

Scout Moor Wind Farm Extension, Greater Manchester/Lancashire: Preliminary Desk-Based Assessment

AOC Project Number: 27940

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Scout Moor Wind Farm Extension, Greater Manchester/Lancashire

Preliminary Desk-Based Assessment

On Behalf of:	Cubico UK Development (Wind 1) Limited
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Prepared by:	Hannah Brown
Illustration by:	Hannah Brown
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Author: Hannah Brown

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Approved by: Lynne Roy

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Enquiries to: AOC Archaeology Group
Edgefield Industrial Estate
Edgefield Road
Loanhead
EH20 9SY

Tel. 0131 440 3593
Fax. 0131 440 3422
e-mail. admin@aocarchaeology.com

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1 NON-TECHNICAL SUMMARY

- 1.1 AOC Archaeology Group was commissioned by Cubico UK Development (Wind 1) Limited to undertake an Archaeological Desk-Based Assessment (DBA) relating to an area of land (hereafter 'the Assessment Boundary') proposed as an extension to Scout Moor Wind Farm. The Assessment Boundary mostly upland moorland, located between Rochdale and Rawtenstall and straddling the county boundary of Greater Manchester and Lancashire (centred at NGR SD 8555 1859). The Assessment Boundary lies within the local authority administrative areas of Rochdale Metropolitan Borough Council and Rossendale Borough Council.
- 1.2 This Preliminary Archaeological DBA sets out the findings of an initial phase of desk-based research and walkover survey, undertaken to review the current archaeological baseline. It is based primarily on initial review of current HER/NHLE data, alongside historical mapping, aerial photography and other online sources pertaining to the Assessment Boundary and a surrounding 1km Study Area.
- 1.3 A further, Detailed Archaeological DBA will be completed to inform the Environmental Impact Assessment (EIA) and Environmental Statement (ES) in order to allow refinement of the preliminary baseline data and the development of a better understanding of the archaeological resource within the Assessment Boundary. This will allow fuller and more nuanced identification and assessment of potential direct effects on the archaeological resource and will inform the development of a suitable mitigation strategy if required.
- 1.4 This phase of the assessment has established that the relevant Historic Environment Records (HERs) currently record the presence of 201 known archaeological heritage assets within the Assessment Boundary. Comparison of the currently available information with historical mapping, LiDAR data, aerial imagery and the results of the 17 previous archaeological investigations that are recorded as having taken place within/extended into the Assessment Boundary has determined the likely presence of additional archaeological features within the Assessment Boundary that are not currently recorded. Mapping the location and character of these features (and any others identified through consultation of additional documentary sources, historical and landscape datasets), along with further walkover survey, will form part of the upcoming detailed phase of archaeological assessment and will enable the establishment of a robust baseline understanding of the archaeological resource.
- 1.5 Currently recorded archaeological remains include evidence of prehistoric activity in the Assessment Boundary (including Mesolithic and Neolithic lithic finds and possible cairns) although the landscape is dominated most visibly by extensive remains of post-medieval sandstone and coal extraction, with post-medieval agricultural remains evident around the downslope-fringe of the open moorland. A number of boundary markers are also present, along with Rooley Moor Road, which represents an older routeway modified by a 19th-century public works scheme. The moorland plateau includes extensive peat deposits.
- 1.6 Based on the current evidence, it is considered probable that unrecorded and/or hitherto unknown (buried) archaeological remains are likely to be present within the Assessment Boundary, along with peat deposits that are likely to contain palaeoenvironmental information. Any such archaeological remains that may be present are most likely to be associated with prehistoric or post-medieval activity. Although most of the of the later remains are considered to be of low heritage significance individually, it is noted that cumulatively they form a coherent and legible resource at the landscape scale.
- 1.7 The Detailed DBA will accompany the ES and will set out assessment of the significance of identified heritage assets and the potential for impacts on them resulting from the Project for Assessment. The findings of the DBA

will be incorporated into the EIA process, in order to minimise the potential for impacts on the archaeological record. Recommendations regarding any necessary mitigation measures will also be made.

- 1.8 In accordance with national and local planning policies on heritage, additional intrusive archaeological evaluation works may be required. Any decision relating to the requirement for and scope of further works would be made by Greater Manchester Archaeological Advisory Service (GMAAS) and Lancashire County Council Historic Environment Team (LCCHET) as advisors to the local planning authorities on archaeological matters.

2 INTRODUCTION

2.1 Assessment Boundary

- 2.1.1 AOC Archaeology Group was commissioned by Cubico UK Development (Wind 1) Limited to undertake a Desk-Based Assessment (DBA) regarding the Scout Moor Wind Farm Extension (hereafter ‘the Assessment Boundary’ – Figure 1). The Assessment Boundary lies within the administrative areas of two local authorities: Rochdale Metropolitan Borough Council and Rossendale Borough Council.
- 2.1.2 The Assessment Boundary comprises land to the northwest of Rochdale and lies within an area of upland moorland typical of the South Pennines (National Character Area 36; Natural England 2014). Much of the land within the Assessment Boundary is common land in use for rough grazing and is under extensive areas of blanket bog and upland acid grassland, crossed by a network of public rights of way. The landscape is characterised by frequent historical remains of extractive industries (predominantly sandstone quarrying and small-scale coal mining), with several quarries remaining active in the surrounding area. The existing Scout Moor Windfarm, consisting of 26 turbines and two associated masts, extends across Whittle Hill and Knowl Moor to the west of the Assessment Boundary; two of the extant turbines on Hail Storm Hill stand within the current Assessment Boundary.

