



Morven Hawthorn Pit Grid Connection Project

Preliminary Environmental Information Report

Volume 3, Annex 4.1: Onshore Archaeological
Desk-Based Assessment Report

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Glossary

Term	Meaning
AC connection cables	Alternating Current (AC) cables that will connect the proposed onshore land substation to the National Grid Hawthorn Pit Substation.
Desk study	A desk-based research method used to collect and analyse existing information, including the review of literature, previous survey reports, databases and maps to inform the baseline environment and the need for further surveys.
Designated Heritage Asset	Heritage assets designated nationally under the relevant legislation. Planning Practice Guidance paragraph 022 identifies designated heritage assets as including scheduled monuments, listed buildings, registered parks and gardens, registered battlefields, world heritage sites, conservation areas and protected wreck sites.
Desk-Based Assessment	Desk-based assessment is a programme of study of the historic environment within a specified area or site on land, in the inter-tidal zone or underwater that addresses agreed research and/or conservation objectives. It consists of an analysis of existing written, graphic, photographic and electronic information in order to identify the likely heritage assets, their interests and significance; the character of the study area, including appropriate consideration of the settings of heritage assets; and, in England, the nature, extent and quality of the known or potential archaeological, historic, architectural and artistic interest. Significance is to be judged in a local, regional, national or international context as appropriate (ClfA 2020a).
Development Consent Order (DCO)	An order made under the Planning Act 2008, as amended, granting development consent.
Environmental Impact Assessment (EIA)	The process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.
Field survey	The direct on-site observation and collection of environmental data, through sampling and recording, undertaken within the Study Area.
Geoarchaeological potential	Some deep natural or semi-natural deposits have the capacity to preserve deeply buried archaeological or environmental material, including organic materials that are rarely preserved. Such deposits can be said to have high geoarchaeological potential.
High Voltage Direct Current (HVDC)	A HVDC electric power transmission system uses direct current for electric power transmission, in contrast to the more common alternating current systems. Most HVDC links use voltages between 100 kilovolts (kV) and 800kV.
High Voltage Alternating Current (HVAC)	A HVAC electric power transmission system uses alternating current for electric power transmission that periodically reverses direction at regular intervals.
Landfall	The area in which the offshore export cables make landfall (come onshore) and the transitional area between the offshore cabling and the onshore cabling. This term applies to the entire landfall area between the trenchless technique exit pits and the transition joint bay inclusive of all construction works.
LiDAR	A remote sensing method used to generate accurate three dimensional data about the earth surface.

Term	Meaning
Marine Directorate Licensing Operations Team (MD-LOT)	The part of the Scottish Government's Marine Directorate responsible for assessing and administering applications for marine licences and Section 36 consent (offshore) in Scotland.
Marine Management Organisation (MMO)	The MMO, as a UK government body, is responsible for licensing, regulating and overseeing activities in the marine environment for English waters. For a Development Consent Order (DCO) and deemed marine licence, the MMO acts as a statutory consultee, advising on marine planning, environmental impacts, habitats and compliance with marine licensing regulations.
Mean High Water Springs (MHWS)	The most inshore level location reached by the sea at high tide during mean high water spring tide. This is defined as the average throughout the year, of two successive high waters, during a 24-hour period in each month when the range of the tide is at its greatest.
Mean Low Water Springs (MLWS)	The average height of the low water levels of each pair of successive low waters during the periods of about 24 hours when the tidal range is at its greatest.
MHPGC PEIR Red Line Boundary: Onshore	Spatial extent used to define the environmental assessment within the PEIR. The area within which all onshore components of the MHPGC Project will be located landward of MHWS, including areas required on a temporary basis during construction and/or decommissioning (e.g. construction compounds).
MHPGC Project Environmental Statement (ES)	The document presenting the results of the Environmental Impact Assessment process.
MHPGC Project Preliminary Environmental Information Report (PEIR)	A report that provides preliminary environmental information in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. This is information that enables consultees to understand the likely significant environmental effects of a project and which helps to inform consultation responses.
MHPGC Project Scoping Boundary	The spatial extent of the area used to define the environmental baseline to inform impact assessments at the time the MHPGC Project Scoping Report was submitted.
MHPGC Project Scoping Opinions	Separate scoping opinions received from PINS (Planning Inspectorate) (on behalf of the Secretary of State) and Marine Directorate – Licencing Operations Team (MD-LOT) (on behalf of the Scottish Ministers) in response to the MHPGC Project Scoping Report. The MHPGC Project Scoping Opinions contain the range of issues that PINS, and MD-LOT in consultation with statutory stakeholders, have identified should be considered within the EIA process.
MHPGC Project Scoping Report	A Scoping Report for the MHPGC Project, scoping the likely significant effects of the project on the environment, was submitted and accepted by Planning Inspectorate (PINS) and submitted to the Scottish Ministers, via the Marine Directorate – Licencing Operations Team (MD-LOT) in February 2025.
Morven Hawthorn Pit Grid Connection Project	The MHPGC Project is comprised of the offshore export cables in Scottish and English waters from the Morven North or the Morven South offshore substation platform(s) (OSP), landfall, onshore export cables, the onshore land substation (LSS) and AC connection cables. Also referred to in this report as the MHPGC Project, for ease of reading.

Term	Meaning
Non-designated heritage asset	A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. It includes assets identified by the local planning authority (including local listing).
Offshore substation platform(s) (OSP)	OSP(s) comprise the support structure, topside and electrical components used for collecting they generated by the wind turbine generators, in Scottish waters, for the passage or transmission to landfall. These OSP(s) can be divided into two types: - HVAC collector substations; - HVDC converter substations.
Onshore Archaeology and Cultural Heritage Extended Study Area - Green LSS Option Area	The Green LSS Option Area buffered to 3km used to assess potential impacts on heritage assets due to setting change and are centred on the areas of proposed above-ground infrastructure, as the presence of this will constitute a new, and potentially significant, element in the visual environment.
Onshore Archaeology and Cultural Heritage Extended Study Area - Blue LSS Option Area	The Blue LSS Option Area buffered to 3km used to assess potential impacts on heritage assets due to setting change and are centred on the areas of proposed above-ground infrastructure, as the presence of this will constitute a new, and potentially significant, element in the visual environment.
Onshore Archaeology and Cultural Heritage Study Area	The MHPGC PEIR Red Line Boundary: Onshore plus a buffer of 1km and bounded at Mean Low Water Spring (MLWS) on the seaward side, used to undertake the main baseline analysis.
Onshore export cables	HVDC cables which bring electricity from the TJB to the onshore land substation.
Onshore land substation (LSS)	A purpose-built site comprising a compound containing the electrical components for converting the HVDC to HVAC power. The LSS site associated with the MHPGC Project adjusts the power quality and power factor to meet the requirements of power supply being fed to the National Grid Hawthorn Pit Substation.
Planning Inspectorate (PINS)	The PINS is an executive agency of the UK Government responsible for administering and examining DCO applications for Nationally Significant Infrastructure Projects (NSIPs) in England. PINS manages the application process, oversees consultation and examination, and makes a recommendation to the relevant Secretary of State on whether consent should be granted.
the Study Area	For each environmental topic, the baseline environment will be characterised, and the likely significant effect will be described within a topic-specific Study Area. Specific Study Areas are defined for each topic and are based on the maximum spatial extent across which likely significant effects of the MHPGC Project may be experienced by the relevant receptors (i.e. Zone of Influence (Zoi)).
Survey Area	The area within which field surveys for the environmental topic are undertaken. This would include all areas for which impacts from the MHPGC Project may occur on relevant receptors.

Acronyms

Acronym	Meaning
AD	Anno Domini
BC	Before Christ
c.	Approximately
CHL	Chain Home Low
CIfA	Chartered Institute for Archaeologists
DBA	Desk-Based Assessment
DCC	Durham County Council
DCCAS	Durham County Council Archaeology Service
Defra	Department for Environment, Food & Rural Affairs
DTM	Digital Terrain Model
EA	Environment Agency
ES	Environmental Statement
FISH	Forum on Information Standards in Heritage
GIS	Geographic Information System
HE	Historic England
HER	Historic Environment Record
HLC	Historic Landscape Characterisation
KYA	Thousand (kilo) Years Ago
LiDAR	Light Detection and Ranging
LRM	Local Relief Modelling
LSS	Onshore land substation
MHPGC	Morven Hawthorn Pit Grid Connection
MLWS	Mean Low Water Springs
NERRF	North East Regional Research Framework
NHLE	National Heritage List for England
NMP	National Mapping Programme
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
QGIS	Quantum Geographic Information System

Units

Unit	Meaning
km	Kilometres
m	Metres
mAOD	Metres Above Ordnance Datum

1 Introduction

1.1 Overview

- 1.1.1.1 This report presents the Onshore Archaeology and Cultural Heritage Desk-Based Assessment (DBA) for the Morven Hawthorn Pit Grid Connection Project (hereafter 'the MHPGC Project'). It forms **Volume 3, Annex 4.1: Onshore Archaeological Desk-Based Assessment Report, of the Preliminary Environmental Information Report (PEIR)** prepared for the MHPGC Project and supports **Volume 3, Chapter 4: Onshore Archaeology and Cultural Heritage, of the PEIR**.
- 1.1.1.2 This report presents the baseline information on the onshore archaeology and cultural heritage for the MHPGC Project. The purpose of the report is to establish the cultural heritage and archaeological context of the MHPGC Project and to identify heritage assets that may be affected through direct physical disturbance; and to inform the potential for as-yet unknown archaeological remains within the MHPGC PEIR Red Line Boundary: Onshore. The report also characterises designated heritage assets within a series of study areas used to inform the assessment. These comprise the Onshore Archaeology and Cultural Heritage Study Area, consisting of the MHPGC PEIR Red Line Boundary: Onshore buffered by 1km, and Onshore Archaeology and Cultural Heritage Extended Study Area – Green LSS Option Area and Onshore Archaeology and Cultural Heritage Extended Study Area – Blue LSS Option Area comprising the Green and Blue LSS Option Areas buffered by 3km respectively. The Onshore Archaeology and Cultural Heritage Study Area has been used to establish the archaeological and cultural heritage baseline and identify potential direct effects, while the Extended Study Areas have been used to inform the assessment of potential effects arising from changes to the setting of heritage assets associated with the proposed substation sites. Further detail on the Study Areas used in this report can be found in **Section 2.2**. The report presented is informed by the following technical chapter: **Volume 1, Chapter 2: Project Description, of the PEIR**.
- 1.1.1.3 The report also draws on information contained within the following annex:
- **Volume 3, Annex 4.2: Onshore Archaeology and Cultural Heritage Gazetteer, of the PEIR.**
- 1.1.1.4 The MHPGC Project is located in County Durham and comprises the offshore export cable, the onshore export cable and the onshore land substation (LSS) and is centred on National Grid Reference NZ 41255 46043.

1.2 Aims and Objectives

- 1.2.1.1 The aim of this Desk-Based Assessment is to identify, characterise and assess the known and potential heritage resource within the MHPGC PEIR Red Line Boundary: Onshore and its Study Area.
- 1.2.1.2 The specific objectives of this assessment are to:
- identify designated and non-designated heritage assets within the MHPGC PEIR Red Line Boundary: Onshore, including the landfall, onshore export cable and AC connection cable corridor, onshore land substation (LSS) areas (Green and Blue Option Areas), construction compounds, accesses and temporary works; the Onshore Archaeology and Cultural Heritage Study Area; the Onshore Archaeology and Cultural Heritage Extended Study Area – Green LSS Option Area and the Onshore Archaeology and Cultural Heritage Extended Study Area – Blue LSS Option Area (see **Section 2.2**);
 - characterise the archaeological, historical and landscape resource of the MHPGC PEIR Red Line Boundary: Onshore based on a review of available desk-based sources;
 - assess the archaeological potential of the MHPGC PEIR Red Line Boundary: Onshore for previously unrecorded heritage assets;
 - assess the heritage significance/value of identified and potential heritage assets in accordance with relevant national policy and guidance.
- 1.2.1.3 In line with the North East Regional Research Framework (NERRF 2.0), the following research themes are relevant to this report:
- Palaeolithic and Mesolithic agenda;
 - How can we find out more about the early post-glacial coastline?

- How can we better understand the dating and chronology of the region in the Palaeolithic and Mesolithic periods?
- What do we know about the scale, distribution and character of occupation in the region?
- Neolithic and Early Bronze Age Agenda;
 - What do we know about the Mesolithic–Neolithic transition in the region?
 - How can we better understand the chronology of prehistoric rock-art?
 - How can we better understand the spatial context of prehistoric rock-art?
 - How can prehistoric rock art be best conserved and managed for future generations?
 - How can we better understand the relationship between rock art and associated prehistoric monuments and landscapes?
- Late Bronze Age and Iron Age Agenda;
 - How can we better understand the chronology of the Late Bronze Age and Iron Age in the Northeast?
 - What is the nature and character of settlement and land use during the Late Bronze Age and Iron Age?
 - How does the structure and organisation of agricultural landscapes develop during this period?
 - What evidence is there for regional variation in settlement, economy, and material culture?
- Roman Agenda;
 - How can we better understand the transition from the Iron Age to the Roman period in NE England?
 - What is the nature and character of indigenous rural settlement and land use during the Roman period?
 - How does the rural settlement pattern and agricultural landscape develop during the Romano-British period?
- Early Medieval Agenda;
 - What is the nature and extent of settlement in the early medieval period?
 - How can archaeological evidence be better integrated with documentary and historical sources?
 - What is the nature of transition from the Roman to early medieval landscape?
 - How can we better understand the development of early medieval identities and polities?
- Medieval Agenda;
 - How do rural settlement patterns and village morphologies develop during the medieval period?
 - What is the nature and organisation of medieval agrarian systems?
 - How are medieval landscapes structured and managed?
 - What is the relationship between settlement, economy, and ecclesiastical institutions?
- Post-Medieval Agenda;
 - How can we better understand patterns of consumption in the post-medieval period?
 - How can we better understand the creation and maintenance of social identities in the post-medieval period?

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- How can archaeological evidence be used to explore industrialisation and economic change in the region?
 - How can rural and urban material culture be better integrated with documentary sources?
 - 20th-century Agenda.
 - What can archaeology tell us about the changes in agriculture in the 20th-century?
 - What can archaeology tell us about the emergence of large-scale forestry in the 20th-century?
 - Is it possible to recognise the archaeological impact of the Great Depression of the late 1920s and 1930s?

2 Methodology

- 2.1.1.1 This Desk-Based Assessment has been prepared in accordance with the following professional and local authority guidance:
- Chartered Institute for Archaeologists (CIfA) (2020) Standard and guidance for historic environment desk-based assessment. Reading: CIfA;
 - CIfA (2022). Code of conduct. Reading: CIfA;
 - CIfA (2020). Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment. Reading: CIfA;
 - Historic England (HE) (2015). Managing Significance in Decision-Taking in the Historic Environment: Historic Environment Good Practice Advice in Planning 2. Swindon: Historic England;
 - HE (2017). The Setting of Heritage Assets: Historic Environment Good Practice Advice in Planning 3 (Second Edition). Swindon: Historic England;
 - HE (2019). Statements of Heritage Significance: Analysing Significance in Heritage Assets. Historic England Advice Note 12. Swindon: Historic England;
 - Durham County Council Archaeology Section (DCCAS) guidance for the submission of archaeological reports and use of the Durham County Council (DCC) Historic Environment Record (HER).
- 2.1.1.2 The assessment has been undertaken by suitably qualified archaeologists working to the CIfA Code of Conduct (CIfA, 2022) and Standard and guidance for historic environment desk-based assessment (CIfA, 2020a). Consultation with DCC as the local planning authority archaeological advisor has informed the scope of the Study Areas, data sources consulted and reporting requirements.

