

Archaeological Deskbased Assessment of Land

PROPOSED FOR HEYSHAM WIND FARM, HEYSHAM

For BT PLC

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Archaeological Deskbased Assessment of Land

PROPOSED FOR HEYSHAM WIND FARM, HEYSHAM

Client: BT PLC

Local Authority: Lancaster City Council

NGR: 342763 , 460774

Planning App: N/A

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Abstract

This desk based assessment covers land to the east of Heysham Moss and to the north of the BT Heysham Radio Station. Contained within the report are the results of a 1km Lancashire Historic Environment Record (LHER) search, a documentary and cartographic study and a walkover of the site.

The proposed development site does not contain any existing LHER records though sites of Prehistoric and Post Medieval dates were identified on the higher ground of the surrounding landscape. The site is wet and low lying in nature and appears most suitable for agricultural use which is supported by the cartographic evidence from the 19th and 20th centuries.

The proposed development consists of two wind turbines and their associated infrastructure with only localised ground disturbance on a 40.8 hectare site.

1. Introduction and Scope of Study

- 1.1. This archaeological desk based assessment has been researched and prepared by John Duffy of L - P : Archaeology on behalf of BT PLC to accompany the future submission of a planning application.
- 1.2. The report considers land east of the town of Heysham, Lancashire. The local planning authority is Lancaster City Council who take archaeological advice from Lancashire County Archaeology Service, who have been consulted during the preparation of this report.
- 1.3. BT are submitting a planning application for two wind turbines and their associated infrastructure at the site (APPENDIX 2).
- 1.4. The site occupies an area of approximately 40 hectares and is centred at National Grid Reference 342763, 460774 (FIGURE 1).
- 1.5. The site is bounded on the west by Heysham Moss and on all other sides by agricultural land. The BT Heysham Radio Station is located on the southern boundary of the site to the north of the A683 (FIGURE 2).
- 1.6. The assessment comprises an examination of the Lancashire Historic Environment Record (LHER), which includes previous archaeological work and other findspots and listed buildings within a radius of 1km of the site.
- 1.7. The assessment also considers documentary and cartographic evidence including published and unpublished sources. A walkover survey of the site was conducted to assess the potential of the site, existing conditions and likely areas of disturbance.
- 1.8. The assessment seeks to address the following issues:
 - ◆ To assess the potential archaeology and its survival on this site
 - ◆ To assess the possible impact of the proposed development on the archaeology

2. Planning Background

2.1. In November 1990 the Department of the Environment issued PPG 16, “Archaeology and Planning”. This document provides guidance for planning authorities, property owners, developers and others on the preservation and investigation of archaeological remains.

2.2. In considering any planning application for development the local planning authority, Lancaster City Council, is bound by the policy frameworks provided by the government in Planning Policy Guidance Note 16 (PPG 16), the policies within the Lancaster District Local Plan (2004) and the North West of England Regional Spatial Strategy (2008). The currently relevant policies are as follows:

Lancaster District Local Plan

POLICY E44 In determining applications for development, the city council will take into account archaeological considerations and the need to safeguard important sites from damage or destruction. Development proposals which would have an adverse impact on the site or setting of a scheduled ancient monument or other monument of national importance will not be permitted.

POLICY E45 The city council will protect other sites of archaeological significance.

When development affecting such sites is acceptable in principle, the council will seek to ensure mitigation of damage through preservation of the remains in situ as a preferred option.

When in situ preservation is not justified, the developer will be required by planning condition or legal agreement to make adequate provision for investigation and recording before or during development.

POLICY E46 Where development proposals affect sites of known or possible archaeological interest, the city council will require an archaeological assessment and/or evaluation to be submitted as part of the planning application.

Planning permission will not be granted without adequate assessment of the nature, extent and significance of the remains present and the degree to which the proposed development is likely to affect them.

North West of England Regional Spatial Strategy

POLICY EM1 The Region’s environmental assets should be identified, protected, enhanced and managed.

Plans, strategies, proposals and schemes should deliver an integrated approach to conserving and enhancing the landscape, natural environment, historic environment and woodlands of the region.

Plans and strategies should define spatial objectives and priorities for conservation, restoration and

enhancement as appropriate, and provide area-based guidelines to direct decisions and target resources. These will be founded on a sound understanding of the diversity, distinctiveness, significance and sensitivity of the region's environmental assets, and informed by sub-regional environmental frameworks. Special consideration will be given to the impacts of climate change and adaptation measures.

Priority should be given to conserving and enhancing areas, sites, features and species of international, national, regional and local landscape, natural environment and historic environment importance.

Where proposals and schemes affect the region's landscape, natural or historic environment or woodland assets, prospective developers and/or local authorities should first avoid loss of or damage to the assets, then mitigate any unavoidable damage and compensate for loss or damage through offsetting actions with a foundation of no net loss in resources as a minimum requirement.

2.3.The site does not contain any Scheduled Monuments and does not fall within any Conservation Areas.

2.4.In accordance with best practice and government guidance, the client has requested this report at the earliest stage in order to be fully informed of any archaeological issues that may be encountered during any planning application process and subsequent development.

3. Geology and Topography

3.1.GEOLOGY

- 3.1.1. The proposed development site lies adjacent to Heysham Moss, a Site of Special Scientific Interest (SSSI), an area of woodland, wet grassland and an area of raised bog. Heysham Moss would have originally extended much further than its current extent, including extending across the study site. However, the Moss had been affected by continued peat cutting and increased drainage.
- 3.1.2. The BGS Dataindex ([HTTP://WWW.BGS.AC.UK/GEOINDEX/INDEX.HTM](http://www.bgs.ac.uk/GEOINDEX/INDEX.HTM)) only provides a rough indication of the geology present on the site. It shows the site lies on Till deposits over Millstone Grit Series deposits. At this stage there have been no geotechnical investigations conducted on the site.