2.2 Development Proposal

- 2.2.1 This archaeological DBA relates to a proposed extension to Scout Moor Wind Farm. The Project for Assessment will include:
- Site securement;
 - Enabling works and establishment of a temporary laydown area / construction compound;
 - Earthworks to enable the creation of site access tracks, hardstands and other infrastructure;;
 - Formation of drainage features and creation of outfall(s);
 - Earthworks and operations to create turbine foundations, crane pads (alongside associated landscaping), and possible excavation of borrow pits;
 - Wind turbine erection;
 - Installation of electrical connections and construction of substation / control facility;
 - Turbine commissioning and testing;
 - Decommissioning of temporary construction compound, reinstatement of borrow pits, and site finishes;
 - Habitat management / peatland enhancement works;
 - Wind farm operational for 40 years; and
 - Decommissioning of wind farm.
- 2.2.2 The proposed access to the Assessment Boundary during the construction stage will be from the west, with the proposed grid connection running north and then west from the northern edge of the Assessment Boundary (see Figure 1).
- ### 2.3 Topographical and Geological Conditions
- 2.3.1 The Assessment Boundary extends across an upland moorland plateau that slopes slightly down towards the south; the highest ground lies along a rounded ridge that extends from the western side of the Assessment

Boundary into its centre, with elevations of c. 477m above Ordnance Datum (aOD) on Cowpe Moss and c. 474m aOD at Top of Leach. A more irregular ridge, forming the eastern watershed of the Naden Valley, extends south from Top of Leach, via Top of Pike (398m aOD) towards Hunger Hill (318m aOD) at the southern end of the Assessment Boundary. The plateau is drained by a series of approximately radial watercourses that have incised small V-shaped valleys (known locally as 'cloughs') into the steep sides of the plateau and which are tributaries of the surrounding valleys that contain dense ribbon settlement associated with post-medieval industrial growth (particularly evident to the east, north and west of the plateau). On the upper valley sides, a fringe of improved, often rushy, pasture surrounds the edge of the open moorland, enclosed by drystone walls of local sandstone; these fields extend into the Assessment Boundary along parts of the eastern and northern edges of the Assessment Boundary.

- 2.3.2 The 1:50,000 scale geological mapping (BGS 2024) shows that the Assessment Boundary lies within an area of Carboniferous rocks that display a complex distribution due to frequent faulting; the bedrock across the area is dominated by various sand and gritstones, with mudstones, siltstones and grey sandstones of the Pennine Lower Coal Measures also present. Multiple faults across the Assessment Boundary are generally aligned NW-SE and coincide with distinct changes in bedrock strata as well as geomorphological features such as water courses.
- 2.3.3 Although mapping underground strata at this scale inevitably has limitations, it provides useful indications relating to the likelihood and distribution of surviving archaeological remains and historical land use, both directly (e.g. in terms of the distribution of coal or stone extraction activity) and indirectly (e.g. via current surface habitats, including peat distribution, with implications for the survival and visibility of buried remains). The western and central areas of the Assessment Boundary are underlain predominantly by rocks of the Rossendale Formation, including Rough Rock Sandstone (a coarse-grained feldspathic sandstone) and Upper Haslingden Flags, as well as beds of siltstones, mudstones, seatearths and thin coal seams. The southeastern (centred on Top of Pike) and northeastern (NE of a line along Fern Isle Brook, Old Sink Slack and the eastern sides of Hamer Hill and Top of Leach) parts of the Assessment Boundary are underlain by the Pennine Lower Coal Measures Formation, comprising interbedded mudstones and siltstones, and sandstones (including Milnrow Sandstone, Darwen Flags, Ganister Rocks, Woodhead Hill Rocks, Great Arc Sandstone and Helpet Edge Sandstone).
- 2.3.4 The same geological mapping records no superficial deposits across much of the Assessment Boundary, although large areas of peat are mapped across the high ground. Small, localised head deposits and more recent landslip deposits (e.g. around the sides of the Naden Valley) reflect the steep hillsides and often waterlogged ground conditions, while Devensian till and glaciofluvial sands and gravels occur on the lower slopes of the surrounding ice-deepened valleys and, in a few places, extend a short distance into the Assessment Boundary (e.g. on the northern side of Hunger Hill).
- 2.3.5 The BGS (2024) records the locations of two historical boreholes from within the Assessment Boundary (SD81NE11 at Top of Pike Hill; SD81NW36 at Cowpe Moss), however, the results of neither are publicly available. Where results are available from various boreholes located a short distance outside the Assessment Boundary (e.g. SD81NE62; SD81NW9; SD81NE3; SD81NE14), they largely show multiple layers of superficial deposits and sedimentary bedrock as outlined by the geological mapping.
- 2.3.6 It is well established that the waterlogged, acidic and anaerobic conditions associated with peat deposits in good condition can facilitate the survival of archaeological remains and palaeoenvironmental proxies. Peat depth survey and modelling carried out in association with the Project for Assessment (Hammond 2024)

indicate that peat deposits (of various depths) are widespread across the Assessment Boundary and are both deepest and most extensive across the northwestern and northeastern parts (though it is recognised that turbines will not be placed in locations where peat deposits are anticipated to be greater than 1m). It should be noted that the areas of peat correlate well with the distribution of blanket bog habitat, also mapped across the peat survey area (Hammond 2024), as would be expected; these areas also correspond to 'empty' areas in terms of the distribution of currently known heritage assets included in the HER data. This demonstrates that, in terms of earthworks, standing remains and surface finds, the known archaeological resource is likely to be influenced by current visibility and reinforced by modern patterns of land use and accessibility; it should also be borne in mind that the distribution of bog, grassland, and indeed wooded, habitats (which have inevitably influenced the distribution of past activity) have not remained constant over time.

- 2.3.7 Archaeological investigations in advance of the construction of Scout Moor Windfarm (Event 1110) included pollen analysis of samples taken from a location close to the access route at the western side of the Assessment Boundary, which demonstrated the survival of high concentrations of well-preserved pollen, and radiocarbon dating of the earliest peat in the sample was successfully undertaken. Geomorphological and palaeoenvironmental assessment of conditions across parts of the eastern side of the Assessment Boundary has also been undertaken (Headland Archaeology 2014) based on the results of 31 auger cores. More detailed analysis of the implications of these results for the survival of and potential impacts on the archaeological resource within the Assessment Boundary will be incorporated into the proposed detailed DBA and relevant findings taken into account in the EIA and ES.