2.2 Study areas

- 2.2.1.1 The Study Areas relevant to onshore archaeology and cultural heritage have been reviewed and amended to reflect the reduction of the area under consideration from the MHPGC Project Scoping Boundary to the MHPGC PEIR Red Line Boundary: Onshore, as route selection and design have progressed. The Study Areas have been agreed with HE and DCC.
- 2.2.1.2 This report utilises a set of bespoke Study Areas to compile and analyse the data. The first, the Onshore Archaeology and Cultural Heritage Study Area (hereafter '1km Study Area'), comprises the MHPGC PEIR Red Line Boundary: Onshore buffered to 1km and bounded at Mean Low Water Spring (MLWS) on the seaward side. The 1km Study Area has been used to undertake the main baseline analysis, enabling the historic environment to be understood and ensuring that any recorded heritage assets that could potentially be impacted by the MHPGC Project are identified. It has also allowed for the inclusion of assets that may be recorded outside the MHPGC PEIR Red Line Boundary: Onshore but may extend into it; and provides a robust basis for assessing the potential for unrecorded archaeology.
- 2.2.1.3 The second and third Study Areas, referred to as the Onshore Archaeology and Cultural Heritage Extended Study Area - Green LSS Option Area and the Onshore Archaeology and Cultural Heritage Extended Study Area - Blue LSS Option Area, comprise the Green LSS Option Area and the Blue LSS Option Area, buffered to 3km respectively (hereafter referred to as the 'Extended Study Area - Green' and 'Extended Study Area - Blue' or collectively 'the Extended Study Areas'). The Extended Study Areas are used to assess potential impacts on heritage assets due to setting change and are centred on the Green LSS Option Area and the Blue LSS Option Area,, as the presence of the LSS will constitute a new, and potentially significant, element in the visual environment. Impacts from the MHPGC Project through change to setting have been addressed in **Volume 3, Chapter 4: Onshore Archaeology and Cultural Heritage, of the PEIR**. For the purpose of this report, the extended Study Areas have been used to add further historical and archaeological context to the baseline where relevant.
- 2.2.1.4 The 1km Study Area and the Extended Study Areas are shown on **Figure 2.1** and **Figure 2.2**.

2.3 Data sources

2.3.1.1 The baseline study that provides an overview of the historic environment described in this report is based on the following:

- consultation of the DCC HER;
- consultation of the National Heritage List for England (NHLE) (Historic England, 2026);
- historical map regression using historical map sources covering the 1km Study Area, to identify changes in the historic landscape (National Library of Scotland, 2026; Durham County Council, 2026);
- review of relevant geological data (British Geological Survey, 2026);
- review of Environment Agency (EA) Light Detection and Ranging (LiDAR) data (Environment Agency, 2025);
- review of historic aerial photography and readily available satellite imagery, including Google Earth (Google, 2024), Historic England aerial imagery (Historic England, no date a; Historic England, no date b), Britain from Above (Aerofilms Ltd, 2024), and datasets accessed via the DCC HER (DCC, 2024);
- historic tithe mapping dating from the c.1840s and forming the earliest detailed map source reviewed as part of the assessment, accessed via The Genealogist online database (The Genealogist, 2026);
- mining Remediation Authority online map viewer (Mining Remediation Authority, 2026), used to identify areas of former opencast working within the East Durham coalfield.
- National Trust Open Data dataset (National Trust, 2026);
- review of sources held with the Durham HER (accessed in person) (Durham County Council, 2026);
- readily available published sources including archaeological grey literature, Historic Environment Record source material, local histories and relevant academic publications relating to the MHPGC PEIR Red Line Boundary: Onshore ,1km Study Area and the Extended Study Areas.
- Field survey (WSP, 2026).

2.3.1.2 A visit to the DCC HER was undertaken on 29 July 2026 to inspect non-digital records and gather additional sources not accessible remotely.

2.3.1.3 The scope and coverage of each dataset have been targeted to the relevant Study Areas (the MHPGC PEIR Red Line Boundary: Onshore, 1km Study Area, and Extended Study Areas for the Green and Blue LSS Option Areas), rather than applied uniformly across all Study Areas.

2.3.1.4 Engagement with the National Trust Open Data dataset has been undertaken as part of this assessment. This identified that the 1km Study Area intersects with the National Trust 'Durham Coast' property, comprising a discontinuous stretch of coastal land between Seaham and Horden, including Blast Beach, Hawthorn Dene, Beacon Hill and Limekiln Gill. No direct or significant effects on the National Trust asset are anticipated as a result of the MHPGC Project; however, the asset has been recorded as part of the baseline to ensure consistency with the consulted dataset.

2.4 Determining archaeological potential

2.4.1.1 Archaeological potential is assessed with reference to factors such as the distribution of known archaeology, topography and previous land use or ground disturbance within the MHPGC PEIR Red Line Boundary: Onshore and the Study Areas. **Table 2.1** shows the criteria used to assess archaeological potential within the MHPGC PEIR Red Line Boundary: Onshore.

Table 2.1: Criteria for assessing archaeological potential

Potential	Rationale
High	Presence of heritage assets has been established or can confidently be inferred on the basis of previous investigations or visibly surviving material.
Moderate	Presence of heritage assets likely due to finds or features identified within the immediate vicinity.

Potential	Rationale
Low	No finds or features to suggest potential presence of archaeology though area is relatively undisturbed; or presence of archaeology has likely been reduced due to previous disturbance (for example intensive arable farming).
Negligible	Presence of archaeology demonstrably unlikely as a result of extensive previous disturbance (for example quarrying).

2.4.1.2 It is important to note that an assessment of low potential entails that a potential for archaeological remains to be present exists, but that there is no evidence to directly suggest the presence or nature of those remains. High and moderate potential reflects the existence of evidence which suggests, indicates or confirms the presence of archaeological remains.

2.5 LiDAR data analysis and interpretation

2.5.1.1 LiDAR is a method of determining three-dimensional points using laser scanning, a technology which accurately measures distance, based on a precise measurement of time, and combines these measures into a collection of coordinates facilitating the collection of very large quantities of high-precision measurements (HE, 2018; Opitz and Cowley 2013). This enables very detailed analysis of a single site, or data capture of entire landscapes (HE, 2018).

2.5.1.2 LiDAR data was downloaded in June 2026 from the Department for Environment, Food & Rural Affairs (Defra) website in the form of 1m resolution Digital Terrain Model (DTM) and Digital Surface Model (DSM). Data captured in 2021 and 2025 was procured to obtain the optimum conditions such as low vegetation levels for the purposes of identifying and mapping potential archaeological features. Individual tiles were merged to form a continuous LiDAR model across the MHPGC PEIR Red Line Boundary: Onshore. The merged LiDAR tiles were then processed in Quantum Geographic Information System (QGIS)© as multishade hillshade images and Local Relief Modelling (LRM) using the simple Local Relief Model tool within the Relief Visualisation Toolbox in QGIS©. LRM is effective for identifying archaeological features as it "filters out" terrain surfaces leaving otherwise discrete archaeological features and their relative elevation above or below the surrounding terrain (Kokalj et al., 2013: 103-104). Additionally, LiDAR intensity data from a 2021 DTM was analysed, which measures the intensity of the reflected pulse, translating the data into a series of tonal differences, resulting in an image which resembles an aerial photograph (HE 2018: 8-12).

2.5.1.3 Features of possible archaeological origin within the MHPGC PEIR Red Line Boundary: Onshore have been identified and recorded using a bespoke Geographic Information System (GIS) shapefile which enables the consistent recording of information. The conventions for each attribute in the shapefile are explained in **Table 2.2** below. The methodology for the transcription of archaeological features has been informed by HE guidance (2019) to retain consistency and represents best practice.

Table 2.2: Criteria used for analysis of LiDAR imagery

Attribute	Description
ID	Unique identification number assigned to each feature
Physical character	Relates only to the physical, morphological characteristics of the feature
Interpretation	Assigning an archaeological term to the physical feature from those listed in the Forum on Information Standards in Heritage (FISH) thesaurus (FISH,2026)
Indicative date	Assigning an historical period to the feature based on factors such as supporting evidence, and morphological characteristics coupled with professional judgement.
Condition	A judgement on the condition of the possible archaeological feature, whether fully extant or extant but degraded.

2.6 Assessment of heritage significance

- 2.6.1.1 Heritage assets have been assigned a level of importance based on their designation status and professional judgement, informed by available data sources including the HER, NHLE, and published sources.
- 2.6.1.2 'Significance' in terms of heritage-related planning policy is defined as the value of a heritage asset to this and future generations because of its historic, archaeological, architectural, or artistic interest. Significance derives not only from a heritage asset's physical presence, but also from its setting, and is based on the following criteria:
- Historic interest - an interest derived from an asset's ability to illustrate or be associated with past lives and events (including pre-historic). Heritage assets with historic interest not only provide a material record of our nation's history but can also provide meaning for communities derived from their collective experience of a place and can symbolise wider values such as faith and cultural identity.
 - Archaeological interest - there will be archaeological interest in a heritage asset if it holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point.
 - Architectural and artistic interest - these are interests in the design and general aesthetics of a place. They can arise from conscious design or fortuitously from the way the heritage asset has evolved. More specifically, architectural interest is an interest in the art or science of the design, construction, craftsmanship and decoration of buildings and structures of all types. Artistic interest is an interest in other human creative skills, like sculpture.
- 2.6.1.3 Designated heritage assets are assigned value based on their statutory designation (e.g. Scheduled Monument, Listed Building), while the values of non-designated heritage assets are assessed based on their evidential, historical, architectural and archaeological interest. These criteria are described below in **Table 2.3**.

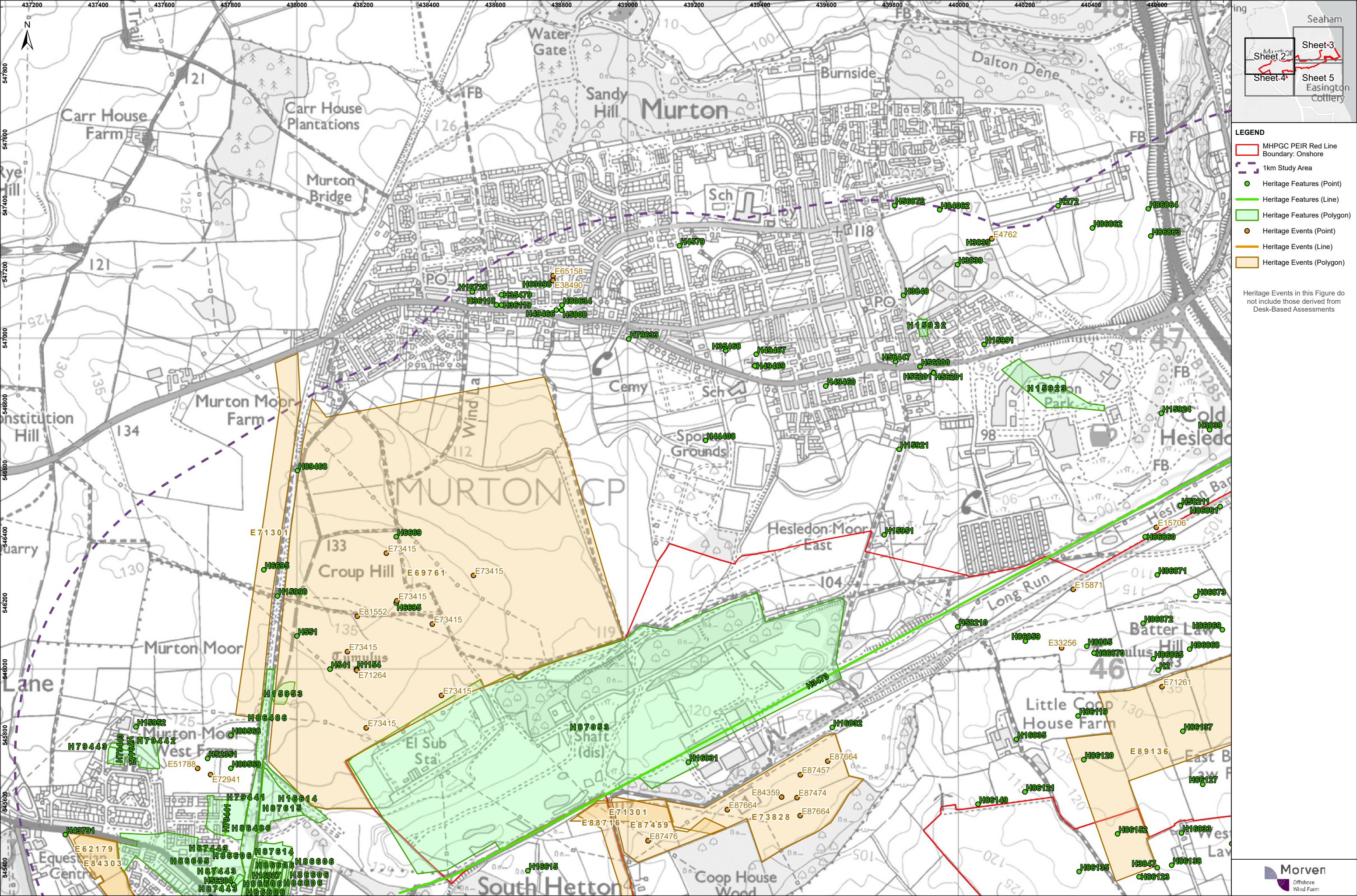
Table 2.3: Criteria for assessing archaeological significance/value

Significance /value	Criteria	Receptor Type
High	Assets of national importance, which have significance for an outstanding level of archaeological, architectural, historic and/or artistic interest.	Designated Heritage Assets, or non-designated heritage assets of demonstrable equivalence, of national importance.
Medium	Asset has significance for a high level of archaeological, architectural, historic and/or artistic interest.	Non-designated assets of regional importance.
Low	Assets of local interest, which have significance for elements of archaeological architectural, historic or artistic interest.	Non-designated assets of local importance.
Negligible	Due to its nature of form/condition/survival, cannot be considered as an asset in its own right.	Non-extant HER record.

2.7 Limitations of the assessment

- 2.7.1.1 This assessment is based on available data at the time of writing and does not incorporate the results of ongoing or future field investigations. In some cases, the absence of recorded evidence reflects the lack of previous development activity, rather than any necessary absence of archaeological remains. This baseline assessment sets out an understanding of the potential location, character and significance of archaeological remains within the MHPGC PEIR Red Line Boundary: Onshore, 1km Study Area and Extended Study Areas (Blue and Green LSS Option Areas); and considers the potential for archaeological remains which have not previously been recorded to be present within the MHPGC PEIR Red Line Boundary: Onshore.

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- 2.7.1.2 The data in the records supplied by the DCC HER is drawn from a variety of sources, which have variable precision and accuracy. Some records are based on recent professional archaeological investigations, which adhere to ClfA standards, while others are based on older records or are reliant on reporting by members of the public; the precision of these records cannot always be reliably assessed. Information on individual records is préciséd from the detailed description sheets provided by the DCC HER, supplemented by information gathered during the research for the report as appropriate. The consulted DCC HER therefore represents a collection of existing knowledge at the time of writing and is unlikely to be a complete record of all surviving heritage features.
- 2.7.1.3 An attempt has been made to consult all readily available documentary sources. However, it is always possible that there are additional documentary sources, for example, those held under obscure references, which have not been identified. Further survey work, including walkover survey and any geophysical investigation, may refine the baseline understanding in subsequent stages of the assessment.



