

Environment & Climate Action Report: Peat Extraction, Co. Tipperary
Dec 2023

Site 1: Annagh & Straduff Bog, Graigue, Birr, Co. Tipperary

Total peatland area: c.52ha

Peat extraction area: c.8.5ha



Water Framework Characterisation

Waterbody: Annagh_010



Draft 3 rd Cycle EO	Draft Risk	Status 2010-2015	Status 2013-2018	Status 2016-2021
Good	Not at Risk/Review	Unassigned	Moderate	Moderate

This peatland extraction area is located within the Annagh_10 waterbody, which is assigned a status of Moderate (via modelling), there is no historic (pre-WFD) water quality data for reference.

The up-stream waterbody (Pallas_10) is classified as Moderate Status & At Risk, with Agriculture as the significant pressure and Industry also identified as a pressure to be considered.

The down-stream waterbody (Incherky_10) is classified as Good Status, under Review, with extractive industry (Quarries, not Peat) identified as significant pressures.

Protected Areas

The Annagh_10 drains the area identified as Site 1 along the southern boundary of the site. It flows in a westerly direction for ~600m before its confluence with the Pallas_10. The Annagh_10 continues to flow in a north-westerly direction for ~1km before it enters The River Little Brosna Callows SPA (004086) & The River Little Brosna Callows NHA (000564).

It can be reasonably concluded that while Site 1 is not directly located within the designated site identified, there is a direct hydrological and possibly hydrogeological connectivity between the SPA and NHA and the Peat extraction site, and consequently Appropriate Assessment Screening should be carried out.

The River Little Brosna Callows SPA (004086)

Qualifying Interests:

Whooper Swan (*Cygnus cygnus*) [A038]
Wigeon (*Anas penelope*) [A050]
Teal (*Anas crecca*) [A052]
Pintail (*Anas acuta*) [A054]
Shoveler (*Anas clypeata*) [A056]
Golden Plover (*Pluvialis apricaria*) [A140]
Lapwing (*Vanellus vanellus*) [A142]
Black-tailed Godwit (*Limosa limosa*) [A156]
Black-headed Gull (*Chroicocephalus ridibundus*) [A179]
Greenland White-fronted Goose (*Anser albifrons flavirostris*) [A395]
Wetland and Waterbirds [A999]

Conservation Objectives:

1. To maintain or restore the favourable conservation condition of the bird species listed Special Conservation Interests for this SPA.

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2. To maintain or restore the favourable conservation condition of the wetland habitat at River Little Brosna Callows SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

Local Government (Water Pollution) Act, 1977 (as amended)

There are no water pollution licences issued by Tipperary County Council to the operator of this site.

Site 2: Klassmann Deilmann, Sharragh, Rathcabbin, Roscrea, Co. Tipperary

Total peatland area: c.170ha

Peat extraction area: c.55ha



Water Framework Classification

Waterbody: Pallas_10

Draft 3 rd Cycle EO	Draft Risk	Status 2010-2015	Status 2013-2018	Status 2016-2021
Good	At Risk	Moderate	Moderate	Moderate



The area of peat extraction is located within the Pallas_10 waterbody. This is a monitored waterbody and has consistently demonstrated Less Than Good water quality at the monitoring station 500 located Near the Church d/s of Pallas Bridge. This is both a biological & chemical monitoring point.

Biological Monitoring

The most recent Q value of 3-4 was recorded in 2021.

	1987	1993	1996	1999	2002	2005	2008	2011	2014	2017	2021
Result	5	4	3.5	3	3	4	3.5	4	3.5	3.5	3.5
Classification	High	Good	Moderate	Poor	Poor	Good	Moderate	Good	Moderate	Moderate	Moderate
Q-Value	5	4	3-4	3	3	4	3-4	4	3-4	3-4	3-4

Chemical Monitoring

This waterbody is failing to meet its WFD objective due to ortho-Phosphate and TON. Ammonia-N is not a parameter of concern and in fact, is indicative of High Status.

Parameter	Station	Indicative Quality	Trend	Statistically Significant
Ammonia-Total (as N)	Nr Church d/s Pallas Bridge	High	Downwards	No
ortho-Phosphate (as P) - unspecified	Nr Church d/s Pallas Bridge	Moderate	Downwards	No
Total Oxidised Nitrogen (as N)	Nr Church d/s Pallas Bridge	Moderate	Upwards	No

Agriculture has been identified as a Significant Pressure within the Pallas_10 waterbody.

It is evident from the monitoring data that peatland and specifically peat extraction is not impacting the water quality of the Pallas_10 waterbody. It is considered more probable that this peatland is

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drained through the SAC (Ballyduff/Clonfinane) to the adjacent waterbody to the south, the Little Brosna_40.

Little Brosna_40

This waterbody is monitored at station 700 (Riverstown Br.) which is both a biological & chemical monitoring station. It has demonstrated consistently Less Than Good water quality over the past 3 reporting periods. It is At Risk of failing to meet its WFD objective.