2.4 Government and Local Planning Policies and Guidance

Legislative Framework

- 2.4.1 Parliamentary legislation for Scheduled Monuments and other buried archaeological remains is provided by the Ancient Monuments and Archaeological Areas Act 1979. The most recent legislation, the Levelling Up and Regeneration Act 2023, includes provision for designated heritage assets including Scheduled Monuments, Listed Buildings and Registered Parks and Gardens, as well as placing a Statutory duty on Local Planning Authorities to maintain Historic Environment Records (HERs). With regard to World Heritage Sites, Scheduled Monuments, Registered Parks and Gardens, Protected Wrecks and 'other area[s] of land included in a register maintained by the Historic Buildings and Monuments Commission for England [Historic England]', Section 102 of the 2023 Act amends Section 58 of the Town and Country Planning Act 1990 to include a new section, Section 58B, which states that:

In considering whether to grant planning permission or permission in principle for the development of land in England which affects a relevant asset or its setting, the local planning authority or (as the case may be) the Secretary of State must have special regard to the desirability of preserving or enhancing the asset or its setting (Town and Country Planning Act 1990, Section 58 as amended by LURA 2023, Section 102).

- 2.4.2 The Public Services (Social Value) Act 2012, requires contractors, and their supply chains, to consider not only cost when commissioning or procuring services but also how they can make a positive economic, social and / or environmental impact and suppliers are required to set out their proposals for delivering social value that results in positive benefits to communities through a development. In terms of heritage and archaeology, social value can also be referred to as "public benefit" (DLUHC & MCHLG Live Document; ClfA 2021a; Mann 2023).

National Planning Policy Framework (NPPF)

- 2.4.3 The National Planning Policy Framework (NPPF) was published by the Department for Levelling Up, Housing and Communities (DLUHC) and last updated in December 2023. The NPPF sets out the Government's planning

policies for England and how these should be applied. It provides a framework within which locally-prepared plans for development can be produced and assessed. Chapter 16 of the NPPF is concerned with ‘Conserving and enhancing the historic environment’. It identifies heritage assets as “*an irreplaceable resource*” and notes that they “*should be conserved in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of existing and future generations*” (DLUHC 2023, para 195).

- 2.4.4 Where designated assets are concerned great weight should be given to the asset’s conservation. The more important the asset the greater the weight should be. Any harm to or loss of significance that is predicted to result from either a direct impact upon a designated heritage asset or a change to its setting should require:
- Clear and convincing justification. Substantial harm to or loss of:*
- *grade II listed buildings, or grade II registered parks or gardens, should be exceptional;*
 - *assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II* listed buildings, grade I and II* registered parks and gardens, and World Heritage Sites, should be wholly exceptional* (ibid, para 206).
- 2.4.5 Regarding proposals that are predicted to lead to substantial harm to or the total loss of significance to a designated asset, Paragraph 207 states that “*local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss*” (ibid, para 207). Where “*a development proposal will lead to less than substantial harm to the significance of a designated asset*” Paragraph 208 states that “*this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use*” (ibid, para 208).
- 2.4.6 Impacts upon non-designated heritage assets are also a pertinent planning consideration; Paragraph 209 states that “*In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset*” (ibid, para 209).
- 2.4.7 Where a heritage asset is to be lost, either in part or in whole, as a result of the development, the local planning authority should require developers to “*record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible*” (ibid, para 211).
- 2.4.8 The NPPF sets out three objectives to achieving sustainable development: economic, social; and environmental (ibid, para 8). Proposals for social value/public benefit can contribute to developments achieving these objectives. In terms of heritage and archaeology, “*Plans should set out a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats*” (ibid, para 196). Any proposal for a social value/public benefit strategy should take into account:
- a) *the desirability of sustaining and enhancing the significance of heritage assets, and putting them to viable uses consistent with their conservation;*
 - b) *the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;*
 - c) *the desirability of new development making a positive contribution to local character and distinctiveness;*
and

- d) *opportunities to draw on the contribution made by the historic environment to the character of a place* (ibid).

Planning Practice Guidance (PPG)

- 2.4.9 Planning Practice Guidance (PPG) was published in 2016 to expand upon the NPPF and is updated periodically, though the section on the Historic Environment was last updated on the 23rd July 2019. Section 18a of the guidance is concerned with ‘...*enhancing and conserving the historic environment*’. The Guidance notes that “*conservation is an active process of maintenance and managing change. It requires a flexible and thoughtful approach to get the best out of assets as diverse as listed buildings in everyday use and as yet undiscovered, undesignated buried remains of archaeological interest*” (DLUHC & MHCLG Live Document).
- 2.4.10 PPG requires assessments to consider the potential for harm of a proposed development on heritage assets in order to understand the impact on the significance of the heritage asset. Where designated heritage assets will be impacted upon, the PPG requires the assessment to clearly state whether that harm will be substantial or less than substantial (ibid, para 18).
- 2.4.11 When considering whether a proposal would cause substantial harm to a designated asset the PPG observes that:
- Substantial harm is a high test, so it may not arise in many cases. For example, in determining whether works to a listed building constitute substantial harm, an important consideration would be whether the adverse impact seriously affects a key element of its special architectural or historic interest. It is the degree of harm to the asset’s significance rather than the scale of the development that is to be assessed. The harm may arise from works to the asset or from development within its setting.*
- While the impact of total destruction is obvious, partial destruction is likely to have a considerable impact but, depending on the circumstances, it may still be less than substantial harm or conceivably not harmful at all, for example, when removing later additions to historic buildings where those additions are inappropriate and harm the buildings’ significance. Similarly, works that are moderate or minor in scale are likely to cause less than substantial harm or no harm at all. However, even minor works have the potential to cause substantial harm, depending on the nature of their impact on the asset and its setting* (ibid).
- 2.4.12 PPG provides a definition and guidance for public benefit where a development can achieve sustainable objectives (DLUHC 2023, para 8) and where there is the potential for harm to heritage assets. PPG states that that “*Public benefits should flow from the proposed development*” and that benefits “*should be of a nature or scale to be of benefit to the public at large and not just be a private benefit. However, benefits do not always have to be visible or accessible to the public in order to be genuine public benefits*” (DLUHC & MCHLG Live Document).