Project Name:
MORVEN HAWTHORN PIT GRID
CONNECTION PROJECT

Drawing Title:
FIGURE 2.2 NON-DESIGNATED HERITAGE ASSETS
SHEET 2 OF 5

0 0.1 0.2 km
Scale@A3: 1:10,000

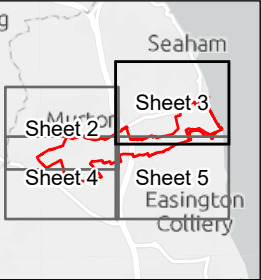
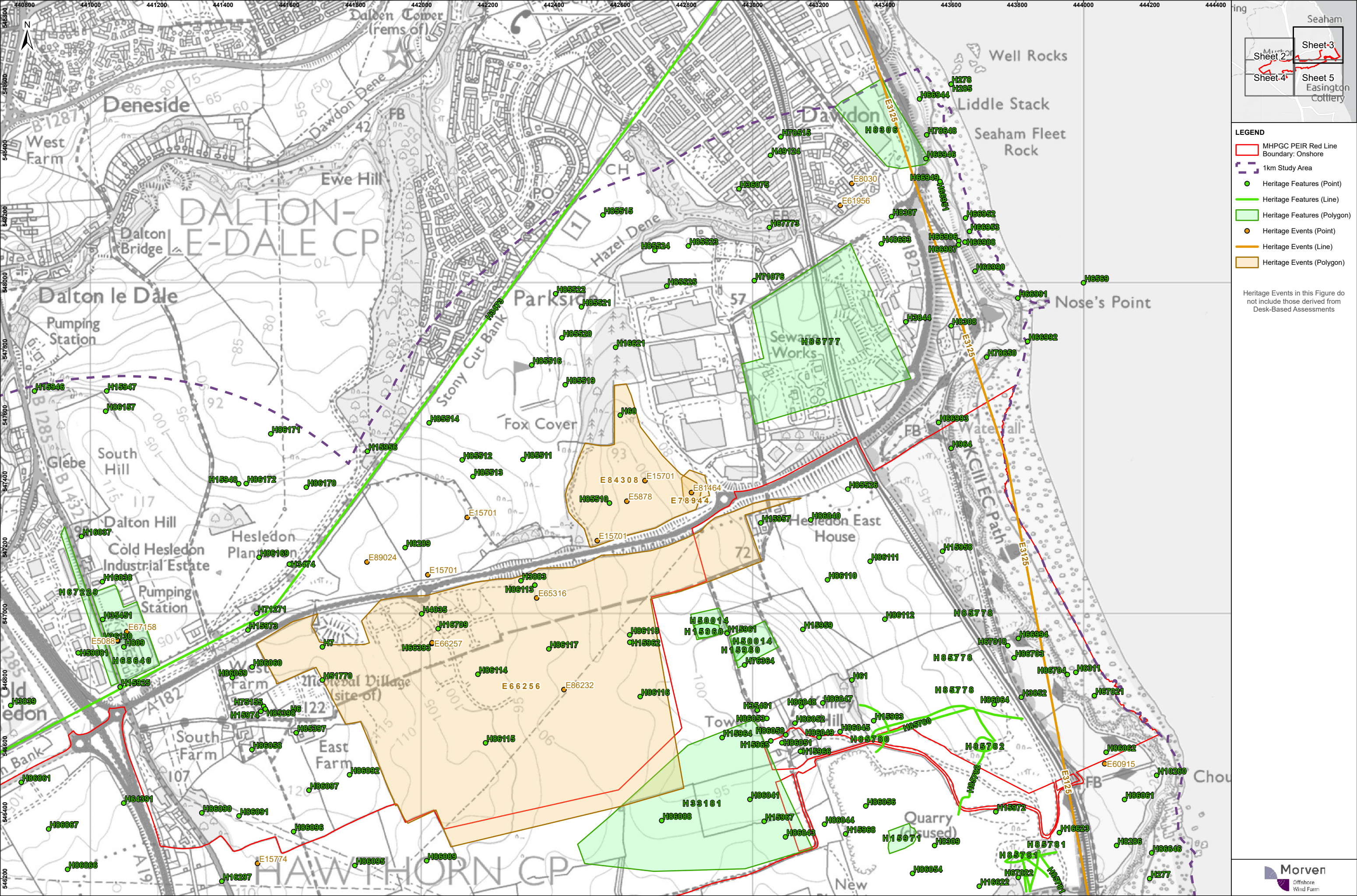
Geodetic Information:
Datum: OSGB 1936
Projection: British National Grid

Data Sources:
BP, Ordnance Survey, Historic England

Service Layer Credits:
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Drawing Number:
MHPGC-WSP-PEIR-033

VER	DATE	DETAILS	BY	CHECK
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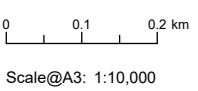


- LEGEND**
- MHPGC PEIR Red Line Boundary: Onshore
 - 1km Study Area
 - Heritage Features (Point)
 - Heritage Features (Line)
 - Heritage Features (Polygon)
 - Heritage Events (Point)
 - Heritage Events (Line)
 - Heritage Events (Polygon)

Heritage Events in this Figure do not include those derived from Desk-Based Assessments

Project Name:
MORVEN HAWTHORN PIT GRID CONNECTION PROJECT

Drawing Title:
FIGURE 2.2 NON-DESIGNATED HERITAGE ASSETS
SHEET 3 OF 5



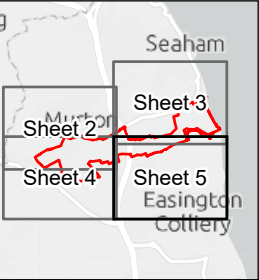
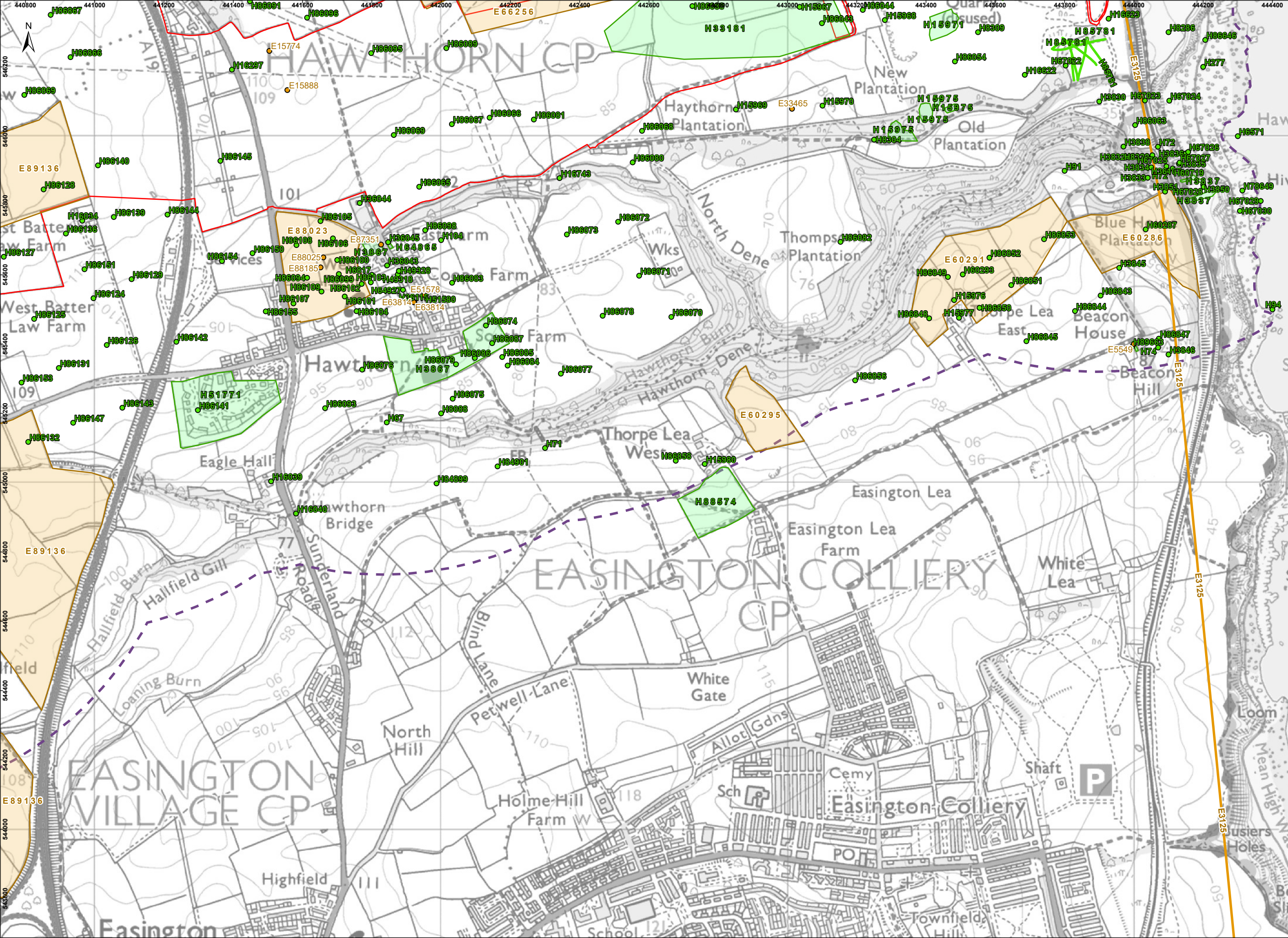
Geodetic Information:
Datum: OSGB 1936
Projection: British National Grid

Data Sources:
BP, Ordnance Survey, Historic England

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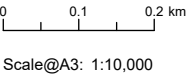


- LEGEND**
- MHPGC PEIR Red Line Boundary: Onshore
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Project Name:
MORVEN HAWTHORN PIT GRID CONNECTION PROJECT

Drawing Title:
FIGURE 2.2 NON-DESIGNATED HERITAGE ASSETS
SHEET 5 OF 5



Geodetic Information:
Datum: OSGB 1936
Projection: British National Grid

Data Sources:
BP, Ordnance Survey, Historic England

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Drawing Number:
MHPGC-WSP-PEIR-033

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3 Baseline characterisation

3.1 Field Survey

- 3.1.1.1 The Field Survey was undertaken to verify the condition and survival of known heritage assets, identify any previously unrecorded heritage assets visible at ground level, and inform understanding of the archaeological and historic character of the MHPGC PEIR Red Line Boundary: Onshore. The Field Survey was completed in dry weather conditions between 15 and 17 July 2026; and 21 July 2026. The majority of the MHPGC PEIR Red Line Boundary: Onshore was accessible, with generally flat ground conditions across much of the survey area. Visibility was locally reduced by crops and areas of overgrown vegetation. Survey conditions within the intertidal area were more challenging due to the presence of a shingle beach and uneven ground underfoot. One identified heritage asset was not visited during the survey as its precise location could not be confidently established and it was located beyond the accessible survey area. Overall, the survey was successfully completed, and no significant limitations were identified. The results of the Field Survey have helped to define the information presented in **Section 3.2** and will be incorporated into the following sections; and within **Volume 3, Chapter 4: Onshore Archaeology and Cultural Heritage**, as appropriate.
- 3.1.1.2 Additional field survey work, including geophysical survey or targeted investigation, will be undertaken following the submission of the PEIR and will be reported within the Environmental Statement (ES).

3.2 Site location, land use and environmental baseline

- 3.2.1.1 The MHPGC PEIR Red Line Boundary: Onshore is located in County Durham and extends across a predominantly rural and coastal landscape, comprising agricultural land, areas of industrial or commercial use, and limited settlement associated with farms and small villages. The MHPGC PEIR Red Line Boundary: Onshore is centred on National Grid Reference NZ 41255 46043.

3.2.2 Current land use

- 3.2.2.1 The majority of the land area within the MHPGC PEIR Red Line Boundary: Onshore is in agricultural use, mainly for arable, with more limited areas of pasture. Land uses of a more limited extent include areas of industrial/commercial use, concentrated towards the western end of the land within the MHPGC PEIR Red Line Boundary: Onshore. Settlement within the MHPGC PEIR Red Line Boundary: Onshore comprises occasional farms; with further examples within the 1km Study Area along with small villages.

3.2.3 Topography

- 3.2.3.1 The topography within the MHPGC PEIR Red Line Boundary: Onshore is varied, defined to the west by the undulating higher ground of East Durham Limestone Plateau and the steep scarp slopes, deeply incised by narrow, heavily wooded river valleys. To the east, the East Durham Limestone Plateau transitions to the coast. The highest point in the landscape is Batter Law (143 metres Above Ordnance Datum (mAOD)), but in general the altitude falls from approximately 115mAOD at the western end of the MHPGC PEIR Red Line Boundary: Onshore to approximately 40mAOD at the head of the cliffs at the eastern end of the MHPGC PEIR Red Line Boundary: Onshore. The landscape is notably open in nature, with few trees within the agricultural areas. The coastline in which the MHPGC PEIR Red Line Boundary: Onshore is located comprises a mixture of shallow bays and headlands, with limestone cliffs and sand or shingle beaches.

3.2.4 Geology and soils

- 3.2.4.1 Solid geology and superficial geology within the MHPGC PEIR Red Line Boundary: Onshore are depicted on Volume 3, Chapter 1 Geology, Hydrogeology and Ground Conditions Figure 1.4 and Figure 1.3 respectively. Further information, relating to soils and agricultural land is provided within Volume 3, Chapter 9: **Agriculture and Soils** and relating to geology, within **Volume 3, Chapter 1 Geology, Hydrogeology and Ground Conditions**.

Solid geology

- 3.2.4.2 The majority of the solid geology within the MHPGC PEIR Red Line Boundary: Onshore is the Ford Formation, a dolomite (magnesian limestone) dating to the later Permian. Towards the east of the MHPGC PEIR Red Line Boundary: Onshore, there are areas of the Roker Formation, another dolomite dating to the later Permian (BGS, 1995; Smith *et al.*, 1986).

Superficial geology

- 3.2.4.3 The majority of the MHPGC PEIR Red Line Boundary: Onshore is covered by glacial till dating from the Devensian (116 thousand years ago (KYA) to 12KYA). Glacial tills are generally highly variable in terms of their texture and lithology, though the largest component is commonly silt. There are small areas of glaciofluvial sands and gravels, dated to the Devensian (116KYA to 12KYA), deposited by the out washing of sands and gravels during periods of glacial retreat. There is a very limited number of narrow areas of alluvium at the western end of the MHPGC PEIR Red Line Boundary: Onshore. Areas of made ground are also present within the MHPGC PEIR Red Line Boundary: Onshore, associated with former industrial and mining activity (BGS, 2025).

Soils

- 3.2.4.4 The majority of soils within the MHPGC PEIR Red Line Boundary: Onshore are classified as Soilscape Type 5, consisting of freely draining lime-rich loamy soils. These loams are freely draining to the local limestone groundwater, classed as being lime-rich and having low carbon storage potential. Towards the western end of the MHPGC PEIR Red Line Boundary: Onshore, the soils change to Soilscape Type 6, classified as freely draining slightly acid loamy soils. These soils drain to local groundwater and rivers. The soils are described as having low fertility and low carbon storage potential (Cranfield University, 2025). Further information relating to soils and agricultural land is provided within **Volume 3, Chapter 9: Agriculture and Soils..**

Geoarchaeological potential

- 3.2.4.5 Review of the geological and soils information allows an assessment of the geoarchaeological potential of the MHPGC PEIR Red Line Boundary: Onshore to be undertaken. The most common form of geoarchaeological potential is the presence of deep sedimentary sequences with the capacity to preserve organic matter, such as peat deposits, or organic archaeological materials such as wooden or leather artefacts. These typically occur within deep alluvial sequences where waterlogged conditions exclude oxygen and support the preservation of organic remains.
- 3.2.4.6 As noted above, within the MHPGC PEIR Red Line Boundary: Onshore there are very limited areas of alluvial deposits, and these are generally narrow, implying that they are also likely to be relatively shallow. In addition, the soils within the MHPGC PEIR Red Line Boundary: Onshore are predominantly characterised as well drained, and the superficial geology is dominated by glacial till, which does not typically contain organic deposits. On this basis, the overall geoarchaeological potential is assessed as low, with localised potential for shallow alluvial sequences within the limited areas of alluvium identified above.

