

Borrisbeg Grid Connection

Appendix 5-2 Desktop Study Results

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Appendix 5-2 Desk Study Results

Desk Study results – Borrisbeg Consented Wind Farm - ABP Ref: PA92.318704

Ecological surveys were undertaken across a wider study area which incorporated the Proposed Grid Connection in 2022 and 2023 as part of a separate planning application for a proposed wind farm which has since been consented (ABP - PA92.318704), hereafter referred to as the 'Consented Wind Farm'. The multidisciplinary surveys relevant to the Proposed Grid Connection are detailed below. The Consented Wind Farm (ABP Ref: PA92.318704) ecological reporting¹ was reviewed as the site boundary of that project overlaps with the boundary of the Proposed Grid Connection.

Multi-disciplinary walkover surveys - 2022 and 2023

As part of the survey effort for the adjacent Consented Wind Farm, which also included the study area of the Proposed Grid Connection, multidisciplinary walkover surveys were undertaken on the 11 August 2022, 25 August 2022, 18 October 2022, 13 April 2023, 27 April 2023, 11 May 2023 and the 21 September 2023. A comprehensive walkover of the entire site was completed with incidental records also incorporated from other dedicated species/habitat specific surveys including for otter, aquatic invertebrate surveys and quadrat surveys.

The multi-disciplinary walkover surveys comprehensively covered the Proposed Grid Connection footprint and based on the survey findings, further detailed targeted surveys were carried out for features and locations of ecological significance. These surveys were carried out in accordance with NRA Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes (NRA, 2009).

During the multidisciplinary surveys, a search for Invasive Alien Species (IAS) listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2015) was conducted.

Botanical surveys of the site were also undertaken during the 2022 and 2023 multidisciplinary walkover surveys. Habitats were recorded on site and classified in accordance with Fossitt (2000). The habitat assessment surveys described above in the 2022 and 2023 surveys here were undertaken in accordance with the following guidelines and interpretation documents: NPWS (2019a), NPWS (2019b), Martin *et al* (2018), O'Neill *et al* (2013), (Stace, 2010) and (British Bryological Society, 2010).

Habitats

Habitats present at and surrounding the Proposed Grid Connection footprint (i.e. the Ecology Survey Area) include the following;

- Buildings and artificial surfaces (BL3)
- Depositing/ lowland river (FW2).
- Improved agricultural grassland (GA1)
- Dry meadows and grassy verges (GS2)

¹ The ecological reporting included an NIS and EIAR can be found online at <https://www.pleanala.ie/en-ie/case/318704>

- Hedgerows (WL1)
- Treelines (WL2)

The proposed 110kV substation and its associated temporary construction compound are located within an area of Agricultural grassland (GA1) adjacent to local road L-70391 within the west of the Site. The proposed underground grid connection cabling route continues east from the substation through the Agricultural grassland (GA1) habitat before exiting on to the L7039 local road classified as Buildings and artificial Surfaces (BL3), where it turn south and runs along the road, crossing the R433 and L7038 for a total of 900m. Habitats adjacent to these roads include Amenity grassland (GA2), Buildings and artificial surfaces, Hedgerow (WL1) and Treeline (WL2).

The proposed underground grid connection cabling route crosses the Clonmore (Stream) classified as a depositing/ lowland river (FW2). The road at this river crossing is lined by a managed hedgerow with species including hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*) and scattered trees including alder (*Alnus glutinosa*), hawthorn and ash (*Fraxinus excelsior*).

From the L7038, the proposed underground grid connection cable route enters agricultural grassland (GA1), running parallel to the L7038 for approx. 175m before turning in a northeastern direction. The underground grid connection cable route crosses a tributary of the Clonmore (Stream), the Strogue Stream, which is classified as a Depositing/ lowland River (FW2) and is located within an agricultural grassland and bordered by a treeline (WL2) that consists of hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*) and scattered trees including ash.

Otter survey

Following a review of the initial site walkover, ecological surveys for constraints identification and the results of the multi-disciplinary walkover survey, areas identified as providing potential habitat for otter were subject to specialist targeted survey. Otter surveys were conducted on the 11 of August 2022, 25 of August 2022, 18 of October 2022, 13 April 2023, 27 April 2023, 11 May 2023 and 21 September 2023.

The otter surveys were conducted as per NRA (2009) guidelines (Ecological Surveying Techniques for Protected Flora and Fauna during the Planning of National Road Schemes). This involved a search for all otter signs e.g., spraints, scat, prints, slides, trails, couches and holts. In addition to the width of the rivers/watercourses, a 10m riparian buffer (both banks) was include as part of the otter habitat (NPWS 2009). The dedicated otter surveys also followed the guidance as set out in NRA (2008) 'Guidelines for the Treatment of Otters Prior to the Construction of National Roads Schemes' and following CIEEM best practice competencies for species surveys (CIEEM, 2013).

These surveys found no evidence of otter signs, couches or otter holts.

Invasive Alien Plant Surveys

During the multidisciplinary surveys in 2022 and 2023 for the Consented Wind Farm, no Third Schedule Invasive plant species were encountered within the footprint of the Proposed Grid Connection.