3.2.TOPOGRAPHY

- 3.2.1. The site is currently in use as mixed farmland. It covers an area of 40.8 hectares divided into two main fields.
- 3.2.2. Heysham Moss forms the western boundary of the site with agricultural land to the north, south and east. Along the southern boundary of the site is the Heysham BT Radio Station (FIGURE 1).
- 3.2.3. The site is located in a natural depression in the landscape and is at approximately 5m OD. The town of Heysham is to the west, beyond Heysham Moss, on top of a hill rising to approximately 40m OD. To the south and east the land rises further inland. However, the agricultural land to the north remains at a similar level to the development site.
- 3.2.4. The site itself is relatively flat with some small undulations and appears to have originally been part of Heysham Moss.



Plate 1 - General view of site, looking south from north west corner of site



Plate 2 - General view of site, looking south from north east corner of site



Plate 3 - General view of site, looking north from southern edge of site (near BT Radio Mast)

4. Archaeological and Historical Background

TIMESCALES USED IN THIS REPORT:

PERIOD	FROM	TO
PREHISTORIC		
PALAEOLITHIC	450,000	12,000 BC
MESOLITHIC	12,000	4,000 BC
NEOLITHIC	4,000	1,800 BC
BRONZE AGE	1,800	600 BC
IRON AGE	600	43 AD
HISTORIC		
ROMAN	43	410 AD
SAXON	410	1066 AD
MEDIEVAL	1066	1485 AD
POST MEDIEVAL	1485	PRESENT

- 4.1. The site does not contain any Scheduled Monuments or Listed Buildings. It does not fall within any Council designated conservation area or area of high archaeological priority. Heysham Moss to the west is a Site of Special Scientific Interest (SSSI).
- 4.2. A search of the Lancashire Historic Environment Record (LHER) for a 1km radius from the edge of the study site revealed evidence from Prehistoric and Post-Medieval periods (FIGURE 3). Within the search radius a single listed building (PRN12429) was identified.
- 4.3. The landscape of the site and its surrounding area has influenced the development of the site. The site, from the late Prehistoric to the Post Medieval period, was part of Heysham Moss, an area of wet grassland and raised bog. This limited activity in the vicinity until peat cutting and drainage of the area allowed the encroachment of farmland (FIGURE 4). The low lying Moss is surrounded by more suitable land for occupation on higher ground to the east, south and west, with the headland further to the west (FIGURE 4).
- 4.4. It is not the aim of this assessment to present a complete history of this area of East

Heysham from earliest times, nor is it the intention of this report to examine every artefact or archaeological report found in the local area. Rather, the aim of this assessment is to review the data available and to use this to construct a model of the potential archaeology of the specific study site.

4.5.PREHISTORIC

- 4.5.1. The evidence for Prehistoric activity, from the Palaeolithic through to the end of the Iron Age, is minimal within the 1km search radius from the boundary of the proposed development site. The only recorded evidence within the LHER are four sites of possible barrow groups dated to the 'Late Prehistoric'. Three of these sites are based on conjectural evidence with no physical evidence remaining (PRN2547, PRN2548, PRN2549). The three sites are located near the top of the hill to the west on the edge of the modern town of Heysham.
- 4.5.2. A fourth 'Later Prehistoric' barrow site is located at Byroe Hill to the east of the site and recorded on the Tithe Map, dated 1838 (PRN30032). The name Byroe is thought to be derived from the word barrow and suggests this site maybe the location of a barrow or group of barrows. The evidence for the barrow site is based only on the name of the area and no physical evidence survives.
- 4.5.3. The absence of recovered evidence for this period is reflected across the county with only limited records within the LHER (EDE AND DARLINGTON 2002). However, mosslands elsewhere in the North West region have produced evidence of Upper Palaeolithic/Mesolithic activity through to the Iron Age (HODGSON AND BRENNAND 2006). Organic material, including human remains and wooden structures, have been identified preserved in the waterlogged conditions of these mosses. The proposed development site is beyond the boundary of the surviving Heysham Moss and the site has been subjected to increased drainage in the Post Medieval period. If waterlogged conditions continue on the site then there is a medium to high potential for preserved material dating to the Prehistoric periods.

4.6.ROMAN

- 4.6.1. The LHER has no records of Roman activity within the 1km search radius of

the site boundary.

4.6.2. This lack of Roman period sites and findspots within the vicinity of the study site is not unexpected due to the limited number of identified sites of this period elsewhere in the North West. Identified sites have been generally limited to the larger sites especially the major military installations (PHILPOTT 2006). The military fort at Lancaster, 4km to the east, is the nearest such site.

4.6.3. The study site was likely to have been unsuitable for settlement during this period due to its low lying wet nature. It is also located away from any major Roman occupation. The potential for Roman deposits on the site is very low.

4.7.SAXON

4.7.1. The LHER 1km search radius produced no sites or findspots dating to the Saxon period.

4.7.2. The focus of Saxon activity at Heysham was beyond the search radius to the north west on the headland in Lower Heysham. The remains of St Patrick's Chapel and the existing parish church of St Peter's have structural features dated to the 8th century and along with carved stones of a similar date identify this as a possible monastic site. This early monastic site has been discussed in more detail in other publications (BRENNAND 2006, HIGHAM 2004, NEWMAN 1996).

4.7.3. The site continued as a low lying wetland area throughout this period and is at a distance from the core of the Saxon occupation on the headland. The potential for preserved archaeological deposits of this period are very low.

4.8.MEDIEVAL

4.8.1. The LHER 1km search radius produced no sites or findspots dating to the Medieval period. The site was still mossland in this period though evidence from other mossland sites in the North West region suggests some small scale peat cutting and agricultural encroachment (EDE AND DARLINGTON 2002).

