



Partnerships for Renewables

HMP Haverigg Wind Energy

Development

Archaeology and Heritage Desk Based Baseline Assessment

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1.0 Introduction

This Archaeological and Cultural Heritage Desk Based Baseline Assessment (DBA) has been prepared by Kirsten Holland, Principal Archaeologist on behalf of Partnerships for Renewables (PFR) in support of a full planning application for a proposed five turbine wind farm development at Her Majesty's Prison (HMP) Haverigg, in southern Cumbria.

1.1 Aims and Objectives

In accordance with the Institute for Archaeologists (IfA) standard definition of a desk-based assessment (Standard and Guidance for Desk-Based Assessment, Operational Draft, 2011):

Desk-based assessment will determine, as far as is reasonably possible from existing records, the nature, extent and significance of the historic environment within a specified area. Desk-based assessment will be undertaken using appropriate methods and practices which satisfy the stated aims of the project, and which comply with the Code of conduct, Code of approved practice for the regulation of contractual arrangements in field archaeology, and other relevant by-laws of the IfA. In a development context desk-based assessment will establish the impact of the proposed development on the significance of the historic environment (or will identify the need for further evaluation to do so), and will enable reasoned proposals and decisions to be made whether to mitigate, offset or accept without further intervention that impact.

This study examines the cultural heritage potential of the proposed development site and the surrounding area. The aim of the study is to:

- Identify recorded cultural heritage sites within the site boundary;
- Identify the potential for previously unrecorded sites to be present within the site;
- Identify potential impacts and mitigation strategies where appropriate; and
- Make recommendations for further work where required.

Cultural heritage within this context includes all buried and upstanding archaeological remains, built heritage sites, historic landscapes and any other features that contribute to the archaeological and historic interest of the area.



This baseline assessment considers the cultural heritage potential within the site itself, the surrounding area and wider local and regional context. This assessment does not attempt to plot and review every archaeological find and monument; rather it aims to examine the distribution of evidence and to use this to predict the archaeological potential of the study area and the likely significance of the development proposals on those remains.

2.0 Methodology

2.1 Assessment Methodology

No standard method of evaluation and assessment is provided for the assessment of impact significance upon cultural heritage, therefore a set of evaluation and assessment criteria have been developed using a combination of the Secretary of State’s non-statutory criteria for Scheduling Monuments (Scheduled Monument Statement, Annex 1), Design Manual for Roads and Bridges (DMRB), Volume 11, Part 3, Section 2, HA 208/07 (Highways Agency, 2007) and Transport Analysis Guidance (TAG Unit 3.3.9, Heritage of Historic Resources Sub-Objective) to assist in the application of this standard methodology to cultural heritage remains.

For the purposes of this assessment the identified cultural heritage sites have been assigned a cultural heritage value. The value has been assigned on the basis of the value categories detailed in Table 2.1.

Table 2.1 Cultural Heritage Value Criteria

Value	Examples
High	<p>World Heritage Sites, Scheduled Monuments of exceptional quality, or assets of acknowledged international importance or can contribute to international research objectives.</p> <p>Scheduled Monuments, or assets of national quality and importance or than can contribute to national research objectives.</p> <p>Grade I, II* and Grade II Listed Buildings, Conservation Areas with very strong character and integrity, other built heritage that can be shown to have exceptional qualities in their fabric or historical association.</p> <p>Grade I, II* and II Registered Parks and Gardens, Registered Battlefields and historic landscapes and townscapes of outstanding interest, quality and importance, or well preserved and exhibiting considerable coherence, integrity time-depth or other critical factor(s).</p>
Medium	Designated or undesignated assets of regional quality and importance that



Value	Examples
	contribute to regional research objectives. Locally Listed Buildings, other Conservation Areas, historic buildings that can be shown to have good qualities in their fabric or historical association. Designated or undesignated special historic landscapes and townscapes with reasonable coherence, integrity, time-depth or other critical factor(s). Assets that form an important resource within the community, for educational or recreational purposes.
Low	Undesignated assets of local importance. Assets compromised by poor preservation and/or poor survival of contextual associations but with potential to contribute to local research objectives. Historic (unlisted) buildings of modest quality in their fabric or historical association. Historic landscapes and townscapes with limited sensitivity or whose sensitivity is limited by poor preservation, historic integrity and/or poor survival of contextual associations. Assets that form a resource within the community with occasional utilisation for educational or recreational purposes.
Negligible	Assets with very little or no surviving cultural heritage interest. Buildings of no architectural or historical note. Landscapes and townscapes that are badly fragmented and the contextual associations are severely compromised or have little or no historical interest.

The potential to impact these sites as a result of development within the area is considered in general terms within Section 11.

2.2 Sources Consulted

A study area of 1.5km buffer from the site boundary of the turbines has been examined to assess the nature of the surrounding cultural heritage sites and place the recorded sites within their context. The study area encompasses the proposed access road.

This study has been undertaken taking into consideration the historical and archaeological background of the proposed development area. The sources consulted were:

- Cumbria Historic Environment Record (HER);



- National Monuments Record (NMR);
- English Heritage for designated sites;
- Cumbria Records Office (Barrow in Furness);
- Aerial photographs;
- Historic mapping including relevant Ordnance Survey Maps; and
- Appropriate documentary sources and archaeological journals.

In addition to the above a site walkover survey was undertaken on 22nd June 2010.

3.0 Site Description

The HMP Haverigg Wind Farm site lies 2.5km to the southwest of Millom on the southern coast of Cumbria. The approximate centre of the site lies at Grid Reference SD 141 784. A Site Location Plan (Figure 1) can be seen in Appendix A.

HMP Haverigg lies to the north of the site and an existing windfarm lies to the north west. The existing windfarm comprises a total of eight turbines constructed in two phases, known as Haverigg II and Haverigg III. To the east of the site lies open grassland / fields, and Haws Lane which leads towards the settlement of Haverigg approximately 1km distant.

The Irish Sea is situated to the south and west, and the south and west boundaries of the site are formed by sand dunes. The boundary of The Lake District National Park is approximately 2.5km to the north of the site.

The general area of the site is relatively flat, and around 10m Above Ordnance Datum (AOD); however, around 1.5km to the north, the ground rises steeply beyond the A5093. The redline boundary for the development site covers approximately 2.565 hectares and currently comprises grassland and part of a redundant airfield.



4.0 Legislation and Planning Policy Context

4.1 Ancient Monuments and Archaeological Areas Act 1979

Scheduled Monuments are designated by the Secretary of State for Culture, Media and Sport on the advice of English Heritage as selective examples of nationally important archaeological remains. Under the terms of Part 1 Section 2 of the Ancient Monuments and Archaeological Areas Act 1979 it is an offence to damage, disturb or alter a Scheduled Monument either above or below ground without first obtaining permission from the Secretary of State. This Act does not allow for the protection of the setting of Scheduled Monuments.

4.2 Planning (Listed Buildings and Conservation Areas) Act 1990

The Act outlines the provisions for designation, control of works and enforcement measures relating to Listed Buildings and Conservation Areas. Section 66 of the Act states that the planning authority must have special regard to the desirability of preserving the setting of any Listed Building that may be affected by the grant of planning permission. Section 72 of the Act states that special attention shall be paid to the desirability of preserving or enhancing the character or appearance of Conservation Areas.

4.3 The Hedgerows Regulations Statutory Instrument no. 1160, 1997

These regulations protect hedgerows on ecological and archaeological grounds from removal without prior permission and consideration of the planning authority. The regulations apply to a hedgerow which measures over 20m in length and satisfies at least one of several criteria. The method of identifying historical interest is outlined below:

- Where a hedge marks or is part of a boundary of at least one township or parish dating prior to 1850;
- The hedgerow incorporates a Scheduled Monument or an archaeological feature which is recorded on the SMR;
- Where a hedgerow is situated wholly or partly within an archaeological site, or is on land adjacent to or associated with such a site;



- Where a hedgerow marks the boundary of a pre 1600 estate or manor as recorded on archived documents or on the SMR, or is visibly associated with any building or feature of such a manor or estate; and
- Where a hedgerow is recorded as forming part of a field system predating the Enclosure Acts, or is part of or visibly related to such a system.

4.4 Planning Policy Statement 5: Planning for the Historic Environment 2010

Planning Policy Statement 5 (PPS5) sets out the Government's national planning policies on the conservation of the historic environment. The PPS covers all aspects of the historic environment and heritage assets including designated assets (World Heritage Sites, Scheduled Monuments, Listed Buildings, Protected Wreck Sites, Conservation Areas, Registered Parks and Gardens and Registered Battlefields) and non-designated assets. The PPS identifies that consideration of the historic environment and the requirements for assessment and mitigation of impacts on heritage assets should be proportional to their value and the effect of proposals on their significance. The PPS sets out the approach regional and local authorities should adopt in identifying and making provision for conservation of heritage within the plan making process (HE1-HE5) and in assessing development proposals within the context of applications for development (HE6-HE12).

The PPS states that the significance of heritage assets (including their settings) should be identified and the effect of the proposal on the significance of the asset should be assessed. Prior to validation the planning application should include sufficient information to enable the impact of proposals on significance to be assessed and thus where desk-based research is insufficient to assess the interest field evaluation may also be required (HE6). The PPS includes policy principles to guide the determination of applications relating to heritage assets (HE7 and HE8) and additional principles to be considered for designated assets (HE9 and HE10).

Whilst the PPS reflects the Governments overarching aim that "the historic environment and its heritage assets should be conserved and enjoyed for the quality of life they bring to this and future generations" it recognises that there are occasions where loss of significance is justified on the merits of new development. The more significant the asset and the greater the harm to the significance the greater the justification needed. Policy HE11 outlines a number of principles for enabling development that should be considered in assessing the benefits and disbenefits. Where loss of significance as a result of development is considered justified the PPS includes provision to allow for the recording and advancing understanding of the asset



before it is lost using planning conditions or obligations (e.g. S106) as appropriate (HE12). The results of these investigations should be made available and the archive deposited in a suitable repository. A Planning Practice Guide (English Heritage, March 2010) provides further information and guidance on the interpretation and implementation of the PPS.

4.5 Local Policy and Guidance

The Copeland Local Plan 2001-2016 (Copeland Borough Council, 2006) contains five saved policies relevant to this cultural heritage and the context of this development. The full text of the policies can be seen in Appendix B.

- Policy ENV26 (Conservation Areas);
- Policy ENV33 (Listed Buildings);
- Policy ENV35 (Scheduled Monuments);
- Policy ENV36 (Sites of Local Archaeological Importance); and
- Policy ENV37 (Sites of Archaeological Potential).

A further nine policies are relevant to cultural heritage within the Local Plan. Policies ENV7 and ENV8 relate to the Heritage Coast, policies ENV25, ENV27 and ENV28 are concerned with Conservation Areas, and policies ENV30, ENV31, ENV32 AND ENV24 are concerned with Listed Buildings. The development will not involve development within any of these areas therefore they are not considered further.

4.6 Planning Policy Analysis

It is anticipated that through this assessment, the EIA and subsequent evaluation and mitigation measures, the impacts of the development on cultural heritage will be identified. It is anticipated that impacts will be reduced or avoided through design modifications where possible or through the identification of mitigation measures. It is anticipated that these measures will minimise or remove any potential conflicts with the identified planning policies.



5.0 Consultation

Consultation was undertaken with the Cumbria HER, English Heritage and the Local Records Office for the provision of data for this report. Consultation was also undertaken with Jeremy Parsons, Cumbria County Archaeologist (12/12/11). Comments on the report and discussion on the mitigation strategy have been incorporated into the report as appropriate.

6.0 Baseline Data

6.1 Designated Sites

Within 1.5km of the site boundary there are no World Heritage Sites, Scheduled Monuments, Listed Buildings, Conservation Areas, Heritage Coasts, Protected Wreck Sites, Registered Parks and Gardens and Registered Battlefields.