Draft 3 rd Cycle EO	Draft Risk	Status 2010-2015	Status 2013-2018	Status 2016-2021
Good	At Risk	Moderate	Moderate	Moderate

Biological Monitoring

The most recent Q value of 3-4 was recorded in 2021.

	1971	1973	1977	1981	1984	1987	1993	1996	1999	2002	2005	2008	2011	2014	2017	2021
Result	5	4.5	4.5	4.5	4	4	3.5	3	4	3.5	3	3.5	4	3.5	3.5	3.5
Classification	High	High	High	High	Good	Good	Moderate	Poor	Good	Moderate	Poor	Moderate	Good	Moderate	Moderate	Moderate
Q-Value	5	4-5	4-5	4-5	4	4	3-4	3	4	3-4	3	3-4	4	3-4	3-4	3-4

Chemical Monitoring

TON is the limiting parameter for which this waterbody is failing to meet WFD objectives. Ortho-Phosphate and Total Ammonia are both indicative of High Status.

Parameter	Station	Indicative Quality	Trend	Statistically Significant
Total Oxidised Nitrogen (as N)	Riverstown Br	Moderate	Upwards	No
ortho-Phosphate (as P) - unspecified	Riverstown Br	High	Upwards	No
Ammonia-Total (as N)	Riverstown Br	High	Downwards	No

The Little Brosna_40 is a 2nd cycle PAA, although not yet started, LAWPRO have expanded this PAA to include all 6 waterbodies (Little Brosna_10-60). Initial characterisation of the Little Brosna_40 highlighted peat extraction (drainage) as a significant pressure. Hydromorphology and Agriculture are also significant pressures within the waterbody. Field work will focus on bank morphology, sediment, substrate and drainage intensity.

Protected Areas

Site 2 encompasses an estimated area of c.55Ha. This section is directly adjacent to the remainder of the peatland which is designated as the Ballyduff/Clonfinane SAC (000641).

It can be reasonably concluded that there is a direct terrestrial connectivity between Site 2 and the Ballyduff/Clonfinane SAC and that it is very probable that there is a direct hydrological and possibly hydrogeological connectivity between the SAC and the Peat extraction site. Consequently, Appropriate Assessment Screening should be carried out.

The Qualifying Interests of the SAC

Active raised bogs [7110]

Degraded raised bogs still capable of natural regeneration [7120]

Depressions on peat substrates of the Rhynchosporion [7150]

Bog woodland [91D0]

Note: Active raised bogs and bog woodland are Priority Habitats under the Habitats Directive.

Conservation Objectives

1. To restore the favourable conservation condition of Active Raised Bogs in Ballyduff/Clonfinane Bog SAC, defined by a list of attributes and targets (please see: [ConservationObjectives.rdl\(npws.ie\)](#))
2. Re-establish the peat forming capability of degraded raised bogs capable of natural regeneration.
3. Depressions on peat substrates of the Rhynchosporion

Drinking Water Abstractions

There are two groundwater sources & one surface water source identified for consideration.

1. Abbeyville GWS abstraction point (Borehole) is located 2.6km NW of the peat extraction Site 2. The ZOC for this abstraction has been delineated and is 950m from Site 2, at its closest point.
2. Lacka GWS is located >5km south of Site 2.
3. Riverstown PWS abstraction at Riverstown is located almost 6km ESE of Site 2.

Given the distance from the site, it is not considered likely that peat harvesting activities at this site will have a significant effect on the drinking water quality of the Lacka GWS supply, in particular.

Given the likely hydrological and hydrogeological connectivity is considered to be in a southerly direction, the Abbeyville GWS is unlikely to be adversely affected, although it is the closest in proximity. An examination of the water quality data may be considered.

Given the hydrological connection with the Little Brosna_40 discussed above, an examination of water quality data for the Riverstown PWS may also be considered.

Local Government (Water Pollution) Act, 1977 (as amended)

There are no water pollution licences issued by Tipperary County Council to the operator of this site.

Site 3: Arraghbeg, Riverstown, Co. Tipperary

Total peatland area: c.59ha

Peat extraction area: c.50ha



Water Framework Characterisation

Waterbody: Little Brosna_40

This site is located within the Little Brosna_40 waterbody, and has been discussed above in detail.

In this instance, the site is directly drained by two tributary streams of the Little Brosna_40, one of which flows along the Eastern boundary and the second flows 120m south of the southern boundary. These watercourses merge and continue to flow in a south easterly direction for approx. 4km before its confluence with the main Little Brosna channel, at which point it, the Little Brosna forms the western boundary of the Sharravogue Bog SAC.



Sharravogue Bog SAC (000585)

Qualifying Interests

Active raised bogs [7110]

Degraded raised bogs still capable of natural regeneration [7120]

Depressions on peat substrates of the Rhynchosporion [7150]

Conservation Objectives

1. To restore the favourable conservation condition of Active Raised Bogs in Sharavogue Bog SAC, defined by a list of attributes and targets (please see: [ConservationObjectives.rdl \(npws.ie\)](#))
2. Re-establish the peat forming capability of degraded raised bogs capable of natural regeneration
3. Depressions on peat substrates of the Rhynchosporion

It can be reasonably concluded that there is a hydrological and possibly hydrogeological connectivity between the SAC and the Peat extraction site. Consequently, Appropriate Assessment Screening should be carried out.