4.8.2. It is likely that any Medieval activity was focused around the headland and continued from the Saxon monastic site. The town of Heysham is mentioned in the Domesday Book (dated 1086) as 'Hessam'. However, the evidence from

this period is limited with the wealth of the area generated through its fishing industry (HIGHAM 2004).

- 4.8.3. The site continues as a low lying wetland area throughout this period with some possible agricultural encroachment on the site as evidenced at mosses elsewhere in the region. The focus of Medieval occupation would have continued from the Saxon occupation in the vicinity of the early ecclesiastical structures on the headland. The potential for preserved archaeological deposits of this period are very low.

4.9.POST MEDIEVAL

- 4.9.1. At the start of the Post Medieval period the site would have been part of Heysham Moss. During this period peat cutting increased, to fuel a growing town, and the land was better drained to provide more land usable for agriculture. The cartographic evidence, including the Tithe Map (1838) and the Ordnance Survey Maps (1848 onwards), show long narrow fields running approximately north to south across the eastern half of the site and the surrounding area to the north, east and south (FIGURES 5 and 6). The differences in the extent of the formal fields between the 1848 OS Map and that dated to 1915 show the continued reduction in the size of the moss even in the late 19th century (FIGURES 5 and 6).
- 4.9.2. The LHER search identified several Post Medieval sites indicating the increase in activity in this period within the immediate vicinity of the site. Two tithe barns are recorded in the LHER (PRN423 and PRN424), both were identified on the 1838 Tithe Map. The Tithe Barn at near Byroe Hill (PRN424) also had a well nearby and this is recorded on the later Ordnance Survey map of 1848 (PRN4592). A ruined field barn is also recorded in the LHER (PRN8594) and an undated pond (PRN11347), though its proximity to a farm suggests a Post Medieval date, and these all further indicate the agricultural activity in the vicinity of the proposed development site.
- 4.9.3. Other evidence of activity within the landscape surrounding the proposed development site dating to before the mid 19th century is recorded on the 1st Edition of the OS map and also listed in the LHER. To the east of the proposed

development area was the site of a windmill (PRN4593) on a hill referred to on the modern OS map as Windmill Hill.

- 4.9.4. Also identified from the 1st Edition OS map are two former quarry sites (PRN4584 and PRN22199) with a third site recorded in the LHER after an archaeological survey in its vicinity (PRN8593). The sites all run along the east face of the hill on which Heysham Town sits and were for the extraction of sandstone. One quarry (PRN22199) was an extraction pit while the other two were located on sandstone outcrops.
- 4.9.5. Located to the west of the proposed development site is the location of Penhale Court, formerly known as Heysham House (PRN12426) and is the only listed building within the 1km search radius (Grade II – Listed Building 391862). Although heavily renovated the building is mid 19th century in date and lies at the southern end of Higher Heysham.
- 4.9.6. A second hall is located to the north of the proposed development site and is recorded on the 1st Edition OS map (1848) as Blackberry Hall (PRN4583). The building dated from at least the early 19th century though it is not known how much of this building survives in the current structure. The building is located on the north east edge of the town and a well, also recorded on the 1st Edition OS map, is located nearby to the west towards Lower Heysham (PRN22200).
- 4.9.7. At the southern limit of Higher Heysham to the west of the proposed development site is the former location of a bobbin mill known as Royds Bobbin Mill (PRN4784). The mill was constructed in the early 20th century and was closed in 1969 and demolished in 1993 to make way for the Lancaster and Morecambe Bypass. The building was recorded as part of the archaeological work associated with the bypass project (PRN23678). The associated archaeological watching brief on the groundworks during the road construction found no evidence of surviving archaeological deposits (PRN23677). The bypass is immediately to the south of the site and passes through the same landscape.
- 4.9.8. Two other nearby late Post Medieval sites are a 19th and 20th century bottle dump to the north (PRN11346) and a 20th century golf course immediately to

the west of Heysham Moss (PRN8592).

4.9.9. During the Post Medieval period activity in the area surrounding the proposed development site increases as the size of Heysham begins to increase. Both Lower and Higher Heysham expand, the harbour becomes established, fishing and agriculture are the main sources of wealth and the town becomes a small bathing resort (FARRER AND BROWNBILL 1914). However, this appears to have had little effect on the proposed development site as most development was on the higher ground of the surrounding landscape. The wet and low lying nature of the site appears to have left the site free of Post Medieval occupation with the continued reclamation to exploit this marginal environment for agriculture. The potential for any deposits from this period are low.

4.10.UNDATED

4.10.1. Several cropmarks have been identified in aerial photographs though all remain undated and lie to the south of the proposed development. These cropmarks include an area of drainage or old field boundaries with small ground or low earthwork mounds (PRN2936). Other cropmarks are two circular enclosures (PRN2975 and PRN26976) and a short length of a curving earthwork (PRN2976).

4.10.2. To the south of the site is a large low lying peat filled depression identified during the work on the Lancaster and Morecambe Bypass (PRN4196). This feature was a natural depression in the ground and there was no associated archaeological evidence to suggest any activity around this feature.

5. Proposed Development and Archaeological Impact

5.1.PROPOSED REDEVELOPMENT

5.1.1. The proposed development consists two wind turbines, with foundations measuring approximately 20m in diameter and 2.5m to 3m deep (APPENDIX 2). Hard standing for cranes, the upgrading and construction of new access tracks and access off the public highway will also be part of the development. On site underground power lines and a control building will also be required.

5.1.2. The proposed development will require heavy ground disturbance for the bases of the two turbines with further disturbance for any underground cabling, access tracks, and other on site facilities.