Local Planning Policies

- 2.4.13 The Assessment Boundary lies within the administrative areas of Rochdale Metropolitan Borough Council and Rossendale Borough Council. Policies relevant to cultural heritage conservation are outlined in the Rochdale Borough Unitary Development Plan 1996-2016 (Rochdale Metropolitan Borough Council 2006) and the Rossendale Local Plan 2019-2036 (Rossendale Borough Council 2021). Although the former is dated 1996 to 2016, it is still in place until a new local plan has been adopted. Policies relevant to the scope of this assessment are as follows:

Rochdale Borough Unitary Development Plan 1999-2016

Policy BE/10 – Development Affecting Archaeological Sites and Ancient Monuments

‘Ancient Monuments and sites of archaeological interest are a valuable part of the Borough’s heritage and should be conserved as far as possible. The effects of development proposals on archaeological value must be assessed and evaluated before planning applications are determined and the County Archaeological Sites and Monuments Record (SMR) is a reference for this purpose.

The development control process provides an opportunity to suggest amendments to a proposal to protect a site or allow monitoring during development. In certain cases archaeological mitigation may be required. For example, where the local planning authority decides that the physical preservation in situ of known sites is not justified and that development should proceed, the developer may be required to make appropriate provision for the excavation and recording of remains. This can be achieved through planning conditions and legal agreements reached between appropriate parties. The policy applies to sites scheduled as being of national importance and all other known sites and monuments. Although the Department for Culture, Media and Sport (DCMS) is ultimately responsible for the protection of scheduled sites and monuments, the Council needs to ensure the protection of other sites. The Council will consult with Greater Manchester Archaeological Unit, English Heritage and DCMS as appropriate in respect of any explicit or implied threat to a site. It should be recognised that proposals which do not require planning permission can have an impact on sites and their settings and it may be appropriate to use planning legislation to bring minor works and development under planning control’.

Rossendale Local Plan 2019-2036

Strategic Policy ENV2: Historic Environment

‘The Council will support proposals which conserve or, where appropriate, enhance the historic environment of Rossendale.

Particular consideration will be given to ensure that the significance of those elements of the historic environment which contribute most to the Borough’s distinctive identity and sense of place are not harmed. These include:

- *The legacy of mill buildings and their associated infrastructure including engine houses, chimneys and mill lodges, and the relationship to nearby terraced workers’ housing;*
- *The infrastructure associated with the Borough’s mining and quarrying heritage;*
- *Historic Landscape.*

Proposals affecting a designated heritage asset (or an archaeological site of national importance) should conserve those elements which contribute to its significance. Less than substantial harm to such elements will be permitted only where this is clearly justified and outweighed by the public benefits of the proposal.

Substantial harm or total loss to the significance of a designated heritage asset (or an archaeological site of national importance) will be permitted only in exceptional circumstances. Where permission is granted for a development which would result in the partial or total loss of a designated heritage asset, approval will be conditional upon the asset being fully recorded and the information deposited with the Historic Environment Record (HER).

Proposals which would remove, harm or undermine the significance of a non-designated heritage asset will only be permitted where the benefits are considered sufficient to outweigh the harm.

The historic landscape of the Borough should be protected and any proposals which would impact on its qualities or functions will be assessed according to policy ENV3.

Where the proposal affects (non-designated) archaeological sites of less than national importance it should conserve those elements which contribute to their significance in line with the importance of the remains. In those cases where development affecting such sites is acceptable in principle, mitigation of damage will be ensured through the preservation of the remains in situ as a preferred solution. When in situ preservation is not justified, the developer will be required to make adequate provision for excavation and recording before or during development, the findings of which should be deposited with the Historic Environment Record'.

2.5 Planning Considerations

- 2.5.1 The local planning authorities of Rochdale Metropolitan Borough Council and Rossendale Borough Council are advised on archaeological matters by the Greater Manchester Archaeological Advisory Service (GMAAS) and Lancashire County Council Historic Environment Team (LCCHET) respectively.
- 2.5.2 There are 201 known archaeological heritage assets recorded within the Assessment Boundary by the HERs and 1269 assets within the 1km Study Area (see Figure 2 and Gazetteer).
- 2.5.3 Catley Lane Head Conservation Area (Asset 22) extends into southern tip of the Assessment Boundary and includes a section of Rooley Moor Road (Asset 828).
- 2.5.4 An additional Conservation Area (Prickshaw and Broadley Fold) and further 21 Grade II Listed Buildings lie within 1km of the Assessment Boundary. No World Heritage Sites, Scheduled Monuments, Registered Battlefields or Registered Parks and Gardens are present within the Assessment Boundary or the surrounding Study Area.
- 2.5.5 Note that this assessment is concerned with the potential for impacts on archaeological remains within the Assessment Boundary. Any anticipated impacts on the settings of upstanding heritage assets will be considered separately in the EIA, ES and accompanying Built Heritage Appraisal.

2.6 Limitations of Scope

- 2.6.1 This assessment is based upon data obtained from publicly accessible archives as described in the *Data Sources* in Section 4.2. Data from the National Heritage List for England (NHLE) was downloaded on the 2nd of September 2024. Data provided by the Greater Manchester and Lancashire HERs were received on the 23rd September 2024 and 18th September respectively. The information presented in the gazetteer regarding known heritage assets is current to these dates.
- 2.6.2 It should be noted that the report has been prepared under the express instructions and solely for the use of Cubico Uk Development (Wind 1) Limited and their partners. All the work carried out in this report is based upon AOC Archaeology Group's professional knowledge and understanding of current October 2024 and relevant United Kingdom standards and codes, technology, and legislation.
- 2.6.3 Changes in these areas may occur in the future and cause changes to the conclusions, advice and/or recommendations given. AOC Archaeology Group does not accept responsibility for advising Turley or associated parties of the facts or implications of any such changes in the future.