Aquatic survey

As part of the survey effort for the Consented Wind Farm, watercourses in proximity to the wind farm and Proposed Grid Connection infrastructure, were subject to biological evaluation and assessment through kick sampling, fish stock assessment (electro-fishing) and white-clawed crayfish surveys between the 28 and 29 September 2022. One aquatic survey site was surveyed within Proposed Grid Connection ecology survey area. The sample site (D1) is on the Clonmore stream with the sample taken at the bridge location along the L-7039 road in proximity to where the HDD drilling will occur. The result of this survey is detailed below.

Site D1 – Clonmore Stream, Clonmore

Atlantic salmon ($n=2$), brown trout ($n=12$), European eel ($n=2$) and lamprey (*Lampetra* sp.) ($n=1$) were the fish species recorded via electro-fishing at site D1.

Site D1 was of relatively poor value for salmonids, supporting only a low density of Atlantic salmon parr and mixed-cohort brown trout. This reflected the significant siltation at the site in addition to poor hydromorphology. However, some moderate quality nursery and holding habitat was nonetheless present. Spawning substrata for both salmonids and lamprey was not present. Whilst the site was heavily silted, the generally flocculent nature of the shallow soft sediment deposit rendered them unsuitable for ammocoetes, with only a single *Lampetra* sp. transformer recorded via electro-fishing. Whilst the bridge area provided some good European eel habitat given the presence of boulder refugia, suitability elsewhere at this location was poor.

Desktop Habitats

2019 Article 17 Annex I Habitats

A search of the NPWS 2019 Article 17 Reporting GIS and Metadata² undertaken May 2025 indicated three different Annex I habitats within 5km of the Proposed Grid Connection. These habitats are not listed as QI of any nearby SAC and were recorded outside the confines of any European Site.

- A section of Orchid Rich Calcareous Grassland [6210] and Molina Meadows [6410] is located 2.1km northwest as the crow flies. This habitat is located upstream of the Proposed Grid Connection and therefore hydrological connectivity to the Proposed Grid Connection is ruled out for this habitat.
- A section of Residual Alluvial Woodland [91E0] 3.8km west as the crow flies. This habitat is located upstream of a tributary of the Suir which is not within the same river basin as the Proposed Grid Connection and therefore hydrological connectivity to the Proposed Grid Connection is ruled out for this habitat.
- A section of 4.5km Molina meadows [6410]. This habitat is located upstream of a tributary of the Suir which is not within the same river basin as the Proposed Grid Connection and therefore hydrological connectivity to the Proposed Grid Connection is ruled out for this habitat.

Invasive Alien Plants

² NPWS Article 17 GIS and Metadata Downloads <https://www.npws.ie/maps-and-data/habitat-and-species-data/article-17>

A search of the NBDC 2km Grid squares S17L and S17M was undertaken in May 2025, and no Third Schedule Invasive plant species were recorded in either 2km grid square with only a single sycamore (*Acer pseudoplatanus*) record, listed as a medium impact invasive species found in Grid square S17M.

Badger and Otter

A search of the NBDC 2km Grid squares S17L and S17M was undertaken in May 2025 and recorded one record of badger within grid square S17M. NPWS records show an otter record from 2010 approximately 2km southwest of the Ecology Survey area.

Other Protected Mammals

A search of the NBDC 2km Grid squares S17L and S17M was undertaken in May 2025 and recorded one record of red squirrel and west European hedgehog within grid square S17M, both of which are protected under the Wildlife Act 1976. A request to the NPWS for protected records returned no results for any other protected mammals within the 2km grid squares S17L and S17M.

Bats

A search of the NBDC 2km Grid squares S17L and S17M was undertaken in May 2025, and no records of any bat species were returned. A request to the NPWS for protected records returned no results for bats within the 2km grid squares S17L and S17M.

Amphibians and Reptiles

A search of the NBDC 2km Grid squares S17L and S17M was undertaken in May 2025, and no records of any amphibians or reptiles were returned. A request to the NPWS for protected records returned no results for amphibians and reptiles within the 2km grid squares S17L and S17M.

Terrestrial Invertebrates

A search of the NBDC 2km Grid squares S17L and S17M was undertaken in May 2025, and no records of terrestrial invertebrates were returned. A request to the NPWS for protected records returned no results for terrestrial invertebrates within the 2km grid squares S17L and S17M.

Protected Flora

A search of the NBDC 2km Grid squares S17L and S17M was undertaken in May 2025, and no records of protected flora were returned. A request to the NPWS for protected records returned no results for protected flora within the 2km grid squares S17L and S17M.

A search of the New Atlas of the British and Irish Flora for protected flora in 10km Grid Square S17 returned the following records details in **Apx Table 1** below.

Apx Table 1: Flora Plant Atlas results

Scientific Name	Common Name	Status
Least Bur-reed	<i>Sparganium natans</i>	(NT) Near Threatened

Ornithology

A search of the NBDC 2km Grid squares S17L and S17M was undertaken in May 2025 and recorded 6 bird species within the grid squares. These results are displayed in **Apx Table 2**. A search of the NPWS protected records showed returned no results for birds within the 2km grid squares S17L and S17M.