5.2.ARCHAEOLOGICAL IMPACT

5.2.1. Any archaeological deposits present on the site are expected to be well preserved with the site originally part of Heysham Moss and in use as arable land. As there has been no development on the site there is likely to be only minimal ground disturbance through ploughing. There is no evidence for any landscaping of the site either.

5.2.2. The exact details of the extent of the groundworks associated with the proposed development is not known. The construction of the bases for the turbines will adversely impact on any preserved archaeological deposits. Access roads, temporary construction structures and underground cabling will also impact on any preserved archaeological deposits with the extent of the impact determined by the depth of the associated groundworks.

6. Summary and Conclusions

- 6.1. A site to the east of Heysham Moss is proposed for the construction of two wind turbines. The site is currently in use as arable fields.
- 6.2. The proposed development is to construct two wind turbines and the associated infrastructure, including access tracks, a control building and underground cabling.
- 6.3. Examination of the available data indicates that the site does not contain any Scheduled Monuments and is not in any Conservation area. There are also no Listed Buildings within the site boundary.
- 6.4. There is some evidence of activity in the vicinity of the site from the Prehistoric period. Although no evidence has been recovered on the site there are a series of barrow sites identified on the higher ground in the surrounding landscape.
- 6.5. Similar mossland sites around the North West have produced well preserved remains from the Prehistoric period. Organic material, including human remains and wooden structures, can be preserved in the waterlogged conditions that occurred after this period.
- 6.6. The potential for Prehistoric activity on the site is medium to high as there is evidence for Prehistoric activity in the surrounding area and similar landscapes in the North West have produced well preserved remains.
- 6.7. There has been no identified Roman remains on or in the vicinity of the site. This also reflects the limited evidence recovered from the wider landscape of the Lune Valley.
- 6.8. The potential for preserved archaeological deposits from the Roman period is very low as no evidence has been recovered from the surrounding landscape.
- 6.9. Saxon activity has been identified beyond the site in Lower Heysham and is focused on the early monastic site at St Peter's Church and St Patrick's Chapel. Activity beyond the monastic settlement appears limited as no evidence has been identified in the surrounding area.
- 6.10. The potential for preserved Saxon period archaeological deposits is very low as no evidence of Saxon period activity was identified within the 1km LHER search and the

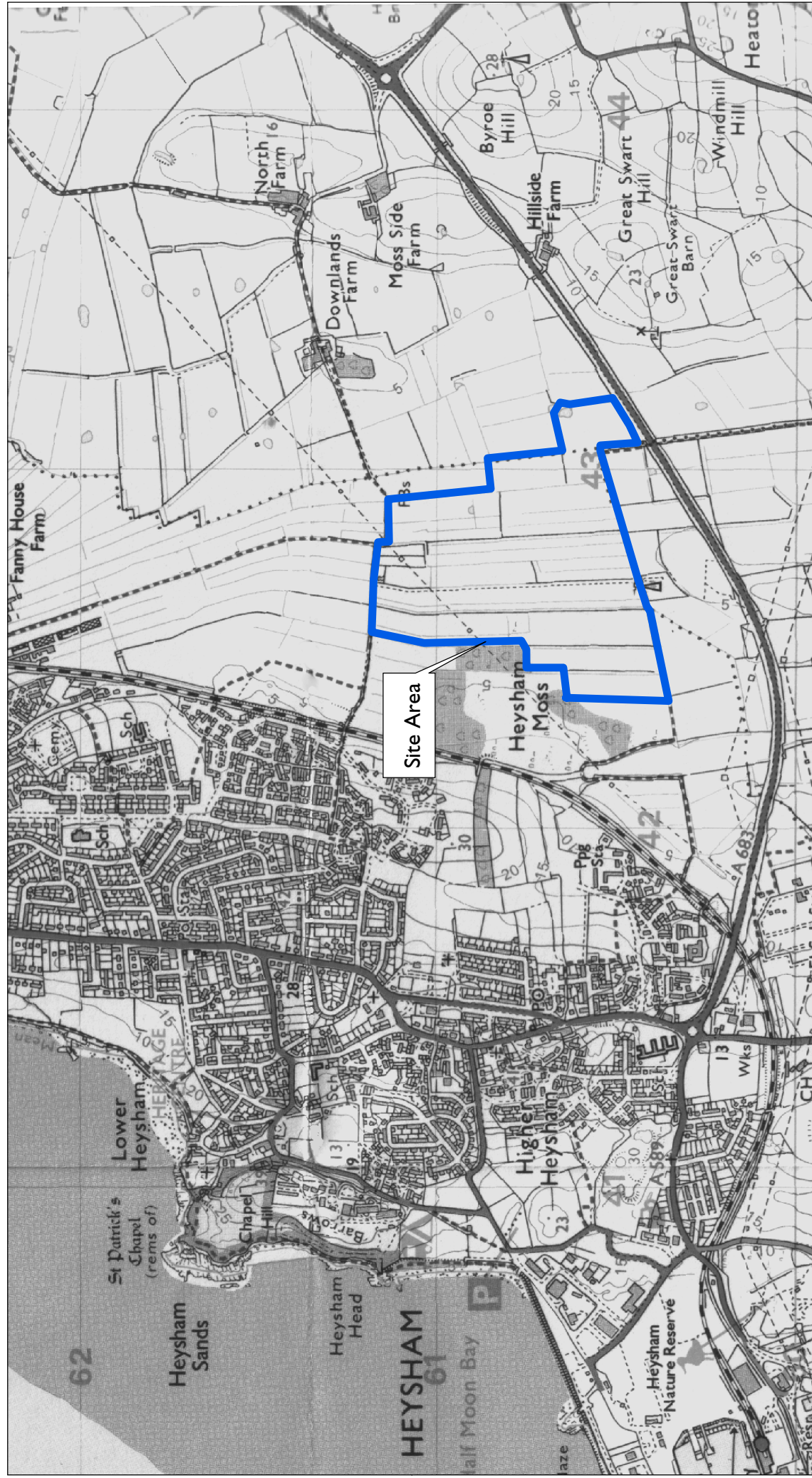
main focus at this period was the monastic settlement to the north west.

