APPENDIX 14-3

SI ARCHAEOLOGICAL MONITORING REPORT

Archaeological Monitoring of Site Investigations at Ballydermot Bog, Co. Kildare and Offaly

Part 1 – Licensed Archaeological Monitoring - FINAL REPORT

Excavation Licence No. 21E0221Ext (Miriam Carroll)

Date: 08/03/2023

5. ARCHAEOLOGICAL MONITORING RESULTS

5.1 Archaeological background

Nine recorded monuments are located within the proposed development site boundary (Figure 3) and are listed in Table 1 below. The site investigations were generally situated in areas where no monuments were located as the proposed wind farm site is being designed to avoid archaeological constraints where possible.

Table 1: SMRs within the Proposed Development site.

SMR NO.	ITM E	ITM N	TYPE	TOWNLAND
KD012-002001-	669905	728698	Road - class 1 togher	DERRYBRENNAN,TICKNEVIN
KD012-004001-	670085	727258	Road - class 1 togher	DERRYBRENNAN,LULLYMORE WEST
KD012-014----	669601	724602	Road - class 1 togher	LULLYBEG,LULLYMORE EAST
KD012-015----	670690	724604	Road - gravel/stone trackway - peatland	LULLYMORE EAST
KD012-016----	670900	726428	Road - gravel/stone trackway - peatland	LULLYMORE WEST
KD012-018----	672119	724322	Structure - peatland	DRUMSRU (Kilmeage North ED)
KD012-019----	671539	724561	Platform - peatland	DRUMSRU (Kilmeage North ED)
KD012-014001-	669818	724783	Road - class 1 togher	LULLYMORE EAST
KD012-014002-	669512	724520	Road - class 1 togher	LULLYMORE EAST

5.2 Notable Finds – Topographical Files of the National Museum of Ireland

A search of the topographical files of the National Museum of Ireland for the townlands within the proposed development site yielded several results which are provided below.

ALLENWOOD SOUTH Co. Kildare:
1987:71 Cast Copper Alloy cauldron, Findplace: bog.
1987:72 Leather Shoe sole, Findplace Bog 1.25m deep,

BALLYBRACK County Kildare:
1937:2421 Stone axehead, Findplace unknown.

1937:2438 Stone rubber, Findplace unknown.
1937:2439 Stone rubber, Findplace unknown.
1937:2440 Stone Burnisher, Findplace unknown.
1937:2441 Stone Rubber, Findplace unknown.
1937:2442 Chert blade, Findplace unknown.
1937:2443 Hone stone, Findplace unknown.
1937:2444 Hone stone, Findplace unknown.

BALLYKILLEEN County Offaly
1933:2757 Tracked stone
1933:2758 Stone tool
1933:2759 Hammerstone
1998:68 Bone pin
1998:69 Iron Object
2002E941:12 Wood stake
2002E941:13 Wood object
2002E941:14 Horn fragment
2002E941:15 Horn fragment
2002E941:16 Horn fragment
2002E941:17 Horn fragment
2002E941:4 Wood object
2002E941:5 Wood object
2002E941:8 Wood rope

BALLYSOOGHAN NORTH County Kildare:
1989:14 Leather Shoe, Findplace: bog

CLONBROWN County Offaly:
1945:79 Leather shoe, Findplace: Bog at Clonbrown

DERRIES County Kildare
1000:564 Stone tool, Findplace: The Derries.
1000:565 Quartz pebble, Findplace: The Derries.
1989:17 Wood tool, Findplace: The Derries.

DERRIES, County Offaly
2013:417 Animal remains sample.

KILCUMBER County Offaly.
1947:832 Leather Sheath, Findplace Bog at Kilcumber
2013:435: Stone Sheela-na-gig, Findplace Figile river at Kilcumber bridge
2013:436 Architectural fragment - OGEE-HEADED TWIN-LIGHT WINDOW MOULDING, Findplace Figile river at Kilcumber bridge

KILLINAGH UPPER
1972:355:3 Iron horseshoe, Findplace bog.

