Windfarm Development at Cleanrath, County Cork

Part 1 - Archaeological Monitoring of groundworks (Windfarm and underground cable route) – Final Report

Excavation Licence No. 18E0646 X (Annette Quinn)

Planning Ref: ABP PL. 04. 246742
Planning Status: Condition of Planning Permission

Client: **Inchee Energy Supply Ltd**
Lissarda Business Park
Lissarda, Co. Cork

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1 REPORT DETAILS

Excavation Licence No.	18E0646X
Licensee:	Annette Quinn
Planning Ref:	ABP PL. 04. 246742
Townland:	Various
County:	Cork
ITM Coordinates (Centre point)	ITM E520194, N569225
Planning Status:	Condition No. 16 Monitoring

2 INTRODUCTION

2.1 SCOPE OF WORK

This report was prepared by Annette Quinn of Tobar Archaeological Services. It presents the results of archaeological monitoring of groundworks associated with a permitted wind farm and grid connection at Cloontycarthy, Cleanrath Nth, Cleanrath Sth, Derreennacarton, Derrineanig, Turnaspidogy, Milmorane, Coomlibane, Rathgaskig, Derragh, Augeris, Gorteennakilla, Carrignadoura, Gurteenowen, Lyrenageeha and Lackabaun townlands, Co. Cork. Archaeological testing (Licence number 18E0646) was previously undertaken on the site in compliance with Condition No. 16 of the An Bord Pleanála grant of planning permission and a recommendation of the archaeology and cultural heritage chapter of the EIAR undertaken for the development. The permitted development comprises a 9 turbine wind farm and associated infrastructure (T7-T15). The monitoring was undertaken between November 2018 and May 2019. No archaeological finds, features or deposits were uncovered during the monitoring.

Trenching works associated with the underground grid connection within County Cork and were also subject to archaeological monitoring. Ground works for the grid connection further to the west within County Kerry were monitored by another archaeological firm. Monitoring of the excavation of the cable trench along an existing farm track (west end of route) and thereafter along public roads was carried out.

This document has been updated for the purposes of inclusion in a Remedial Environmental Impact Assessment Report for Cleanrath Wind Farm as part of a substitute consent application to An Bord Pleanála. The updates to the document relate only to the turbine numbering where it reverts to the original numbering system used when the project was originally proposed for planning permission.

2.2 PERMITTED DEVELOPMENT

Planning permission for a 9 turbine wind farm at Cloontycarthy, Cleanrath Nth, Cleanrath Sth, Derreennacarton, Derrineanig, Turnaspidogy, Milmorane, Coomlibane, Rathgaskig, Derragh, Augeris, Gorteennakilla, Carrignadoura, Gurteenowen, Lyrenageeha and Lackabaun townlands, Co. Cork has been granted by An Bord Pleanala (ABP Pl. 04. 246742).

2.3 PLANNING REQUIREMENTS

Condition No. 16 of the grant of planning permission deals with archaeology and states the following:

'The developer shall facilitate the archaeological appraisal of the site and shall provide for the preservation, recording and protection of archaeological materials or features which may exist within the site or along the grid connection route. In this regard the developer shall:

(a) Notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) relating to the proposed development, and

(b) Employ a suitably qualified archaeologist prior to the commencement of development. The archaeologist shall assess the site and monitor all site development works.

The assessment shall address the following issues:-

(i) The nature and location of archaeological material on the site and

(ii) The impact of the proposed development on such archaeological material.

A report, containing the results of the assessment, shall be submitted to the planning authority and, arising from this assessment, the developer shall agree in writing with the planning authority details regarding further archaeological requirements (including, if necessary, archaeological excavation) prior to commencement of construction works.

In default of agreement on any of these requirements, the matter shall be referred to an Bord Pleanála for determination.

Reason: In order to conserve the archaeological heritage of the area and to secure the preservation (in-situ or by record) and protection of any archaeological remains that may exist within the site or along the grid connection route.'

2.4 PREVIOUS WORK CARRIED OUT ON THE SITE

Tobar Archaeological Services carried out the Archaeology and Cultural Heritage chapter of the EIAR for the project which included both desktop research and a site walk-over survey. Tobar also carried out pre-development archaeological testing of one turbine base, hardstand and associated access track in 2011 under licence 11E0335 on foot of a request for Further Information from the Planning Authority (Pl. Ref. 11/05245). No archaeological finds or features were uncovered during the testing.