Local Government (Water Pollution) Act, 1977 (as amended)

There are no water pollution licences issued by Tipperary County Council to the operator of this site.

Site 4: The Sheehy's & Moanaincha, Roscrea, Co. Tipperary

Total peatland area: 160Ha

Peat extraction area: >100Ha (Bing Maps & Planning Drone Imagery)



WFD Characterisation

Site 4 is located within the Nore_40 waterbody.

Draft 3 rd Cycle EO	Draft Risk	Status 2010-2015	Status 2013-2018	Status 2016-2021
Good	At Risk	Good	Moderate	Poor

The Nore_40 is currently at Poor Status and At Risk of failing to meet WFD objectives. There has been a clear deterioration of this waterbody. Extractive Industry (Peat) has been highlighted by the EPA

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Catchments unit as being a Significant Pressure within this waterbody. It is not a 2nd or 3rd Cycle PAA/AFA.

Biological Monitoring

The Nore_40 is monitored at Quakers Bridge (Station 300), just downstream from Site 4. Historically (since 2010) ecological status has been Good, however, significant deterioration has been observed since 2019, when a Q3 was recorded and remained in 2022.

	1971	1975	1979	1981	1984	1987	1991	1995	1998	2001	2004	2007	2010	2013	2016	2019	2022
Result	5	4.5	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4	3	3
Classification	High	High	Good	Good	Good	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Good	Good	Good	Poor	Poor
Q-Value	5	4-5	4	4	4	3-4	3-4	3-4	3-4	3-4	3-4	3-4	4	4	4	3	3

Chemical Monitoring

Parameter	Station	Indicative Quality	Trend	Statistically Significant
Ammonia-Total (as N)	Quakers Bridge	Moderate	Downwards	Yes
ortho-Phosphate (as P) - unspecified	Quakers Bridge	Good	Upwards	No
Total Oxidised Nitrogen (as N)	Quakers Bridge	Good	Upwards	No

Annual average ammonia levels during the 2013-2018 period are between 0.078 – 0.165mg/l

Annual average ammonia levels during the 2019-2023 period are between 0.062 – 0.104mg/l

The EQS for ammonia is 0.065mg/l for Good Status.

Nore_40 is also failing to meet water quality standards with respect to Cypermethrin (a pesticide used in Forestry to control Pine Weevil and also in sheep flocks to control ectoparasites).



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The Nore_40 is not hydrologically connected to any nearby SAC or SPA and therefore I don't consider Appropriate Assessment Screening to be warranted in this case. Further investigation with respect to the impact of peat extraction may be required in the future.

There are no public drinking water abstractions or Group Water Schemes downstream of the peat extraction area which could be adversely affected by activity at this site.

Local Government (Water Pollution) Act, 1977 (as amended)

There are no water pollution licences issued by Tipperary County Council to the operator of this site.

Site 5: Monincha, Roscrea, Co. Tipperary

Total peatland area: 54ha

Peat extraction area: >50ha



This site is located within 500m of Site 4 and all information discussed above with regard to the Nore_40 also applied to this site.

Local Government (Water Pollution) Act, 1977 (as amended)

There are no water pollution licences issued by Tipperary County Council to the operator of this site.

Site 6: Glenahilty, Roscrea, Co. Tipperary

Total peatland area: 60ha

Peat extraction area: 42.7ha



WFD Characterisation

Site 6 is located within the Ballyfinboy_20 waterbody but it is considered not likely to be drained to this watercourse and is more likely drained to one or both the Ollatrim_20 and/or the Gortadalaun Stream_10.



Gortadalaun Stream_10

This waterbody is un-monitored but has been assigned a Poor Status and is under review. This waterbody forms part of the AFA for which LAWPRO are the lead authority.

There is no further detail regarding water quality for this waterbody.

Ollatrim_40

The Ollatrim_40 is currently at Moderate Status and At Risk of failing to meet WFD objectives.

Draft 3 rd Cycle EO	Draft Risk	Status 2010-2015	Status 2013-2018	Status 2016-2021
Good	At Risk	Good	Good	Moderate

Biological Monitoring Only (at Station 250)

	1996	1999	2002	2005	2008	2012	2015	2018	2021
Result	4	4	4	4	4	4.5	4.5	4	3.5
Classification	Good	Good	Good	Good	Good	High	High	Good	Moderate
Q-Value	4	4	4	4	4	4.5	4.5	4	3.4

There are no SAC/SPA located within these waterbodies

Local Government (Water Pollution) Act, 1977 (as amended)

There are no water pollution licences issued by Tipperary County Council to the operator of this site.

Signed:



Gillian Delehanty, Agricultural Scientist



Colette Moloney, Senior Executive Scientist