KILLINTHOMAS
1989:15 Stone axehead

LULLYMORE EAST County Kildare:
1989:16 Stone Quern, findplace Lodge bog
1009C2:11 Bronze coin, findplace ecclesiastical enclosure
2009C2:12 Bronze sheeting

RATHANGAN County Kildare:
1877:58 Bronze dirk
1884:337 Stone axehead
2001:1 stone axehead

SHEAN County Offaly:
1989:50 leather shoe, findplace bog.

TICKNEVIN County Kildare
1937:2423 Stone axehead
1987:140 leather shoe, Findplace bog.
2010C2:703 stone axehead
2017:102 wood vessel
2017:95 wood vessel
2017:96 wood vessel
2017:97 wool ball
2017:98 wool ball
X4060 amber bead, Findplace: bog in Punchestown

5.3 Previous Archaeological Work Carried out on the Site

5.3.1 Peatland Survey

A peatland survey of the Derrygreenagh Bogs was carried out in 2004 by ADS Ltd (Whitaker, 2004). The findings of the survey may be summarised as follows:

'*A total of 83 sites were recorded during the course of the field survey. The majority (55) of these sites were occurrences of single worked brushwood or roundwoods. It was thought at the time that many of there were modern in origin. The reason for this assumption was two-fold. Many of the pieces were very well preserved and from talking to BnM about disturbances evident in the peat from earlier methods of peat production in the area… it appeared likely that they could have been relatively modern. In some case BnM noted that they themselves had used small trackway like constructions to facilitate the removal of machinery from the bog that had become stuck. An example of this are sites KD-BRN007 and 008 in Barnaran Bog which were dated to within the past fifty years.*'

5.3.2 Walk-Over Survey

A walk-over survey of the Proposed Development site was carried out over a number of weeks between April and July 2022 by Tobar Archaeological Services. The walk-over focussed on areas of proposed infrastructure including turbine and hardstand locations, proposed access roads, compounds and substations. No previously unrecorded potential archaeological sites were noted during the walk-over survey which included a visual examination of any available drain sections in the vicinity of proposed infrastructure.