Tobar also carried out pre-development archaeological testing under license no. 18E0646 over the remainder of the site, the report on which was submitted to the National Monuments Service and the National Museum in December 2018.

2.5 SITE DESCRIPTION AND RECEIVING ENVIRONMENT

The permitted development area is located in County Cork approximately 2.5km north-west of Inchigeelagh. It is situated on relatively high ground varying in height from 200-304m above OD and incorporates a portion of Derrineanig Hill. The northern portion of the site is under forestry and semi-mature forestry is located along the eastern portion of the site. The site measures approximately 2.6km north-south by 2.8km east-west.

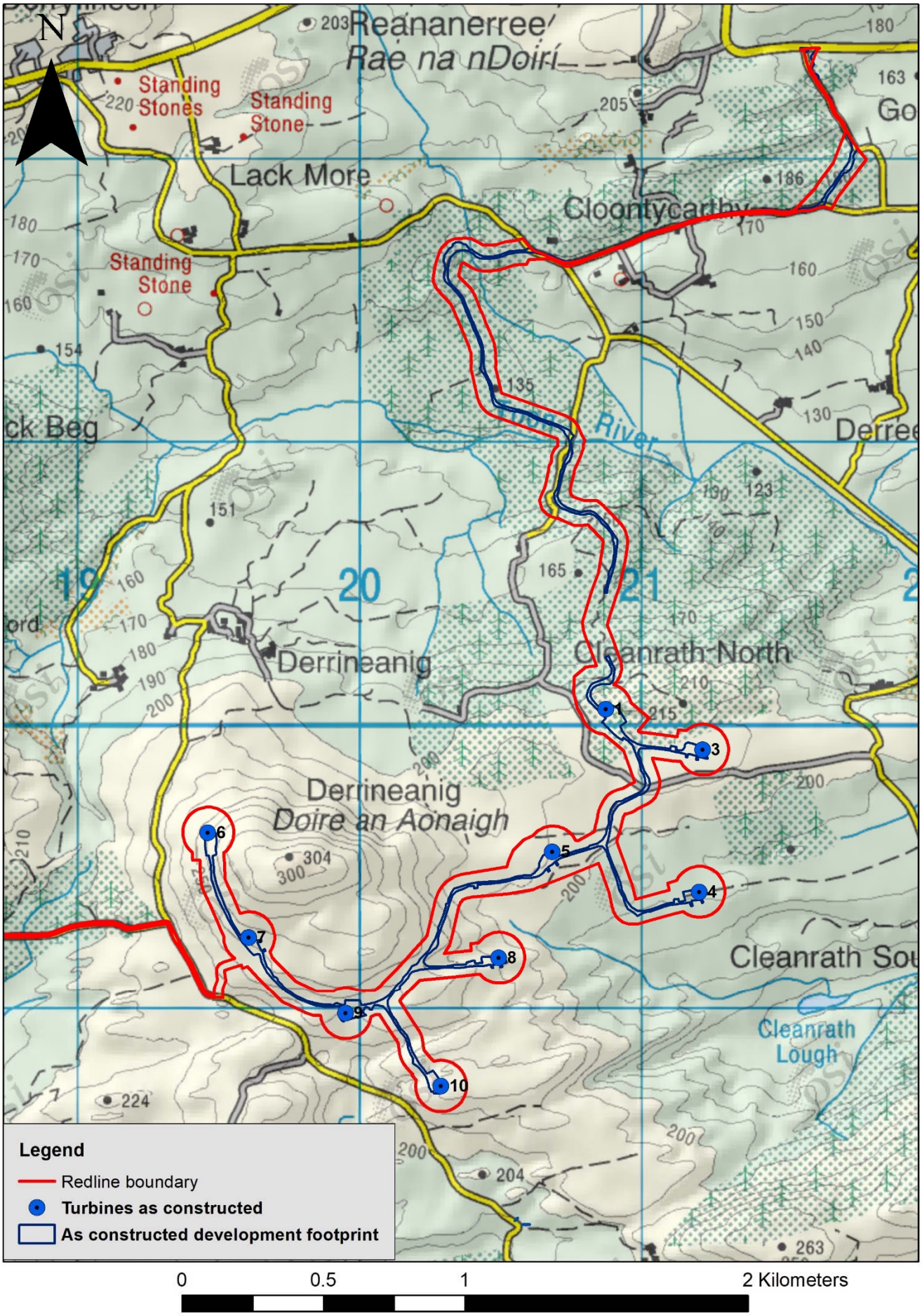

Figure 1: Site location map and wind farm layout.