Apx Table 2: NBDC Search of birds within 2km Grid Square S17M and S17L

Scientific Name	Common Name	Record Year	Grid Square	Status
<i>Carduelis cannabina</i>	Common Linnet	2011	S17M	Wildlife Act, Amber List
(<i>Columba oenas</i>)	Stock Pigeon	2011	S17L	Wildlife Act, Amber List, Red List
<i>Larus ridibundus</i>	Black-headed Gull	2011	S17M	Wildlife Act, Amber List
<i>Passer domesticus</i>	House Sparrow	2011	S17M	Wildlife Act, Amber List
<i>Sturnus vulgaris</i>	Common Starling	2011	S17M	Wildlife Act, Amber List
<i>Vanellus vanellus</i>	Northern Lapwing	2011	S17M	Wildlife Act, EU BD Annex II, Red List

Hydrology and Hydrogeology

Relevant Surface Waters

The Ecology Survey Area is located within the sub-catchment Suir_SC_010 (Sub-catchment ID: 16_22). which is within the Suir Catchment (Catchment ID: 16).

There are three rivers/streams across the Proposed Grid Connection Survey Boundary which are the Clonmore stream (Suir), the Strogue stream and the River Suir.

The WFD status of the Clonmore Stream (Suir)_010, which includes both the Clonmore and the Strogue within the Proposed Grid Connection area, for the 2016-2021 period is classified as “moderate”, as assessed via monitoring. The Clonmore Stream (Suir)_010 is also considered to be ‘at risk’ of not achieving its WFD objectives (based on WFD risk for the 3rd Cycle of the WFD). This status was assessed via monitoring. The WFD status of the Suir_020 for the 2016-2021 period is classified as “poor”, as assessed via monitoring. The Suir_020 is also considered to be ‘at risk’ of not achieving its WFD objectives (based on WFD risk for the 3rd Cycle of the WFD). See **Apx Table 3** for Q-Value assessments of the watercourses within the Site.

Apx Table 3: EPA River Q-Value Monitoring for Watercourses within the Vicinity of the Proposed Grid Connection

Local Name	EPA Station Code	EPA Name	Station Name/Monitoring Location	Location in relation to Proposed Grid Connection redline	Most recent Q-value (year)
Clonmore Stream (Suir)	RS16C111000	CLONMORE STREAM (SUIR)_010	Br u/s Suir R confl	At HDD Bridge location within Proposed Grid Connection boundary	3* ³ (2023)
Strogue	RS16C111000	CLONMORE STREAM (SUIR)_010	Br u/s Suir R confl	At HDD Bridge location within Proposed Grid Connection boundary	3* (2023)
Suir	RS16S020200	SUIR_020	Knocknageragh Br	Within Proposed Grid Connection boundary approximately 170m west of on-site 110kv electricity substation	3 (2023)

Relevant Groundwaters

The Site is located entirely within the Templemore (IE_SE_G_151) groundwater body (GWB). The Geological Survey Ireland (GSI) summary of initial characterisation document for the Templemore GWB (GSI, 2004) describes the groundwater flow paths within the Templemore groundwater body:

“The majority of groundwater flow in this aquifer is considered to take place in the upper weathered zone (3m), below this the amount of groundwater flow decreases gradually with depths and large flows are not expected below 10m except in isolated open fractures.”

The document (GSI, 2004) further describes the groundwater and surface water interaction within the Templemore GWB as:

“Groundwater will discharge locally to streams and rivers crossing the aquifer and also to small springs and seeps. Owing to the poor productivity of the aquifers in this body it is unlikely that any major groundwater - surface water interactions occur. Baseflow to rivers and streams is likely to be relatively low.”

The Ballysteen Formation underlies the majority of the Site are classified by the GSI (www.gsi.ie) as a Locally Important Aquifer (LI), having bedrock which is moderately productive only in local zones. The Lisduff Oolite Member on the south of the Site Locally Important Aquifer - Bedrock which is Generally Moderately Productive. There are no GSI mapped karst features in the area of the Site. Groundwater vulnerability across the Ecology Study area has a range of different classes including ‘rock near surface of karst’, ‘extreme’, ‘high’ and ‘moderate’.

Soils & Geology

The GSI online database⁴ was consulted for available edaphic, geological, and hydrological information of the site and its environs. The bedrock present within the Proposed Grid Connection survey area is composed of dark muddy limestone and shale of the Ballysteen Formation and section of Oolithic limestone of the Lisduff Oolite Member.

³ The EPA River quality survey: biological report states that ‘asterisk after the Q value (e.g. Q3*) indicates something worthy of special attention, typically heavy siltation of the substratum’.

A search of the GSI soils database was conducted to establish the underlying soils in the study area. Teagasc soils mapping characterises the majority of the soils in the Proposed Grid Connection survey area, including the following:

- Coarse loamy drift with siliceous stones;
- Fine loamy drift with limestones;
- Peat; and
- River Alluvium

The dominant subsoil type is Till derived chiefly from limestone with Alluvium also present within the Proposed Grid Connection survey area.