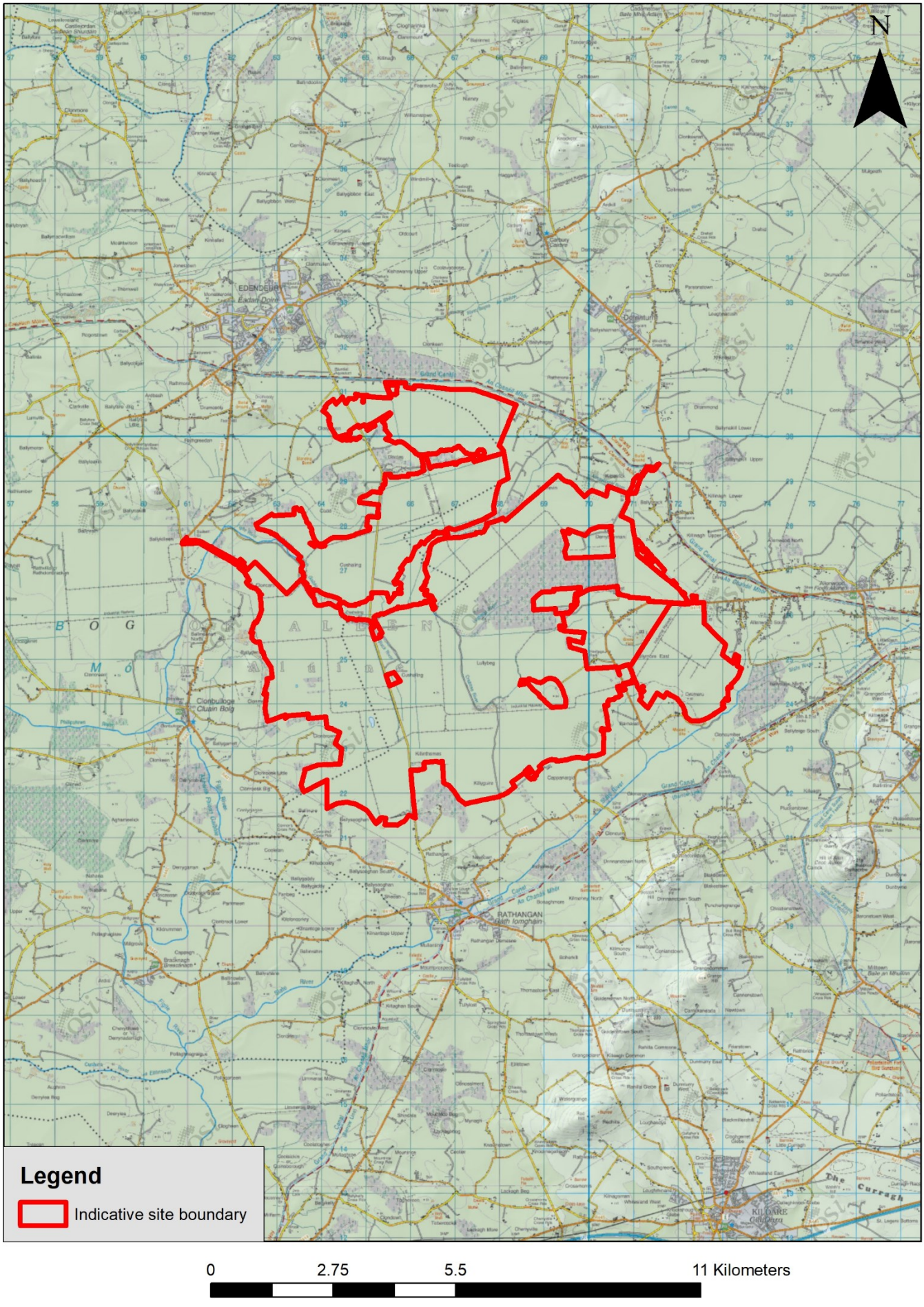


Figure 1: Site location map.