3.3 Desk study

3.3.1 Overview of past archaeological investigations

- 3.3.1.1 The DCC HER visit was undertaken on 29 July 2026. Relevant records provided by the DCC HER on 18 June 2026, pertaining to potential archaeology receptors within the MHPGC PEIR Red Line Boundary: Onshore were reviewed, and additional sources were identified to augment existing information on archaeology receptors. A search for information relating to past archaeological investigations was undertaken in July 2026 within the MHPGC PEIR Red Line Boundary: Onshore and 1km Study Area was also undertaken.
- 3.3.1.2 A number of archaeological survey and investigation events recorded on the DCC HER are located within the MHPGC PEIR Red Line Boundary: Onshore and 1km Study Area. These investigations were undertaken in support of a range of development proposals, including energy, residential and

infrastructure schemes. The results of those investigations are described in detail where relevant within **Section 3.3.3**, but in terms of archaeological fieldwork are summarised as the following:

- 23 geophysical magnetometer surveys, seven of which intersect the MHPGC PEIR Red Line Boundary: Onshore;
- 18 archaeological evaluations by trial trenching, four of which are located within the MHPGC PEIR Red Line Boundary: Onshore;
- Six archaeological watching briefs, of which two are located within the MHPGC PEIR Red Line Boundary: Onshore;
- Four archaeological excavations, three of which are located within the MHPGC PEIR Red Line Boundary: Onshore.

3.3.1.3 Additionally, a number of Desk-Based Assessments including aerial photograph analysis and building surveys have been undertaken within the MHPGC PEIR Red Line Boundary: Onshore and 1km Study Area.

3.3.1.4 The results available through Historic England's Aerial Archaeology Mapping Explorer (Historic England, no date a) have been incorporated into the DCC HER and will be discussed where appropriate in **Section 3.3.3**. In addition, the Historic England Aerial Photo Explorer website (Historic England, no date b) and Britain from Above (Historic England 2024) was consulted for additional aerial photographs. A review of these photographs did not lead to the identification of any new archaeological sites or features. Google Earth historic satellite imagery has also been analysed; however, no new archaeological sites have been identified.

3.3.2 Results of LiDAR analysis

3.3.2.1 Overall, the LiDAR interpretation exercise has revealed that despite the fields occupied by the MHPGC PEIR Red Line Boundary: Onshore being heavily ploughed, low earthworks of former landscape features do survive. However, it should be noted that numerous buried deposits representing potential archaeology have been identified through aerial photograph analysis and geophysical survey within the MHPGC PEIR Red Line Boundary: Onshore. Therefore, the results of the LiDAR interpretation exercise have been analysed in conjunction with other non-intrusive prospection methods, existing HER data, and historic mapping.

3.3.2.2 A total of 78 features of possible archaeological origin has been identified through the analysis of LiDAR data. These include possible prehistoric barrows and linear boundaries, medieval and post-medieval ridge and furrow, and post-medieval mineral extraction sites. The results of the LiDAR analysis and interpretation exercise are discussed in **Section 3.3.3**, listed in **Volume 3, Annex 4.2: Onshore Archaeology and Cultural Heritage Gazetteer, of the PEIR**, and depicted on **Figure 3.1**.

3.3.3 Archaeological and historical baseline

3.3.3.1 The archaeological and historical baseline has been compiled from the sources listed in **Section 2.2** and considers both designated and non-designated heritage assets. Further detail on designated heritage assets is provided where relevant below, while non-designated heritage assets are shown on **Figure 2.1** and **Figure 2.2** and listed in **Volume 3, Annex 4.2: Onshore Archaeology and Cultural Heritage Gazetteer, of the PEIR**.

3.3.3.2 One designated heritage asset is located within the MHPGC PEIR Red Line Boundary: Onshore, the Grade II listed 'Kinley Hill Tower, 200 metres northwest Of Linley [sic] Hill Farmhouse' (1231817). This is described below in **Paragraph 3.3.3.63**. A further 14 listed buildings are located within the 1km Study Area, one of which is the Grade II* listed Dalton Water Pumping Station (1277461). The remaining 13 are Grade II listed, comprising post-medieval farms, churches, war memorials and industrial buildings. These are depicted on **Figure 3.1** and listed in **Volume 3, Annex 4.2: Onshore Archaeology and Cultural Heritage Gazetteer, of the PEIR** and described where relevant in **Section 3.3.3** of this document.

3.3.3.3 Within the Extended Study Area – Blue there is one scheduled monument: 'Dalden Tower: a medieval fortified manor house and related earthworks' (1020292), and 29 listed buildings, including two Grade I listed buildings: Seaton Holme (1231692) and 'Church of St Mary' (1231813), four Grade II* listed buildings:

- Church of St Andrew (1231690);
- Dalden Tower (1232268);
- Farmhouse and adjacent barn 15 metres to north of Seaton Holme (1277424);
- Dalton Water Pumping Station (1277461).

- 3.3.3.4 The remaining 25 listed buildings are Grade II listed, comprising post-medieval and early modern dwellings, school buildings, churches, bridges and war memorials. One Conservation Area is located within the Extended Study Area – Blue: Hawthorn, situated immediately adjacent to the MHPGC PEIR Red Line Boundary: Onshore and containing five Grade II listed buildings. There are no World Heritage Sites, Registered Parks and Gardens, Protected Wreck Sites or Registered Battlefields within the Extended Study Area – Blue.
- 3.3.3.5 Within the Extended Study Area – Green there are two scheduled monuments: ‘Enclosed hilltop settlement on Pig Hill, 600m southwest of High Fallowfield’ (1019919); and ‘High Haswell Chapel 300m southeast of Low Haswell’ (1019917). There are 19 listed buildings within the Extended Study Area – Green, of which two are Grade II* listed: Church of St Andrew (1231690) and Dalton Water Pumping Station (1277461). The remaining 17 are Grade II listed, comprising post-medieval churches, farms, war memorials, and bridges. Hawthorn Conservation Area is located within the Extended Study Area – Green, which includes five Grade II listed buildings. There are no World Heritage Sites, Grade I listed buildings, Registered Parks and Gardens, Protected Wreck Sites or Registered Battlefields within the Extended Study Area – Green. All designated heritage assets located within the Extended Study Areas are depicted on **Figure 2.1** and listed in **Volume 3, Annex 4.2: Onshore Archaeology and Cultural Heritage Gazetteer, of the PEIR**.
- 3.3.3.6 A total of 70 non-designated heritage assets are recorded within the MHPGC PEIR Red Line Boundary: Onshore in the DCC HER. These comprise:
- six prehistoric assets (two undated findspots, two Bronze Age round barrows, one Iron Age enclosure (H8085) and one further possible prehistoric enclosure ditch of uncertain date (H64391));
 - two medieval assets (one ridge and furrow parcel and one medieval farmstead);
 - 54 post-medieval assets (principally ridge and furrow cultivation at Hawthorn (30), Murton (11) and Seaham (1), together with seven quarries, three farmsteads, one milestone and one sand pit);
 - eight modern-period assets (principally Second World War coastal defensive features at Dawdon Beach Blast and a Cold War Royal Observer Corps monitoring post).
- 3.3.3.7 A further 329 non-designated heritage assets are recorded within the 1km Study Area in the DCC HER, comprising records dating to the Mesolithic, undated prehistoric, Bronze Age, Iron Age, Roman, early medieval, medieval, post-medieval and modern assets. The medieval and post-medieval periods are the most strongly represented, with extensive ridge and furrow cultivation close to the historic settlements of Hawthorn, Murton, Seaham, Easington and South Hetton, together with deserted medieval villages (DMVs) at Cold Hesledon (H6) and Hawthorn (H3867), a dispersed network of medieval and post-medieval farmsteads, the East Durham collieries at Murton (H3839), Dawdon (H3844) and South Hetton (H84059). A substantial 20th-century military landscape is recorded in the eastern portion of the 1km Study Area, including the Kinley Hill CHL Radar Station (H50014) and the Cold Hesledon ROTOR sites (H51770, H51771). Further detail of recorded assets by period is provided in **Paragraph 3.3.3.13 to Paragraph 3.3.3.68**. All non-designated heritage assets within the MHPGC PEIR Red Line Boundary: Onshore and 1km Study Area are depicted in **Figure 2.2** and listed in **Volume 3, Annex 4.2: Onshore Archaeology and Cultural Heritage Gazetteer, of the PEIR**.
- 3.3.3.8 The pattern of known heritage assets should be understood in light of variations in survival, land use and the extent of previous archaeological investigation. As such, an absence of evidence does not necessarily indicate an absence of past activity.

Historic Landscape Character

- 3.3.3.9 Historic Landscape Characterisation (HLC) builds a picture of how an area changes over time and is a way of understanding and managing the historical identity of a place. The HLC for County Durham

is available as an interactive map which has been consulted for this report (Durham County Council, 2013).

- 3.3.3.10 The majority of the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area are located within what the Durham HLC defines as 'Enclosed Land' (HLC ID: 603). This encompasses a diverse range of agricultural enclosed land, dating from the late medieval period to the modern, with hedgerows forming the boundaries of most fields within the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area. This HLC type is defined by the gradual enclosure of former medieval open field agriculture associated with historic settlements throughout the post-medieval period, and more recently the modern open fieldscapes which have replaced former collieries. As will be discussed in more detail later, ridge and furrow, traces of the former medieval and post-medieval landscape, survive as buried deposits or low earthworks within the large, enclosed fields of today's landscape. There are many surviving hedgerows present on the Hesledon tithe map of 1844 and the Easington tithe map of 1840. This suggests that these hedgerows may be deemed important under the Hedgerow Regulations.
- 3.3.3.11 More dispersed HLC types within the MHPGC PEIR Red Line Boundary: Onshore and 1km Study Area comprise woodland (HLC ID: 604), the largest being Coop House Wood in the western portion, Industrial (HLC ID: 606) in the form of Hawthorn Quarry in the east and the former Hawthorn Pit in the west. HLC types relating to historic farmsteads and villages are scattered throughout the MHPGC PEIR Red Line Boundary: Onshore and 1km Study Area. The modern A19 road traverses the MHPGC PEIR Red Line Boundary: Onshore and 1km Study Area north to south (HLC ID: 276).

Prehistoric (500,000 BC to AD 43)

- 3.3.3.12 Prehistoric evidence within the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area reflects broader patterns of activity across East Durham and is represented principally by lithic findspots, burial monuments (surviving as both extant earthworks and buried deposits), cropmark and geophysical enclosures, and isolated funerary or depositional remains. No designated prehistoric heritage assets are recorded within either the MHPGC PEIR Red Line Boundary: Onshore or 1km Study Area; however, the Extended Study Areas have been reviewed for prehistoric assets to inform the wider archaeological context, which will be expanded upon in the following paragraphs where relevant.
- 3.3.3.13 Six heritage assets assigned to the prehistoric period are recorded within the MHPGC PEIR Red Line Boundary: Onshore: two undated prehistoric findspots (H964 and H73), two Bronze Age round barrows surviving as earthworks (H2 Batter Law and H61 Kinley Hill), one Iron Age enclosure recorded as a buried cropmark and findspot (H8085 Batter Law), and one possible prehistoric enclosure ditch identified through geophysical survey (H64391, recorded in the HER as uncertain in date).
- 3.3.3.14 Within the 1km Study Area there is a substantially larger and more varied known prehistoric evidence-base, including Mesolithic findspots, further undated lithic findspots, further Bronze Age funerary monuments and metalwork findspots, and later prehistoric and Iron Age enclosures, summarised by sub-period below in accordance with Historic England's standard period framework (HE, England's Historic Periods, no date).

Palaeolithic (c. 800,000 BC to 10,000 BC)

- 3.3.3.15 No known heritage assets explicitly attributed to the Palaeolithic period are recorded within the MHPGC PEIR Red Line Boundary: Onshore or the 1km Study Area in the DCC HER. This absence is consistent with the wider East Durham archaeological record, in which Palaeolithic evidence is typically scarce and most commonly represented by isolated, residual lithic finds rather than stratified deposits or upstanding remains.
- 3.3.3.16 The visibility of Palaeolithic activity is further limited by the post-glacial geomorphology of the East Durham Plateau, the impact of subsequent ploughing and industrial disturbance, and the absence of systematic fieldwalking or geoarchaeological investigation across the MHPGC PEIR Red Line Boundary: Onshore. It is possible that some of the undated prehistoric findspots recorded within the MHPGC PEIR Red Line Boundary: Onshore (H964 and H73) and the 1km Study Area (H72, H71, H74,

H60287, H60293) include residual material of Palaeolithic date that cannot be confidently attributed on the basis of the recovered finds alone.

Mesolithic (10,000 BC to 4,000 BC)

- 3.3.3.17 No known heritage assets explicitly attributed to the Mesolithic are recorded within the MHPGC PEIR Red Line Boundary: Onshore. This absence is likely to reflect the typically ephemeral nature of Mesolithic activity, which is most commonly represented by isolated lithic finds or surface scatters rather than upstanding or structural remains, and is therefore difficult to identify in the absence of systematic fieldwalking or intrusive investigation. It is also possible that some of the undated prehistoric findspots recorded within the MHPGC PEIR Red Line Boundary: Onshore (H964 and H73; see **Paragraph 3.3.3.15**) include material of Mesolithic date that cannot be confidently attributed on the basis of the recovered finds alone.
- 3.3.3.18 Within the 1km Study Area, three Mesolithic findspots are recorded, all comprising surface lithic material surviving as unstratified or buried finds with no associated upstanding remains rather than stratified deposits. These include flint finds at Hawthorn Tower (H91), located 771m from the MHPGC PEIR Red Line Boundary: Onshore; Mesolithic artefacts at Beacon Point, Easington Colliery (H94), located 963m from the MHPGC PEIR Red Line Boundary: Onshore; and a Mesolithic lithic scatter at East Farm, Hawthorn (H104), located 122m from the MHPGC PEIR Red Line Boundary: Onshore.
- 3.3.3.19 The character of this evidence is consistent with short-term or repeated hunter-gatherer activity that has left only a light archaeological signature and demonstrates that the area containing the MHPGC PEIR Red Line Boundary: Onshore and 1km Study Area formed part of an exploited Mesolithic landscape. Taken together with the undated prehistoric findspots within the MHPGC PEIR Red Line Boundary: Onshore and given that no systematic fieldwalking has been undertaken across the MHPGC PEIR Red Line Boundary: Onshore, comparable buried Mesolithic lithic material may survive within the MHPGC PEIR Red Line Boundary: Onshore without surface expression.

Neolithic (4,000 BC to 2,200 BC)

- 3.3.3.20 There are no known heritage assets explicitly attributed to the Neolithic within either the MHPGC PEIR Red Line Boundary: Onshore or the 1km Study Area. This absence is more likely to reflect the difficulty of confidently dating undiagnostic lithic finds to a specific sub-period, combined with the limited surface visibility of Neolithic activity in heavily ploughed landscapes, rather than a true absence of Neolithic occupation.
- 3.3.3.21 The HER parish-level overview for Seaham (H6875) explicitly acknowledges that farming would probably have begun in the area during the Neolithic period, although no Neolithic remains from this date have survived, while the parish overview for Murton (H4579) references the antiquarian recovery of "a barrow containing Neolithic cremations and secondary Bronze Age burials" approximately 1.6km southwest of Murton, likely corresponding to one of the recorded Bronze Age round barrows within the 1km Study Area (most plausibly H1154 Croup Hill or H541 East Murton A; see **Paragraph 3.3.3.24 to 3.3.3.31**). This provides direct evidence that Neolithic burial activity has been recovered from at least one funerary monument in the 1km Study Area.
- 3.3.3.22 Within the MHPGC PEIR Red Line Boundary: Onshore, two undated prehistoric findspots are recorded (H964, a prehistoric lithic scatter west of Hesledon East House; and H73, a prehistoric findspot near Great Co-op House Farm), both comprising lithic material attributed only to the broad period Prehistoric (500,000 Before Christ (BC) to Anno Domini (AD) 43) and surviving as unstratified or buried finds with no associated upstanding remains. It is possible that some of this material is of Neolithic date. Within the 1km Study Area, five further undated prehistoric findspots (H72, H71, H74, H60287, H60293) are similarly attributed only to the broad prehistoric period and may likewise include material of Neolithic date.
- 3.3.3.23 An additional findspot northeast of Cold Hesledon (H3883), attributed in the HER to uncertain date, is likewise potentially of earlier prehistoric origin and possibly Neolithic. Given the parish-level evidence for probable Neolithic activity, the antiquarian record of Neolithic burials within the 1km Study Area, and the cluster of undated prehistoric findspots both within the MHPGC PEIR Red Line Boundary: Onshore itself and across the 1km Study Area, comparable buried Neolithic lithic material

and potentially Neolithic funerary deposits may survive within the MHPGC PEIR Red Line Boundary: Onshore without surface expression.