3 AIMS AND OBJECTIVES

- 3.1 The aim of this assessment is to identify the cultural heritage value of the Assessment Boundary. The evidence presented and the conclusions offered will provide a comprehensive basis for further discussion and decisions

regarding heritage constraints on the future development of the land within the Assessment Boundary and for the formulation of further mitigation strategy, should this be required.

- 3.2 The objectives to be undertaken in pursuing this study will be focused on the heritage significance of the land at the Project for Assessment. This will be done by examining a variety of evidence for upstanding and buried remains of heritage interest including World Heritage Sites, Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens, Registered Battlefields, and archaeological heritage assets up to 1km of the Assessment Boundary. The assessment is based upon data obtained from publicly accessible sources as described in *Data Sources* (Section 4.2).

4 METHODOLOGY

4.1 Standards

- 4.1.1 The scope of this assessment meets the requirements of current planning regulations set out in the Planning Practice Guidance (DLUHC & MHCLG Live Document); National Planning Policy Framework (DLUHC 2023); Ancient Monuments and Archaeological Areas Act, 1979; Planning (Listed Buildings and Conservation Areas) Act, 1990 and Town and Country Planning Act, 1990 as amended by the Levelling-up and Regeneration Act, 2023; and local planning policies.
- 4.1.2 AOC Archaeology Group conforms to the standards of professional conduct outlined in the Chartered Institute for Archaeologists' (CIfA) *Code of Conduct* (CIfA 2022), the *CIfA Standard and Guidance for Commissioning Work or Providing Consultancy Advice on Archaeology and the Historic Environment* (CIfA 2020a), the *CIfA Standards and Guidance for Historic Environment Desk-Based Assessments* (CIfA 2020b), the *CIfA Regulations for Professional Conduct* (CIfA 2021b), and other relevant guidance.
- 4.1.3 AOC Archaeology Group is a Registered Organisation of the CIfA. This status ensures that there is regular monitoring and approval by external peers of our internal systems, standards, and skills development.
- 4.1.4 AOC is ISO 9001:2015 accredited, in recognition of the Company's Quality Management System.

4.2 Data Sources

- 4.2.1 The following sources were consulted during the preparation of this assessment:
- **Historic England's (HE) National Heritage List for England (NHLE)** - for designated heritage asset data for statutory designations;
 - **The Greater Manchester and Lancashire HERs (GMHER and LHER)** - for records of designated and archaeological heritage assets and previous archaeological interventions;
 - **Rochdale Borough Council** - for details of the Prickshaw and Broadley Fold, and Catley Lane Head Conservation Areas;
 - **The National Library of Scotland (NLS), Old Maps Online, and the British Library (BL)** – for historical Ordnance Survey (OS) and pre-Ordnance Survey mapping.
 - **The Archaeological Data Service (ADS)** – for heritage data including grey literature reports and archaeological journals;
 - **HE's Aerial Photo Explorer (APEX) and The National Collection of Aerial Photography (NCAP) websites** - for historic and modern aerial photography;
 - **The Environment Agency** - for publicly available LiDAR data covering the Assessment Boundary;

- **Google Earth Pro** - for current and historical satellite imagery of the Assessment Boundary;
- **British Geological Survey (BGS)** - for information pertaining to the geological character of the Assessment Boundary;
- **Other relevant online resources** - for archaeological and/or historic information about the Assessment Boundary and surrounding area.

4.3 Report Structure

- 4.3.1 Each heritage asset referred to in the text is listed in the Gazetteer in Appendix 2 and mapped on Figures 2 - 5. All locations of previous archaeological investigations (Events) referenced are also detailed within the accompanying gazetteer (Appendix 2) and are mapped on the same figures. Each has been assigned an 'Asset/Event Number' unique to this assessment, and the Gazetteer includes information regarding the type, period, grid reference, HER number, protective designation, and other descriptive information, as derived from the consulted sources.
- 4.3.2 All currently recorded features of potential heritage significance located within a 1km radius of the Assessment Boundary have been included in the assessment. The aim of this is to help predict whether any similar, hitherto unknown archaeological remains survive within the Assessment Boundary.
- 4.3.3 All sources consulted during the assessment, including publications, archived records, photographic and cartographic evidence, are listed amongst the References in Section 7.

4.4 Assessment Criteria

- 4.4.1 The assessment aims to identify the known and likely archaeological potential of the land within the Assessment Boundary and the relative value or importance of such a resource / asset. The criteria for assessing these factors are laid out in detail in Appendix 1.
- 4.4.2 The criteria for assessing archaeological potential are expressed in this report as ranging between the scales of High, Medium, Low and Uncertain, criteria for which are also noted in Appendix 1.
- 4.4.3 Levels of importance in the report are expressed as ranging between the scales of High, Medium, Low, Negligible and Unknown. The importance of archaeological heritage assets is determined firstly by reference to existing designations – for example Scheduled Monuments are already classified as Nationally Important and therefore of High importance. For archaeological heritage assets where no designation has previously been assigned, the likely importance of that resource has been based upon the available evidence and professional knowledge and judgement.
- 4.4.4 The likely magnitude of the impact of the works associated with the Project for Assessment is determined by identifying the degree of change from the Project for Assessment upon the 'baseline' conditions of the land within the Assessment Boundary and the heritage resource identified in the assessment. This impact can be either adverse (negative), beneficial (positive) or neutral and is ranked according to the scale of High, Medium, Low, Negligible or Neutral.
- 4.4.5 The assessment of Direct Impacts will be undertaken in line with the assessment criteria noted above and in Appendix 1. This will be done by establishing the historic environment baseline through examination of the data sources outlined in Section 4.2 and a walkover survey. The Project for Assessment will be assessed against the established historic environment baseline, and potential direct impacts on known and unknown archaeological heritage assets will be identified.