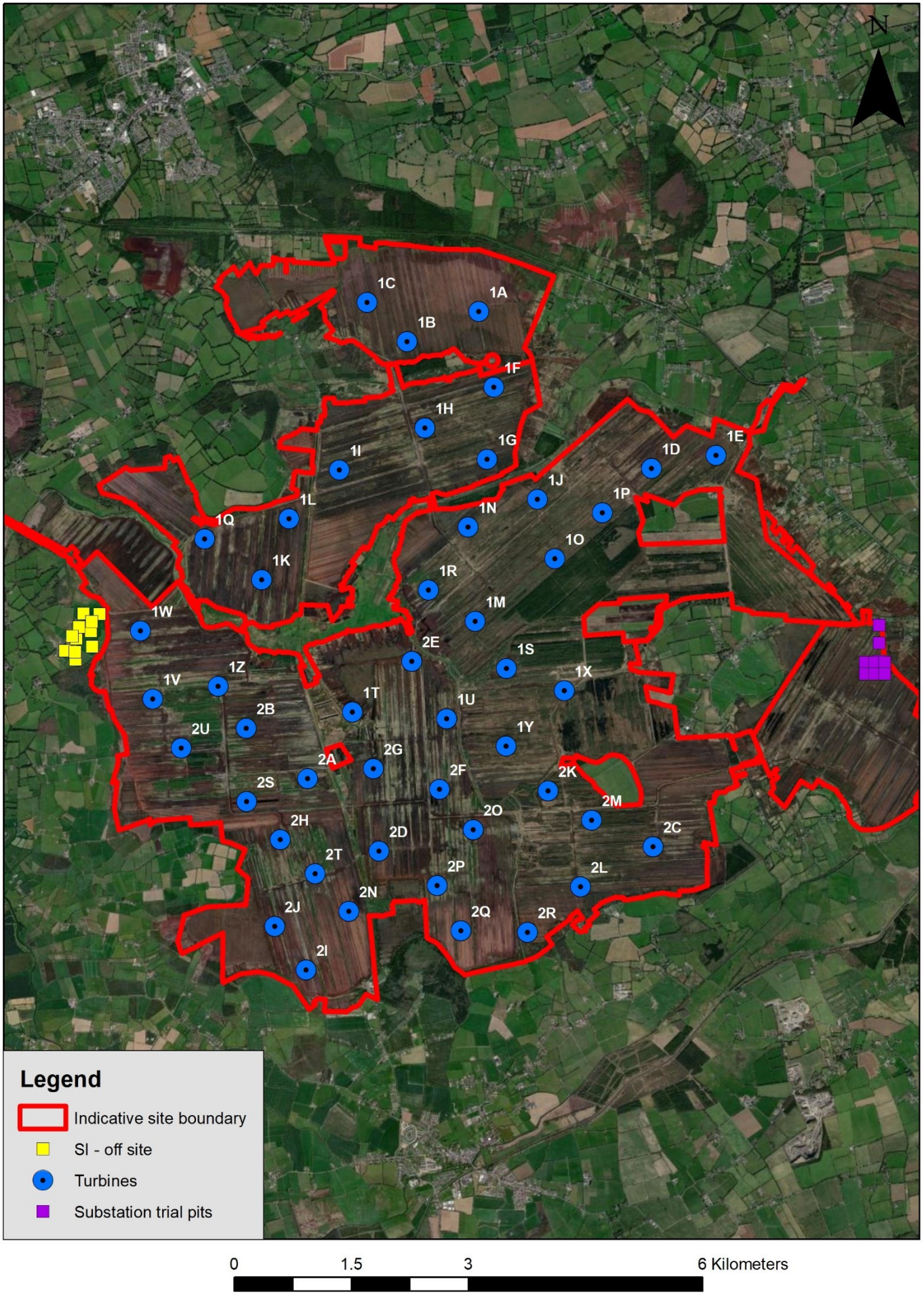


Figure 2: Location of SI trial pits.