Bronze Age (2,200 BC to 800 BC)

- 3.3.3.24 The Bronze Age is the most clearly represented prehistoric sub-period within both the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area, characterised principally by funerary monuments together with findspots of metalwork and ceramics.
- 3.3.3.25 Two Bronze Age round barrows are recorded within the MHPGC PEIR Red Line Boundary: Onshore, both surviving as upstanding earthworks. Batter Law Round Barrow (H2), Hawthorn survives as an earthwork approximately 1.8m high and was excavated by Trechmann in 1911, recovering a secondary crouched inhumation accompanied by a flint knife, calcined bone and a fragment of hand-made pottery. It was stated by the excavator that there was a high likelihood for further interments within the barrow, including the primary inhumation which was not found at this time. The barrow's survival as an earthwork is corroborated by aerial photographic mapping (MONARCH 27172) and LiDAR imagery (RSply_ID_052).
- 3.3.3.26 Round Barrow (H61), 400m from Kinley Hill, Hawthorn, survives as an earthwork approximately 1.6m high on its eastern side, although disturbed by quarrying, and is recorded with associated cairn, clearance cairn, lithic scatter and settlement evidence. The feature is currently located within woodland and could not be accessed on the site walkover; however, the extant physical remains have been confirmed through analysis of LiDAR DSM imagery from 2021, captured in winter with the trees not in leaf (RSply_ID_076). The LiDAR imagery appears to corroborate the statement in the HER that a considerable amount of material has been removed from the feature as a depression is visible in its centre. It should be noted that the (H61) record is derived largely from early 20th-century antiquarian accounts, with the detail relating to the associated cairn, clearance cairn, lithic scatter, shellfish and settlement evidence recorded in the DCC HER as conjectural rather than securely demonstrated.
- 3.3.3.27 A total of 16 low earthen mounds have been identified through analysis of LiDAR imagery within the MHPGC PEIR Red Line Boundary: Onshore which have been tentatively interpreted as Bronze Age barrows (RSply_ID_021-025; RSply_ID_043; RSply_ID_046-053) (see **Figure 2.2**). These interpretations are based on the similar morphology and size compared to known examples in the MHPGC PEIR Red Line Boundary: Onshore (H2; H61) and 1km Study Area, and their locations on and around the slopes of Batter Law upon which the barrow of the same name (H2) is situated.
- 3.3.3.28 Within the 1km Study Area, the Bronze Age funerary evidence includes burial cairns at Hesledon East House, Seaham (H60), located 414m from the MHPGC PEIR Red Line Boundary: Onshore, originally recorded as stone scatters with associated human and lithic material, now surviving as buried deposits only following ploughing. East Murton A round barrow (H541), located 260m from the MHPGC PEIR Red Line Boundary: Onshore, survives as an earthwork approximately 1.4m high, excavation of which recovered a secondary cremation with a flint knife. East Murton B round barrow (H551), located 410m from the MHPGC PEIR Red Line Boundary: Onshore, survives as an earthwork approximately 0.8m high. The round barrow at Croup Hill, Murton (H1154), located 224m from the MHPGC PEIR Red Line Boundary: Onshore, survives as an earthwork approximately 1.4m high, excavation of which recovered a cremation burial with a flint knife and scraper.
- 3.3.3.29 Bronze Age findspots within the 1km Study Area include a cinerary urn findspot at Murton (H79633), located 633m from the MHPGC PEIR Red Line Boundary: Onshore, a Bronze Age axe southeast of Stony Cut, Cold Hesledon (H8289), located 877m from the MHPGC PEIR Red Line Boundary: Onshore, and a further findspot at Hawthorn/Cold Hesledon (H4035), located 648m from the MHPGC PEIR Red Line Boundary: Onshore. The latter was recovered during construction of the A19 to Dawdon Link Road in 1997 and comprised a late Bronze Age socketed axe of Heathery Burn tradition. The discoverer also noted that several similar finds were made in the near vicinity, indicating the possibility of a hoard.
- 3.3.3.30 The 'Cold Hesledon Cropmark' (H16709), located 601m from the MHPGC PEIR Red Line Boundary: Onshore, is also of possible Late Bronze Age date. It comprises a circular enclosure approximately 50m in diameter and is recorded in the DCC HER under the broad period attribution of 'Later Prehistoric' (4000 BC to AD 43). The HER notes that the size and form of the enclosure, along with

the discovery of a number of Bronze Age findspots in close proximity (H4035; H8289), suggest a Late Bronze Age date. The asset is located close to the radiocarbon-dated Iron Age enclosure at H66393, which was investigated by Archaeological Research Services Ltd in 2018 (event E66257) and subject to open area excavation by Archaeological Services WYAS in 2022 to 2023 (event E86232). Given the close spatial relationship between H16709 and H66393, the Late Bronze Age attribution of the H16709 cropmark may benefit from further consideration in light of the excavated evidence. The monument survives as buried deposits only, with no upstanding remains.

- 3.3.3.31 As is shown above, Bronze Age assets are distributed widely across the 1km Study Area rather than being concentrated in a single part of the landscape. The survival of these remains has been shown to vary from extant earthworks (H2; H61) within the MHPGC PEIR Red Line Boundary: Onshore, and H541, H551 and H1154 within the wider 1km Study Area; while other assets survive as buried deposits or cropmarks (H60; H16709). This pattern indicates that Bronze Age remains have been affected by ploughing and other later land use in places, but that both earthwork and buried evidence can still survive across the wider landscape. These may include plough-truncated funerary monuments, associated burial deposits and isolated artefact findspots. On this basis, the MHPGC PEIR Red Line Boundary: Onshore is assessed as having a moderate to high potential for the survival of further Bronze Age remains.

Iron Age (800 BC to AD 43)

- 3.3.3.32 One Iron Age heritage asset is recorded within the MHPGC PEIR Red Line Boundary: Onshore: Batter Law enclosure (H8085), a roughly rectilinear cropmark enclosure with possible internal circular features, attributed in the HER to the Iron Age on the basis of Iron Age beehive-type querns recovered from the area of the enclosure. The asset survives as a buried cropmark and associated findspot only, with no upstanding remains.
- 3.3.3.33 A further asset within the MHPGC PEIR Red Line Boundary: Onshore, 'Possible Enclosure Ditch at Hawthorn, Easington' (H64391) was identified by geophysical survey in 2007 (event E15774) as an approximately (c.) 130m long magnetic anomaly interpreted as a possible prehistoric soil-filled ditch. It is recorded in the HER as uncertain in date and, while not explicitly attributed to the Iron Age in the HER, its morphology and geophysical signature are consistent with later prehistoric or Romano-British enclosure features recorded elsewhere within the 1km Study Area, including the Hawthorn rectangular enclosure (H8088), the enclosure southeast of Cold Hesledon (H66393), and comparable cropmark features at Carr's Farm (H42065) and Haswell (H62078), and it likewise survives as a buried feature only rather than upstanding evidence.
- 3.3.3.34 Within the 1km Study Area, one Iron Age asset and one Later Prehistoric asset with secure Iron Age dating evidence are recorded. Hawthorn rectangular enclosure (H8088), located 780m from the MHPGC PEIR Red Line Boundary: Onshore, is a rectangular cropmark with a sub-circular internal enclosure, interpreted in the HER as a likely Iron Age or Romano-British homestead, surviving as a buried cropmark only. Prehistoric circular enclosure (H66393), located 550m from the MHPGC PEIR Red Line Boundary: Onshore to the southeast of Cold Hesledon is recorded in the DCC HER under the broad period attribution of Later Prehistoric (4000 BC to AD 43), but archaeological evaluation by Archaeological Research Services Ltd in 2018 (event E66257) at South Seaham Garden Village revealed an enclosure ditch with an external palisade gully, with radiocarbon dating of these features producing an Iron Age date. This represents the most secure Iron Age dating evidence for prehistoric settlement within the 1km Study Area. The asset survives as a buried feature only.
- 3.3.3.35 Two further cropmark enclosures recorded in the HER as uncertain in date are also morphologically consistent with Iron Age or Romano-British enclosure forms recorded elsewhere within the 1km Study Area: H42065 Enclosure near Carr's Farm, South Hetton, located 90m from the MHPGC PEIR Red Line Boundary: Onshore, and H62078 Three-sided rectangular cropmark, Haswell, located 960m from the MHPGC PEIR Red Line Boundary: Onshore. Six linear earthworks have been identified on LiDAR imagery (RSply_ID_001–003; RSply_ID_015; RSply_ID_044; RSply_ID_055). These have been assigned to unknown in date in the absence of further investigation; however, they do not appear on historic mapping and could therefore date to the Iron Age.
- 3.3.3.36 Within the Extended Study Area – Green, the scheduled Iron Age settlement at Pig Hill (NHLE 1019919) provides further regional context, demonstrating that more substantial nucleated Iron Age settlement is recorded within the wider landscape beyond the 1km Study Area. While sufficiently

distant from the MHPGC PEIR Red Line Boundary: Onshore that no direct relationship exists, its presence reinforces the interpretation of the surrounding landscape as one supporting both dispersed enclosure-based settlement and more substantial Iron Age occupation foci within the broader East Durham Plateau.

- 3.3.3.37 The combined evidence within the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area indicates that the wider landscape supported low-intensity Iron Age rural occupation, characterised by dispersed enclosed settlements, associated field systems, and agricultural land use. The presence of the Batter Law enclosure (H8085) and the possible enclosure ditch at Hawthorn (H64391) within the MHPGC PEIR Red Line Boundary: Onshore, together with the morphologically comparable enclosures recorded within the 1km Study Area (H8088, H66393, H42065 and H62078), suggests that the MHPGC PEIR Red Line Boundary: Onshore is likely to have formed part of the wider agricultural and grazing landscape associated with these settlements rather than a focus of nucleated occupation in its own right. This interpretation is consistent with the broader pattern of dispersed Iron Age rural settlement identified across East Durham in the NERRF.

Roman/Romano-British (AD 43 to AD 410)

- 3.3.3.38 Within the MHPGC PEIR Red Line Boundary: Onshore, there is one Roman-period asset recorded: a single findspot at Kinley Hill near Hawthorn (H33181), where unstratified finds, including coins, were recovered alongside material from other periods. In this context, 'Roman' is taken to refer to characteristic features such as forts, roads, and villas, and their absence is consistent with the limited Roman period archaeological evidence across East Durham, which lies beyond the main Roman military and urban focus of the region, and is more typically represented by isolated findspots and small-scale rural occupation rather than substantial settlement, road, or villa evidence.
- 3.3.3.39 Two cropmark enclosures within the 1km Study area, although attributed by the DCC HER to the Iron Age (see **Paragraph 3.3.3.32 to 3.3.3.37**), are interpreted in the HER as likely "Iron Age or Romano-British" homesteads or enclosures and may therefore reflect activity continuing into the Roman period. In contrast to the limited 'Roman' evidence defined above, these features are more appropriately understood as part of a Romano-British agricultural landscape, comprising domestic settlement, farmsteads and field systems continuing from those established during the Iron Age. These are the Hawthorn rectangular enclosure (H8088) located 780m from the MHPGC PEIR Red Line Boundary: Onshore, which records a rectangular cropmark with a sub-circular internal enclosure, and the prehistoric circular enclosure southeast of Cold Hesledon (H66393) located 550m from the MHPGC PEIR Red Line Boundary: Onshore, the latter producing radiocarbon-dated Iron Age evidence during evaluation by Archaeological Research Services Ltd in 2018 (event E66257). Morphologically, the remains are consistent with enclosures that continued in use into the Romano-British period. Both assets survive as buried features only, with no upstanding remains.
- 3.3.3.40 Two further cropmark enclosures recorded in the HER as uncertain in date are Carr's Farm, South Hetton (H42065) located 90m from the MHPGC PEIR Red Line Boundary: Onshore and Three-sided rectangular cropmark, Haswell (H62078) located 960m from the MHPGC PEIR Red Line Boundary: Onshore. These are similarly morphologically consistent with Iron Age or Romano-British enclosure forms recorded elsewhere within the 1km Study Area, and characteristic of rural settlement patterns identified in the NERRF. The identified enclosure features are therefore more consistent with a dispersed rural landscape reflecting continuity of settlement and land use from the Iron Age into the Romano-British period.
- 3.3.3.41 The presence of a Roman-period findspot within the MHPGC PEIR Red Line Boundary: Onshore (H33181), combined with the cluster of cropmark and geophysical enclosures of potential Iron Age or Romano-British date within the 1km Study Area (H8088, H66393, H64391, H42065 and H62078, including two assets within the MHPGC PEIR Red Line Boundary: Onshore itself), indicates that the wider landscape supported low-intensity rural occupation, agricultural land use, or transient activity during the Roman period.
- 3.3.3.42 This evidence does not suggest a coherent Roman-period settlement focus. The distinction between limited 'Roman' infrastructure and continued Romano-British rural activity is consistent with a dispersed agricultural landscape rather than formal Roman settlement, with the possibility that previously unrecorded buried remains may survive in less disturbed areas.

- 3.3.3.43 As these features survive primarily as buried deposits, cropmarks, and unstratified findspots with no surface expression, and as no systematic fieldwalking or evaluation has been undertaken across the MHPGC PEIR Red Line Boundary: Onshore to date, comparable buried Roman and Romano-British remains may survive without surface expression. Any such remains are most likely to relate to dispersed Romano-British agricultural activity rather than formal 'Roman' infrastructure.