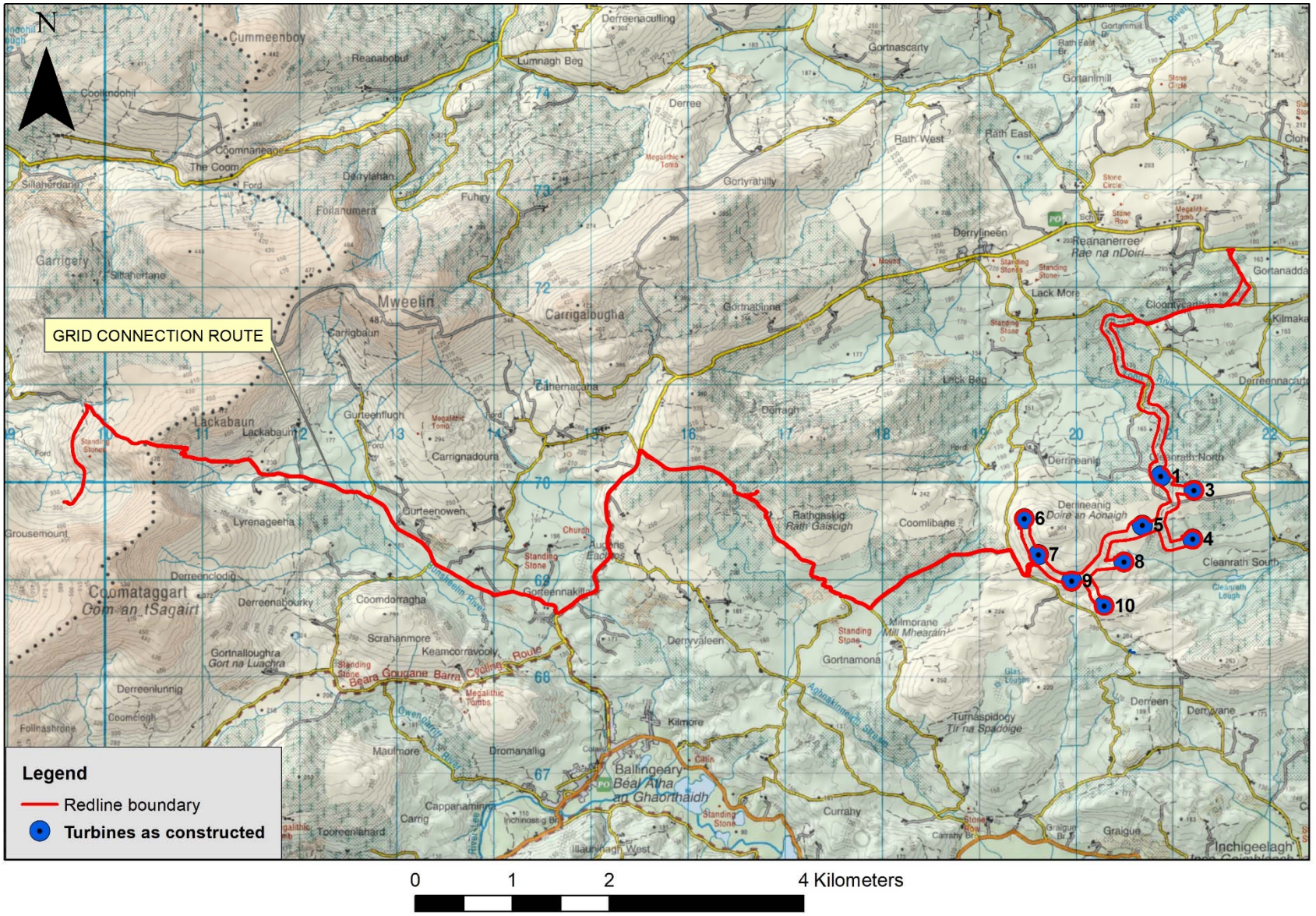

Figure 2: Site location map showing wind farm layout and associated underground grid connection route.

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 (Culture, Heritage and the Gaeltacht) 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).

Archaeological Monitoring Report – part 2

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4 EXISTING ARCHAEOLOGICAL ENVIRONMENT

Four recorded monuments (CO069-094 – Enclosure, CO069-095001 and 002 – hut sites, CO069-096 – field boundary) are located in close proximity to the westernmost turbine, T6 and were detected during field survey carried out by Tobar Archaeological Services as part of the Archaeology and Cultural Heritage chapter of the EIAR in 2010 and 2011. Given the proximity of these features to the development area T6 was subsequently tested, however, no archaeological finds or features were uncovered.