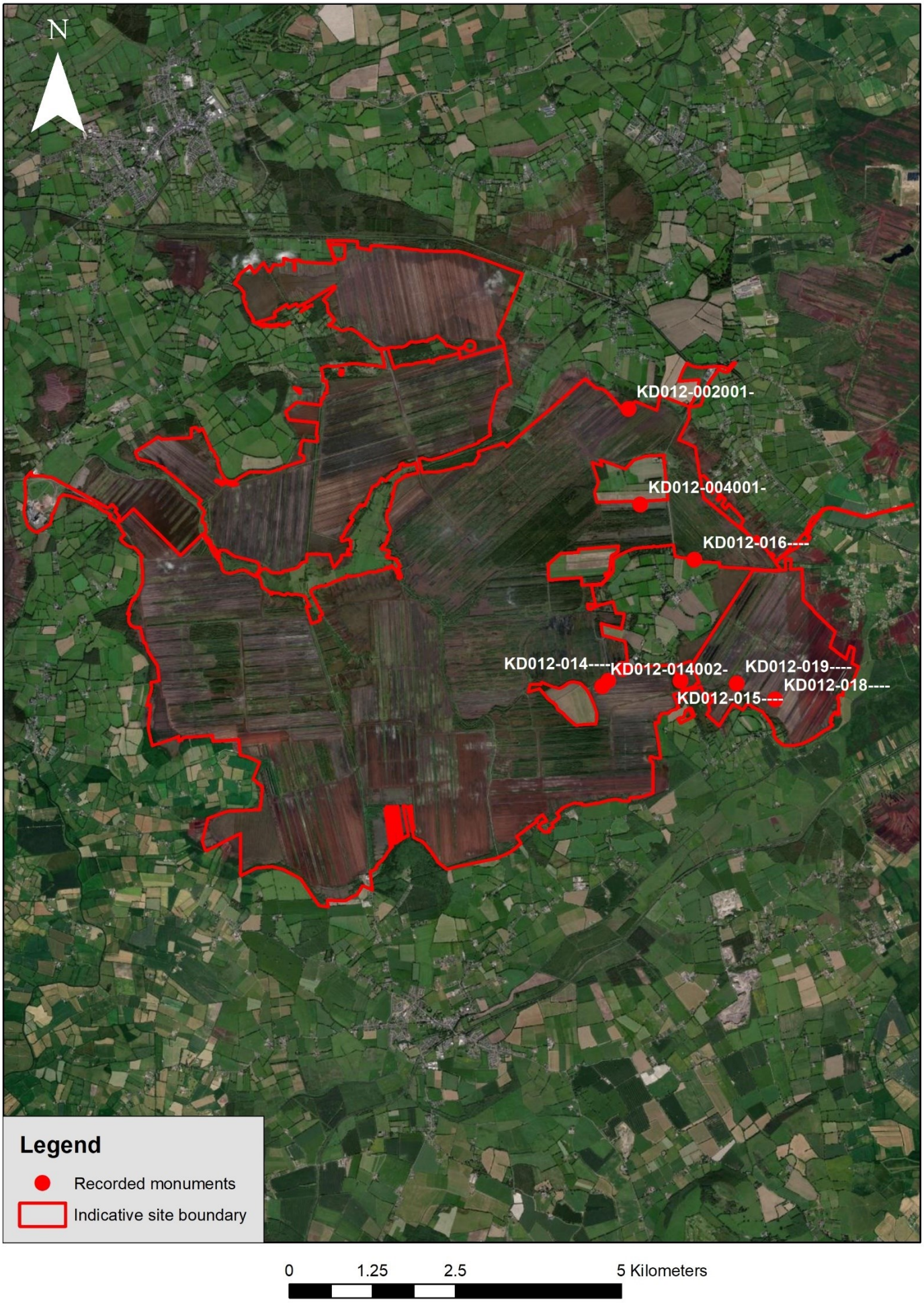


Figure 3: SMRs within the indicative Proposed Development site boundary.

5.4 Results of Archaeological Monitoring

Archaeological monitoring of site investigation works was carried out in two phases in 2021. The initial phase comprised the excavation of nine trial pits at a potential substation location in May 2021, while Phase 2 comprised the excavation of 54 trial pits at each proposed turbine location and at a potential off-site substation location in November 2021 (Figure 2).

5.4.1 Phase 1

Archaeological monitoring of the excavation of nine Site Investigation trial pits was carried out over a period of one day in late May 2021. A total of nine trial pits (TPA-I) were excavated at a potential substation location at the east side of the Proposed Development site. The site comprises cut-over peat which is no longer in production. The stratigraphy noted in the trial pits therefore comprised varying depths of peat overburden which overlay a grey clay subsoil. The peat depths recorded in the trial pits varied from 0.25m-3.05m and some tree roots were noted towards the base of a number of pits. No worked timbers or any other potential archaeological wood was exposed, however. No archaeological finds, features or deposits were uncovered in any of the trial pits and subsoil was observed in each. The Phase 1 trial pits are listed in Table 2 and a photographic record of same is provided below.

Table 2: Phase 1 SI trial pits excavated at potential on-site substation location.

TP ID.	ITM E	ITM N	Peat Depth
A	672480	726257	3.05m
B	672480	726027	0.25m
C	672480	725796	0.75m
D	672302	725779	1.75m
E	672427	725779	0.95m
F	672552	725779	0.8m
G	672302	725629	1.45m
H	672427	725629	2m
I	672552	725629	0.8m



Plate 1: TPA.



Plate 2: TPB.



Plate 3: TPI.



Plate 4: TPF.



Plate 5: TPH.



Plate 6: TPC.



Plate 7: TPE.



Plate 8: TPG.



Plate 9: TPD.

5.4.2 Phase 2

Archaeological monitoring of the excavation of Site Investigation trial pits at each of the proposed turbine locations and at a potential off-site substation was carried out over a period of two weeks in November 2021. As with the trial pits excavated for the potential on-site substation during Phase 1, all trial pits excavated at the proposed turbine locations were located in cut-over peat which is no longer in production. As the bog has not been in production for some time many of the fields are now colonised with vegetation, although some fields also remain vegetation-free. The trial pits excavated generally measured 1.8m in width x 4.5-5m in length with varying depths. In most cases subsoil was exposed in each pit, however, where deep peat was encountered subsoil was not always exposed. Some trial pits contained tree roots and twigs, however, no evidence for worked timbers or potential archaeological wood was noted. No archaeological finds, features or deposits were uncovered in any trial pit excavated at the proposed turbine locations.