Early Medieval (AD 410 to AD 1066)

- 3.3.3.44 No known heritage assets explicitly attributed to the early medieval period are recorded within the MHPGC PEIR Red Line Boundary: Onshore in the DCC HER. This absence is consistent with the wider East Durham Plateau, where early medieval activity is typically poorly represented in the archaeological record and comprises isolated artefact findspots, ecclesiastical remains and cemetery deposits rather than substantial settlement, structural or landscape evidence with strong surface expression. This pattern aligns with the NREEF, which highlights the dominance of ecclesiastical and high-status sites and the limited diagnostic visibility of early medieval activity in unstratified or undated contexts, where it can often be conflated with later medieval material.
- 3.3.3.45 Although direct early medieval archaeological evidence within the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area is limited to a single findspot in the DCC HER (see below), the place-name evidence provides strong indirect evidence that the principal settlements around the MHPGC PEIR Red Line Boundary: Onshore are of Anglo-Saxon (early medieval) origin. The DCC parish-level overview for Cold Hesledon (H6767) records that the village name is "probably of Old English origin, meaning the 'hill by the hazel valley'", with the wider Hesleden/Hesledon group of names derived from Old English *hæsel-denu* ("hazel valley"). The settlement of Hawthorn is recorded from at least 1155 as Hagethorn, derived from Old English *hagu-thorn* ("place at the hawthorn"). Murton derives from Old English *mōr* ("moor, marsh") and *tūn* ("enclosure, farmstead"), translating to "moor farm/settlement" per the Key to English Placenames (University of Nottingham, n.d.). Easington is first recorded c. 1050 as Esingtun, an Old English place-name, with documentary evidence indicating that the lands of Easington were granted to Bishop Cutheard between AD 900 and 915. Seaham (from Old English meaning "homestead by the sea") is first recorded in an AD 933 land grant by King Athelstan to the Community of St Cuthbert. The consistent Old English place-name evidence therefore indicates that the principal settlement pattern around the MHPGC PEIR Red Line Boundary: Onshore was established by the late early medieval period.
- 3.3.3.46 Within the 1km Study Area, one asset attributed in the DCC HER to the early medieval period is recorded: a carved stone findspot at Murton (H80634). The asset survives as a single recovered artefact only, with no associated upstanding remains, structural deposits, or in situ evidence of contemporary occupation. The carved stone was recovered from a hedge during excavation for the foundations of the Aged Miners Home, Murton, in 1912. It was initially identified by R. Blair, Secretary of the Society of Antiquaries of Newcastle, as the base of a pre-Conquest cross and was therefore tentatively assigned an Anglo-Saxon date. Sir C. H. Read of the British Museum subsequently suggested that the stone may instead represent the capital of a column subsequently hollowed out for use as a holy water stoup, implying a substantially later, possibly 13th-century, medieval date. The date of the stone therefore remains uncertain; however, its attribution to the early medieval period in the DCC HER reflects the interpretation of the object as a pre-Conquest cross base, rather than the alternative interpretation as a later medieval stoup.
- 3.3.3.47 The Domesday Book (1086) does not cover County Durham, omitting both Durham and Northumberland due to the Palatinate of Durham being administered separately by the Bishop of Durham as a quasi-independent jurisdiction. However, the equivalent regional record, the Boldon Book of 1183, references many of the settlements within the 1km Study Area, indicating that they were established and rendering services to the Bishop by the late 12th century at the latest. The nearest direct archaeological evidence for early medieval activity beyond the 1km Study Area is the excavated Anglo-Saxon cemetery at St Mary's Church, Seaham, where ten burials radiocarbon-dated to AD 660–880 were recovered during 1997 and 1999 excavations, demonstrating that the wider East Durham coastal landscape supported Anglo-Saxon ecclesiastical and burial activity (Durham County Council, n.d.). A pagan Anglo-Saxon burial ground discovered at Easington in 1991, interpreted as part of a much larger 6th or 7th-century cemetery, provides further evidence for early Anglo-Saxon occupation in the vicinity (Hamerow and Pickin, 1995).

3.3.3.48 As early medieval activity in the region typically survives only as unstratified findspots, dispersed cemetery deposits, or buried features rather than upstanding remains, and as little systematic fieldwalking (systematic collection of archaeological artefacts from ploughsoil) or archaeological evaluation has been undertaken across large parts of the MHPGC PEIR Red Line Boundary: Onshore to date, comparable buried early medieval material including stray findspots, ephemeral occupation traces, and potential burial deposits may survive within the MHPGC PEIR Red Line Boundary: Onshore without surface expression.

Medieval (1066 to 1540)

3.3.3.49 The medieval period is well represented in the DCC HER within both the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area, reflecting the development of nucleated village settlements and open-field cultivation across the East Durham coastal plateau. As established in **Paragraph 3.3.3.44 to 3.3.3.48**, the principal settlements around the MHPGC PEIR Red Line Boundary: Onshore of Cold Hesledon, Hawthorn, Murton, Easington and Seaham are of Anglo-Saxon (early medieval) origin, with the medieval landscape representing the continued development and reorganisation of these pre-Conquest foundations under the administration of the Palatinate of Durham. The settlements within the 1km Study Area are referenced in the Boldon Book of 1183.

3.3.3.50 Within the MHPGC PEIR Red Line Boundary: Onshore, a substantial body of medieval assets is recorded in the DCC HER, comprising principally ridge and furrow cultivation together with one medieval-period site of agricultural activity. Ridge and furrow cultivation attributed in the DCC HER to the medieval period is recorded at multiple locations around Hawthorn (H86058-H86109), reflecting the extensive open-field cultivation that characterised the medieval agricultural landscape of the East Durham Plateau. Additional ridge and furrow at Cold Hesledon (H58210) has been identified through aerial photographic interpretation, along with a further six identified through analysis of LiDAR imagery (see **Figure 2.2** and **Figure 3.1**) These are:

- RSply_ID_016
- RSply_ID_054
- RSply_ID_061
- RSply_ID_063
- RSply_ID_064
- RSply_ID_074

3.3.3.51 The remains survive as levelled earthworks and cropmarks, with the ridges typically reduced through subsequent post-medieval and modern ploughing, although localised areas of upstanding ridge and furrow also survive.

3.3.3.52 Within the 1km Study Area, known evidence dating to the medieval period is substantially more varied and includes DMVs, shrunken settlements, multiple medieval farmsteads, extensive ridge and furrow cultivation, and isolated landscape features. The two principal nucleated settlements within the 1km Study Area are recorded as deserted or shrunken medieval villages: the Cold Hesledon DMV (H6) located 381m from the MHPGC PEIR Red Line Boundary: Onshore, which retained visible earthworks including deserted settlement remains, boundary banks, building platforms, enclosure features, extractive pits and a hollow way, although later quarrying and agricultural activity have removed or damaged elements of the surface evidence; and the DMV at Hawthorn (H3867), located 370m from the MHPGC PEIR Red Line Boundary: Onshore, recorded as a shrunken village with associated hollow ways, platforms, enclosures, banks, boundary banks and ditches surviving as a combination of earthworks and buried features. Both DMVs are corroborated by the National Mapping Programme (NMP) aerial photographic record (MONARCH 1456306 and 27177), which records building platforms, enclosures, hollow ways, ditches and boundary banks as either earthworks or destroyed monuments, indicating variable survival across the wider settlement footprints.

3.3.3.53 Murton (H4579) located 955m from the MHPGC PEIR Red Line Boundary: Onshore, referenced in the parish overview as the original medieval settlement core of the modern village, was the focus of intensive late medieval activity demonstrated by recent archaeological investigation at Village Farm, Murton (H63098) located 869m from MHPGC PEIR Red Line Boundary: Onshore. Here, archaeological evaluation by The Archaeological Practice Ltd in 2011 (event E38490) recorded

significant medieval archaeological remains including a croft, fence, kiln, cess pit, boundary ditch and gully, with further significant medieval remains identified by subsequent excavation. This represents the most secure medieval settlement evidence within the 1km Study Area and provides direct comparator evidence for the survival of buried medieval settlement deposits in the wider landscape. Beacon Hill earthworks 600m east of Thorpe Lea East (H3847) preserve a medieval field system, settlement remains and a quarry, surviving as upstanding earthworks. A medieval beacon site 600m east of Thorpe Lea East (H3846) is also recorded within the wider landscape.

3.3.3.54 The 1km Study Area contains a number of medieval farmsteads representing the dispersed settlement element of the medieval agricultural landscape, all surviving in varying combinations of buried deposits, upstanding ruined or rebuilt structures, and associated ridge and furrow. Cold Hesledon Farm (H15974) is recorded as a historic building of medieval origin, with surviving farm building and horse engine. Additional farmsteads recorded in the DCC HER within the 1km Study area include:

- Little Thorn Farmstead (H15977);
- Farmstead near Thorpe Lea West (H15980);
- Milestone House Farmstead (H16002);
- West Moor House (H16043);
- Hawthorn Moor House Farmstead (H16044);
- Dunscombe Moor Farmstead (H16045);
- Murton Moor West Farmstead (H15952);
- Hesleden East House Farmstead (H15957);
- Kinley Hill Farmstead (H15966);
- Park House Farmstead (H15971);
- West Batter Law Farm (H16033);
- East Batter Law Farm (H16034).

3.3.3.55 A series of large lakes or pools near Frederick Terrace (H16026) is also recorded as a medieval landscape feature, likely representing managed water bodies associated with the wider medieval agricultural landscape such as fishponds, livestock watering or drainage features. It should be noted that several of the farmsteads listed in the DCC HER under medieval attribution are predominantly post-medieval structures with possible medieval origins, with continuity of use or rebuilding from earlier predecessors. Their inclusion here reflects the HER record rather than a definitive medieval date for each individual farmstead.

3.3.3.56 Further records of medieval ridge and furrow are located within the 1km Study Area, including multiple parcels at Hawthorn (e.g. H86058, H86059, H86060, H86083, H86084, H86085, H86086, H86087, H86100–H86109), at Seaham (H85516, H85519, H85520, H85521, H85522), at Cockhill Plantation (H79444), and most recently identified near South Hetton Junction at Murton Moor (H89568, H89569) the last two added to the DCC HER in May 2026. The ridge and furrow assets survive as upstanding earthworks, levelled earthworks identified from aerial photography (NMP MONARCH 1456228, 1456231 and others), and buried deposits visible only as cropmarks or geophysical anomalies. Their wide distribution across the Hawthorn, Seaham, Cold Hesledon and Murton areas demonstrates the extent of medieval open-field cultivation across the East Durham Plateau, with associated implications for the survival of related boundaries, headlands, and access routes within the agricultural landscape.

3.3.3.57 Within the Extended Study Area - Green, two designated medieval heritage assets are recorded which lie outside the 1km Study Area but are relevant to the wider medieval setting. The scheduled High Haswell Chapel (1019917), at the extreme southwestern extent of the Extended Study Area – Green, occupies a platform in the western part of Chapel Garth, immediately northwest of High Haswell village. No remains are visible above ground, but sub-surface remains are expected to survive. Documentary references suggest the chapel was constructed around 1300 and it is later recorded in the Chantry Survey of 1547–48 before the dissolution of chantries; it is described as having been of stone construction and approximately 10m by 20m in size, without aisles.

3.3.3.58 Dalden Tower (Scheduled Monument and Grade II* listed building), is 1.6km north of the MHPGC PEIR Red Line Boundary: Onshore and within the Extended Study Area – Blue. Originating in the 13th century, the monument comprises the remains of a medieval manorial complex partly enclosed by a

ditch and bank, a 16th century tower attached to the southern end of a medieval hall range, and the remains of a Jacobean Hall on the eastern side of the tower. Although the standing remains are ruinous, excavations undertaken between 1965 and 1966 and again between 1985 and 1989 demonstrated that substantial structural remains survive below ground within the scheduled area. Both scheduled monuments are sufficiently distant from the MHPGC PEIR Red Line Boundary: Onshore that no direct relationship is likely to exist, but their presence demonstrates the wider medieval settlement and ecclesiastical landscape into which the assets within the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area form an integral part.

- 3.3.3.59 In summary, the medieval period within the MHPGC PEIR Red Line Boundary: Onshore is dominated by ridge and furrow cultivation surviving as a combination of upstanding and levelled earthworks. Combined with the recorded nucleated settlements, dispersed farmsteads and extensive open-field cultivation across the 1km Study Area, this indicates that the MHPGC PEIR Red Line Boundary: Onshore formed part of an actively cultivated and farmed medieval landscape. Excavated medieval settlement evidence at Village Farm, Murton (H63098/E38490) further demonstrates that medieval features can survive as buried deposits across the wider landscape.

Post-medieval (1540 to 1901)

- 3.3.3.60 The post-medieval period is the most extensively represented in the DCC HER within both the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area, reflecting the intensification of agricultural improvement, extractive industry, transport infrastructure, settlement expansion and coastal industrial activity that characterised the East Durham Plateau from the 16th century onwards. The post-medieval agricultural landscape developed directly from the medieval pattern described in **Paragraph 3.3.3.49 to 3.3.3.59**, with continuity of land use evident in the conversion of medieval ridge and furrow to enclosed post-medieval fields and the redevelopment of medieval farmstead sites as post-medieval and Victorian-period farms. From the late 18th century, the landscape was progressively transformed by the development of the East Durham coalfield, with major collieries at Murton, Dawdon, South Hetton and Hawthorn supported by associated railways, workers' housing, quarries, limekilns and industrial works.
- 3.3.3.61 Within the MHPGC PEIR Red Line Boundary: Onshore, post-medieval ridge and furrow is recorded at multiple locations around Hawthorn (H86040–H86149) and Murton (H86859–H86873), as well as at Seaham (H85526). These features survive principally as levelled earthworks and cropmarks identified through NMP aerial photographic interpretation (e.g. MONARCH 1456228, 1456231) and are interpreted in the DCC HER as later reworking or extension of the medieval open-field system. Five areas of upstanding post-medieval ridge and furrow have also been identified through analysis of LiDAR imagery (RSply_ID_40–42; RSply_ID_065; RSply_ID_068). Within the 1km Study Area, extensive post-medieval ridge and furrow is also recorded across South Hetton, Easington Village, Hawthorn, Easington Colliery and Seaham (e.g. H79441–H79443, H84612–H84634, H86843–H86858, H85511–H85514). The post-medieval agricultural landscape is further reflected by historic farmsteads at Beacon House (H3845), Hesleden Moor (H16032, H15951), Murton Moor East (H15953) and Murton Moor (H52351). Additionally, analysis of LiDAR imagery has led to the identification of seven low banks representing former field boundaries which are depicted on 1st edition Ordnance Survey maps. These are listed in **Volume 3, Annex 4.2: Onshore Archaeology and Cultural Heritage Gazetteer, of the PEIR**.
- 3.3.3.62 The post-medieval agricultural landscape within the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area is further characterised by a network of isolated farmsteads associated with the enclosure of the surrounding open-field system. These include the post-medieval farmsteads identified above at Beacon House (H3845), Hesleden Moor (H16032, H15951), Murton Moor East (H15953) and Murton Moor (H52351), which are likely to represent purpose-built dispersed farms established to manage the newly enclosed post-medieval fields, consistent with the wider pattern of post-medieval agricultural reorganisation across the East Durham Plateau. Within the MHPGC PEIR Red Line Boundary: Onshore, this dispersed settlement pattern is complemented by the Grade II Listed Kinley Tower (LB1231817), recorded as a post-medieval estate-related structure forming part of the wider designed and managed landscape associated with the surrounding farmsteads and enclosed fields.

- 3.3.3.63 Quarrying and lime production is recorded within the MHPGC PEIR Red Line Boundary: Onshore and 1km Study Area, reflecting the importance of the magnesian limestone reserves of the East Durham Plateau. Within the MHPGC PEIR Red Line Boundary: Onshore, recorded examples include the limekiln and limestone quarry at Hawthorn Quarry (H8309), the Sand Pit on Coop Hill (H16617) and the wider Hawthorn Quarries complex (H15958, H15959, H15961, H15963, H15964, H15965, H15967), the latter recorded under HER 'Stuart and Georgian' attributions but forming a continuous post-medieval extractive landscape. The remains of a former sand/gravel pit depicted on 1st Edition Ordnance Survey mapping have also been identified through LiDAR analysis (RSply_ID_034). Within the 1km Study Area, further quarries include Quarry South-East of Kinley Hill (H15968), Site of Old Quarry Northeast of Haythorne's Plantation (H15969), Quarry Near New Plantation (H15970), Site of Old Quarry near Hesledon Bank (H15973) and Quarry East of Thompson's Foundation (H15976), along with Victorian-period quarries (H16023, H16038, H16622), gravel pits (H16625) and reservoirs (H16623). Lime production is represented by limekilns at Hawthorn Dene (H8304), Dawdon Farm (H8307), Hawthorn Hive (H67027) and Hawthorn Dene Limekiln (H67022), together with the Lime Kiln, Quarry and Gravel Pit Northeast of Easington Lea Farm (H15978).
- 3.3.3.64 From the 19th century, industrial and extractive activity intensified across the wider landscape with the development of the East Durham coalfield. Major colliery sites within the 1km Study Area include Murton Colliery (H3839), recorded with associated aerial ropeway, compressor house, engine house, power house and winder house; Dawdon Colliery, Seaham (H3844), with its associated cliff-top and beach-side waste disposal sites, drainage structures, tipping flumes, railways and coal tippler features (e.g. H66946, H66949, H66951, H66953, H66986, H66988, H66990, H66991, H66992, H66987, H67030); the 'Site of Koepe Engine, Murton Colliery' (H3840); and the colliery-related 'Concrete Structure at Dawdon' (H66952). South Hetton Colliery (H84059), partially overlain by the site of WWII military complex (H15960), forms a further industrial focus to the southwest. Within the MHPGC PEIR Red Line Boundary: Onshore, related post-medieval/early 20th century industrial deposits are recorded at Hawthorn Junction (H66994) and as cliff-top construction debris at Dawdon Beach Blast (H67018), the latter reflecting continued coastal industrial activity also recorded in the modern period (see **Paragraph 3.3.3.67 to 3.3.3.77**). The wider coastal landscape, including Hawthorn Dene and Dawdon Beach Blast, partially overlaps with the National Trust 'Durham Coast' property (see **Section 2.2**).
- 3.3.3.65 The development of the East Durham coalfield was supported by a network of colliery and mineral railways. The South Hetton Railway (H3473/H16614) ran through the 1km Study Area, with associated infrastructure including the 'Site of Viaduct south of Murton Colliery' (H15921), the 'Site of Tunnel on South Hetton Railway' (H15924), the 'Site of Viaduct over South Hetton Railway' (H15925), the 'South Hetton Mineral Railway' (H71271) and the 'Londonderry Railway, part of the Hartlepool and Sunderland Direct Railway' (H71076). Additional railway infrastructure includes Dobson Bridge (H15990), the Grade II Listed Hawthorn Dene Viaduct (H36107; LB1277271), the Edwardian Hawthorn Tower Halt (H8286), the Dawden Colliery Railway Line (H66944) and Jenny's Dene Railway Bridge (H66993).
- 3.3.3.66 A post-medieval map regression exercise has been undertaken to identify changes within and around the MHPGC PEIR Red Line Boundary: Onshore across the available historic cartographic record. The Tithe Map (c.1840s), available via The Genealogist (The Genealogist, 2026), provides the earliest detailed depiction of the area and is used as the baseline reference (see **Table 3.1**).