Within 5km of the site boundary there are no World Heritage Sites, Heritage Coasts, Protected Wreck Sites, Registered Parks and Gardens or Registered Battlefields.

There are eight Scheduled Monuments within a 5km buffer of the site boundary. These are mainly located at Great Knott above Kirksanton and are identified in Appendix D and are shown on Figure 2. These Scheduled Monuments largely have above ground visible remains and due to the elevated locations are likely to have an outward focus and setting.

There are 16 Listed Buildings within a 5km buffer of the site boundary. These are primarily focused in the town of Millom, however there are a number of individual properties throughout the surrounding area primarily farmsteads. These include one Grade I Listed Buildings (Church of Holy Trinity) with the remaining buildings Grade II Listed. The Listed Buildings within the centre of Millom are anticipated to mainly have an inward focus towards the centre of the town and their immediate surroundings rather than outwards to the development site. These are included in Appendix D and are shown on Figure 2.

There is one Conservation Area within a 5km buffer of the site boundary. The Conservation Area of Millom is focussed on the historic town centre of Millom and comprises mainly commercial and residential properties. The focus of the Conservation Area is anticipated to be inwards to the town centre and the immediate surroundings rather than outwards to the development site, although views from the church graveyard may include the turbines.



6.2 Non-Designated Sites

There are seven sites within a 1.5km buffer of the site boundary recorded on the NMR and Cumbria HER. In addition there are several records of wrecks and crashed aircraft which are assigned a generic grid reference of Haverigg Point but which are anticipated to be located across the coast and offshore waters. The details of the recorded sites are in Appendix E and are shown on Figure 3.

6.2.1 Prehistoric (up to 43AD)

Regional evidence for the prehistoric is variable depending upon the specific period and location. During the Palaeolithic period the coast is anticipated to have lain approximately 15km to the west and the environment would have been relatively open low lying plain with meres in low lying areas. The only evidence from the region is largely confined to cave sites, but a Palaeolithic axe rough out has been recorded near Millom (ARS, 2009).

Whilst evidence for the early prehistoric (Mesolithic, Neolithic and Bronze Age) is present in the record (see below), evidence for the Iron Age is patchy; the area of Cumbria, Lancashire and Cheshire being described '...as a 'black hole' regarding the current state of archaeological knowledge' (Haselgrove *et al.* 2001, 25 cited in Hodgson and Brennand 2006, 51). Whilst several enclosures have been identified as possibly belonging to the Iron Age, the lack of both dated sites and artefactual evidence associated with the sites is regarded as a problem in attributing a date to these features (Hodgson and Brennand 2006, 52).

There is one recorded site of prehistoric date within the study area. This is a scatter of Neolithic flint artefacts (Site 18912) located in the west of the study area at Kirksanton Haws. Evidence of later Mesolithic and Neolithic activity in the form of lithic scatters is not uncommon in the area of west Cumbria, particularly on the raised beaches and clifftops north of St Bees (Cherry and Cherry 1983; 2002 cited in Hodgson and Brennand 2006, 25). The coastline has changed significantly since this period and therefore some coastal sites may now be located inland and others are submerged (ARS, 2009).

There is evidence that the surrounding area was occupied in the late Neolithic to early Bronze Age as there is a cluster of Scheduled Monuments including four stone circles approximately 2km west of the study area at Great Knott, Lacro, overlooking the River Duddon estuary. Two of these have an associated stone avenue and evidence of cremations. A further cairn is located within another of the circles. This is in keeping with the settlement evidence for the wider area which is also dominated by more monumental rather than domestic evidence, as well as flint scatters (Hodgson and Brennand 2006, 31). The



environment is anticipated to have been relatively wooded with small scale clearances and settlement. The area was still subject to rapid regression and transgression of the coastline.

It is unclear whether the land was of sufficient height above sea level to have been used for settlement in prehistory, or whether it would have been low lying and susceptible to frequent inundation. If it was unsuitable for settlement it is likely to have been used for exploitation for food and other resources. Evidence from basal peat deposits in the Duddon estuary dating to the Neolithic give relative sea levels of $-0.76\text{m}\pm 0.21$ (3930-3647BC) and $0.67\text{m}\pm 0.21$ (3643-3377BC) relative to present levels. The model for this part of the coast indicates the mid Holocene high stand may have been approximately 4m greater than the mid Holocene environmental evidence indicates (Barlow and Shennan 2009, 44; ARS, 2009). These results are however from within the Duddon estuary and it is uncertain how this relates to the site, which is not within the main shelter of the estuary and of unknown topography during this period.

6.2.2 Roman/Romano British (43AD to c.450AD)

Within the wider area, the evidence for Roman activity is sparse, with '...relatively low level of material culture and poor site visibility contribute to the lack of identification of Roman period remains beyond the major military installations.' (Philpott 2006, 59). Much of the evidence has succumbed to plough damage, or having not survived within the burial environment due to the use of organic materials such as timber structures (Philpott 2006, 59).

There are no recorded sites of Roman date within the study area and the Ordnance Survey map of Roman Britain (Ordnance Survey, 1997) indicates that there were no roads or recorded remains in the immediate region. The fort of *Glannoventa* (Ravenglass), of which only the bath house survives (referred to as Walls Castle), lies approximately 15km to the north-west. This important Roman naval base suggests that the coast was well travelled during this period, and it is possible that the Duddon estuary may have provided a natural sheltering point for vessels.

6.2.3 Early Medieval (450AD to 1066AD)

The character of early medieval settlement is not fully understood in the region. Place-name evidence provides some clues in the region, and it is likely that there was continuity in the use of Romano-British farmsteads in the 5th century (Newman 2006a, 94-95 and 97).

There was a significant decline in population levels in the early 6th century and increase in woodland regeneration, indicative of an environmental crisis or climatic deterioration. Little is known about the



political conditions in the immediate post-Roman period but it is possible that the area formed a number of small kingdoms or tribal groups, or formed part of the kingdom of Rheged. This altered in the mid 7th century when the region was absorbed into the Anglian Northumbrian kingdom. The area was exploited by Scandinavian settlers who arrived in the 9th and 10th centuries following the decline of Northumbrian power. There are place names of both Scandinavian and Anglian origin on the peninsular (Winchester, 2006).

There are no recorded sites of early medieval date within the study area. The area is considered likely to have been inhabited, although the density of settlement may have been below levels which are easily recognized in the landscape. It is considered more likely that settlement was located away from the immediate coastal areas to help safeguard against attack and therefore settlement remains would be anticipated to the north of the study area.

6.2.4 Medieval (1066AD to c.1540AD)

The character of the region during the medieval period was one of rural settlements, with a number of dispersed settlements of a seasonal or transitional nature (Newman 2006b, 115). Urban settlement was sparse and considered economically under developed during this period when compared to the rest of England (Newman 2006b, 126).

The village of Haverigg was first recorded in 1880 as Haverig meaning 'ridge where oats are grown or where he-goats graze'. It is derived from Old Scandinavian (Mills, 2003). The village does not however appear to have grown significantly until the late post-medieval period and therefore probably remained a small hamlet throughout this time.

The town of Millom is first recorded in 1180 as Millum. It is derived from the Old English mylnum meaning '(place at) the mills' (Mills, 2003). Millom Castle (approximately 1.5km to the north-west of the development site) was also built in the early 12th century by Godard de Boyvill and received a licence to crenellate in the 14th century (www.millom.org.uk). The Holy Trinity Church also dates to the 12th century and is located close to the castle.

During this period the settlement of Millom is anticipated to have been focused upon the west of the present town (in the area of Holborn Hill) a short distance from the castle. The surrounding area is also likely to have had a number of other small settlements as evidenced by the deserted settlement of Lacra Old Kirk dispersed settlement on the higher land to the west.



The proposed development site is still considered likely to have been on marginal land on the coast and therefore whilst the area may have been exploited there are unlikely to be archaeological remains from this period within the site.

6.2.5 Post-Medieval (c.1540AD to 1900AD) and Modern (1900AD to present)

Developments in agriculture, land use and increased industrialisation in the 18th century changed the landscape of the region (McNeil and Newman 2006, 165). Areas of rural settlement and farming had, by the mid 19th century, succumbed to the parliamentary enclosure act (McNeil and Newman 2006, 165), with future settlement growth centring on more urban areas. The geology of the West Cumberland region, specifically coal measures and haematite (iron oxide) (McNeil and Newman 2006, 183) was exploited and fuelled industrial activity in the area.

The major changes at Millom are due in large part of the discovery of a large iron ore deposit at Hodbarrow in the mid 19th century. Hodbarrow Mine (Site 4301) and its associated railways shaped much of the areas landscape including land reclamation, particularly to the north and east of the study area.

The minerals discovery caused major changes within the settlement of Millom itself. The establishment of the mines and ironworks drew large numbers of people to the area looking for employment. The 1841 census gave the population of the town as 358, however by 1855 it was over 10,000 (www.millom.org.uk). The centre of Millom, which is a Conservation Area, largely dates from this period. The boom from the mining period continued into the 20th century, however when the mines closed in 1968 then the town began to decline as the population moved away in search of other work.

RAF Millom (Site 1107992) opened in January 1941 as No.2 Bombing and Gunnery School and in the summer of 1941 it became the No. 2 Air Observer School. It became a Polish Resettlement Corp Depot in 1944 and in 1949 it was put under care and maintenance following the end of the Second World War. It was reopened in 1952 for a 12 month period as No.1 Officer Cadet Training Unit. It was again mothballed and put under a care and maintenance regime until 1954 when various army regiments passed through the Civil Defence Training School established here. HM Prison Service took it over in 1967 and they remain the current occupier (www.rafmillom.co.uk). The RAF airfield extended across the western half of the site and includes the part of the development site located within the modern day prison.



7.0 Historic Mapping

A selection of the historic maps consulted are presented in Appendix F. The approximate site boundary shown on these maps encloses the area of the turbines. The landscape has undergone two major interventions, *i.e.* the airfield and the prison, with little else in the way of change in the area evidenced by the maps.

The earliest map of the area consulted was a reproduction of Donald's Map of Cumberland, 1774. The map indicates the place names Haverigg and Haverigg Haws, however no detail of the land around these is depicted. The Chapel Sunken tithe map (and schedule) of 1849 was the first map to show any significant details of the development site and surrounding area. This shows the area was subdivided into fields, the boundaries of which did not change again until the 1862 OS map (6" to 1 mile). The tithe schedule does not identify any specific field names which indicate particular land uses. The fields were under a mixture of arable and pasture cultivation.

By the time of the late nineteenth century survey (1898, 6" to 1 mile), the field boundaries had been modified with some of the larger areas being sub-divided. The 1898 map also shows a rifle range in the area south of the fields on the coastal sand, with the targets still noted on the 1924 map.

Millom airfield was built in 1941, however on the 1951 mapping only the outline of the site was included with no internal details recorded. This is typical for military installations of this period. The rifle range was marked as disused by this period, however a flag staff was noted on the boundary between the fields (and development site) and the dunes.

By 1973 the airfield was marked as disused and the prison had been built. No internal features of the prison were shown, however the layout of the airfield runways and dispersal areas were depicted. In the late 20th century the fields to the east of the prison and including the area of the development site were reorganised to form larger fields. This may be related to changes in farming practice where larger fields suit modern farming methods.

8.0 Aerial Photographs

Online modern satellite imagery, a Second World War aerial photograph and photographs from 1966 held by the HER were examined. The 1940s aerial photograph is an image of the airfield adjacent to the area of the proposed wind farm taken during the Second World War. The airfield was operational and planes can



be seen at the edge of the runway. The development area lies just outside the boundary of the photograph.

