from rich fen to transition mire is an extensive 1-2 m wide band of varnished hook-moss (*Hamatocaulis vernicosus*). This species is considered Near Threatened (Wyse Jackson *et al.*, 2016) and is protected under Annex II of the Habitats Directive. Lough Patrick is only the second site in which the species is known to occur in Westmeath. (The other is the nearby Scragh Bog.) Varnished hook-moss grows here with



Varnished hook-moss in Annex I transition mire

marsh cinquefoil, bogbean, lesser spearwort, marsh marigold and meadowsweet. The best area of rich fen in the site is located uphill, and although it appears more neutral in character than most examples, it corresponds with Habitats Directive Annex I alkaline fen (7230). Bottle sedge is the most abundant of the sedge species present, accompanied by abundant *Calliergonella cuspidata*. Other frequently occurring species include wild angelica, greater tussock sedge, devil's-bit scabious, meadowsweet, common valerian, water horsetail, red fescue, water mint and marsh bedstraw.

More degraded areas of fen are frequent in the site and are mapped as transitional to wet grassland. In these places, red fescue and common rush are the principal species, accompanied by lesser amounts of fen species, such as meadowsweet, devil's-bit scabious and tormentil.

Much of the wet grassland in the site is semi-improved, with abundant common rush, creeping bent and Yorkshire fog, accompanied by meadowsweet, wild angelica, creeping buttercup, meadow buttercup (*Ranunculus acris*), sorrel (*Rumex acetosa*) and red clover. Mosses are abundant, however, mainly species of damp, grassy places, such as *Rhytidiadelphus squarrosus* and *Pseudoscleropodium purum*, but more typical wetland and fen species, such as *Calliergonella cuspidata*, *Calliergon giganteum*, *Brachythecium rivulare* and *Sphagnum subnitens* can be found. The most species-poor rushy pastures have been excluded from the site.

South of the lake is a small pocket of planted alder with a few pines (*Pinus* sp.).