The trial pits excavated at the potential off-site substation were located in a greenfield site to the west of the bog in the townland of Cloncant, Co. Offaly. The stratigraphy in these pits generally comprised topsoil which varied in thickness from 0.25m-0.6m (max) and overlay subsoil which varied from orange-beige to grey in colour. No archaeological finds, features or deposits were uncovered in any of the trial pits excavated in the off-site substation location.

The trial pits are listed in Table 3 and a photographic record of same is provided below.

Table 3: Phase 2 trial pits excavated at each turbine location and the potential off-site substation location.

TP ID.	ITM E	ITM N	Depth of overburden
TP-BP01	662039	725925	0.4m
TP-BP02	662173	725813	0.4m
TP-BP03	662184	726082	0.25m
TP-BP04	662383	725982	0.4m

TP-BP05	662367	726181	0.45m
TP-BP06	662271	726402	0.6m
TP-BP07	662483	726400	0.3m
1A	667344	730283	4m
1B	666425	729892	2.5m
1C	665913	730396	1.5m
1D	669561	728267	0.7m
1E	670388	728437	3m
1F	667536	729311	0.4m
1G	667453	728387	0.7m
1H	666655	728789	0.2m
1I	665558	728249	2.1m
1J	668094	727875	0.4m
1K	664557	726842	2.5m
1L	664909	727625	2.1m
1M	667298	726307	1.2m
1N	667205	727517	0.2m
1O	668319	727108	1.2m
1P	668928	727701	0.5m
1Q	663830	727367	0.2m
1R	666700	726709	0.9m
1S	667701	725703	N/A
1T	665722	725146	1.5m
1U	666932	725060	1m
1V	663164	725310	0.2m
1W	663007	726187	0.4m
1X	668441	725419	1.5m
1Y	667697	724705	1.5m
1Z	663999	725474	0.7m

2A	665151	724290	3.8m
2B	664363	724937	2.7m
2C	669577	723418	1.4m
2D	666062	723362	2.5m
2E	666484	725795	2.4m
2F	666843	724155	0.2m
2G	665994	724419	3.5m
2H	664797	723510	1.1m
2I	665130	721837	0.9m
2J	664725	722393	2.4m
2K	668235	724133	1.2m
2L	668652	722904	0.9m
2M	668792	723754	0.9m
2N	665676	722587	4m
2O	667272	723632	1m
2P	666811	722919	0.5m
2Q	667114	722339	3.6m
2R	667967	722319	4m
2S	664367	723995	2.4m
2T	665245	723071	0.9m
2U	663527	724680	1m



Plate 10: TPBP01 at off-site potential substation location.



Plate 11: TPBP02.



Plate 12: TPBP03.



Plate 13: TPBP04.



Plate 14: TPBP05.



Plate 15: TPBP06.



Plate 16: TPBP07.



Plate 17: TP1A.



Plate 18: TP1B.



Plate 19: TP1C.



Plate 20: TP1D.



Plate 21: TP1E.



Plate 22: TP1F.



Plate 23: TP1G.



Plate 24: TP1H.



Plate 25: TP1I.



Plate 26: TP1J.



Plate 27: TP1K.



Plate 28: TP1L.



Plate 29: TP1M.



Plate 30: TP1N.



Plate 31: TP1O.



Plate 32: TP1P.



Plate 33: TP1Q.



Plate 34: TP1R.



Plate 35: TP1T.



Plate 36: TP1U.



Plate 37: TP1V.



Plate 38: TP1W.



Plate 39: TP1X.



Plate 40: TP1Y.



Plate 41: TP1Z.



Plate 42: TP2A.



Plate 43: TP2B.



Plate 44: TP2C.



Plate 45: TP2D.



Plate 46: TP2E.



Plate 47: TP2F.



Plate 48: TP2G.



Plate 49: TP2H.



Plate 50: TP2I.



Plate 51: TP2J.



Plate 52: TP2K.



Plate 53: TP2L.



Plate 54: TP2M.