5 ARCHAEOLOGICAL AND HISTORICAL EVIDENCE

5.1 Prehistoric (c. 14,000 BC - AD 43)

- 5.1.1 A number of chance finds of flint implements, thought to date from the Mesolithic and Neolithic, are recorded from within the Assessment Boundary. These include a Mesolithic flint flake or blade found on Rooley Moor (Asset 351), a Mesolithic point from Ding Quarry (Asset 353) and Neolithic flints found on Brandwood Moor in the 19th century (Asset 104). The LHER records a collection of Neolithic finds from Hunger Hill (Asset 514) and Turnshaw Hill (Asset 352; note the nominal NGR provided for this asset places it just outside the Assessment Boundary on Figure 2), found in the late 19th century. The HER entries for these assets both contain the same description of the implements, as ‘knives, scrapers, arrowheads, speartips and very small implements’; the entry relating to Hunger Hill implies that a number of finds were recovered from a pit close to the summit, however, the original text from which this has been taken only includes Hunger Hill and Turnshaw Hill in ‘a list of twenty-five places in the parish where, from time to time, numbers of flint implements and chippings have been found, which shows how wide spread was the area in which these early tool makers dwelt’ (Fishwick 1889: 3)¹. Accompanying illustrations include two arrowheads from Hunger Hill (Fishwick 1889: 4). Fishwick also notes that the finds (i.e. from all 25 locations) ‘have generally been discovered on the neolithic floor which is found about 1300 feet above the sea level, and is covered with a layer of peat, varying from one to ten feet in depth’ (Fishwick 1889: 3). While this observation does not apply precisely to Hunger or Turnshaw Hills, the summits of which are shown as 318m and 300m aOD respectively on current OS mapping and thus below 1300ft (396m) (even allowing for use of a pre-1921 datum measurement), the impression that the finds have come from a zone within the upland moorland but below the most elevated (generally bog-covered) areas appears convincing, even if it only reflects a pattern of preferential survival and recovery rather than a ‘real’ distribution.
- 5.1.2 Additional finds from the moorland plateau on which the Assessment Boundary is located (but from outside the Assessment Boundary itself) include a Mesolithic flint core from Scout Moor (Asset 879), two flint and four chert Mesolithic waste flakes from Knowl Moor (Asset 551) and a possible Neolithic scraper or retouched flake from Great Ding (Asset 350).
- 5.1.3 The GMHER records two possible Bronze Age cairns on (Asset 143) and below (Asset 144) the crest of Bagden Hillocks (see Section 5.8.5 and Plates 22-23). They survive as grassed over mounds, with some evidence of stone robbing; the uppermost mound (Asset 143) includes possible kerb stones. Their locations afford extensive views across the lowlands southwest of the plateau and southern parts of the plateau itself (including along the ridge extending south to Top of Pike and Hunger Hill, and across to Knowl Hill). From Asset 143, there are also clear views towards the surrounding Pennine uplands and valleys to the east/southeast.
- 5.1.4 No further Bronze Age or Iron Age archaeological remains are currently known from the Assessment Boundary and finds from the surrounding Study Area are limited to a stone head from Knack Farm (Asset 549) recorded as being of Iron Age date.
- 5.1.5 The Rossendale uplands, and those of Lancashire and Greater Manchester more widely, are well known for evidence of early prehistoric activity, both via surface artefact collection and from palaeoenvironmental material (Myers & Stallibrass 2024). However, synthetic analyses of existing data relating to, for example, the onset of peat accumulation, has demonstrated that environmental and vegetation conditions, the impacts of

¹ The additional references cited in the HER entries appear to be incorrect and could not be followed up.

large-scale climate changes and anthropogenic influences were highly localised and generalisations cannot be successfully applied to individual sites (Myers & Stallibrass 2024). Nevertheless, peat depth survey and modelling within the Assessment Boundary (Hammond 2024) suggests the presence of both extensive areas and smaller ‘islands’ of peat across the Assessment Boundary, which have the potential to conceal earlier ground surfaces (and any associated anthropogenic artefacts), preserve remains and retain palaeoenvironmental evidence (though it is understood that no turbines will be located in areas where the depth of peat exceeds 1m). Indeed, a linear drystone bank-type feature identified in section in an archaeological evaluation trench located close to the summit of Whittle Hill in advance of the construction of Scout Moor Wind Farm (Event 1124), was found sealed by peat and, although it was not dated, was interpreted by the excavators as being of possible prehistoric date. Borehole survey also associated with the windfarm construction (Event 1110) (located close to the proposed access route at the west of the Assessment Boundary) included analysis of preserved pollen and radiocarbon dating of a sediment sample that demonstrated that peat formation began around 4,500 BC at this site. The pollen samples contained high concentrations of well-preserved pollen and indicated the presence of birch fen, with mixed deciduous woodland in the surrounding landscape, in the early stages of peat formation. Dense woodland continued to be present in the wider landscape as blanket mire spread in the immediate vicinity of the sampling site, with the subsequent appearance of ribwort plantain suggesting clearance of woodland for grazing (Geary 2004).

5.2 Roman (AD 43 - 410)

- 5.2.1 There is no recorded evidence of Roman activity within the Assessment Boundary or the 1km Study Area.

5.3 Early Medieval and Late Medieval (AD 410 - 1540)

- 5.3.1 There is currently very limited evidence for medieval occupation in the Study Area, although it should be noted that later features, including farmsteads and agricultural activity, settlement, extraction and industrial remains may have their origins in earlier centuries, with earlier evidence being concealed or destroyed by later reuse of an area.