- 6.11. There is no recorded Medieval activity near the site and the LHER produced no records of Medieval finds within 1km of the site. As with the Saxon period it is likely that activity was focused around the headland of Lower Heysham where St Peter's Church became the parish church. The site is likely to have been in agricultural use or as part of Heysham Moss.
- 6.12. The potential for preserved Medieval archaeology is very low with no archaeological or documentary evidence identified.
- 6.13. The Post Medieval period saw the site in agricultural use with long narrow fields encroaching onto Heysham Moss throughout this period. Although the town of Heysham appears to be growing, especially during the 19th century, the wet and low lying nature of the site makes it unsuitable for much apart from mixed agricultural uses.
- 6.14. The potential for archaeological deposits from the Post Medieval period are low as the site was in use as agricultural land throughout this period.
- 6.15. The proposed development consists two wind turbines with foundations measuring approximately 20m in diameter and 2.5m to 3m deep (APPENDIX 2). Hard standing for cranes, the upgrading and construction of new access tracks and access off the public highway will also be part of the development. On site underground power lines and a control building will also be required. The only substantial ground disturbance will be for the foundations of the wind turbines and any archaeological deposits on the site will be destroyed due to their depth. The underground power lines and footings for a control building are also likely to impact on any preserved deposits though the depth and nature of the disturbance is unknown at present.
- 6.16. The suggested mitigation strategy for the development, after initial consultation with Doug Moir of Lancashire County Archaeology Service, would be the archaeological supervision of any ground disturbance with adequate time allowed for the excavation and recording of any archaeological deposits encountered. The foundations for the two wind turbines will extend below the likely level of any preserved archaeological deposits. It is therefore likely that these two areas will

initially have to be stripped to the level of the archaeology with any identified remains fully excavated and recorded before full excavation of the foundations can be undertaken.