Lough Patrick Habitats

Scale: 1:5000

Westmeath Wetlands Survey 2020

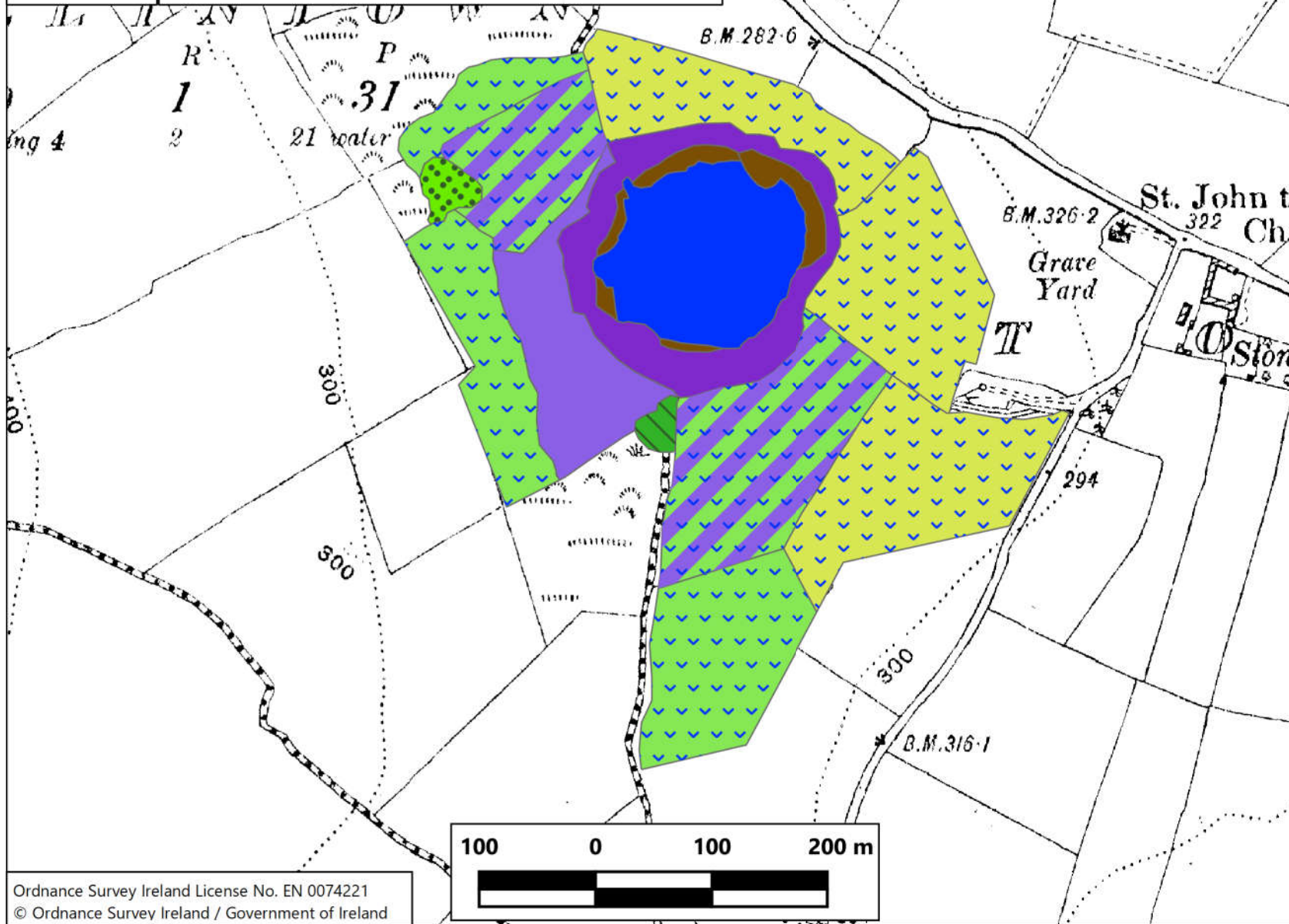
01-06-2021

Rev0

Legend

Habitat types

-  Mesotrophic lakes (FL4)
-  Reed and large sedge swamp (FS1)
-  Wet grassland (GS4)
-  Semi-improved wet grassland (GS4-GA1)
-  Rich fen - wet grassland (GS4-PF1)
-  Rich fen (PF1)
-  Transition mire (PF3)
-  Broadleaved woodland (WD1)
-  Scrub (WS1)



3.2.10 Rathskeagh Lower Fen

Site Name:	Rathskeagh Lower Fen
Site Code:	63
Area:	14.1 ha
Conservation Value:	County Value (C+)
Conservation Condition:	Inadequate
Main Wetland Habitats:	Rich fen, wet grassland
Notable Features:	Annex I alkaline fen
Threats and Pressures:	<ul style="list-style-type: none"> • Drainage • Recent drainage work • Recent reclamation & infilling
Conservation Recommendations:	<ul style="list-style-type: none"> • Restore hydrology • Cease further reclamation / infilling • Maintain low-intensity grazing

Rathskeagh Lower is a rich fen site that, in common with virtually all fens, has been affected by drainage and reclamation. Drainage maintenance and the digging of new drains is still ongoing in the site. Nevertheless, a significant amount of Habitats Directive Annex I alkaline fen (7230) remains. Most of the fen in the site is characterised by black bog-rush and carnation sedge, along with purple moor-grass, long-stalked yellow sedge and the mosses



Rich fen at Rathskeagh Lower

Campylium stellatum, *Calliergonella cuspidata* and *Hylocomium splendens*. Other typical fen mosses scattered throughout the site include *Scorpidium scorpioides*, *S. cossonii*, *Ctenidium molluscum*, *Cratoneuron filicinum* and *Sphagnum subnitens*. Blunt-flowered rush occurs occasionally throughout and dominates a few patches in the north of the site.

At the northern end of the site, the previous landowner had infilled part of the original wetland site and converted it to improved agricultural grassland in or around 2010. He had also stripped the peat from the former fen as a prelude to reclamation. These areas are mapped as recolonising bare ground and are characterised by bare, stony mineral soil being recolonised by sedges (yellow sedge, carnation sedge) and rushes (jointed rush, blunt-

flowered rush, hard rush (*Juncus inflexus*). In one area, spoil heaps are frequent and occupied by coarse, dry meadow grasses and some gorse scrub.

In the western part of the site, as the ground rises from the main fen area, the habitat gradually changes to wet grassland. Transitional habitats are grassier in character with creeping bent, red fescue, Yorkshire fog and hard rush joining a reduced complement of fen species. Other grassland species in these areas include cuckoo flower (*Cardamine pratensis*), creeping buttercup and white clover (*Trifolium repens*). Relatively species-rich wet grasslands with some fen elements, but dominated by creeping bent, Yorkshire fog and hard rush, have been included in the site.