The 1966 aerial photographs cover the area of the prison, disused airfield and immediate surroundings. The area of the prison has been blanked out, however, the development site area is visible. Within the east of the development site the field layout remains little altered from that depicted on the early Ordnance Survey mapping. The rifle range to the south of the development was is still visible.

The 1966 photographs also clearly indicate that the layout of the airfield, including aspects such as its access tracks and dispersal points, remained visible although disused. The access tracks to the south of the turbines will follow the former perimeter track of the airfield. The dispersal areas for aircraft around this perimeter were located to the south of this access track and therefore south of the development. The small pond to the south of turbine 1 is not visible on these photographs indicating it post-dates it.

Modern satellite imagery clearly shows the disused airfield to the west of the prison. The immediate vicinity of the airfield and prison are fields. No further discernable features were noted. The study area has been partially subject to aerial photograph interpretation as part of the North-West Rapid Coastal Zone Assessment Study (ARS, 2009). The development site lies within the study area. This study was a comprehensive review of all available aerial photography for the coastal region. The only new sites identified as part of this assessment in the immediate area were a series of barbed wire obstructions and minefields on the beach below RAF Millom and the development site to deter enemy landings.

9.0 Historic Landscape

The information regarding the historic landscape character was provided by Cumbria County Council (2009). A figure showing the historic landscape character areas presented in Appendix G and summarised here.

The area towards the coast and including the settlement of Millom lies outside the boundary of the Lake District National Park. As a result, this area has suffered from increased industrial activity from the later 19th century onwards, particularly in terms of mineral extraction and wind farms.

Excluding the disused airfield and prison defined as built environment, the area surrounding the proposed wind farm is one of field enclosures. The development site itself is described as planned enclosure. This is mainly land that was enclosed from the late 18th century onwards as part of the widespread Parliamentary



Enclosures (CCC, 2009 p.9). There are also several small areas of ancient enclosure to the north-west of the development site. Such enclosures in this area are regarded as having 'strong legibility of landscape elements of medieval origin' (CCC, 2009 p.57). There is also an area of common arable land to the north of the development site. These areas of common arable land were often enclosed in the early post-medieval period but curved field boundaries reflect the former sinuous ridge and furrow although physical earthworks may not be visible (CCC, 2009 p. 9).

10.0 Site Walkover Survey

A site walkover survey was undertaken on 22nd June 2010. The weather was dry and sunny. Site photographs can be seen in Appendix C.

The site can be clearly divided into two areas. The first is the area which lies to the west and includes turbines 1, 2 and 3. This area forms part of the existing prison boundary and is secured with a tall, dense mesh fence and locked. Access was gained through prior arrangement with the prison service. The area within the prison boundary also correlates with the boundary of the Second World War Haverigg Airfield.

The area is untended and therefore has become significantly overgrown. There are areas of localised historical fly tipping and several areas where crushed concrete and demolition materials are visible. Some of the concrete may have originally been associated with buildings associated with the airfield. There are numerous overgrown spoil heaps and bunds that are now present across the site. A fire pond or balancing pond is located close to the proposed location of turbine 1.

The access track around the former airfield boundary is still discernable. The tarmac hard standing is still present although its condition has deteriorated and in many places it is overgrown. To the north of the wind farm redline boundary the former runway of the airfield is still discernable although again it is largely overgrown and has several bunds located along its edges.

No features of heritage interest were identified within the prison boundary associated with the airfield with the exception of the access track and runway. There is the potential that small features such as anti-tank cubes or gun emplacements may be obscured by overgrown vegetation, however the footprints of the turbines and associated access tracks are relatively small and therefore it is unlikely that even should these be present they will be impacted by the development. A small pond is located adjacent to Turbine 1 although comparison with 1966 aerial photographs indicates this is a modern feature and not associated with the airfield.



The second half of the site is located to the east and lies outside of the prison boundary. This part of the site comprises two agricultural fields. The westerly field is a pasture field currently used for grazing sheep within which the grass was relatively short and also contained a low corrugated iron shelter. The easterly field is currently a meadow and the grass was relatively long. No features of archaeological or heritage interest were recorded.

The site will be accessed along the western boundary of the prison. This area does not contain any additional features of heritage interest.

11.0 Likely Impacts and Archaeological Potential

A full impact assessment will be undertaken within the Environmental Statement. An assessment of the impacts on setting of heritage features will also be included.

The only recorded heritage site within the development site is the former airfield RAF Millom. The airfield is considered to be of local and low heritage value. The layout of the airfield is partially preserved within the existing windfarm and prison boundary. The development will partially affect the layout of the former airfield by the erection of wind turbines and creation of a new access track, however, understanding of the site will only be diminished as the plan form will still be recognisable.

There is considered to be a relatively low potential for previously unrecorded archaeological remains to be discovered within the development site. The airfield is considered likely to have truncated any archaeological remains which were present in the areas of hardstanding associated with the airfield. This truncation may be localised to areas of hardstanding with areas outside of the hardstanding remaining undisturbed. There is a low potential to discover archaeological remains of prehistoric date. The effects of sea level and coastline changes are unknown but the coastal transition area is commonly exploited. The type of site most likely to be discovered are a lithic scatter or possibly settlement remains most likely represented by post-holes and potentially ditches, however evidence of this form is limited in the region.

There is considered to be a very low to negligible potential to discover remains of Roman or early medieval date within the development site due to the paucity of remains from this period in the surrounding region. There is considered to be a very low to negligible potential for remains of medieval or post-medieval date as by this time the settlement centres were established in the villages and outlying farmsteads. The evidence indicates that the site was in use for agricultural purposes during this period.



12.0 Evaluation and Mitigation Measures

The site is considered to have a relatively low potential for the recording of archaeological remains. Should archaeological remains be discovered they will most likely be relatively ephemeral (e.g. flint scatters or postholes) therefore geophysical survey is unlikely to produce useful results as this type of site does not respond well to geophysical survey. The hard standing within the former airfield means this area is also unsuitable for survey. The extent of topsoil stripping and intrusive groundworks within horizons that may contain archaeological remains will be relatively limited and therefore evaluation excavations are not considered to be a proportionate response and may not enable lithic scatters to be recognised within a limited excavation area.

The construction compound and access roads will follow the existing hard standing within the site where possible. Elsewhere the excavations for the access roads and compound are unlikely to require significant excavation and therefore are unlikely to penetrate to archaeological levels. Therefore no further work is proposed on the access road alignments. It is proposed that the topsoil stripping and intrusive groundworks for the turbine bases and crane pads be subject to a strip, map and sample exercise. The area should be stripped of topsoil in the first instance and then left to weather for a number of days to assist in the identification of lithic scatters. A subsequent stripping phase of the subsoil will then be carried out and the exposed surfaces left to weather to assist in the identification of lithic scatters. Should significant scatters be identified during this strip, map, sample exercise provision will be made for an appropriate level of recording and recovery of lithics suitable to their significance. This may include selected sieving to recover small lithics and microliths.

This mitigation should be undertaken in accordance with a Written Scheme of Investigation, agreed in advance with the Cumbria County Council Historic Environment Department and following the Institute for Archaeologist's Standards and Guidance documents.



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Historic Mapping

Chapel Sunken tithe map and schedule, 1847. Ref: BRR/10/I3/1 and IR/29/7/431-E

Ordnance Survey Mapping 25" to 1mile/1:2,500 1862, 1898, 1924, 1969, 1987, 1990

Ordnance Survey Mapping 6" to 1 mile/1:10,560 1867, 1900, 1916, 1927

Ordnance Survey Mapping 1:10,000 1956, 1973, 1983, 2002, 2006, 2009



Aerial Photographs

Ordnance Survey Aerial Photographs held by Cumbria HER, Flown 30th May 1966

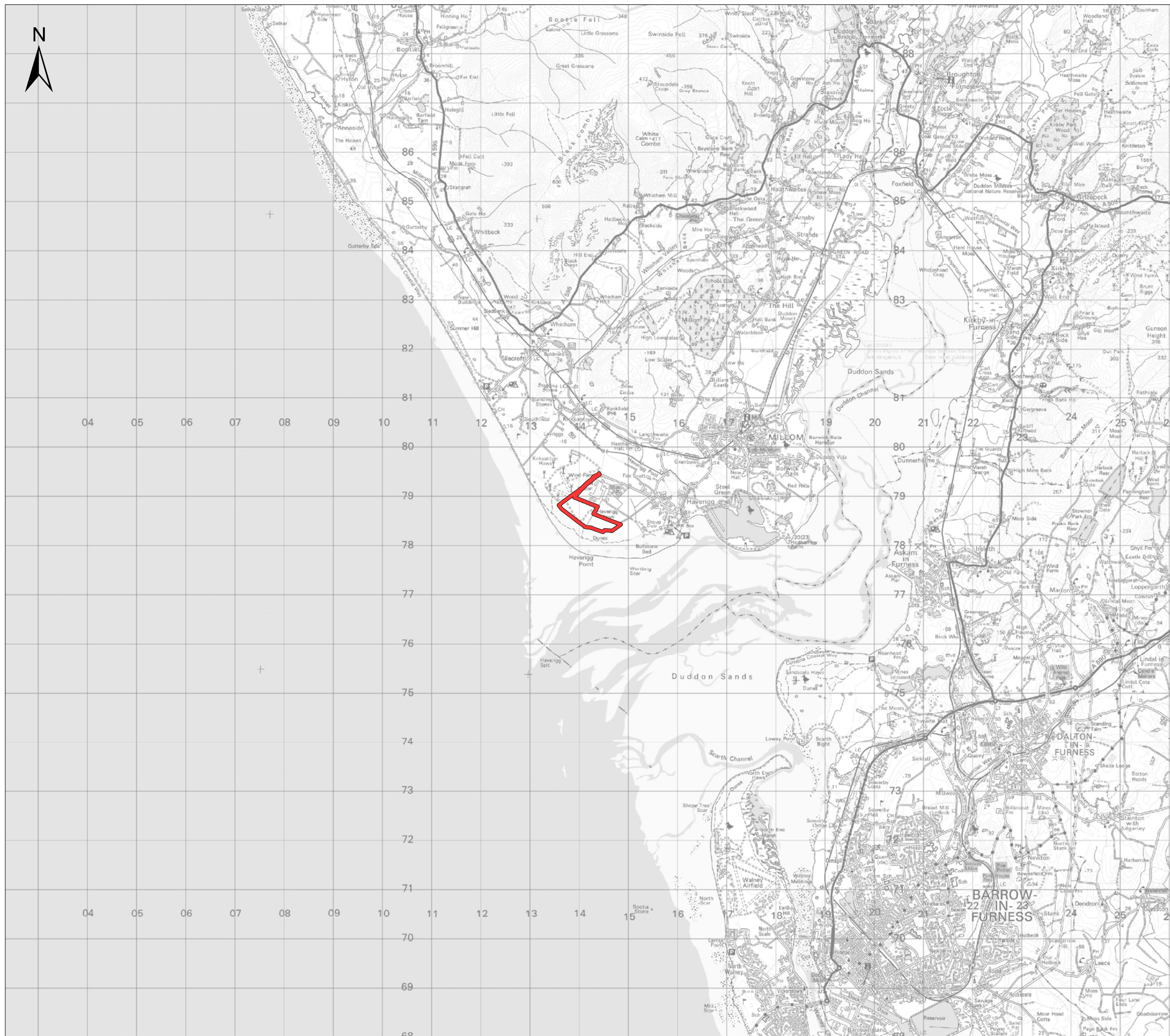
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Appendices



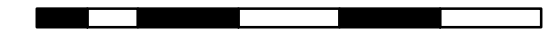
Appendix A – Site Location Plan



Legend

 Application Boundary

0 0.5 1 2 3 4 5



Kilometres

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A CARBON TRUST ENTERPRISE

Project: **HMP Haverigg
Wind Energy Development**

Title: **Site Context Plan**

Office: 4154	Project No: A043494-14	Figure No: 1
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Appendix B – Planning Policies



Copeland Local Plan 2001-2016 (Copeland Borough Council, 2006)

Conservation Areas

Policy ENV 26: Development In and Affecting Conservation Areas

Development within Conservation Areas or that which impacts upon the setting of a Conservation Area will only be permitted where it preserves or enhances the character or appearance of the Area and, if appropriate, views in and out of the Area. In particular it should:

1. respect the character of existing architecture and any historical associations by having due regard to positioning and grouping of buildings, form, scale, detailing and use of traditional materials
2. respect existing hard and soft landscape features including open space, trees, walls and surfacing
3. respect traditional street patterns, plot boundaries and frontage widths
4. improve the quality of the townscape

Outline applications will not be acceptable in respect of sites within Conservation Areas unless they contain sufficient detail to enable the visual impact of the proposal to be understood.