Table 3.1: Post-medieval Map Regression – MHPGC PEIR Red Line Boundary: Onshore

Date	Name	MHPGC PEIR Red Line Boundary: Onshore description
1820	Greenwood's Map of County Durham	Pre-industrial county-scale overview. Small nucleated rural settlements depicted at Cold Hesledon, Hawthorn, Murton and Easington. No industrial features depicted within or adjacent to the MHPGC PEIR Red Line Boundary: Onshore. Predominantly agricultural landscape with established routeways.
1840	Hobson's Map of County Durham	Settlement pattern largely unchanged from Greenwood. No industrial features depicted within the MHPGC PEIR Red Line Boundary: Onshore, although early indications of coalfield development begin to appear within the wider region. Routeway network slightly more developed.

Date	Name	MHPGC PEIR Red Line Boundary: Onshore description
c.1840s	Tithe Map (via <i>The Genealogist</i>)	Earliest detailed field-by-field depiction of the MHPGC PEIR Red Line Boundary: Onshore. Fully enclosed agricultural landscape recorded, with regular field boundaries, established farmsteads (East/West Batter Law Farm, Hesleden Moor East/West, Hawthorn Tower) and small nucleated settlements at Hawthorn, Cold Hesledon and Murton. No industrial activity depicted. Field system reflects continuity with the medieval and early post-medieval landscape. Forms the baseline reference point for the regression.
c.1856–60s	OS One-Inch Old Series	First systematic Ordnance Survey depiction. Murton Colliery shown in its earliest form with limited supporting infrastructure. Enclosed field system within the MHPGC PEIR Red Line Boundary: Onshore largely unchanged from the Tithe Map. Dispersed farmsteads and nucleated settlements at Cold Hesledon and Hawthorn consistent with earlier maps.
1857–62	OS 6-Inch 1st Edition	First high-detail mapping of the area. Murton Colliery depicted in greater detail, including early sidings, water works and workers' housing. Hawthorn Quarry and limekiln features visible. Enclosed field system within the MHPGC PEIR Red Line Boundary: Onshore remains intact. Kinley Tower depicted within its surrounding farmed landscape.
1885–1903	OS One Inch	Murton Colliery substantially expanded. South Hetton Railway and associated mineral lines fully established. Hawthorn village expanded. Cold Hesledon, Kinley Tower and the dispersed farmstead network unchanged. MHPGC PEIR Red Line Boundary: Onshore remains enclosed agricultural land.

Modern (1901 to present)

- 3.3.3.67 Within the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area, the modern period is characterised by the continuation and eventual closure of the East Durham coalfield, the development of associated railway and industrial infrastructure, an extensive 20th century military defensive landscape relating to the First and Second World Wars and the Cold War, and a network of commemorative and ecclesiastical features marking the social legacy of the colliery communities. The modern landscape developed directly from the post-medieval and Victorian industrial pattern described in **Paragraph 0**, with the closure of the Murton, Dawdon, South Hetton and Hawthorn collieries between the 1980s and early 1990s representing a major reorganisation of land use, since which time much of the surface industrial infrastructure has been demolished, levelled or reclaimed.
- 3.3.3.68 20th century industrial activity within the 1km Study Area is represented by the continued operation and ultimate closure of the Murton, Dawdon, South Hetton and Hawthorn collieries, with associated assets including the East Murton Farm curvilinear enclosure (H6669); the Dawdon Bankside Cliff Colliery Railway (H66946); the Dawdon Colliery Tipping Flumes (H66949) and Dawdon Colliery Drainage Structure (H66986); the Hawthorn Combined Coal Mine (H87053); the 'Site of Koepe Engine, Murton Colliery' (H3840, an early 20th-century winder and engine house); and the early 20th-century Dawdon Suspension Bridge (H67773). The 'Dawden Village' (H39391) is recorded as an early 20th-century settlement, reflecting the colliery-driven expansion of the 1km Study Area's settlement footprint, while the 'Site of Seaham Harbour 2nd Gasworks' (H70419) and 'Seaham Brickworks' (H86928) reflect the wider industrial landscape into the early 20th century.
- 3.3.3.69 Within the MHPGC PEIR Red Line Boundary: Onshore, modern industrial activity is represented by the Hawthorn Junction demolition debris (H66994) and the cliff-top construction debris at Dawdon Beach Blast (H67018; previously described in **Paragraph 3.3.3.60 to 3.3.3.66**), reflecting continued 20th century activity at the same coastal locality where WWII defensive features (H86703, H86704, H3852, H6311, H67021) also cluster. This coastal landscape partially overlaps with the National Trust 'Durham Coast' property (see **Section 2.2**).
- 3.3.3.70 The Grade II Listed Hawthorn Dene Viaduct (H36107, LB1277271), constructed in the Edwardian period (1902–1910) to carry the east coast railway line through Hawthorn Dene, is the principal designated modern transport infrastructure asset within the 1km Study Area. The Edwardian Hawthorn Tower Halt (H8286) and the Early 20th-Century War Memorial Sarcophagus at St Joseph's (H49467) reflect associated early 20th century railway and settlement infrastructure supporting the colliery and coastal communities.

- 3.3.3.71 First World War assets within the 1km Study Area include the Trenches at Hawthorn (H60719); the Modern Trench System 250m east of Blue House Plantation, Hive Point (H3837, a practice trench surviving as a buried polygon feature); the War Memorial Cross, St Michael and All Angels Churchyard, Hawthorn (H49328, Grade II listed, LB1438068); and Vane House, Dawdon (H48693, recorded as a First World War hospital). The Easington/Hawthorn Coast was also affected by maritime First World War losses, including the wreck of the Thames off Seaham (H48764). Commemorative features added later in the 20th century include the Grade II listed War Memorial Cenotaph, Murton (H5800, LB1391516); the War Memorial Wall and Plaque close to Murton Cenotaph (H49466); the War Memorial Cross, Holy Trinity Churchyard, South Hetton (H49642); and the South Hetton Colliery memorial (H84058), reflecting the social legacy of the colliery communities into the late 20th-century.
- 3.3.3.72 The Kinley Hill Chain Home Low (CHL) Radar Station (H50014) is the principal Second World War strategic defensive asset within the MHPGC PEIR Red Line Boundary: Onshore, comprising the radar station and associated chain home station infrastructure. The site survives as a series of brick-built structures in varying states of disrepair, concrete and brick foundation platforms, and areas of collapsed corrugated iron sheeting, with aerial photography from 1979 recording six standing ancillary buildings and a number of building bases.
- 3.3.3.73 The Site of World War II Military Complex at Cold Hesledon (H15960), recorded under its early 20th century attribution, comprises a Military Camp and Military Building complex with multiple recorded NMP polygon features, indicating a substantial defensive installation that supported the wider coastal defence and radar infrastructure. This complex was subsequently redeveloped as the Cold Hesledon ROTOR Technical Site (H51770), also known as RAF Cold Hesledon or ROTOR Station (designator identification 'IDW'), a Cold War-period radar station comprising a guardhouse, operations block and radar station, with an associated Cold Hesledon ROTOR Domestic Site (H51771) providing domestic military accommodation. The R1 underground operations block survives beneath an earthen mound and is recorded as intact but backfilled, with associated radar plinths and a single ancillary building still extant, although the guardhouse was removed between 1971 and 1987 and the wider site is overgrown and partially affected by recent housing development.
- 3.3.3.74 These assets reflect the continued strategic importance of the East Durham coastal landscape during the Cold War period (1946–1991), with the ROTOR network forming part of Britain's integrated air defence system. Within the MHPGC PEIR Red Line Boundary: Onshore, this period is also represented by the Royal Observer Corps monitoring post (H76364), a Cold War underground monitoring post. Continued operational use of colliery-period infrastructure into the middle of the 20th-century is represented by the Murton Colliery Open Air Pool (H84062) and the Hawthorn Combined Coal Mine (H87053, recorded by Martin Green in May 2025).
- 3.3.3.75 The Grade II Listed Church of St Hild and St Helen, Melbury Street, Dawdon (H36075, LB1232269), recorded under its 20th-century attribution, reflects the early 20th century expansion of colliery community ecclesiastical infrastructure. No additional designated heritage assets of modern date are recorded within the Extended Study Areas that have not already been referenced above; the principal designated modern assets are the Grade II listed Hawthorn Dene Viaduct (LB1277271), the Grade II listed Hawthorn War Memorial (LB1438068), the Grade II listed Murton War Memorial Cenotaph (LB1391516), and the Grade II listed Church of St Hild and St Helen, Dawdon (LB1232269), all within the 1km Study Area.
- 3.3.3.76 The modern landscape of the MHPGC PEIR Red Line Boundary: Onshore is dominated by Second World War coastal defensive features along the Hawthorn cliff and Dawdon coastline, the Cold War Royal Observer Corps monitoring post (H76364), and post-closure industrial demolition and construction debris associated with the cleared East Durham collieries. The wider 1km Study Area supports a more developed modern landscape, comprising the principal WWII defensive infrastructure of the East Durham coast (Kinley Hill CHL Radar Station and the Cold Hesledon Military Complex), the Cold War ROTOR network at Cold Hesledon, the operational and post-closure remains of the major collieries at Murton, Dawdon, South Hetton and Hawthorn, and the commemorative and ecclesiastical infrastructure of the colliery communities. This indicates that the MHPGC PEIR Red Line Boundary: Onshore lay within an actively defended and industrially developed modern landscape.

3.3.3.77 Survival is variable: above-ground colliery infrastructure has been almost entirely cleared since closure in the late 1980s, while Second World War features survive as a combination of upstanding structures (e.g. Type FW3/22 pillboxes), buried or partially levelled features (e.g. trenches and weapons pits), and demolition or construction debris. A modern map regression exercise has been undertaken to identify changes within and around the MHPGC PEIR Red Line Boundary: Onshore across the 20th and 21st century cartographic record (see **Table 3.2** Error! Reference source not found.).

Table 3.2: Modern map regression – MHPGC PEIR Red Line Boundary: Onshore

Date	Name	MHPGC PEIR Red Line Boundary: Onshore
1920s–1930s	OS Revisions	Continued industrial landscape as depicted in late 19th century OS mapping. Murton, Dawdon and South Hetton Collieries operational. Railway corridors retained. Coastal industrial activity at Dawdon Beach Blast and Hawthorn Hive depicted. Field system within the MHPGC PEIR Red Line Boundary: Onshore unchanged.
1940s	RAF Aerial Photography	First aerial depiction of the area. Coastal landscape shows the initial WWII defensive infrastructure along the Hawthorn cliff and Dawdon coastline. Pillboxes, trackways, barbed wire obstructions and military buildings depicted. Kinley Hill CHL Radar Station and Cold Hesledon Military Complex visible within the 1km Study Area. Field system within the MHPGC PEIR Red Line Boundary: Onshore largely retained.
1950s–1960s	OS Post-war Editions	Continued colliery operation. Cold War ROTOR infrastructure at Cold Hesledon depicted, including Technical and Domestic sites. Royal Observer Corps monitoring post (H76364) recorded within the MHPGC PEIR Red Line Boundary: Onshore. Settlement at Murton and Easington begins to expand. Agricultural landscape within the MHPGC PEIR Red Line Boundary: Onshore unchanged.
1970s–1980s	OS National Grid Editions	Continued industrial activity at Murton, Dawdon and South Hetton. WWII defensive features along the Hawthorn and Dawdon coastline depicted as partial remains. Field system within the MHPGC PEIR Red Line Boundary: Onshore unchanged.
Late 1980s – early 1990s	OS Editions	Colliery closures across the East Durham coalfield (Murton, Dawdon, South Hetton, Hawthorn). Demolition and clearance of above-ground colliery infrastructure begins. Field system within the MHPGC PEIR Red Line Boundary: Onshore unchanged.
2000s–2010s	Modern Aerial Imagery (ESRI/GetMapping)	Above-ground colliery infrastructure cleared. Former colliery sites returned to grassland or redeveloped. A19 corridor present. Settlement expansion at Murton and Easington. Historic railway network removed. Underlying agricultural field pattern within the MHPGC PEIR Red Line Boundary: Onshore remains broadly recognisable from earlier OS editions, with localised field boundary loss and amalgamation.

3.3.4 Survival, truncation and previous investigation

3.3.4.1 The current pattern of known evidence within both the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area is influenced by past activity, differential survival and the uneven extent of previous archaeological investigation. Agricultural truncation through long-term arable ploughing has reduced the survival of upstanding earthworks and shallow buried deposits in many areas, as demonstrated by the recorded conditions of the Bronze Age round barrows within the 1km Study Area. For example, the burial cairns at Hesledon East House (H60) survive as buried deposits only following ploughing, while the round barrows at East Murton (H541 and H551), Croup Hill (H1154), Batter Law (H2) and Kinley Hill (H61) survive as upstanding but ploughed and disturbed earthworks. Industrial and extractive activity associated with the East Durham coalfield, including the Murton, Dawdon, South Hetton and Hawthorn collieries together with their associated waste tips, railway infrastructure, workers' housing, quarries and limekilns, has truncated or removed earlier remains locally, particularly in those parts of the 1km Study Area developed for colliery surface infrastructure during the 19th and 20th centuries. The post-1980s closure and clearance of the major collieries has further altered surface conditions, with much of the colliery infrastructure now demolished, levelled or reclaimed, although associated buried features such as foundations, drainage systems and waste deposits are recorded in the DCC HER as surviving below ground. The Mining Remediation Authority's online map viewer (Mining Remediation Authority, 2026) also identifies areas of former

opencast working within and adjacent to the 1km Study Area, providing further evidence of extensive ground disturbance across the East Durham coalfield.