Plate 55: TP2N.



Plate 56: TP2O.



Plate 57: TP2P.



Plate 58: TP2Q.



Plate 59: TP2R.



Plate 60: TP2S.



Plate 61: TP2T.



Plate 62: TP2U.

6. CONCLUSION

Archaeological monitoring of two phases of site investigation work at the proposed Ballydermot wind farm was carried out by Tobar Archaeological Services in May and November 2021. The site investigations comprised the excavation of trial pits at a potential on-site substation location, a potential off-site substation location and at each proposed turbine location. The on-site substation and proposed turbines are all located in cut-over bog, while the off-site substation location is in pasture to the west of the Proposed Development site. The excavation of all trial pits was archaeologically monitored, and no potential archaeological finds, features or deposits were uncovered.

7. BIBLIOGRAPHY

- Record of Monuments and Places (RMP) for County Kildare and Offaly.
- Aalen, F.H.A. *et al.*, 1997, *Atlas of the Irish Rural Landscape*. Cork University Press, Cork.
- Department of Arts, Heritage, Gaeltacht and the Islands, 1999, Framework and Principles for the Protection of the Archaeological Heritage, 1999.

An Roinn Cultúir, Oidhreachta agus Gaeltachta
Department of Culture, Heritage and the Gaeltacht

2	1	E	0	2	2	1	X

Site Owner: **Bord na Mona Powergen**

Address: **Edenderry Power Ltd**

Ballykilleen, Edenderry

Planning Authority: Kildare and Offaly County Council

Planning Reg. No.: Pre-planning **Excavation Type:** Monitoring

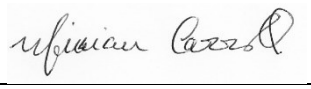
[as per licence application]

Contractor/Developer: As Above

Address: As Above

Background to excavation:

Archaeological Monitoring of Geotechnical Site Investigations

Signed:		**Date:**	**08/03/2023**

Archaeological Monitoring of Site Investigations at Ballydermot WF, Co. Kildare and Offaly

Part 2 – Licensed Archaeological Monitoring - FINAL REPORT

Author:	Miriam Carroll, BA, MA, MIAI
Excavation Licence No.	21E0221ExtX (Miriam Carroll)
Planning Ref:	Pre-Planning
Planning Status:	Pre-Planning report

Client: Bord na Mona Powergen Ltd

Date: 08/03/2023

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1. REPORT DETAILS

Excavation report	Final Report
Excavation Licence No.	**21E0221Ext X**
Licensee:	Miriam Carroll
Planning Ref:	Pre-planning
Townland:	Drumsru,Ticknevin, Ballinure, Ballykilleen, Derrybrennan, Kilcumber, Rathangan, Clonbrown, Cappanargid, Killinthomas, Cushaling, Killinagh Upper, Killyguire, Clonroosk Little, Derries, Allenwood North, Ballybrack, Coolygagan, Cushaling, Clonkeen, Cloncant, Cloncanon, Clonroosk Big, Ballysooghan North, Codd, Kilpatrick, Killinagh Lower, Lullymore West, Shean, Lullymore East, Barnaran, Allenwood South, Ballydermot, Clonmel, Lullybeg
County:	Kildare and Offaly
ITM Coordinates (Centre point)	ITM E667091 N725553
Planning Status:	Pre-planning report

2. INTRODUCTION

2.1 Scope of Work

Two phases of geotechnical site investigations were carried out at Ballydermot Bog in Counties Kildare and Offaly in 2021. The site investigations were undertaken in order to determine the suitability of lands for a proposed wind farm on the site. The initial phase of work comprised the excavation of SI trial pits at a potential substation location, while the second main phase of work comprised the excavation of trial pits at each of the 47 proposed turbine locations, in addition to 11 pits at potential borrow pit locations in a greenfield area to the west of the proposed wind farm site. Phase 1 of the investigations was carried out in May 2021, while Phase 2 took place in November 2021 over a period of two weeks. Both phases of work were subject to archaeological monitoring by Tobar Archaeological Services under licence (21E0221Ext) from the National Monuments Service (NMS) of the Department of Housing, Local Government and Heritage (DHLGH).