Listed Buildings

Policy ENV 33: Development Affecting the Setting and Important Views of Listed Buildings

Applications for development affecting the setting or important views of a Listed Building will only be approved when there is no significant adverse impact on the Listed Building.

Scheduled Monuments

Policy ENV 35: Development Affecting a Scheduled Monument

Planning permission for development which would adversely affect a Scheduled Monument or its site or setting will not be granted.

Archaeological Sites

Policy ENV 36: Development Affecting Sites of Local Archaeological or Historic Importance



In considering proposals for new development the Council will seek to minimise their affect on any site of local archaeological or historic importance. Where proposals are likely to affect such sites the Council will:

1. require an initial assessment of the archaeological value of the site to be submitted as part of the planning application
2. require a full archaeological field evaluation to be carried out before a decision is made on the planning application should the results of (1) above or other research so warrant
3. seek the statutory protection and permanent in situ preservation of nationally important remains before development commences
4. seek the permanent in situ preservation of locally important remains as part of the development design by agreement with the developer before development commences
5. require in cases where the preservation of remains in situ is not appropriate, full investigations and recording of the site by a body nominated or approved by the Council before development commences and removal of the remains to a suitable location for display.

Policy ENV 37: Site of Potential Archaeological Importance

Where chance finds or developing knowledge indicate possible archaeological importance an initial site assessment of archaeological value may be required to be submitted as part of a planning application for development. Where evidence of significant archaeological remains is found then the criteria set out in Policy ENV 36(2-5) will apply.



Appendix C – Site Photographs



Photograph 1: Facing west looking across eastern area of the development site outside prison boundary.



Photograph 2: Facing south looking across west of development site within prison boundary.



Photograph 3: Example of former runway of RAF Millom.



Photograph 4: Facing south looking along access route to windfarm.



Appendix D – Designated Cultural Heritage Sites



Scheduled Monuments (English Heritage)

Monument Number	Grid Reference	Period	Name
23734	SD 14923 80982	?Neolithic-Bronze Age	Stone Circle and Funerary Cairn 440m south west of Great Knott, Lacro. Six granite boulders enclosing approx 15m diameter with a central funerary cairn.
23735	SD 15014 80970	?Neolithic-Bronze Age	Stone Circle 410m south-south-west of Great Knott, Lacro. Four granite boulders enclosing an area approx 24m diameter.
23736	SD 15055 81194	?Neolithic-Bronze Age	Two Stone Circles, a Stone Avenue and a Stone Alignment at Great Knott, Lacro. Monument covers two distinct areas. Concentric stone circle to the north with an avenue of paired stones leading from it.
CU424	SD 18000 78326	Post-Medieval	Hodbarrow Beacon. Old lighthouse near the end of the Old Sea Wall.
23737	SD 13615 81104	?Neolithic-Bronze Age	Giant's Grave Standing Stones, Kirksanton. Two unhewn granite standing stones with cup and ring mark depressions.
23733	SD 14984 81326	?Neolithic-Bronze Age	Stone Circle west of Great Knott, Lacro. Small stone circle of eight granite stones enclosing an area approx 16m in diameter.
35026	SD 14793 81467	Medieval	Lacro Old Kirk Medieval Dispersed Settlement and associated Lynchets 800m and 830m north-north-east of Bankfield House. Earthwork and buried remains of the church, dispersed village and three associated strip



Monument Number	Grid Reference	Period	Name
			lynchets. Monument covers two distinct areas.
CU360	SD 17125 81336	Medieval	Millom Castle (Ruined Portions). A 13th century castle which was substantially rebuilt in the 14th century. It was sacked and burnt during the Civil War.

Listed Buildings (English Heritage)

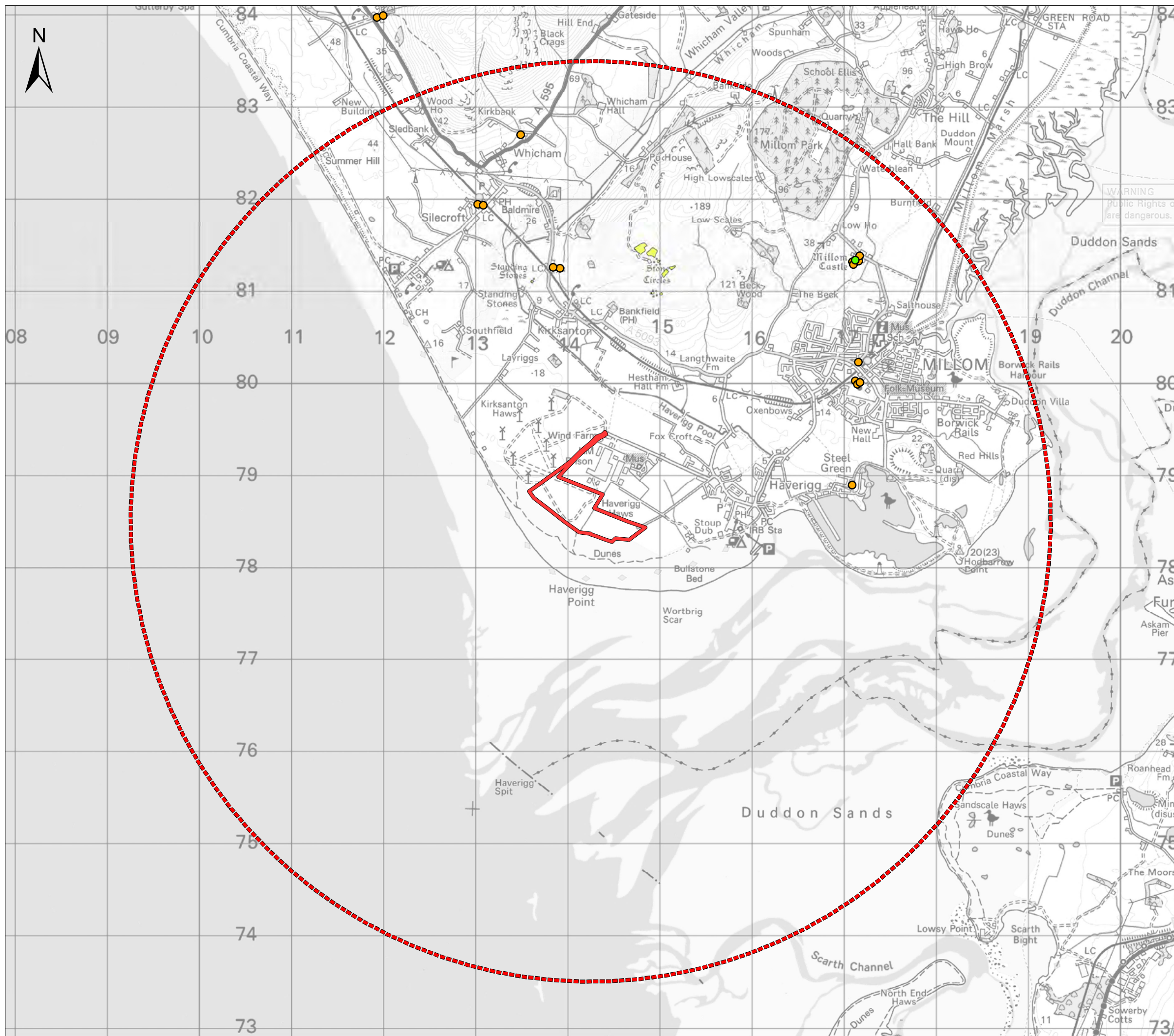
Identifier	Grid Reference	Period	Description	Grade
76381	SD 13025 81940	Post-Medieval	Manor House and Manor Cottage in Silecroft. Probably 17 th century with later extensions.	II
76383	SD 13087 81931	Post-Medieval	Range of buildings immediately to the north-east of Cross house Farmhouse, Silecroft. Probably dating to the early 19 th century, the buildings originally comprised a dwelling, storage area, threshing barn and horse engine house.	II
76376	SD 13494 82696	Medieval	Church of St Mary, Whicham. Probably 12 th century, the church was restored and a transept added in 1878. The church contains good examples of 19 th century stained glass.	II
76352	SD 13846 81255	Post-Medieval	Limekiln immediately to the south-west of the Bankspring former brewery in Millom Without. Probably 19 th century.	II



Identifier	Grid Reference	Period	Description	Grade
76351	SD 13919 81247	Post-Medieval	Bankspring former brewery, Millom Without. Probably 19 th century.	II
76340	SD 17093 78892	Post-Medieval	Hodbarrow Mine Office (now The Commadore Club), Millom. Dating to 1873, it is the last remaining building of Hodbarrow Mine.	II
76330	SD 17097 81316	Medieval	Cross base c.6m north of the porch of the Church of Holy Trinity, Millom. It is probably the base of a market cross (market charter of 1251).	II
76329	SD 17104 81300	Medieval	Church of Holy Trinity, Millom. The 12 th century church has undergone several modifications from the 13 th century to the early 20 th century.	I
76331	SD 17106 81286	Medieval/Post-Medieval	Sundial c.6m south of the Church of Holy Trinity, Millom. Sundial is possibly Post-Medieval and set on a later shaft.	II
76332	SD 17113 81298	Post-Medieval	Postlethwaite Memorial sited immediately to the south of the chancel of the Church of Holy Trinity, Millom. Dates to the early 18 th century. Plate records Miles Postlethwaite (died 1712) and his daughter Elizabeth (died 1758).	II
76338	SD 17127 80023	Post-Medieval	Former vicarage sited to the north of St George's Church, Millom. Now an old people's residence, the building dates to c.1875.	II
76333	SD 17127 81333	Medieval	Millom Castle. Ruins of a castle or moated manor house. Licence to crenellate was granted in 1335, with further modifications in the late 14 th century. The great tower (now a farmhouse)	I

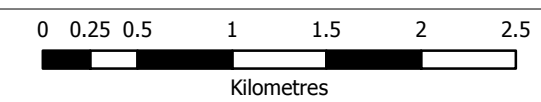


Identifier	Grid Reference	Period	Description	Grade
			dates to the 16 th or 17 th century.	
76336	SD 17152 79984	Post-Medieval	Church of St George, Millom. The church dates to 1874-1875.	II
76339	SD 17160 80226	Modern	War memorial, Millom. Memorial to WWI and adapted after WWII. The memorial dates to c.1920 and is surrounded by four cast iron lamp posts.	II
76334	SD 17164 81323	Post-Medieval	Gate piers to the east of Millom Castle. These rusticated piers with cornices and ball finials probably date to the 17 th or 18 th century.	II
76335	SD 17174 81380	Post-Medieval	Gate piers to the north-east of Millom Castle. These rusticated piers with cornices and ball finials probably date to the 17 th or 18 th century.	II
76337	SD 17177 80007	Modern	War memorial immediately to the north of St George's Church, Millom. Memorial to the Boer War in the form of a cross within a square enclosure, dating to c.1900.	II