Rocky outcrops in the site support gorse and hawthorn scrub.

Two hares and several Snipe were seen on site.



Recently installed drain



Rathskeagh Lower Fen Habitats

Scale: 1:4500








Westmeath Wetlands Survey 2020

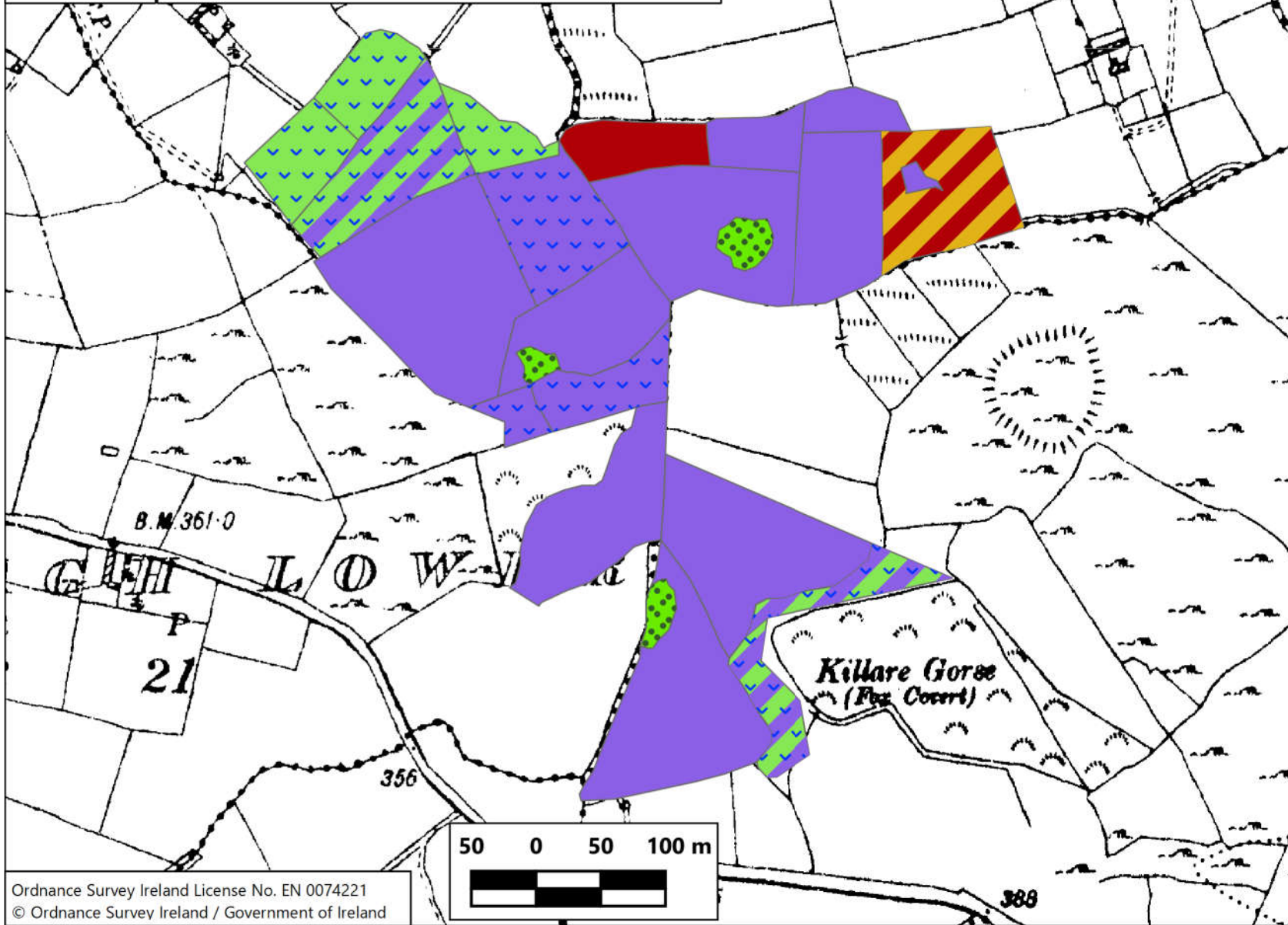
01-06-2021

Rev0

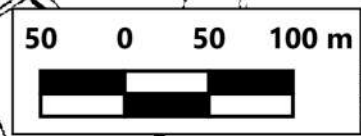
Legend

Habitat types

-  Recolonising bare ground / Dry meadows (ED3/GS2)
-  Recolonising bare ground / Rich fen (ED3/PF1)
-  Wet grassland (GS4)
-  Rich fen - wet grassland (GS4-PF1)
-  Recolonising bare ground / Dry meadows (ED3/GS2)
-  Wet grassland - Rich fen (PF1-GS4)
-  Scrub (WS1)