It must be noted that the sole purpose of this phase of the project was for geotechnical/ engineering investigations, the results of which were used to assess ground conditions on site. While the trial pits were archaeologically monitored under licence, it was not a full archaeological investigative exercise. An opportunity to assess for the presence or otherwise of potential archaeological features was presented however, albeit limited by the programme timeframe and Health and Safety constraints. As agreed in the archaeological method statement, any potential features would be preserved in-situ. Nine trial pits were excavated in the proposed substation location during Phase 1 while 54 trial pits were excavated during Phase 2.

2.2 Development Description and Site Location

The proposed development site known as 'Ballydermot WF' is located within the Derrygreenagh group of bogs in counties Offaly and Kildare (Figure 1). The county boundary extends down through the proposed development area, with the larger portion of same being located in County Kildare. Edenderry, Co. Offaly is situated c. 2km to the north-west while Prosperous, Co. Kildare is c. 9km to the east. The Grand Canal is located to the north, east and south-east and the Cushaling river extends through the northern portion of the proposed development area. A large number of Bord na Móna bogs which were previously under production are located within the proposed development site and include Ticknevin, Glashabaun North, Glashabaun South, Derrybrennan, Codd north, Ballydermot north, Ballydermot South, Blackriver, Lullymore, Killinagh, Bulge, Lullybeg, Lodge, Barnaran, Killyguire and Cappanargid.

3. STATUTORY CONTEXT

3.1 Current Legislation

Archaeological monuments are safeguarded through national and international policy, which is designed to secure the protection of the cultural heritage resource. This is undertaken in accordance with the provisions of the European Convention on the Protection of the Archaeological Heritage (Valletta Convention). This was ratified by Ireland in 1997.

Both the National Monuments Acts 1930 to 2004 and relevant provisions of the Cultural Institutions Act 1997 are the primary means of ensuring protection of archaeological monuments, the latter of which includes all man-made structures of whatever form or date. There are a number of provisions under the National Monuments Acts which ensure protection of the archaeological resource. These include the Register of Historic Monuments (1997 Act) which means that any interference to a monument is illegal under that Act. All registered monuments are included on the Record of Monuments and Places (RMP).

The Record of Monuments and Places (RMP) was established under Section 12 (1) of the National Monuments (Amendment) Act 1994 and consists of a list of known archaeological monuments and accompanying maps. The Record of Monuments and Places affords some protection to the monuments entered therein. Section 12 (3) of the 1994 Amendment Act states that any person proposing to carry out work at or in relation to a recorded monument must give notice in writing to the Minister (Environment, Heritage and Local Government) and shall not commence the work for a period of two months after having given the notice. All proposed works, therefore, within or around any archaeological monument are subject to statutory protection and legislation (National Monuments Acts 1930-2004).

Under the Heritage Act (1995) **architectural heritage** is defined to include '*all structures, buildings, traditional and designed, and groups of buildings including street-scapes and urban vistas, which are of historical, archaeological, artistic, engineering, scientific, social or technical interest, together with their setting, attendant grounds, fixtures, fittings and contents…*'. A heritage building is also defined to include '*any building, or part thereof, which is of significance because of its intrinsic architectural or artistic quality or its setting or because of its association with the commercial, cultural, economic, industrial, military, political, social or religious history of the place where it is situated or of the country or generally*'.

The Planning and Development Act 2000 (as amended), sets out the legal framework for the protection of buildings/structures which are of special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest. Such protection is afforded through the mechanism of the Record of Protected Structures (RPS). In relation to a protected structure or proposed protected structure, the term 'structure' includes the interior of the structure, the land lying within the curtilage of the structure, any other structures lying within that curtilage and their interior, and all fixtures and features which form part of the interior or exterior of that structure. The protection also extends to any features specified as being in the attendant grounds.

4. ARCHAEOLOGICAL PLANNING REQUIREMENTS

The archaeological monitoring of site investigation trial pits was carried out at the pre-planning stage of a proposed wind farm development and therefore there is currently no associated planning reference.