Legend

- Application Boundary
- 5km Study Area
- Listed Buildings
- GRADE
- I
- II
- II*
- Scheduled Monument



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Project: **HMP Haverigg
Wind Energy Development**

Title: **Designated Cultural
Heritage Features**

Office: 4154	Project No: A043494-14	Figure No: 2
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Appendix E – Recorded Cultural Heritage Sites

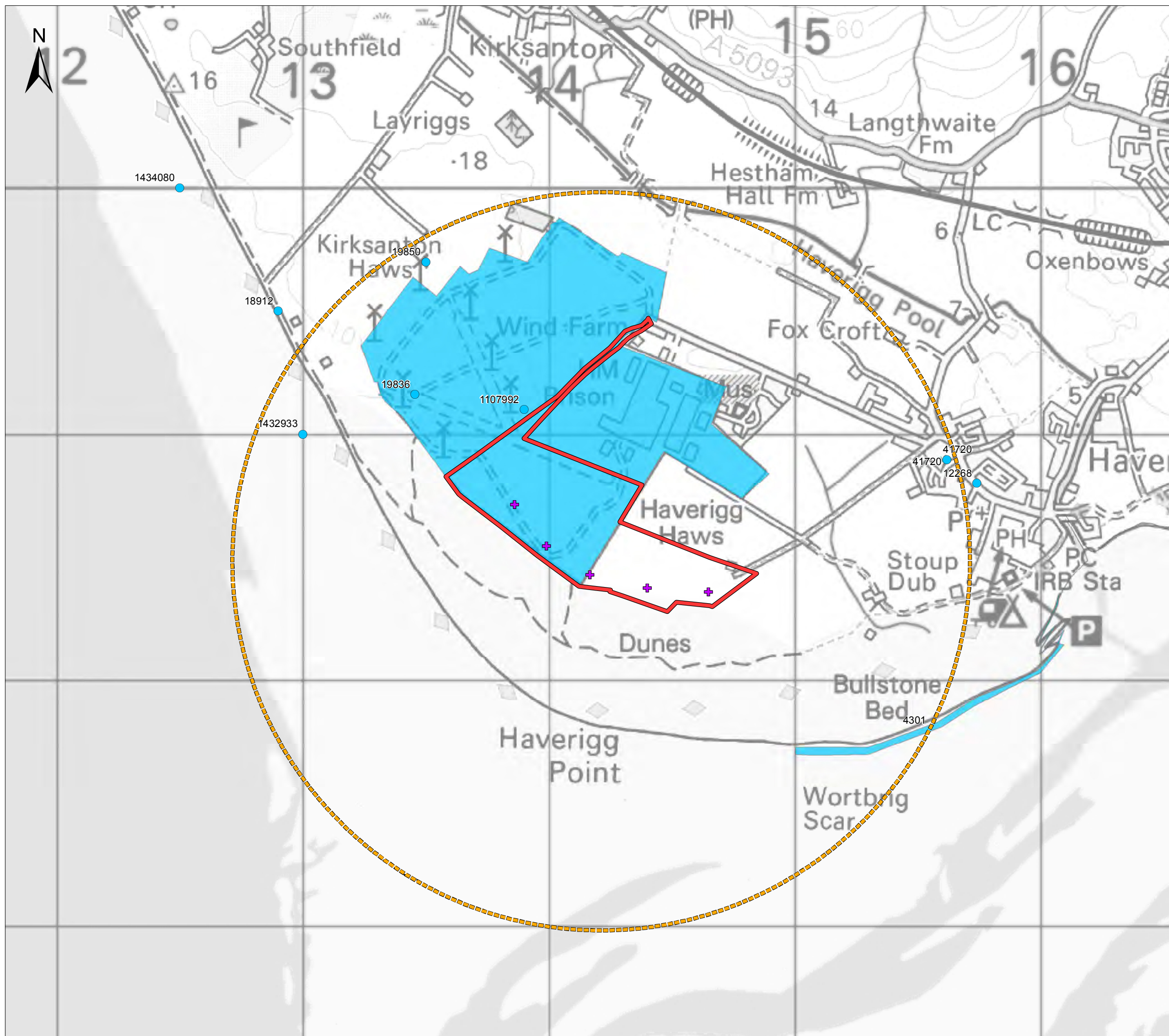


Recorded Archaeological Remains (National Monuments Record and Historic Environment Record)






Identifier	Grid Reference	Period	Description
19850	SD 13500 79699	Modern	The site of a World War II gunpost.
19836	SD 13456 79161	Modern	The site of a World War II Pickett Hamilton hydraulic pillbox.
12268	SD 1574 7880	Post-Medieval	The site of Haverigg Reading Room.
18912	SD 129 795	Neolithic	Scatter of flint artefacts of Neolithic date
4301	SD 17015 78277	Post-Medieval	Hodbarrow Mine. Due to land subsidence a wooden barrier was erected against the sea in 1885, and 1888-90 an 'inner barrier' (SMR 5529) was constructed which was a combination of a concrete wall and a watertight dam. Later this proved inadequate and in 1900-05 an 'outer barrier' was constructed. The outer barrier extended for over a mile, consisted of a girdle of limestone rubble and tumbled concrete blocks with supporting heart of clay and steel or timber piling and repelled the sea.
41720	SD 15619 8896	Post-Medieval	Midtown Farm, Main Street. A farmhouse and associated ancillary buildings shown on the 1869 OS map.
1107992	SD 139 791	Modern	NMP Haverigg/RAF Millom. A Second World War military airfield is visible as a series of structures and earthworks on air photographs. The airfield also consists of a military camp,

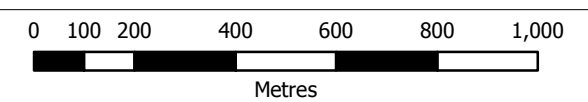


Identifier	Grid Reference	Period	Description
			military buildings, military roads, air raid shelters, emergency water supplies, barbed wire obstructions and a pillbox. Most of the site is extant on the latest 1966 and 1989 Ordnance Survey vertical photography.
1432933	SD 130 790	Modern	Aircraft AM794 an aircraft which crashed into the sea off Millom in 1942. The crash occurred a few minutes after the plane had taken off from Haverigg airfield.
1434080	SD 125 800	Modern	Aircraft NC691 a Vickers Wellington Mark X which crashed into the sea off Haverigg in 1945. Protected Place under the Protection of Military Remains Act 1986.
1323048; 1347997; 1037438; 1330069; 1330093; 1348278; 1349887; 1364966; 1366561; 1367799	SD 1300 7761	Modern	Haverigg Point just off the coast is used as the key locator for a number of wreck sites and aircraft. It is anticipated that these are scattered over a wider location and some are records for which no physical remains will be associated as they were subsequently recovered.



Legend

-  Application Boundary
-  1500m Buffer Of Site Centre
-  Turbine Locations
-  Recorded Cultural Heritage Site
-  Recorded Cultural Heritage Feature



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Project:

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Title:

Recorded Cultural
Heritage Sites

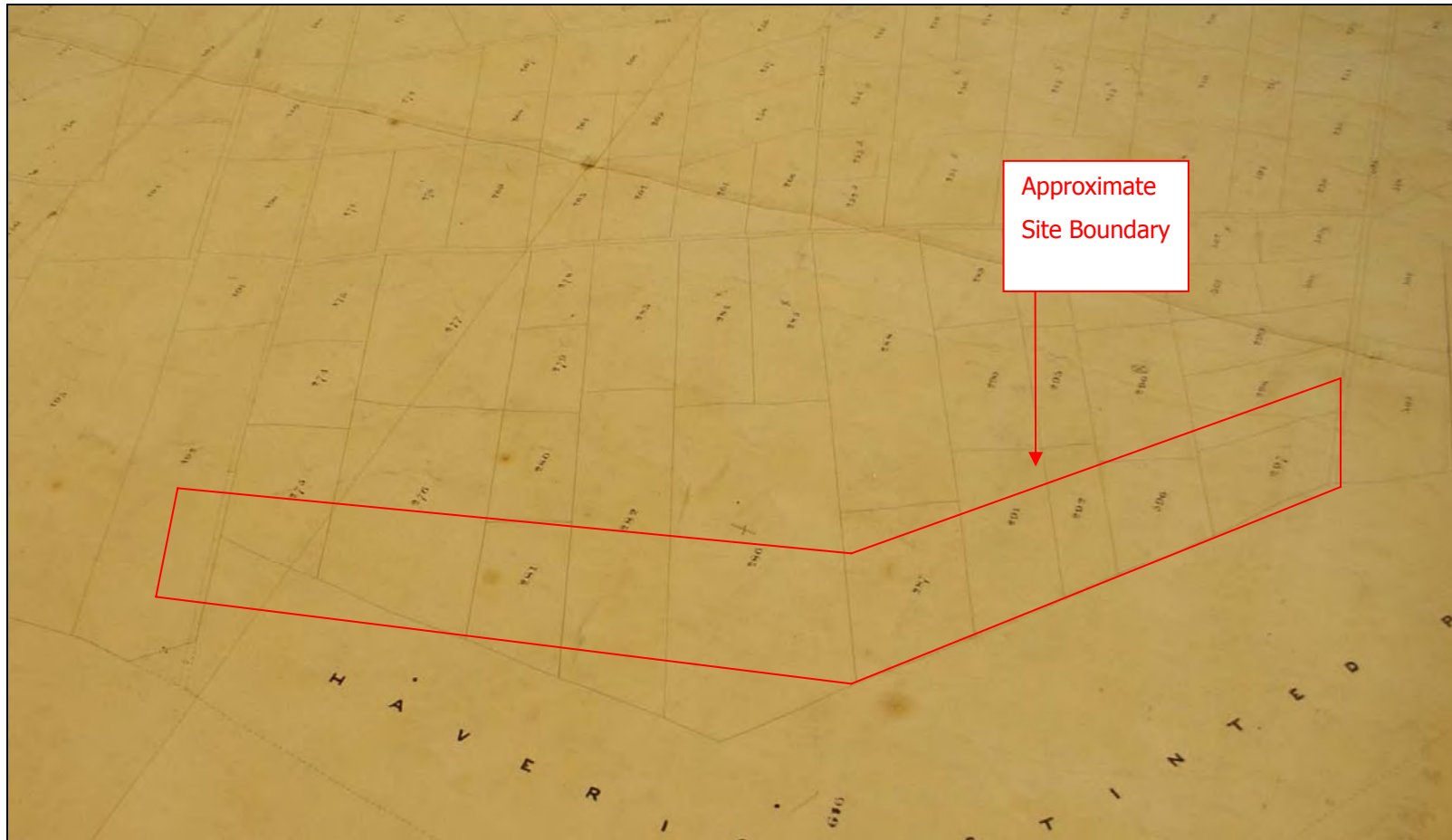
Office: 4154	Project No: A043494-14	Figure No: 3
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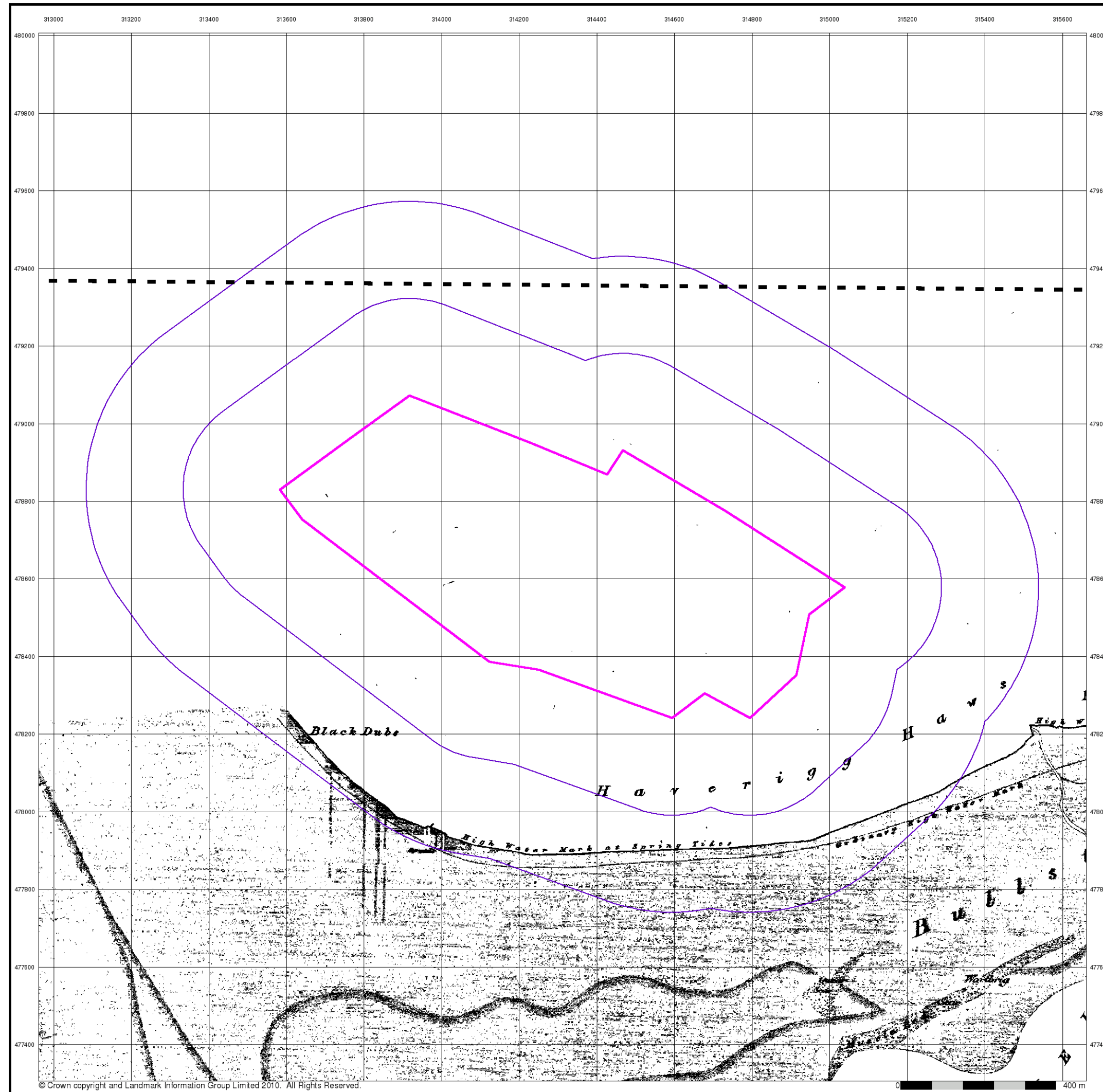
Appendix F – Historic Mapping