Ordnance Survey Ireland License No. EN 0074221
© Ordnance Survey Ireland / Government of Ireland



3.2.11 Togherstown

Site Name:	Togherstown
Site Code:	54
Area:	30.2 ha
Conservation Value:	Moderate Local Value (D)
Conservation Condition:	Very poor
Main Wetland Habitats:	Wet grassland, wet pedunculate oak-ash woodland
Notable Features:	None
Threats and Pressures:	<ul style="list-style-type: none"> • Historical drainage • Arterial drainage • Agricultural improvement • Invasive species • Past afforestation • Recent afforestation
Conservation Recommendations:	<ul style="list-style-type: none"> • Restore hydrology • Control invasive species • Implement low-intensity silvicultural systems

This site occupies the valley of the Lenamore River, a lowland river averaging 2.5 m wide and 80 cm deep within the site. The river is arterially drained, which has deepened the channel, made the sides steeper and dried out wetlands on either bank.

The southern side of the river consists of wet grassland, some of which is semi-improved in nature. The better quality wet grassland has a sward of creeping bent, Yorkshire fog and carnation sedge



Wet grassland at Togherstown

overtopped by abundant common rush. Other frequently occurring species include meadowsweet, lesser spearwort, bulbous rush (*Juncus bulbosus*), jointed rush, brown sedge (*Carex disticha*), creeping buttercup and the mosses *Calliergonella cuspidata* and *Pseudoscleropodium purum*. Semi-improved wet grassland supports the same dominant species, but has a lower diversity of species; those that are present are typical weeds of damp sites, including silverweed and creeping thistle. The grassland fields are separated by deep

drains whose margins are occupied by purple moor-grass, meadowsweet, reed canary-grass (*Phalaris arundinacea*) and grey willow.

On the northern side of the river at the western end of the site is a pocket of wet woodland with a canopy of pedunculate oak (*Quercus robur*), ash and downy birch. Grey willow is abundant in the wettest patches, especially the western boundary where a deep drain filled with common reed is present, and beech is found occasionally. The understorey consists of a well-developed layer of holly and ash saplings. The field layer, however, is rather poor, mainly bramble, ivy and broad buckler fern with occasional enchanter's nightshade (*Circaea lutetiana*). Wet patches usually support tufted hair-grass, common rush, sweet-grass (*Glyceria* sp.) and remote sedge (*Carex remota*). Although the trees themselves do not appear particularly old, the woodland appears on 1840s Ordnance Survey maps and is therefore long-established.



Wet pedunculate oak-ash woodland

To the south of the wet pedunculate oak woodland is a patch of former conifer plantation that has recently been felled. To the east is a recently (2016) established Norway spruce plantation. It is in the pre-thicket stage, and the young, open canopy still supports wet grassland vegetation, perhaps transitional to rich fen, of purple moor-grass, tufted hair-grass, meadowsweet and wild angelica. At the eastern end of the site is another pre-thicket conifer plantation with a similar field layer. Within this stand, there is a small copse of wet pedunculate woodland with downy birch, hazel and holly. Ash, beech and Scots pine are also present in small amounts. Along the river at the eastern end of the site, there is a 5 m wide riparian fringe of wet grassland between the young plantation to the north and a mid-rotation mixed broadleaf/conifer plantation on peat south of the river. The latter has been excluded from the site as it no longer supports a significant wetland flora. The riparian grassland strip is rank and unmanaged and comprises creeping bent and reed canary-grass with frequent nettles (*Urtica dioica*), yellow flag and bramble.

On the north side of the river between the two young plantations is a rank, unmanaged strip of vegetation dominated by meadowsweet and common rush. It was only observed from

across the river and so is tentatively mapped as a transitional rich fen – wet grassland habitat. Adjacent to this is a small stand of non-native oak (*Quercus* sp.) and spruce (*Picea* sp.).