5.4 Post-Medieval (AD 1540 - 1750)

- 5.4.1 The earliest available mapping of the area is Saxton’s map of Lancashire, from 1579 (not illustrated²), which uses a schematic approach and small scale to depict only the primary landscape features. While the features shown are not recorded with a high degree of spatial accuracy, the settlements in the vicinity of the Assessment Boundary are generally correct in terms of their relative positions, for example, along rivers. The map shows settlements at Rochdale and Whitworth (on the River Spodden), Bacup, Rossendale, Haslingden, Edenfield (‘Aytenfelde’) and Newhall (on the Irwell) and Ashworth Chapel, surrounding a series of stylised hills representing the area of upland on which the Assessment Boundary is located. Saxton’s atlas strongly influenced mapping over the following centuries, and several post-medieval maps of Lancashire (including those by Smith, 1602, Blaeu, 1662, and Bowen, 1781; not illustrated) show a similar pattern of settlement and upland (with an additional settlement to the south of the Assessment Boundary at Wolstenholme). Blaeu’s

² Saxton, C. 1579. LANCASTRIAE Comitatus Sheet 28. Available to view at: https://www.oldmapsonline.org/en/Greater_Manchester?year=1832&gid=1ea3e304-98a7-5612-ac12-37112d2b65c1#position=9.947/53.6335/-2.2544/6.61&year=1579 [Accessed 04/10/2024]

map of 1662³ and Bowen's 1781⁴ map also include the boundary of the Royal Manor of Tottington (previously part of the Honour of Clitheroe and, subsequently, the Duchy of Lancaster), which incorporates the western part of the plateau on which the Assessment Boundary is situated.

- 5.4.2 The pattern of scattered farms along the upper valley sides is likely to have developed (or become more formalised) in this period and several of the farmhouses and barns within the 1km Study Area contain surviving 16th-, 17th- and early 18th-century fabric (e.g. Assets 1-5, 7, 10-13, 16, 17, 21). Given the topography and geology of the area, the farms retain a primarily livestock tradition, including use of the common moorland for grazing and such customary rights of pasture (along with similar rights of turbary, estover and common in the soil) were probably established alongside medieval tenure (albeit adapted or redefined since, for example, during Enclosure). The dating of extraction activity in particular can be notoriously difficult, but, given the scale of the undertakings shown on the earliest (mid-19th-century) OS maps, it is likely that these resources have been exploited previously, albeit on a smaller or discontinuous scale.
- 5.4.3 Similarly, the early phases of use of many routeways are difficult to establish. Rooley Moor Road (Asset 828) bisects the Assessment Boundary, running approximately NNW-SSE between Catley Lane Head and Rake Head. This road is described in the GMHER as a 'major landscape feature' and currently comprises a clear track. The first known documentary reference to it as a formalised and maintained route is from 1729, when court records refer to it as being maintained at the cost of the local community, although it is likely that it functioned as a packhorse route prior to this.

5.5 Industrial and 20th Century (AD 1750 - present)

- 5.5.1 The majority of the recorded archaeological heritage assets within the Assessment Boundary are heavily biased towards later post-medieval extraction activities, primarily sandstone quarrying and coal mining (though, as noted, the surviving assets may have had earlier origins). Much of the recorded evidence held in the HERs has been gathered from historical maps, which cumulatively show the development and decline of these industries over the late 19th and 20th centuries, and from which the locations of numerous small and medium-sized quarries, collieries and spoil heaps have been transcribed (see Figure 5). A large number of recorded archaeological heritage assets within or immediately adjacent to the Assessment Boundary (see Figures 2-5) relate to post-medieval farmsteads and related agricultural activity, and it is likely that local families and communities derived their livelihoods from a mixture of both sources of income. Various historical township, parish and county boundaries converge within the Assessment Boundary and a number of boundary mounds and stones (e.g. Assets 99, 100, 441, 442, 444, 1150) are recorded, some of which remain extant.
- 5.5.2 Yates's 1786 map of the County Palatine of Lancaster (not illustrated⁵) shows the Study Area in more detail than previous maps. Although the map legend indicates that market towns and villages are shown 'in their true form', the depiction of buildings remains somewhat stylised and the exact layout of settlements is limited to the main road junctions. However, the map clearly shows a difference between the largest towns (including

³ Blaeu, J. 1662. *Lancastria Palatinatvs*. Available to view at: <https://maps.nls.uk/atlas/blaeu-majior/browse/5/page/236> [Accessed 04/10/2024]

⁴ Bowen, E. 1781. *An accurate map of the county of Lancaster ...* Available to view at: <https://maps.nls.uk/view/220113208> [Accessed 04/10/2024]

⁵ Yates, W. 1786. *The County Palatine of Lancaster*. Available to view at: <https://maps.nls.uk/view/220113073> [Accessed 04/10/2024]

Rochdale and Bury), surrounding valley-bottom villages (such as Bacup and Whitworth) that include numerous mills, churches and chapels, and scattered 'farmhouses', with the occasional 'gentlemen's seat' marked by a larger square symbol. The farms occur most frequently along the valleys and thin out towards the interfluvial moorland, which is represented by shading depicting rough vegetation with hachures to indicate significant topographic changes. In the vicinity of the Assessment Boundary, the Naden Valley (pre-reservoirs) is shown as a prominent landscape element, with the surrounding Rooley Moor (east) and Knowl Hill Moor (west) labelled and the distinctive knoll of Knowl Hill illustrated. The detail of the lower moor edge, shown as a distinct line with numerous geometric changes of direction, suggests that the upper limit of the improved pasture has been clearly defined around the southern and eastern sides of the upland plateau by this date. A similar line marking the limit of the pasture intakes along part of the northern side of the plateau is also shown, though this is much straighter, possibly indicating that the intake land was enclosed in a less piecemeal fashion. By contrast to the southern part of the plateau, the central and northern areas are depicted as relatively featureless, with unclear boundaries and a general label of 'Moors'.