Donald's map of Cumberland, 1774



Chapel Sunken Tithe Map, 1849 Ref: BRR/10/I3/1



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Lancashire And Furness

Published 1850

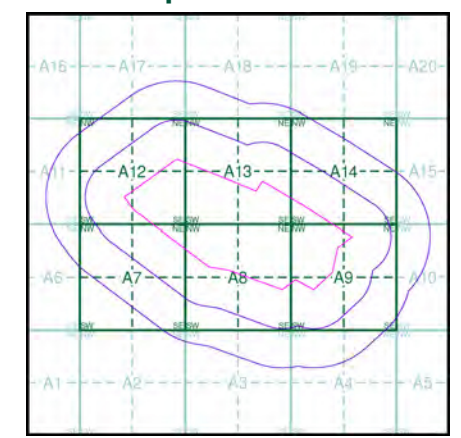
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

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01500	1850	1:10,560

Historical Map - Slice A



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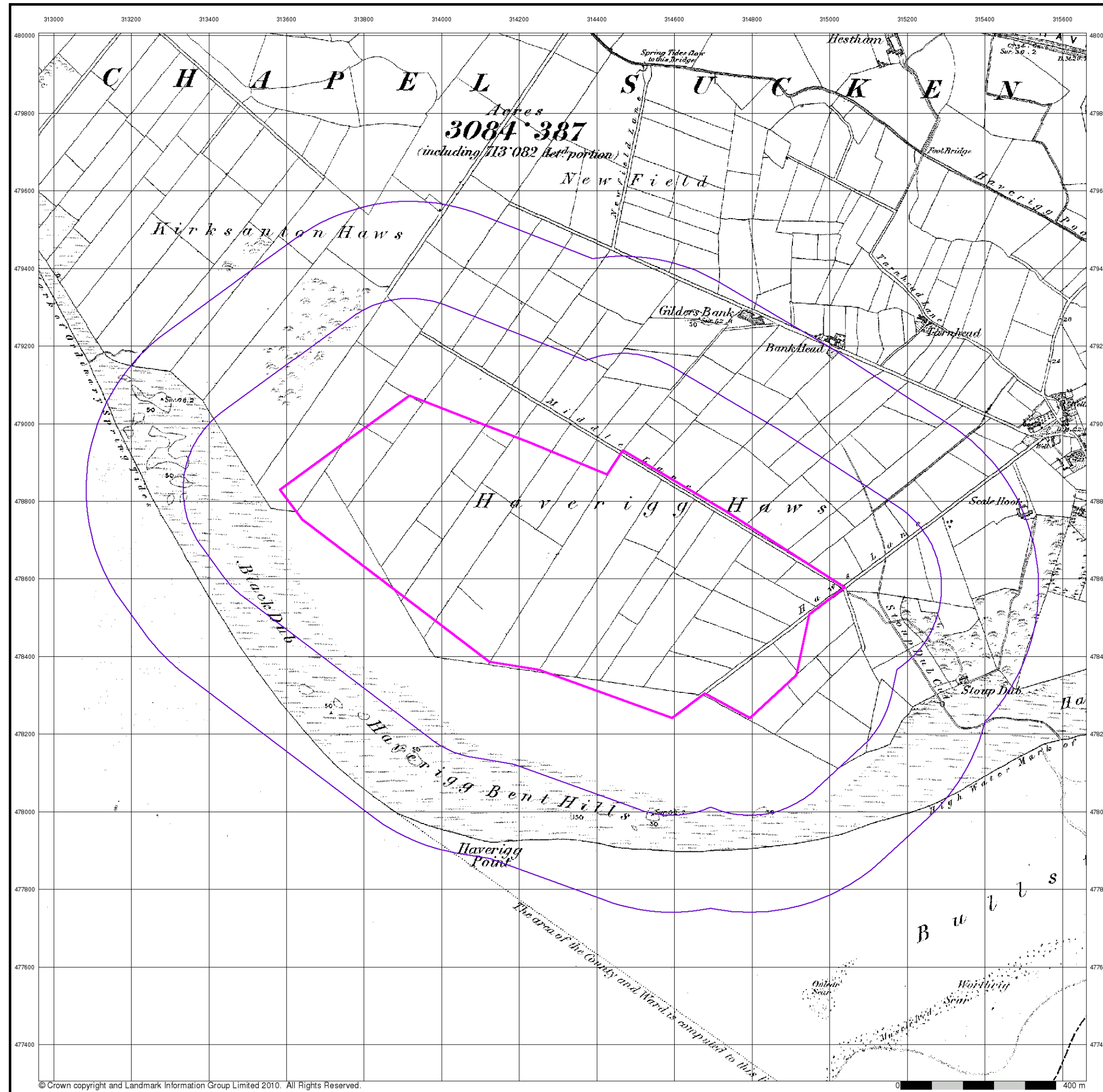
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 Site Area (Ha): 65.63
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Site Details

Site at, Haverigg Prison, Cumbria



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 Web: www.envirocheck.co.uk



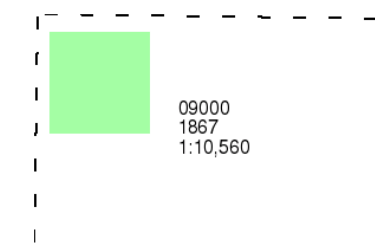
Cumberland

Published 1867

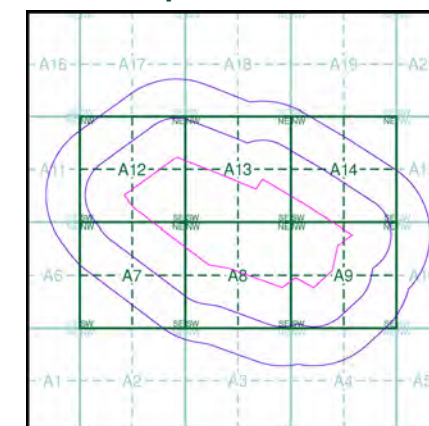
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Map Name(s) and Date(s)



Historical Map - Slice A



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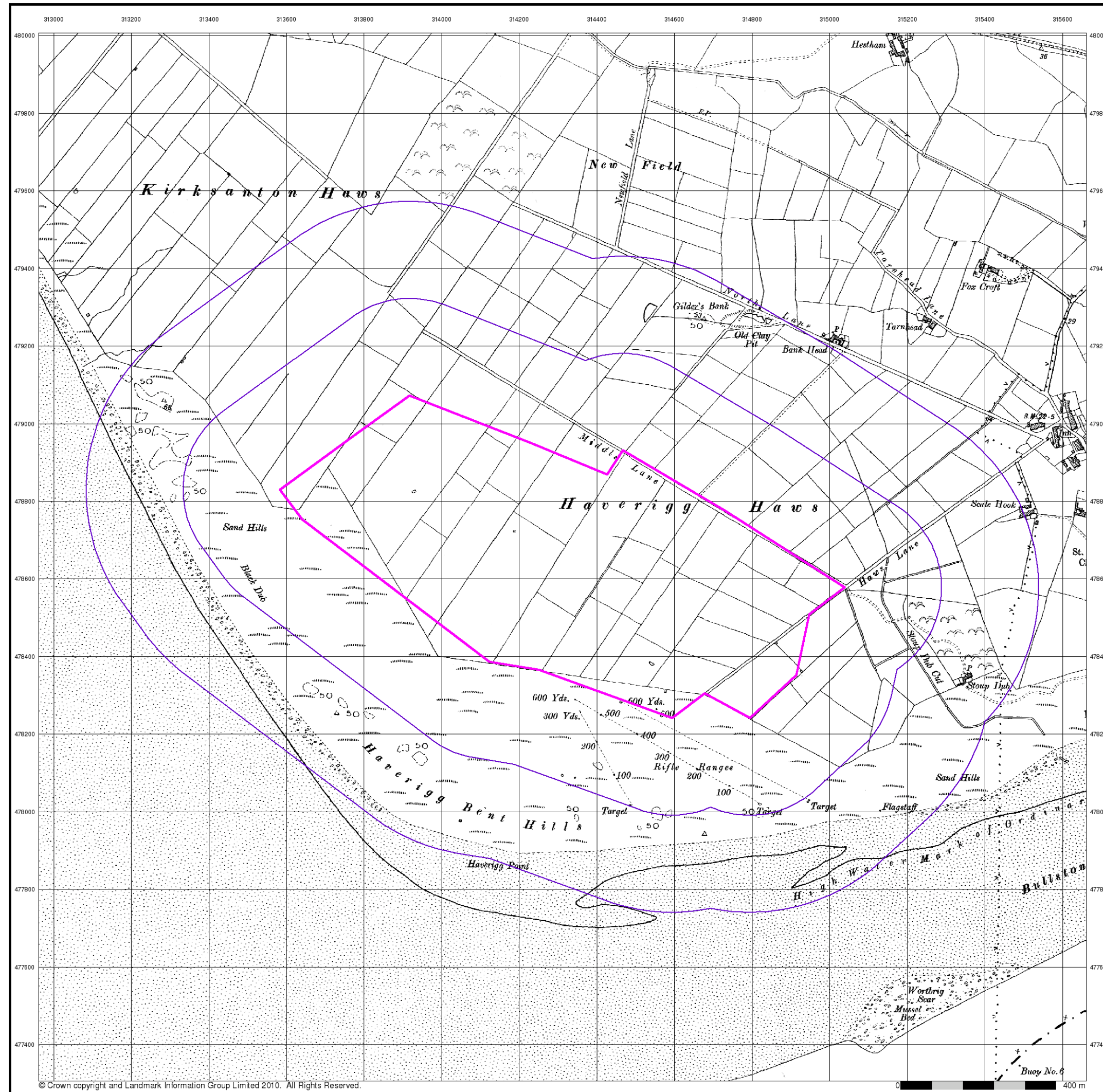
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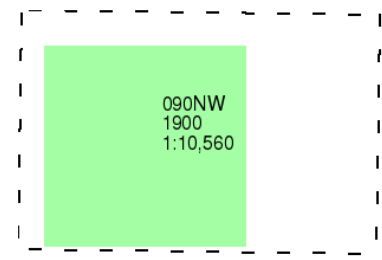
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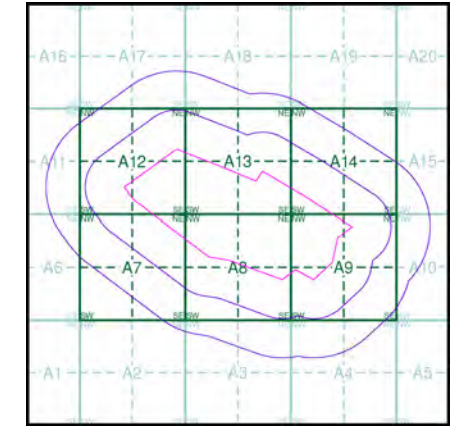
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Map Name(s) and Date(s)