According to the Westmeath Fen Study (Natura Environmental Consultants, 2007), this site supported alkaline fen with lesser tussock sedge (*Carex appropinquata*), a rare species that is a Westmeath specialty. The species was not refound during the field survey and no good quality alkaline fen was recorded either. It seems that they have since been lost to afforestation or agricultural improvement.



Togherstown Fen Habitats

Scale: 1:5000









Westmeath Wetlands Survey 2020

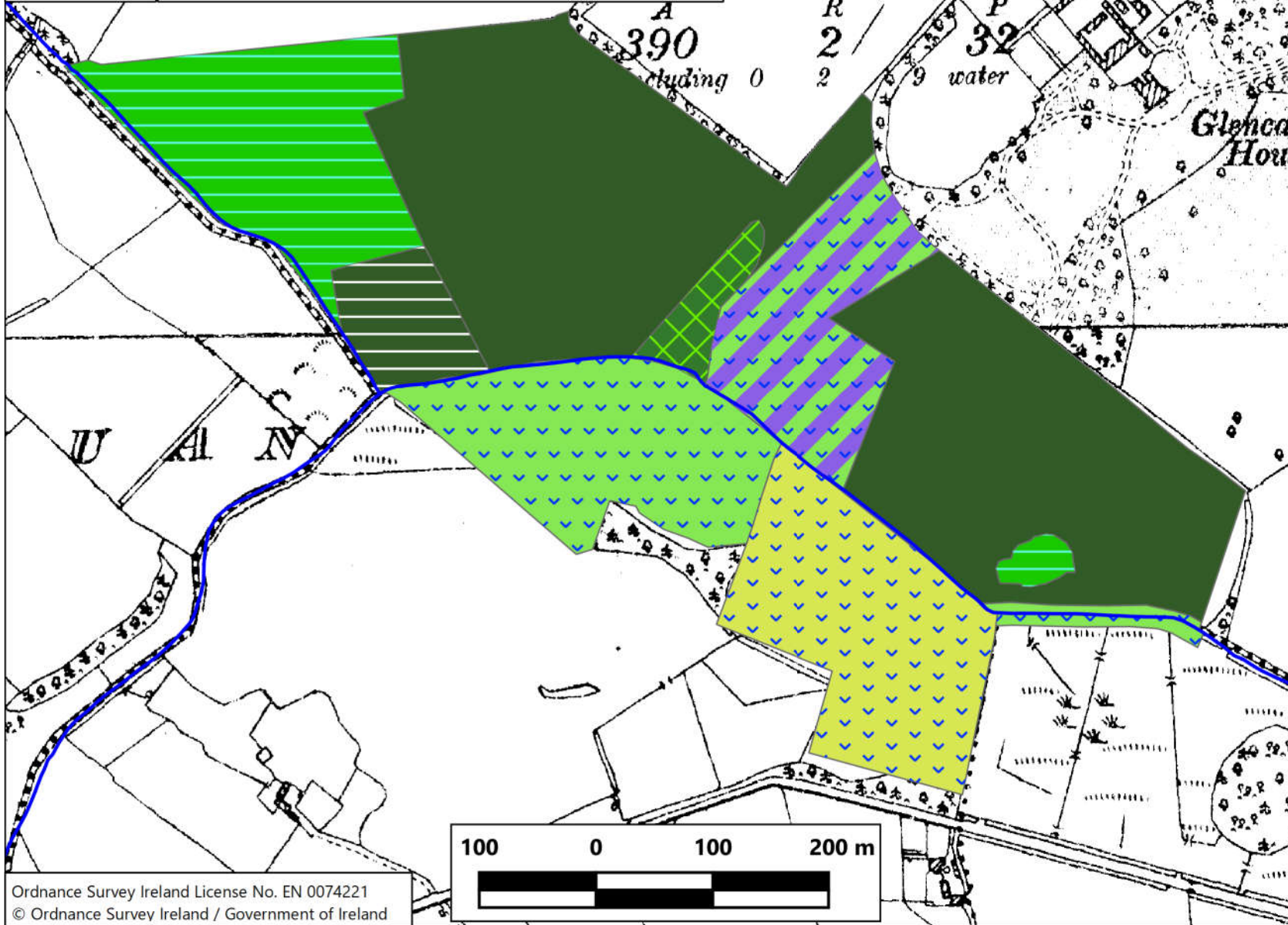
01-06-2021

Rev0

Legend

Habitat types

-  Wet grassland (GS4)
-  Semi-improved wet grassland (GS4-GA1)
-  Rich fen - wet grassland (GS4-PF1)
-  Mixed broadleaved/conifer woodland (WD2)
-  Conifer plantation (WD4)
-  Recently felled woodland (WD5)
-  Wet pedunculate oak-ash woodland (WN4)
-  Depositing / lowland rivers (FW2)