- 3.3.4.2 Conversely, less disturbed areas across the wider landscape retain buried archaeological deposits despite the absence of visible surface evidence. This is directly demonstrated by recent intrusive investigations, most notably the radiocarbon-dated Iron Age enclosure at South Seaham Garden Village (H66393), which was identified from cropmark evidence and confirmed only through evaluation (event E66257, Archaeological Research Services Ltd, 2018) and subsequent open area excavation (event E86232, Archaeological Services WYAS, 2022–2023). The associated DCC source record (S86231) identifies this work as an open area excavation targeting anomalies identified through previous geophysical survey. The 2007 Desk-Based Assessment for Hawthorn Wind Farm (event E75367, Ian Farmer Associates) is also flagged in the DCC HER as identifying significant archaeology – the only investigation in the dataset recorded under this designation. These results demonstrate that significant archaeological remains can survive within and adjacent to the MHPGC PEIR Red Line Boundary: Onshore where no clear surface indication is present.
- 3.3.4.3 The distribution of previous archaeological investigation across the MHPGC PEIR Red Line Boundary: Onshore and the 1km Study Area is uneven and has focused primarily on areas of recent development pressure rather than systematic landscape coverage. The South Seaham Garden Village area located approximately 463m from the MHPGC PEIR Red Line Boundary: Onshore, and the SEGL1/Hawthorn Grid Site corridor within the MHPGC PEIR Red Line Boundary: Onshore, have been the subject of substantial recent fieldwork generating direct evidence for prehistoric and medieval archaeology (events E84359 and E87664, both recording significant archaeology). Geophysical survey coverage is similarly project-driven, with magnetometry undertaken at Hawthorn (event E15774, North Pennines Archaeology, 2007), Murton Solar Farm (event E69761, Headland Archaeology, 2020), Hazel Solar Farm (event E89136, Magnitude Surveys, 2026), West Lane (events E88716 and E89147), Foxcover (event E84308), Logan Terrace (event E84303) and Admiralty Way, Seaham (events E78944 and E81464), with most returning possible archaeological anomalies. No systematic fieldwalking has been undertaken within the MHPGC PEIR Red Line Boundary: Onshore, and the only fieldwalking event of significance within the 1km Study Area is the 2023 fieldwalking at Admiralty Way, Seaham (event E81464, Archaeological Services Durham University), which recorded significant archaeology.
- 3.3.4.4 The current distribution of recorded heritage assets within the 1km Study Area therefore reflects both past activity and the differential survival and investigation pattern described above. Activity is distributed widely across the 1km Study Area rather than confined to any single area, with recurring evidence around Hawthorn, Kinley Hill, Murton, Cold Hesledon, Hesledon East House and Seaham. The MHPGC PEIR Red Line Boundary: Onshore lies within a landscape with a fully developed multi-period archaeological resource, ranging from prehistoric activity through to a substantial 20th century military and industrial layer.
- 3.3.4.5 The current absence of surface evidence for any particular period or asset type should not be taken as evidence for absence of buried remains. The assessment of archaeological potential within the MHPGC PEIR Red Line Boundary: Onshore must therefore take account of both known assets and the demonstrated capacity of the wider landscape to preserve unrecorded buried deposits.

3.4 Archaeological potential and significance/value

3.4.1 Prehistoric potential

Overview

- 3.4.1.1 Two upstanding Bronze Age round barrows, an Iron Age enclosure and a possible enclosure ditch are recorded within the MHPGC PEIR Red Line Boundary: Onshore, with the wider 1km Study Area containing varied Mesolithic, Bronze Age and Iron Age evidence. Recent investigations referred to above in this Desk Based Assessment confirm that buried prehistoric remains survive within the MHPGC PEIR Red Line Boundary: Onshore without surface expression.

Palaeolithic

- 3.4.1.2 No Palaeolithic assets are recorded within the MHPGC PEIR Red Line Boundary: Onshore. Palaeolithic remains typically have low archaeological visibility in ploughed landscapes (Durham County Council, 2013). Potential is therefore low, although residual lithic material may survive within later, undated prehistoric findspots.

Mesolithic

- 3.4.1.3 The archaeological potential is assessed as moderate for remains relating to Mesolithic and undated prehistoric findspots and lithic scatters. Heritage value would be low where recovered from unsecure contexts, reflecting archaeological interest at a local level, and medium where recovered from stratified contexts, reflecting regional interest.

Neolithic

- 3.4.1.4 No Neolithic assets are currently recorded within the MHPGC PEIR Red Line Boundary: Onshore. Neolithic activity often has low archaeological visibility in ploughed landscapes. Potential is therefore assessed as low, although residual Neolithic lithic material may survive within undated prehistoric findspots.

Bronze Age

- 3.4.1.5 Two Bronze Age round barrows are known to survive within the MHPGC PEIR Red Line Boundary: Onshore, and further funerary monuments are recorded across the 1km Study Area. The archaeological potential is therefore assessed as high for further Bronze Age funerary remains. These would carry heritage value considered medium, reflecting archaeological interest at a regional level. While funerary monuments are recorded, there is currently no direct evidence for contemporary Bronze Age settlement within the MHPGC PEIR Red Line Boundary: Onshore or 1km Study Area. Potential for associated settlement remains is therefore assessed as low.

Iron Age

- 3.4.1.6 The archaeological potential for remains relating to Iron Age enclosures and associated settlement features is assessed as moderate. These would carry heritage value considered medium, reflecting archaeological interest at a regional level.

3.4.2 Roman potential

- 3.4.2.1 One Roman-period findspot is recorded within the MHPGC PEIR Red Line Boundary: Onshore (H33181, Kinley Hill), and Roman evidence within the 1km Study Area is otherwise limited. However, the presence of cropmark and geophysical enclosures of probable Iron Age or Romano-British date indicates likely continuity of settlement and land use from the Iron Age into the Romano-British period, consistent with a dispersed rural agricultural landscape rather than formal Roman settlement.
- 3.4.2.2 The archaeological potential for the Roman period is therefore assessed as low to moderate for remains relating to Romano-British rural settlement, enclosure features, and associated agricultural land use. Such remains would carry heritage value considered medium, reflecting their archaeological interest at a regional level within the wider East Durham rural settlement pattern identified in the NERRF. The archaeological potential is assessed as low for remains relating to isolated Roman findspots and unstratified artefactual material, which would carry heritage value considered low based on their limited archaeological interest at a local level.

3.4.3 Early Medieval potential

- 3.4.3.1 No early medieval assets are recorded within the MHPGC PEIR Red Line Boundary: Onshore, and direct evidence within the 1km Study Area is limited to a single uncertain carved stone findspot at Murton (H80634). Strong indirect evidence, including Old English place-names, late Anglo-Saxon land grants relating to Easington and Seaham, and excavated Anglo-Saxon burials within the wider

East Durham coastal landscape, indicates that the principal settlement pattern around the MHPGC PEIR Red Line Boundary: Onshore was established by the late Anglo-Saxon period.

- 3.4.3.2 The archaeological potential for the early medieval period is therefore assessed as low for remains relating to Anglo-Saxon settlement, ephemeral occupation traces and associated agricultural features. Such remains would carry heritage value considered medium, reflecting their archaeological interest at a regional level within the wider Anglo-Saxon settlement pattern of the East Durham coastal landscape. The archaeological potential is assessed as low for remains relating to isolated early medieval findspots and dispersed cemetery deposits, which would carry heritage value considered low to medium, reflecting their archaeological interest at a local to regional level.

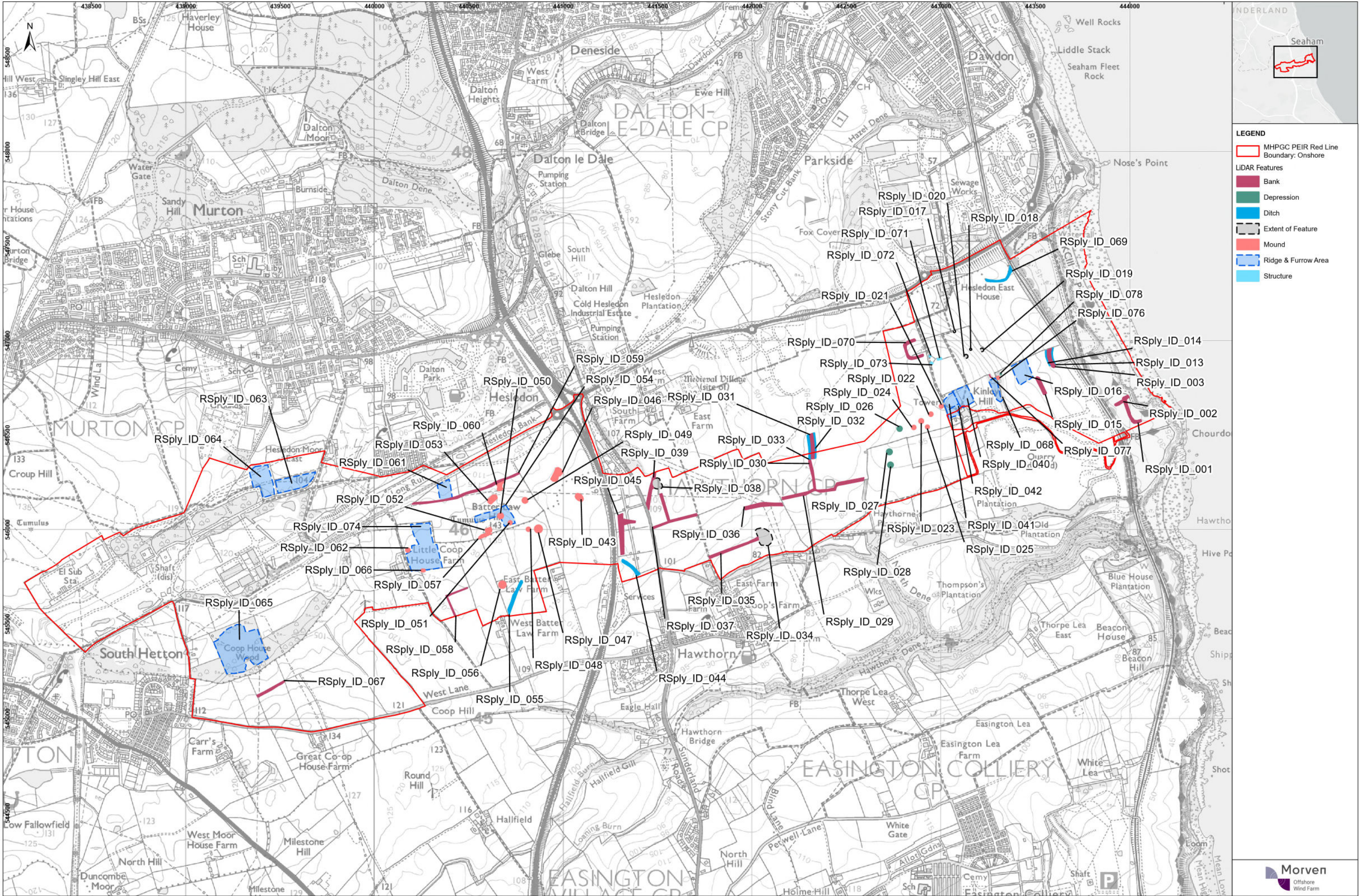
3.4.4 Medieval potential

- 3.4.4.1 Limited areas of medieval ridge and furrow are recorded within the MHPGC PEIR Red Line Boundary: Onshore at Hawthorn and Cold Hesledon, although the majority of ridge and furrow recorded within the MHPGC PEIR Red Line Boundary: Onshore is post-medieval in date (see **Paragraph 3.3.3.54**). The MHPGC PEIR Red Line Boundary: Onshore lies within a wider medieval agricultural landscape comprising deserted and shrunken medieval villages, a dispersed network of farmsteads, and excavated medieval settlement evidence at Village Farm, Murton (H63098, event E38490). Comparable buried cultivation, boundary, and ancillary settlement features may therefore survive within the MHPGC PEIR Red Line Boundary: Onshore without surface expression.
- 3.4.4.2 The archaeological potential for the medieval period is therefore assessed as moderate for remains relating to ridge and furrow cultivation and associated field boundary features. Such remains would carry heritage value considered low, reflecting their archaeological interest at a local level. The archaeological potential is also assessed as moderate for remains relating to dispersed farmsteads and ancillary settlement features, which would carry heritage value considered medium, reflecting their archaeological interest at a regional level within the wider medieval settlement pattern of the East Durham Plateau. The archaeological potential is assessed as low to moderate for remains relating to medieval landscape features such as former ponds, trackways and boundaries, which would carry heritage value considered low, reflecting their archaeological interest at a local level.

3.4.5 Post-medieval and modern potential

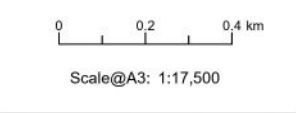
- 3.4.5.1 The MHPGC PEIR Red Line Boundary: Onshore lies within a landscape of substantial post-medieval and 20th century industrial, agricultural and military activity, including recorded ridge and furrow, quarries, limekilns, WWII coastal defences, and a Cold War Royal Observer Corps monitoring post (H76364). Survival is variable: above-ground colliery infrastructure has been almost entirely cleared since closure in the late 1980s, while WWII features survive as a combination of upstanding structures (e.g. Type FW3/22 pillboxes), buried or partially levelled features, and demolition or construction debris.
- 3.4.5.2 The archaeological potential for the post-medieval and modern period is therefore assessed as follows:
- Low to moderate for remains relating to post-medieval ridge and furrow and agricultural boundary features, which would carry heritage value considered low, reflecting their archaeological interest at a local level;
 - Moderate for remains relating to post-medieval quarrying, lime production and extractive industrial features, which would carry heritage value considered low to negligible, reflecting their archaeological interest at a local to regional level;
 - Low to moderate for remains relating to 20th century colliery infrastructure and post-closure demolition deposits, reflecting the extensive clearance and redevelopment of surface remains across the East Durham coalfield. Such remains would carry heritage value considered low, reflecting their archaeological interest at a local level;
 - Moderate for remains relating to Second World War coastal defensive features, reflecting the known cluster of defensive infrastructure along the Hawthorn cliff and Dawdon coastline. Such remains would carry heritage value considered low to medium, reflecting their archaeological interest at a local to regional level;

-
- Low for remains relating to Cold War monitoring and strategic defensive features, reflecting the known footprint of the ROTOR network at Cold Hesledon and the Royal Observer Corps post within the MHPGC PEIR Red Line Boundary: Onshore. Such remains would carry heritage value considered medium, reflecting their archaeological interest at a regional level.



Project Name:
MORVEN HAWTHORN PIT GRID
CONNECTION PROJECT

Drawing Title:
FIGURE 3.1 RESULTS OF LIDAR ANALYSIS



Geodetic Information:
Datum: OSGB 1936
Projection: British National Grid

Data Sources:
BP, Ordnance Survey

Service Layer Credits:
Light Gray Reference: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
Light Gray Base: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
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Drawing Number: MHPGC-WSP-PEIR-034				
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4 Future Baseline

- 4.1.1.1 Large parts of the MHPGC PEIR Red Line Boundary: Onshore and 1km Study Area comprise arable land and some degradation of extant earthworks and shallowly buried archaeological deposits may be expected to occur over the lifetime of the MHPGC Project. The condition of any remains is unlikely to be significantly altered before the start of the construction period, however. This could include the partial or total loss of known or potential buried archaeological resources within the MHPGC PEIR Red Line Boundary: Onshore or known above-ground assets within the 1km Study Area as a consequence of land being disturbed or developed.

5 Next Steps

- 5.1.1.1 The baseline will continue to be refined through the EIA process as additional information becomes available. This will include the results of geophysical survey and targeted trial trench evaluation within selected areas of the MHPGC PEIR Red Line Boundary: Onshore. The trial trenching scope will be focused on the results of the geophysical survey and areas identified as having archaeological potential and likely to be subject to direct physical disturbance by the MHPGC Project. Further design development will also refine the MHPGC PEIR Red Line Boundary: Onshore and identify a preferred LSS option. This will allow assessment of a single LSS and associated Extended Study Area in the Environmental Statement (ES), that will accompany the application to the Planning Inspectorate (PINS) for development consent.

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