Historical Map - Slice A



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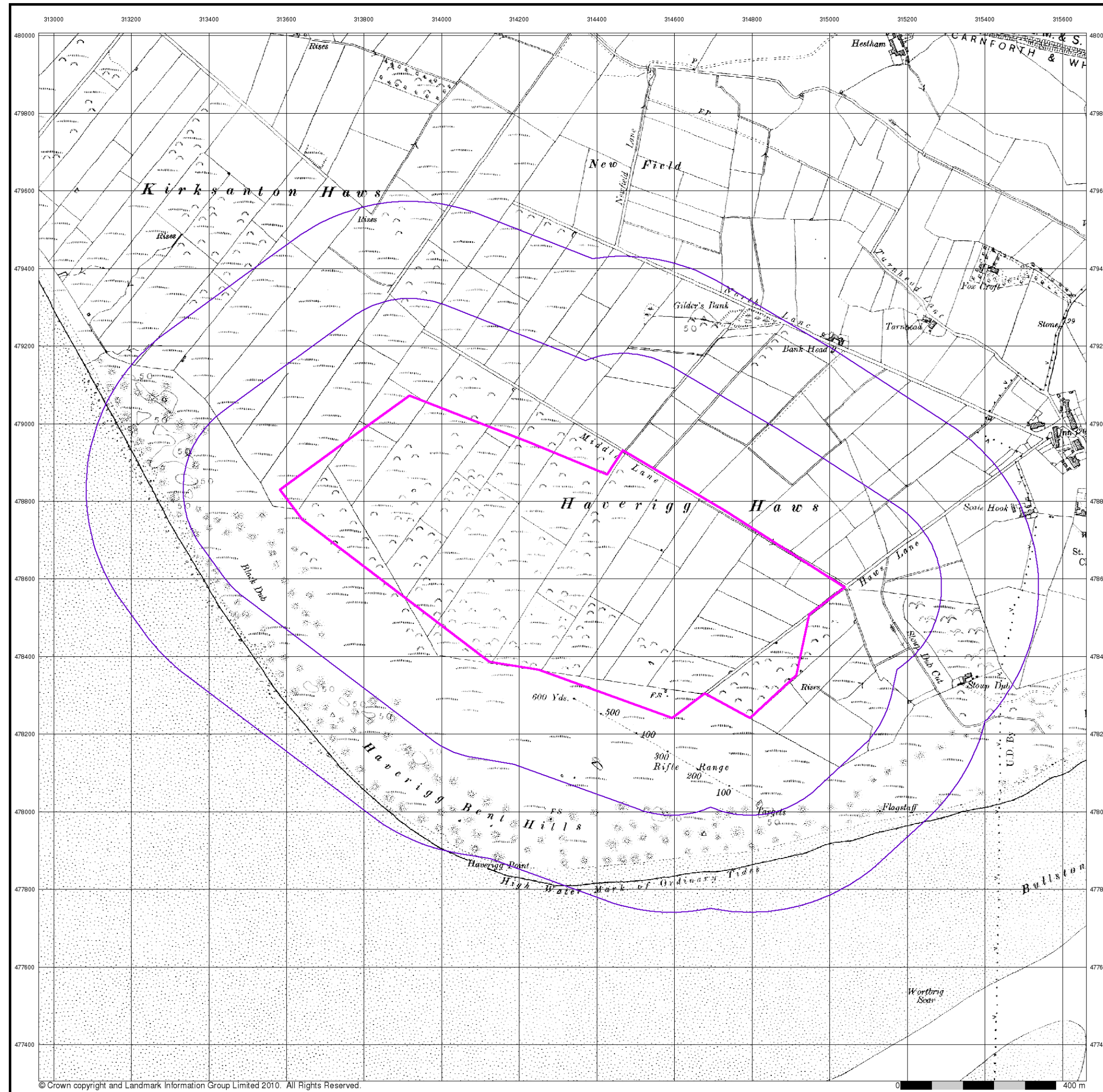
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Site Details

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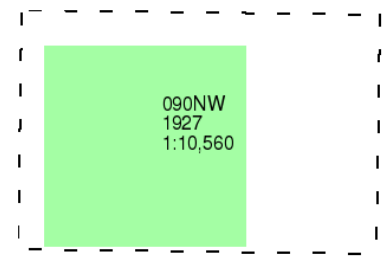
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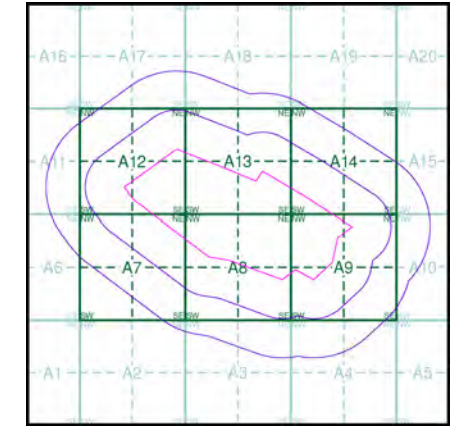
Cumberland
Published 1927
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

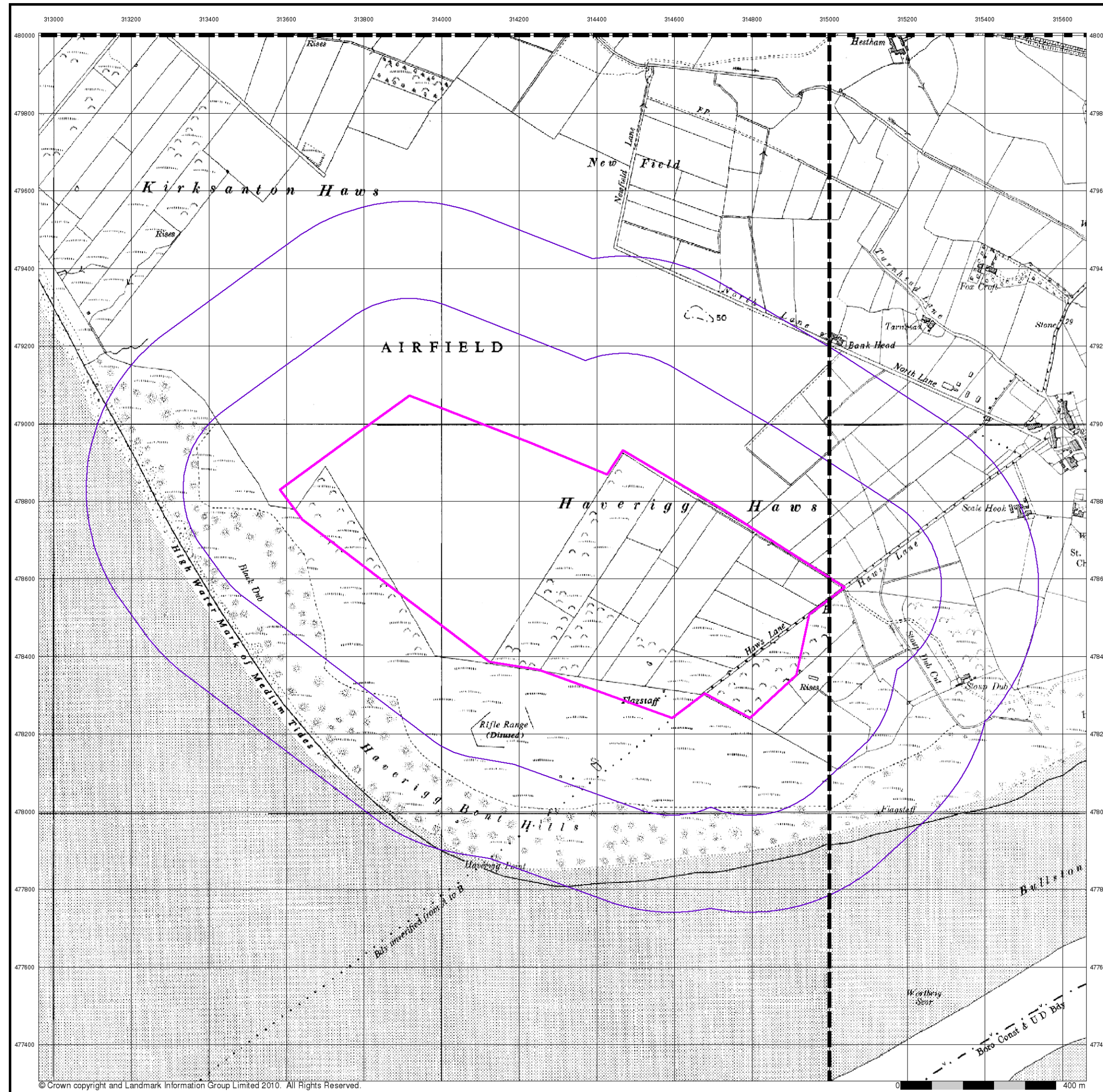
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 Slice: A
 Site Area (Ha): 65.63
 Search Buffer (m): 500

Site Details

Site at, Haverigg Prison, Cumbria



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Ordnance Survey Plan

Published 1956

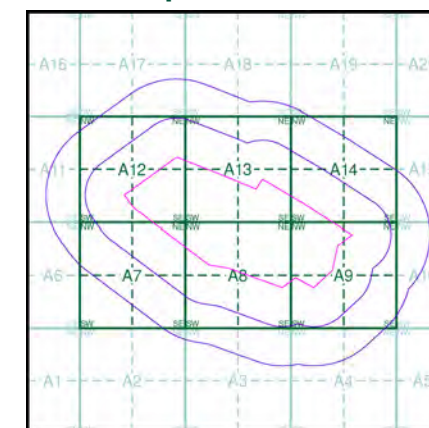
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Map Name(s) and Date(s)