The monuments are not described on the Historic Environment Viewer (www.webgis.archaeology.ie/historicenvironment).

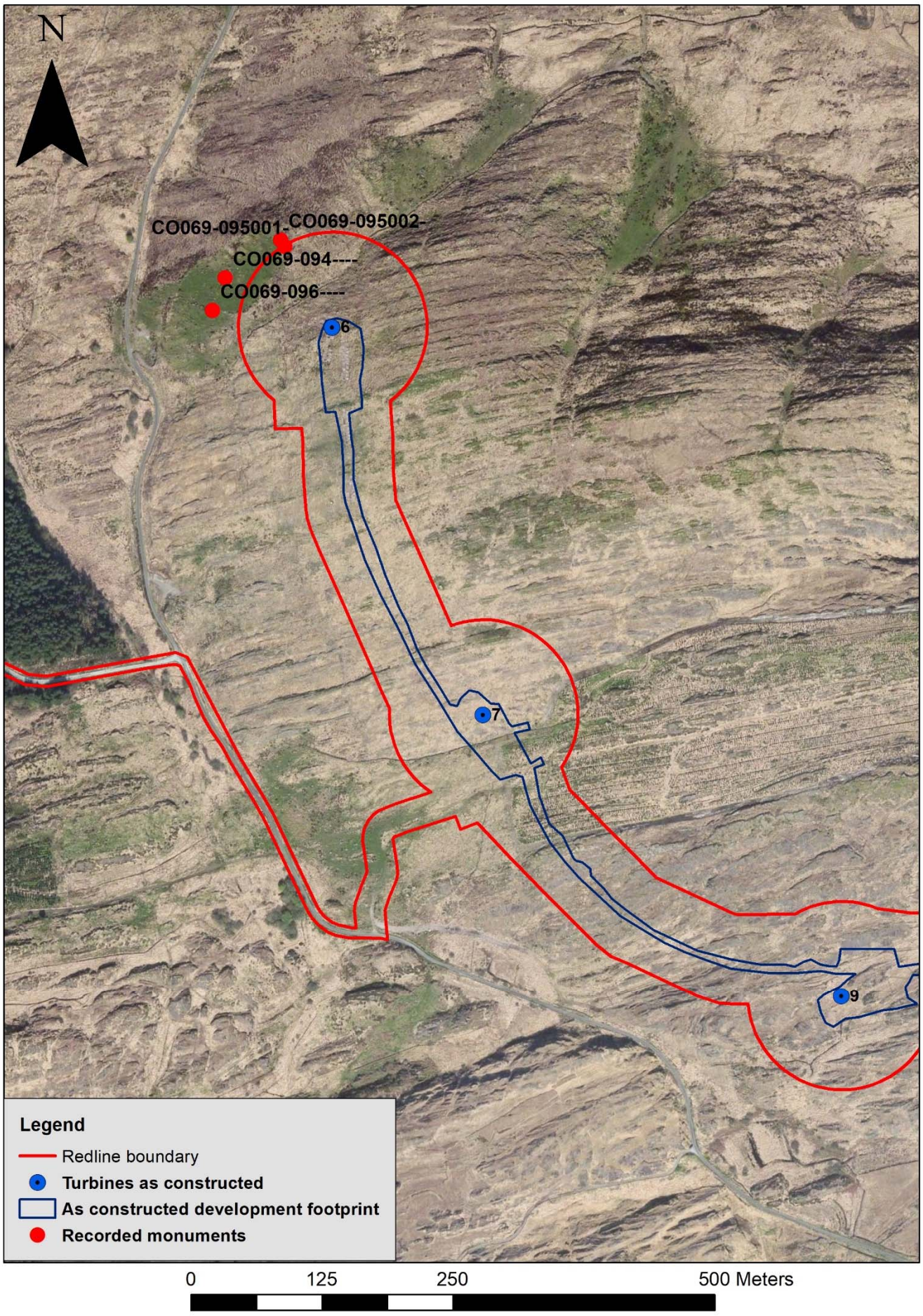

Figure 3: Permitted development site in relation to nearest recorded monuments to NW of T6 (previously tested).

5 RESULTS OF ARCHAEOLOGICAL MONITORING

5.1 THE WINDFARM

In general the stratigraphy encountered over the majority of the site was consistent comprising grass-covered peaty soil overlying a grey stoney natural or bedrock. No archaeological finds, features, structures or deposits were exposed in any of the areas monitored. Archaeological monitoring of the development site was undertaken over several months from November 2018 to May 2019. A photographic description of same is presented below.