FIGURES

FIGURE I // Site Location General



PROJECT // 0805L- Heysham Wind Farm

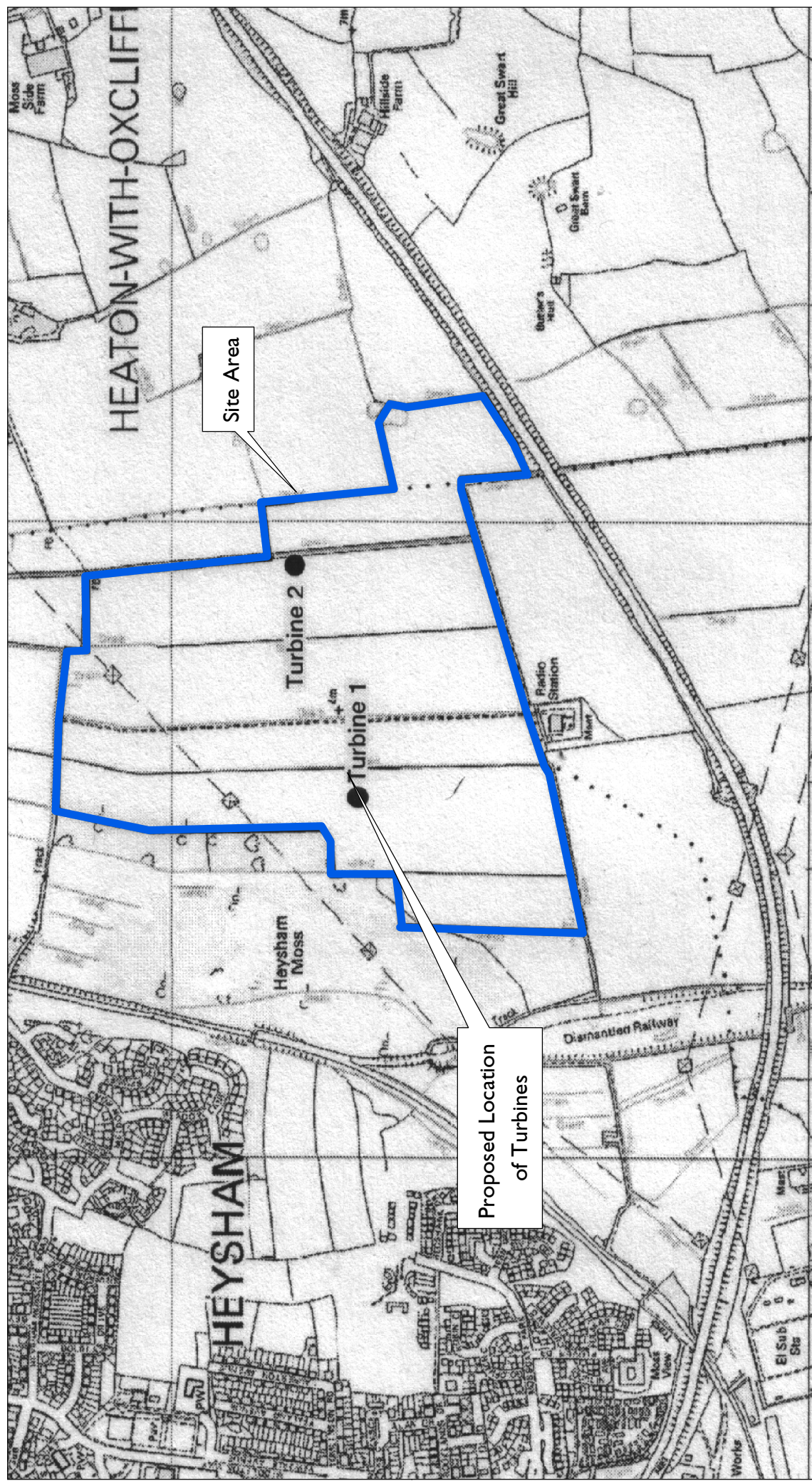
DESCRIPTION // Site Location General

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L-P:ARCHAEOLOGY

FIGURE 2 // Site Location Detail



PROJECT // 0805L- Heysham Wind Farm

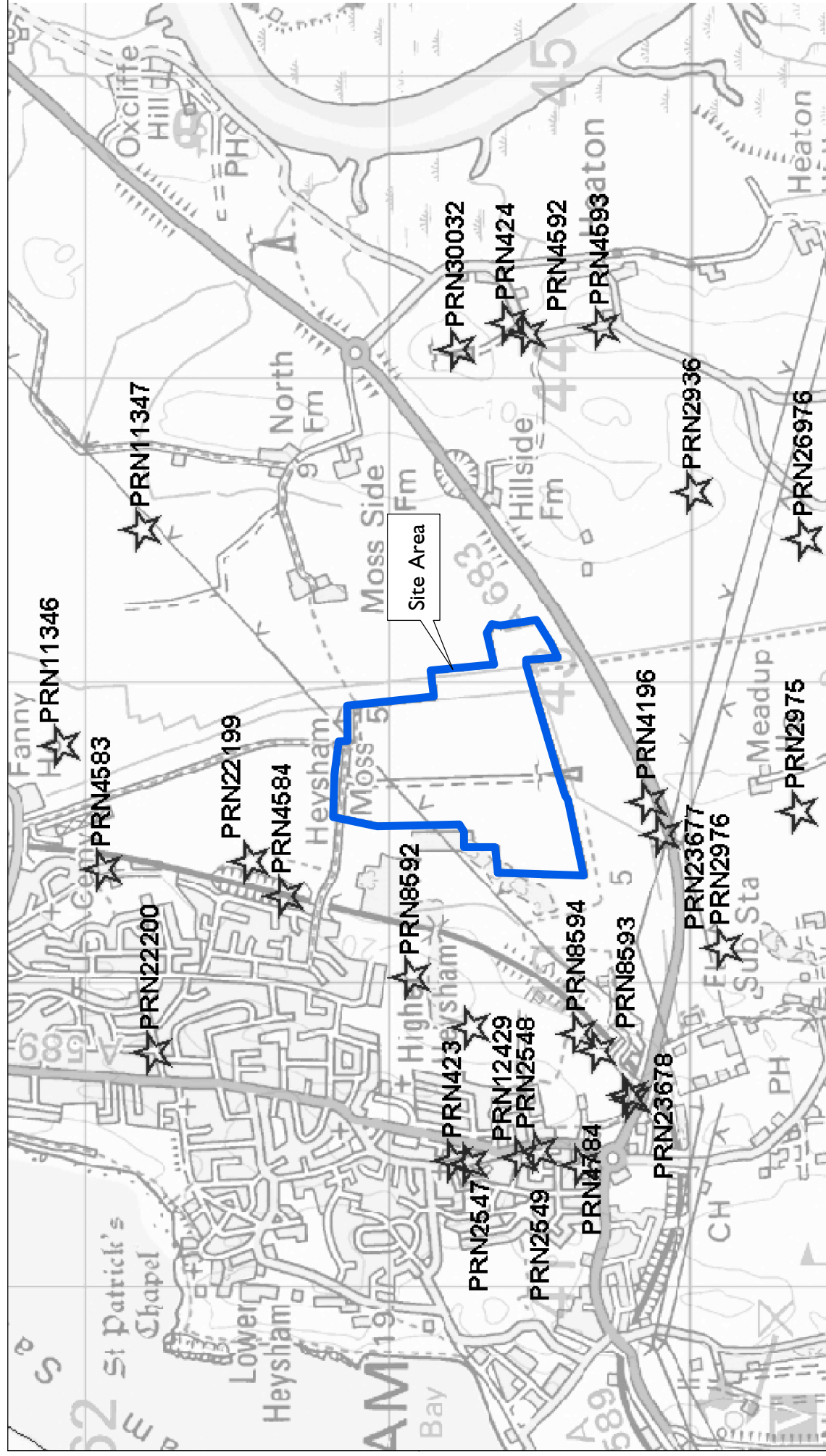
DESCRIPTION // Site Location Detail

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L-P: ARCHAEOLOGY

FIGURE 3 // Lancashire HER Results



PROJECT // 0805L- Heysham Wind Farm