SD18SW	SD18SE
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1:10,560	1:10,560
SD17NW	SD17NE
1956	1956
1:10,560	1:10,560

Historical Map - Slice A



Order Details

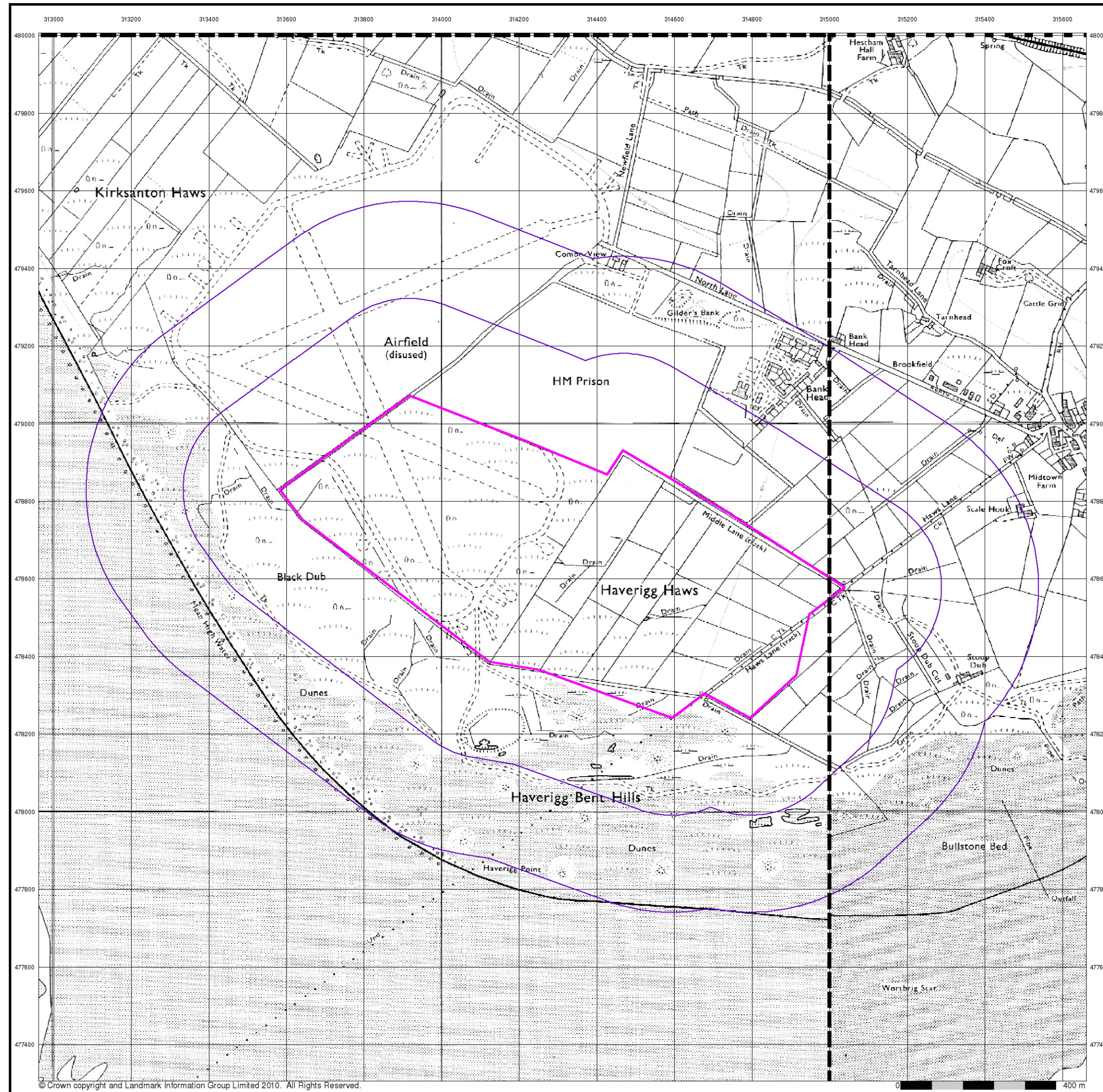
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 Search Buffer (m): 500

Site Details

Site at, Haverigg Prison, Cumbria



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Ordnance Survey Plan

Published 1973

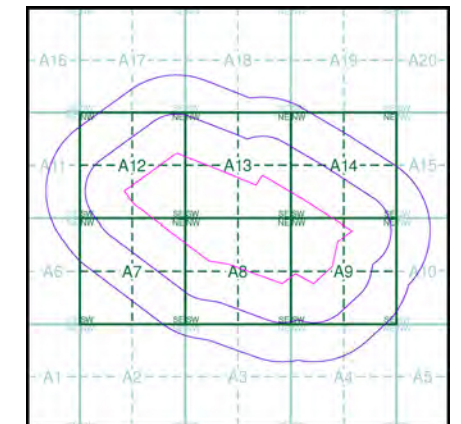
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840's. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940's, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

SD18SW	1973	1:10,560
SD17NW	1973	1:10,000
SD17NE	1973	1:10,000

Historical Map - Slice A



Order Details

Order Number: 30545526_1_1
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 National Grid Reference: 314320, 478650
 Slice: A
 Site Area (Ha): 65.63
 Search Buffer (m): 500

Site Details

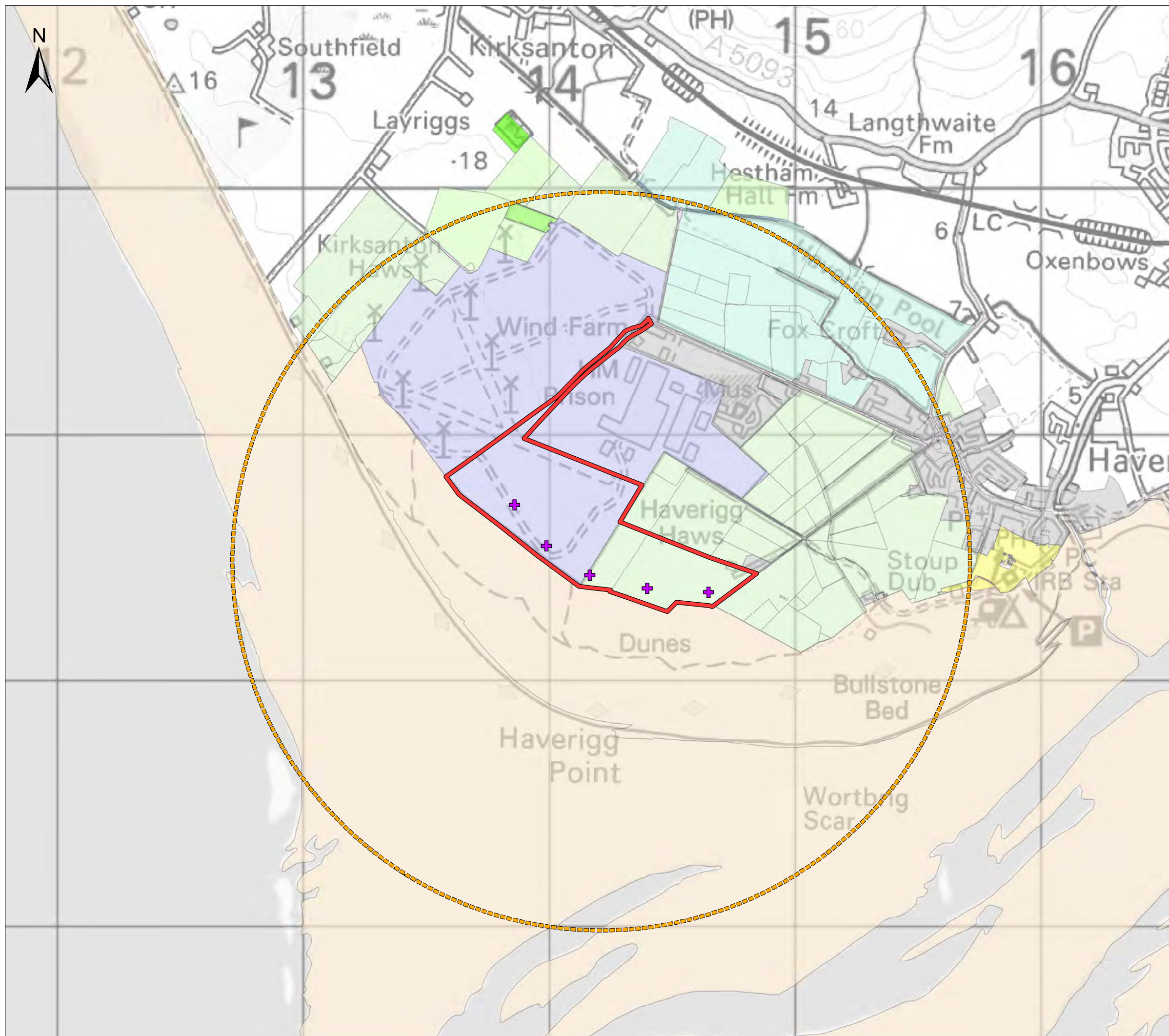
Site at, Haverigg Prison, Cumbria



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 Fax: 0844 844 9951
 Web: www.envirocheck.co.uk

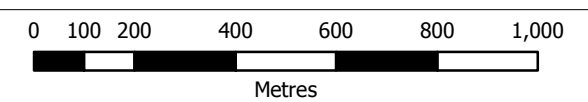


Appendix G – Historic Landscape Character



Legend

- Application Boundary
- 1500m Buffer Of Site Centre
- Turbine Locations
- Ancient Enclosure
- Built Environment
- Former Common Arable
- Planned Enclosure
- Recreation
- Roads
- Settlement
- Unenclosed Coast
- Water
- Woodland



PMC Created:	KRH Checked:	February 2012 Date:	V4 Version:
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Sheet Size: **A3** Scale of Original: **1:15,000**

Client:  PARTNERSHIPS FOR RENEWABLES
A CARBON TRUST ENTERPRISE

Project: HMP Haverigg
Wind Energy Development

Title: Historic Landscape
Character

Office: 4154	Project No: A043494-14	Figure No: 4
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Appendix H – Report Conditions





Archaeology and Heritage Desk-Based Baseline Assessment, HMP Haverigg Wind Energy Development

This report is produced solely for the benefit of **Partnerships for Renewables** and no liability is accepted for any reliance placed on it by any other party unless specifically agreed in writing otherwise.

This report is prepared for the proposed uses stated in the report and should not be used in a different context without reference to WYG. In time improved practices, fresh information or amended legislation may necessitate a re-assessment. Opinions and information provided in this report are on the basis of WYG using due skill and care in the preparation of the report.

This report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times.

This report is limited to those aspects reported on, within the scope and limits agreed with the client under our appointment. It is necessarily restricted and no liability is accepted for any other aspect. It is based on the information sources indicated in the report. Some of the opinions are based on unconfirmed data and information and are presented as the best obtained within the scope for this report.

Reliance has been placed on the documents and information supplied to WYG by others but no independent verification of these has been made and no warranty is given on them. No liability is accepted or warranty given in relation to the performance, reliability, standing etc of any products, services, organisations or companies referred to in this report.

Whilst skill and care have been used, no investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather related conditions.

Although care is taken to select monitoring and survey periods that are typical of the environmental conditions being measured, within the overall reporting programme constraints, measured conditions may not be fully representative of the actual conditions. Any predictive or modelling work, undertaken as part of the commission will be subject to limitations including the representativeness of data used by the model and the assumptions inherent within the approach used. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions.

The potential influence of our assessment and report on other aspects of any development or future planning requires evaluation by other involved parties.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. WYG accept no liability for issues with performance arising from such factors

November 2008

WYG Environment Planning Transport Ltd