5.1.1 Turbine 6

The road between T6 and T7 consisted of shallow peat over undulating natural rock.

Plate 1: Road between T6 and T7

Plate 2: T6 after clearance of peat, revealing natural rock.

Plate 3: T6 after peat removal showing pockets of peat and undulating rocky ground.

5.1.2 Turbine 7

Monitoring of the hardstand and turbine base in the area of T7 revealed a shallow depth of peat overlying natural rock. The maximum depth of peat measured 0.5m.

Plate 4: removal of shallow peat over natural rock outcrop.

5.1.3 Turbine 9

Monitoring of peat at T9 revealed a shallow depth of peat overlying natural rock (0.3m).

Plate 5: Removal of peat at T9 revealing natural rock and pockets of peat.

The road from T9 to T8 traversed rocky ground. The peat measured 0.5m in depth.

Plate 6: Peat removal along access road from T9 to T8 in between two rocky outcrops.

Plate 7: Continuation of road from T9 to T5.

5.1.4 Turbine 10

The peat in this area measured 0.4m in depth and overlay a grey stoney natural.

Plate 8: Commencement of peat removal in area of T10 adjacent to large rock outcrop.

Plate 9: T10 turbine hardstand, shallow peat over natural rock.

Plate 10: General view of T10.

5.1.5 Turbine 8

The road from T8 to T5 consisted of shallow grassy peat overlying rock. Rock breaking was required in this area. The peat measured a maximum of 0.3m in depth in this area. The maximum depth of peat encountered at T8 hardstand was 0.7m.

Plate 11: Removal of scrub overlying rock along access road between T8 and T5.

Plate 12: Monitoring removal of scrub and shallow peat over rocky veins between T10 and T8 access road.

Plate 13: Shallow peat removal in area of T8, numerous rock outcrops visible.

Plate 14: Continuation of road between T8 and T5 after scrub was removed and prior to rock breaking.

5.1.6 Turbine 5

Monitoring at T5 revealed 0.3m of peat over natural rock.

Plate 15: T5 after scrub and peat removal showing natural gravel and rock.

Plate 16: Monitoring of road adjacent to T5.

5.1.7 Turbine 4

Monitoring along the existing and proposed road from T4 to T3 revealed a shallow peat cover of 0.3m in depth directly overlying natural rock.

Plate 17: Access road from T4 to T3

Plate 18: T4 after site clearance

Plate 19: T4 looking East

5.1.8 Turbine 3

Monitoring at the turbine base and hardstand for T3 revealed 1m of peat overlying a brown grey natural stoney material.

Plate 20: T3 showing 1m deep peat

Plate 21: T5 to T3 access road.

5.1.9 Turbine 1

Stripping began to the immediate south of an area that had been tested previously. A thin layer of scrub and heather overlay ridges of E-W bedrock which was comprised of vertically bedded old red sandstone. In between these ridges were thick deposits of peat which in places measured up to 1m in thickness. This peat overlay a beige/grey sandy clay natural which contained large stone/boulder inclusions. Dense forestry also surrounded this area to the W and SW. The peat was covered in thin grass and reeds and the peat was between 0.2-1m thick.

Plate 22: Removal of heather and tree stumps at road leading to T1 looking West

Plate 24: T1 to T3 access road.

Plate 23: T1 after peat removal.

5.2 THE SUBSTATION

Plate 25: Substation site after site clearance and peat removal.

5.3 NORTHERN ACCESS ROAD

This was mainly monitored in April 2019 and provided access to the windfarm site from the north nearer to Reanaree. Some of the road was existing and required upgrade works and other sections were excavated to form a new road through previously undisturbed ground. The peat depth varied according to the level of the underlying natural rock. The average peat depth measured 0.5m.

Plate 26: Section of Northern access road showing uneven natural rock.

Plate 27: Continuation of northern access road.

Plate 28: Northern access road.

Plate 29: Northern access road during monitoring ridges of natural rock under shallow peat.

5.4 THE CABLE ROUTE

5.4.1 Off-road section near Cork – Kerry Border

Monitoring of clearance works along the off-road section of the cable route began in September 2018 on the Cork side of the Cork/Kerry border. The majority of the works in this location consisted of clearance of scrub although some pockets of peat were present and a number of previously constructed stone covered culverts.