DESCRIPTION // Lancashire HER Results

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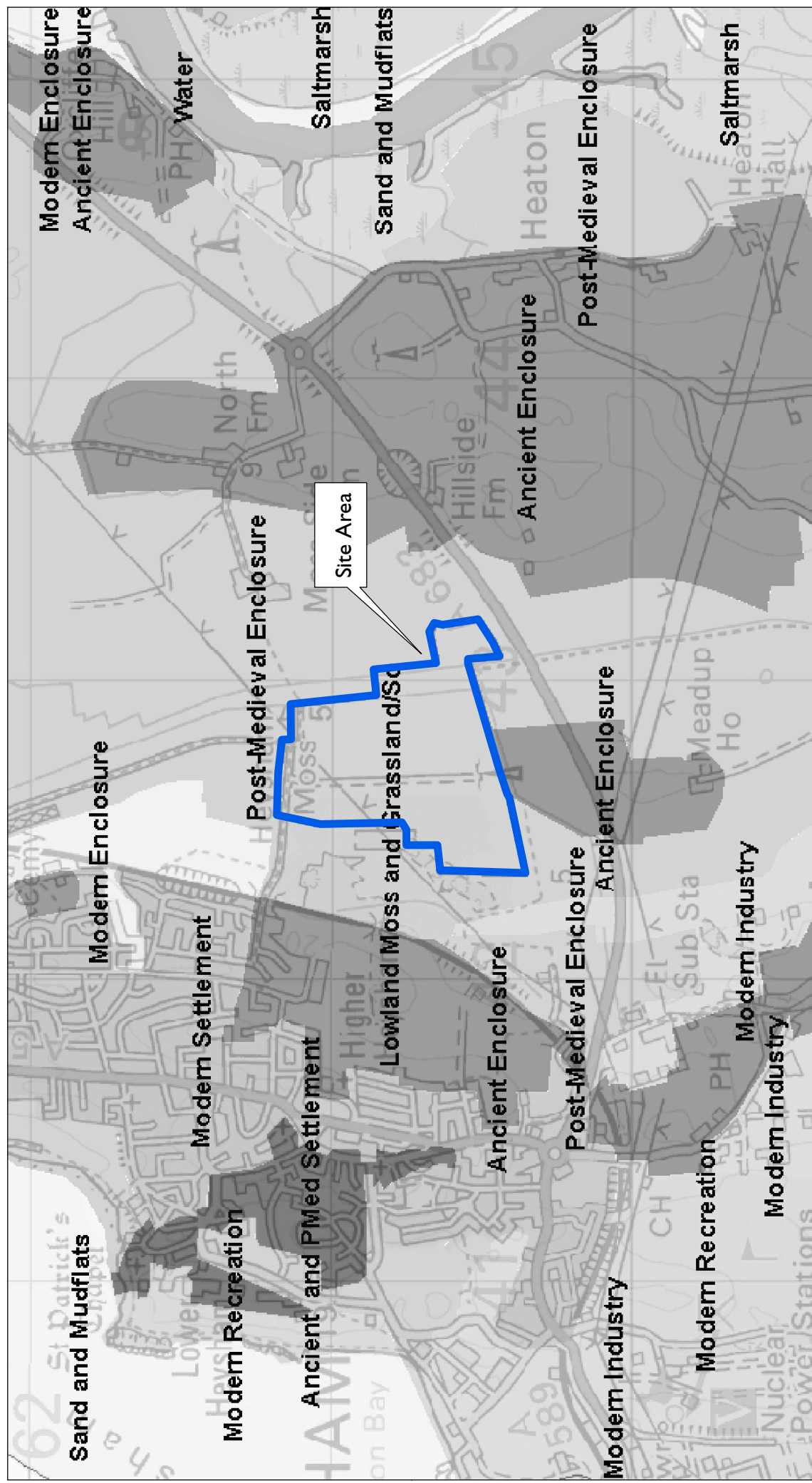
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L-P:ARCHAEOLOGY

2,000m

0

FIGURE 4 // Heysham Historic Landscape



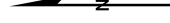
PROJECT // 0805L- Heysham Wind Farm

DESCRIPTION // Heysham Historic Landscape (LHER)

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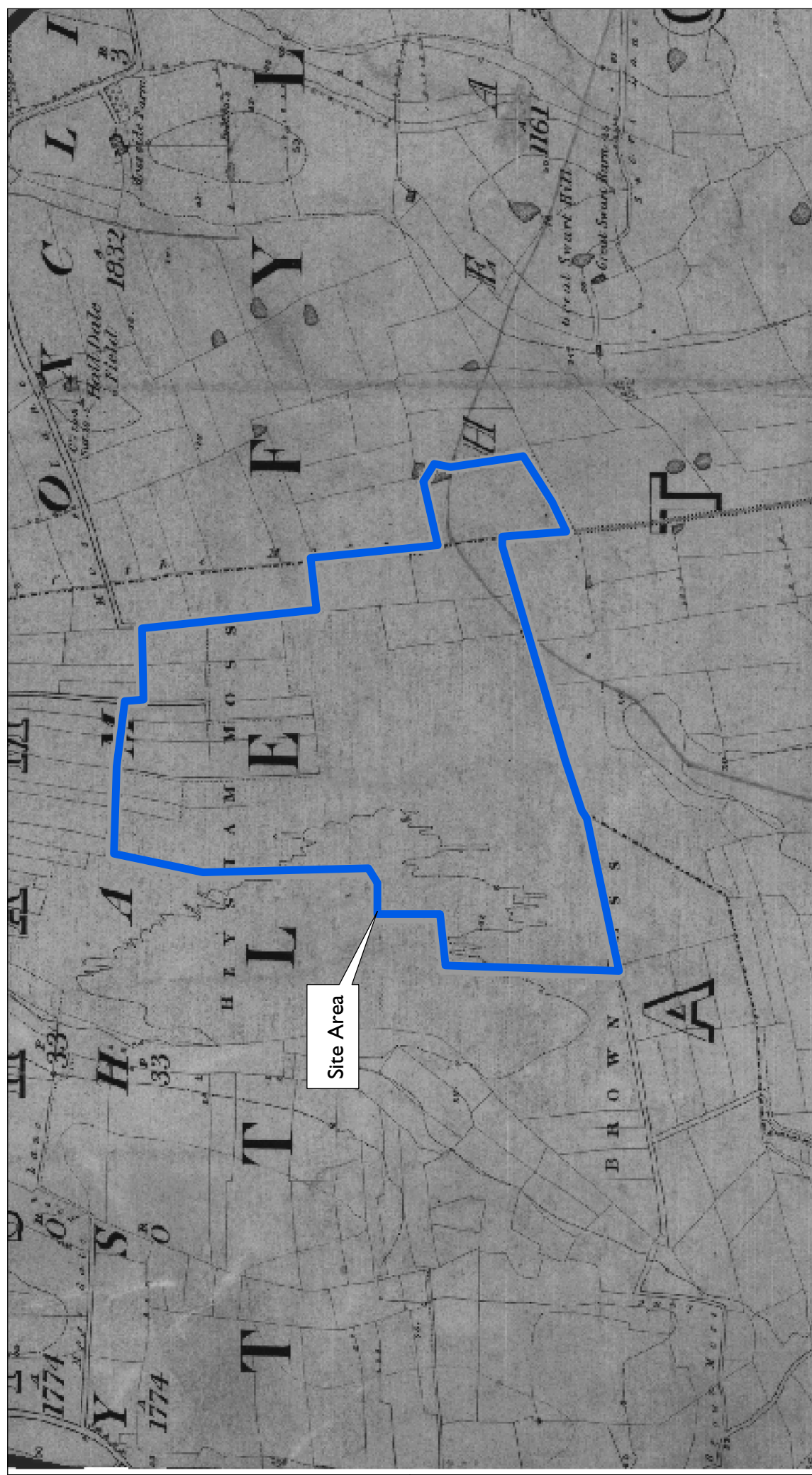
L-P:ARCHAEOLOGY