Ordnance Survey Ireland License No. EN 0074221
© Ordnance Survey Ireland / Government of Ireland



3.2.12 Tullycross Cutover

Site Name:	Tullycross Cutover
Site Code:	79
Area:	149.5 ha
Conservation Value:	Low Local Value (E)
Conservation Condition:	Very poor
Main Wetland Habitats:	Cutover bog
Notable Features:	None
Threats and Pressures:	<ul style="list-style-type: none"> • Peat extraction (ongoing) • Historical drainage • Past afforestation • Recent afforestation • Dumping
Conservation Recommendations:	<ul style="list-style-type: none"> • Restore hydrology

This site is one of a cluster of raised bogs south-east of Lough Ree that includes Crosswood and Carn Park bogs. Survey work in the mid-1980s found the bog to support a very wet central area of interconnecting pools and quaking *Sphagnum* carpets (Douglas and Grogan, 1986). None of this habitat remains, however, as the centre of the site is now industrial cutaway. Surrounding the cutaway are areas of cutover bog, most of which has been abandoned. Functional drains still separate the former turf plots, and the revegetating cutover bog is dry as a result. Heather and purple moor-grass are the dominant species, with gorse scrub and downy birch and grey willow woodland developing in places. Some of the cutover bog has been afforested with conifers, with native birch self-seeding amongst the crop.



Revegetating cutover bog with raised bog remnant (right) and cutaway bog (left) in background

A small sliver of raised bog persists between the industrial cutaway and the conventional cutover bog. This is rapidly disappearing as a result of ongoing turf cutting. The raised bog

remnant is dry and degraded, dominated by tall heather. Dumping is an issue in several abandoned turf plots, especially garden waste, old silage bales and scrap wood.