Plate 30: Cleared Path from north side of cable route near Cork/Kerry border

Plate 31: Culvert across existing path across mountain

Plate 32: Clearance of cable route in advance of trench excavation.

Plate 33: Removal of peat in advance of cable ducting, peat measured 1m (maximum)

Plate 34: Continuation of site clearance in preparation for ducting.

Plate 35: Removal of topsoil at southern end of off-road section of the cable route.

Plate 36: Cable ducting along off-road section of cable route along previously topsoil stripped areas.

Plate 37: Cable trench 1.2m in depth excavated through natural soil.

5.4.2 Monitoring on the public road

Preparatory works began along the public road in October 2018 in advance of cable trenching. Ground works along the route were monitored over a number of months until Feb/March 2019. No archaeological finds, features or deposits were uncovered during monitoring of this work.

Plate 38: Preparatory work along public road in Gurteenowen townland.

Plate 39: Topsoil removal at road margin in advance of ducting at Gurteenowen townland (ITM E513024 N569567).

Having prepared the road margin for cable trenching, excavation began on the L3402 at Augeris townland at ITM E515475 N570380. The majority of the trench was excavated through natural soil with some topsoil and road make-up in the upper portion of the trench.

Plate 40: Trench excavation along public road.

Plate 41: Modern culvert crossing cable trench.

Plate 42: Continuation of cabling along the L3402. Road-side stone wall exposed and remained in situ.

A small stone box culvert was exposed along the L3402 road. It measured of 50cm in width and 48cm in height (Plate 41).

Plate 43: Box culvert along L3402 local road.

Plate 44: Joint bay along the L3402

Monitoring was also conducted along the local road leading to the off-road section of the cable route at the western end in the townland of Lackabaun.

Plate 45: Joint bay monitored at Lackabaun townland at western end of cable route.

Plate 46: Cable trenching in the same location through natural soil

On the L3402 road, the ducting continued on the road leading to the Derragh substation.

Plate 47: Ducting along L3402 near to substation site

On the unnamed road leading to the Derragh substation, the trench for the ducting was excavated through a layer of peat measuring 1.40m in thickness which occurred 40cm below road level.

Plate 48: Ducting showing peat below road make-up.

Excavation of cable trenching was also monitored on the forest track leading to the Derragh substation site. The stratigraphy consisted mainly of made ground from road construction.

Plate 49: Road leading to Derragh substation

The trenching continued near the substation with no archaeological material uncovered.

Plate 50: Trenching near to the Derragh substation (Location: 51.875389N, 9.211015W).

Monitoring continued on a small forest road (named Cal's Road) to the southwest of Turbine 8, Derragh Windfarm). Works in preparation for the trenching took place with no archaeological material uncovered (Location: 51.867851N / 9.187318W).

Plate 51: Ducting on road to west of Cleanrath windfarm.

Continuing on Cal's road, the trench was excavated through made ground associated with forest road construction under which peat was exposed between 0.70m and 2.50m deep. No archaeological finds, features or deposits were uncovered (Location: 51.870545N / 9.173126W)

Plate 52: Cals road, west of Cleanrath windfarm.

6 CONCLUSION

Archaeological monitoring was undertaken within the Cleanrath Windfarm and associated cable route over a period of several months between September 2018 and May 2019. This monitoring was undertaken on foot of a planning condition from an Bord Pleanala the details of which have been presented above. Full time archaeological monitoring of all groundworks were undertaken within the windfarm site and along the underground grid connection from Grousemount via Derragh Substation to the Cleanrath windfarm. In general the stratigraphy within the windfarm consisted of shallow peat and scrub directly overlying natural rock. The natural rock occurred in ridges within intervening pockets of peat. The grid connection cable route consisted of the clearance of the road margin in advance of ducting followed by the excavation of a narrow trench, c. 1.2m deep. The latter was excavated mainly through natural subsoil with rock occurring in places.

No archaeological finds, features or deposits were encountered during monitoring. No further input is required as part of this development and this report complies with the agreed method statement submitted to the National Monuments Service as well as the planning condition pertaining to the site. In accordance with the terms of the excavation licence, two hard copies and one PDF soft copy of this report will be submitted to the NMS, DCHG and a copy to the National Museum of Ireland.

7 BIBLIOGRAPHY

Department of Arts, Heritage, Gaeltacht and the Islands, 1999, Framework and Principles for the Protection of the Archaeological Heritage, 1999.

Other Sources

Record of Monuments and Places (RMP) for County Cork.
Historic OS mapping.