2,000m

0

FIGURE 5 // 1st Edition OS Map 1848

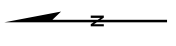


PROJECT // 0805L- Heysham Wind Farm

DESCRIPTION // 1st Edition OS Map 1848

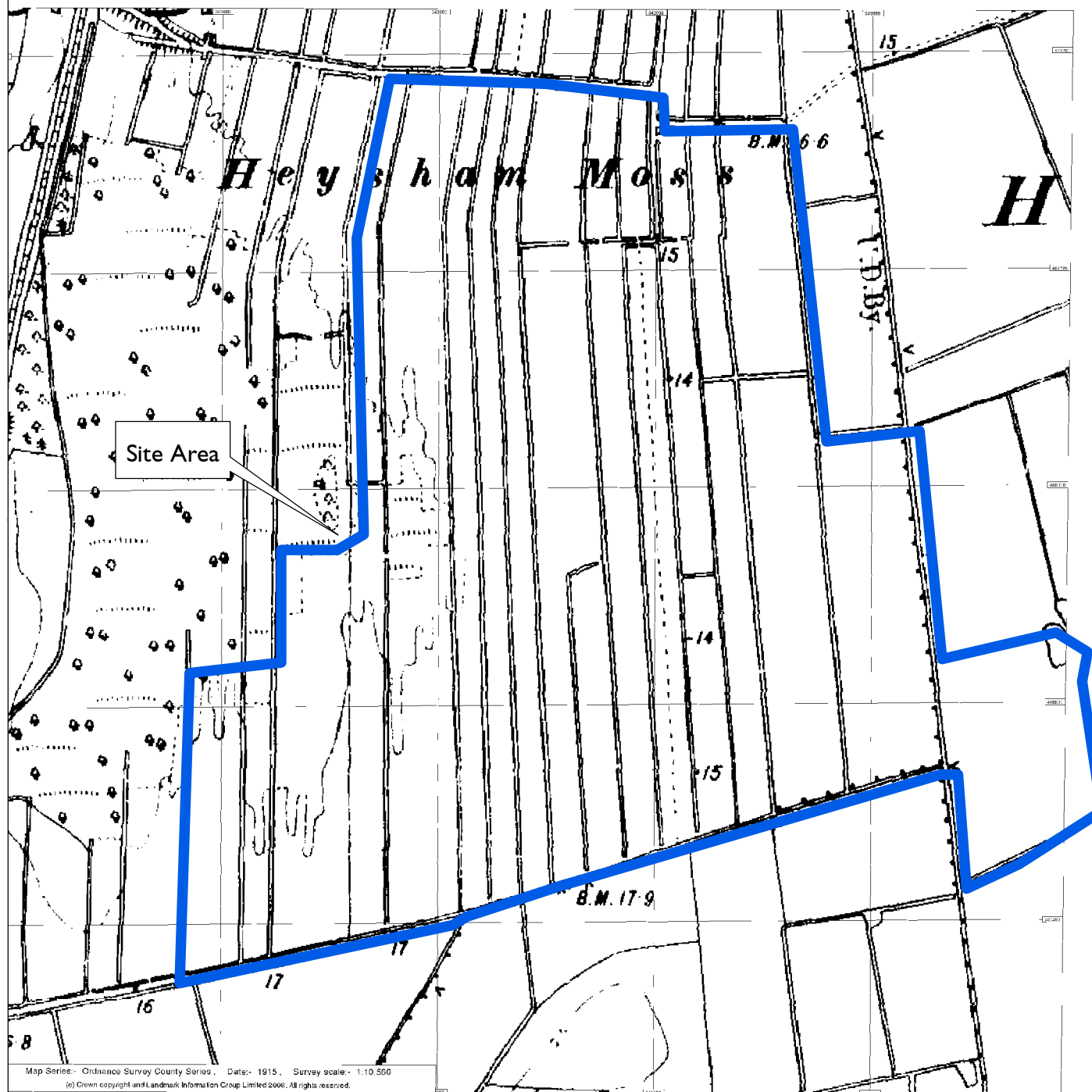
DOC REF: LP0805L-DBA-v1

L-P:ARCHAEOLOGY



0 1,000m

FIGURE 6 // OS Map 1915



PROJECT // 0805L- Heysham Wind Farm

DESCRIPTION // Ordnance Survey Map 1915

DOC REF: LP0805L-DBA-v1

L-P:ARCHÆOLOGY

SOURCES CONSULTED

APPENDIX I

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DEVELOPMENT PROPOSAL

APPENDIX 2