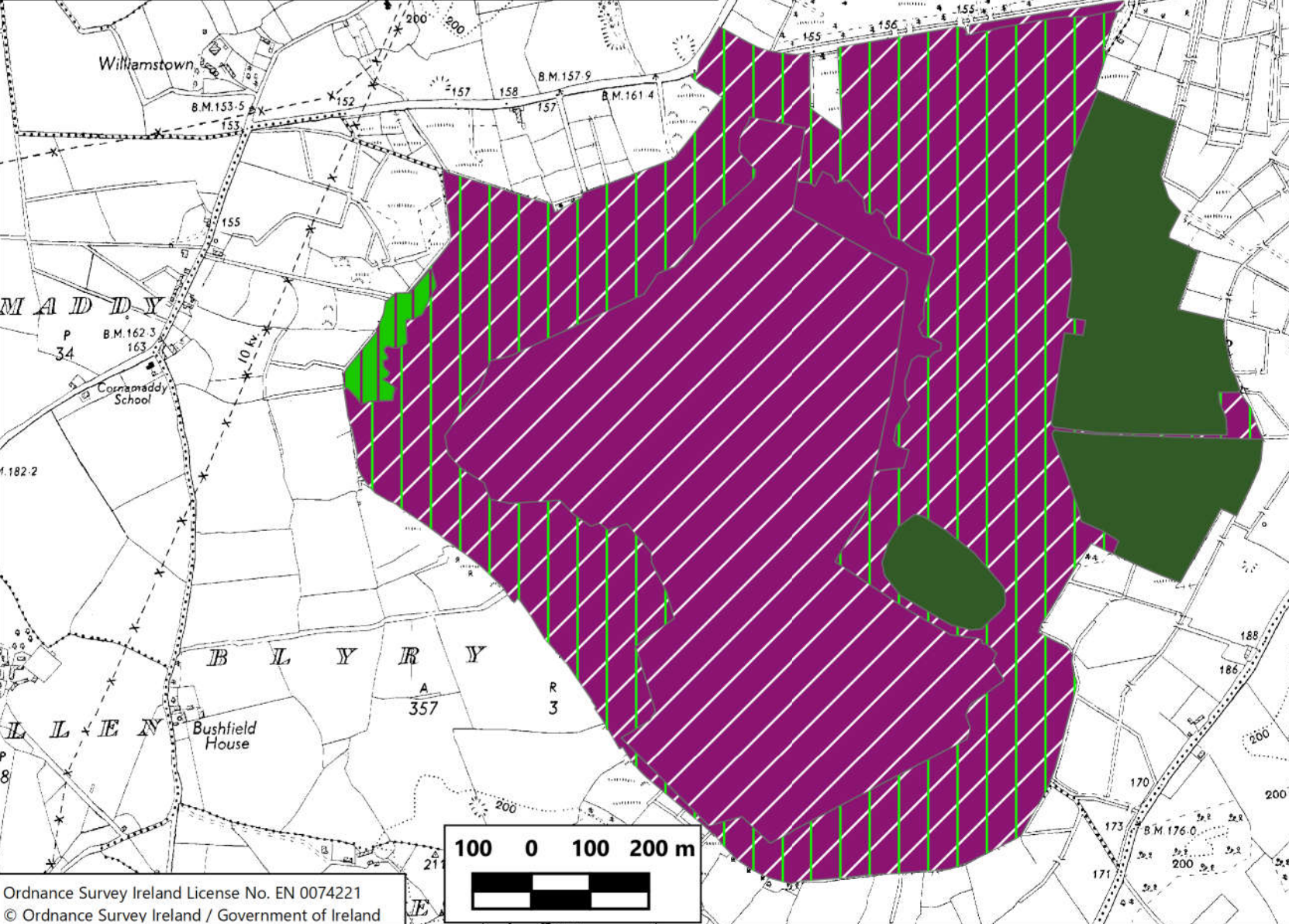
Tullycross Cutover Habitats

Scale: 1:10,000

Westmeath Wetlands Survey 2020

01-06-2021

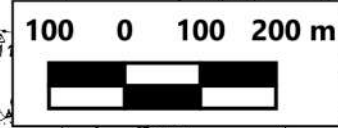
Rev0



Legend

- Habitat types
- Raised bog (PB1)
 - Cutover bog (PB4)
 - Cutover bog / Bog woodland / Scrub (PB4/WN7/WS1)
 - Conifer plantation (WD4)
 - Bog woodland (WN7)

Ordnance Survey Ireland License No. EN 0074221
© Ordnance Survey Ireland / Government of Ireland



4 REFERENCES

- Douglas, C. & Grogan, H. (1986) Survey to locate raised bogs of scientific interest in Counties Longford, Westmeath and East Mayo (also Counties Cavan, Leitrim, Sligo & Roscommon). pp. 184. Internal Report, Wildlife Service, Dublin.
- European Commission (2013) *Interpretation Manual of European Union Habitats*. EUR 28. DG Environment.
- Foss, P. J. (2007) Study of the Extent and Conservation Status of Springs, Fens and Flushes in Ireland 2007. Report prepared for National Parks and Wildlife Service.
- Foss, P. J. & Crushell, P. (2020) *Map of Irish Wetlands (2011-2020)*. On-line public map resource & background documentation on Google Maps platform. Wetland Surveys Ireland and Foss Environmental Consulting. <http://www.wetlandsurveysireland.com/wetlands/map-of-irish-wetlands--/>
- Fossitt, J. A. (2000) *A Guide to Habitats in Ireland*. Heritage Council, Kilkenny.
- Lockhart, N., Hodgetts, N. & Holyoak, D. (2012) *Ireland Red List No. 8: Bryophytes*. National Parks and Wildlife Service, Dublin.
- Natura Environmental Consultants (2005) *Westmeath Peatlands Study*. Report prepared for Westmeath County Council.
- Natura Environmental Consultants (2007) *Westmeath Fen Study*. Report prepared for Westmeath County Council.
- Smith, G. F. & D'Arcy, D. (2020) *Desktop survey of wetland sites in County Westmeath*. Report prepared for Westmeath County Council.
- Smith, G. F., O'Donoghue, P., O'Hora, K. & Delaney, E. (2011) *Best Practice Guidance for Habitat Survey and Mapping*. Heritage Council, Kilkenny.
- Wyse Jackson, M., FitzPatrick, Ú., Cole, E., Jebb, M., McFerran, D., Sheehy Skeffington, M. & Wright, M. (2016) *Ireland Red List No. 10: Vascular Plants*. National Parks and Wildlife Service, Dublin.



Church Street, Moate, Co. Westmeath
T +353 86 1736075
info@blackthornecology.ie