- 5.5.3 This map is the earliest to show Rooley Moor Road (Asset 828), which is depicted as a well-defined road (though not a turnpike road), linking settlement to the south and north of the plateau. 'Rooley House' (later the Moor Cock Inn; Asset 639) is labelled and is located at a fork in Rooley Moor Road, with a second branch of the routeway running south across Rooley Moor and past farms at Wood Houses (now broadly followed by paths and Woodhouse Lane). Although Yate's map includes 'Coal Pits' on its legend, none are specifically marked within the Study Area. Two unlabelled buildings are shown, within the moorland boundary, to the northeast of Rooley House.
- 5.5.4 Greenwood's 1818 map (not illustrated⁶) of the county is broadly similar to the 1786 map, although additional detail, such as farmstead names, is included and the topographic and land use boundaries of the plateau are more clearly defined around all sides. The map legend defines the shaded areas used for the upland moorland as 'heaths and commons' and the label 'Rowley Moor' applies to the full common area. Rowley House (Asset 828) is shown within a rectangular intake. Rooley Moor Road (Asset 828) is present, but its western branch, shown on Yates's map, is not marked (although the section of Woodhouse Lane extending south from the edge of Rooley Moor is depicted). At the western side of the plateau, Whittle Hill is labelled as 'Scate Hill' and a collection of farms along its western slopes are marked as 'Scate Fold' (i.e. Assets 134 - 137). The distribution of farmhouses around the periphery of the common land shows a good correlation with later OS maps and farms, while some can be identified from their name labels e.g. Naden Head (Asset 643) and Intake (Asset 533).
- 5.5.5 Hennet & Bingley's 1818 map (not illustrated⁷) of Lancashire is also broadly similar to Yates' and Greenwood's maps, though the selection of farms that are labelled is slightly different, the western branch of Rooley Moor Road (Asset 828) is shown again and the boundaries of the common land of Brandwood Moor (the northeastern part of the Assessment Boundary) have been altered. A 'colliery' is labelled, just within the southern tip of the Assessment Boundary (no asset number).
- 5.5.6 As common land, much of the area within the Assessment Boundary lay beyond the tithe-able land detailed on the tithe maps produced for the relevant townships in the 1840s. The 1st Edition Six Inch OS mapping for this

⁶ Greenwood. C. 1818. Map of the County Palatine of Lancaster from an actual survey made in the year 1818. Available to view at: <https://maps.nls.uk/joins/10442.html> [Accessed 04/10/2024]

⁷ Hennet & Bingley. 1828. A map of the County Palatine of Lancaster ... Available to view at: <https://maps.nls.uk/counties/rec/10485> [Accessed 04/10/2024]

area was published in 1851 (Figure 6) and provides the first detailed survey of the moorland area. It includes a large number of features related to the extraction of coal (including coal pits, collieries, ventilators and disused pits) and of sandstone (including sandstone and flagstone quarries, disused quarries, spoil heaps and processing facilities, such as rubbing mills and their reservoirs). Subsequent revisions of the mapping (i.e. as published in 1894-5, 1911-12, 1930-31 and 1946-47), along with editions of the 25 Inch mapping (first published in 1893, with revisions in 1910 and 1929) that include greater detail, show additional features and modifications to land use within the Assessment Boundary. Sequential comparison of the available maps gives a better understanding of the ways in which these industries and this landscape changed over time, as well as a more refined understanding of the potential for surviving archaeological remains to be present, through the identification of features and trends (e.g. in distribution or extent) at both localised and broader scales. While many of these features have already been digitally transcribed and included in the HER data (see Figures 2 - 5 and Gazetteer), others have not, though the remaining presence of some such features was confirmed during the initial walkover survey (see Section 5.8).

- 5.5.7 Initial consultation of the OS maps demonstrates both the abandonment of many of the smaller coal shafts and quarries by the end of the 19th century, and the industrialisation of the quarrying process, presumably in part to satisfy demand for building stone from the rapidly expanding urban areas. Several of the more prominent quarries present on maps by the mid 1800s (e.g. 'stone quarries' are shown along the northern edge of Cowpe Moss on the Cowpe tithe map and 1851 OS map; the 1851 map also shows relatively substantial or named quarries along Foe Edge, at Ding Quarry and on Whimsy Hill/Cat Stones Moor) have significantly increased in area and many have merged by the end of the century (as shown on the 1893 25 Inch map). The largest disused quarry complexes within the Assessment Boundary, namely Cragg Quarry (Asset 196) and Ding Quarry (Asset 316) have been subject to archaeological survey work (Events 1078 and 1082) and thus incorporate a large number of individually numbered archaeological heritage assets (such as spoil heaps, building remains, cranes, leats, tanks and adits) (see Figures 2-5) that demonstrate their complexity. By the late 19th century, many of the quarries were linked to each other and to surrounding transport links, by tramways, sections of which partially survive within the Assessment Boundary, often reused as public footpaths (Assets 27, 59, 189).
- 5.5.8 Rooley Moor Road continues to be present on the OS mapping through the 19th and 20th centuries. It is widely held that improvements to the road were undertaken in the early 1860s as a public works initiative during the Cotton Famine when northwestern industrial towns heavily dominated by cotton manufacture suffered severe economic hardship following interruption of raw cotton imports by events surrounding the American Civil War (hence the local names of 'Cotton Famine Road' or 'Famine Road' for this asset). It is generally presumed that such works from this period include the paving of the track with sandstone sets and cobbles.

5.6 Previous Archaeological Investigations (Events)

- 5.6.1 Past archaeological investigations within or extending into the Assessment Boundary include a desk-based study and walkover survey of the section of Rooley Moor Road between Catley Head Lane and Ding Quarry (Event 1118). A number of desk-based assessments and walkover surveys intended to identify, where possible, features shown on historical maps and assess the preservation of above-ground features to inform their future management; these include the surveys of Cragg Quarry (Event 1078) and Ding Quarry (Event 1082) noted above, as well as studies of Bagden Quarry (Event 1139), Ab Top Quarry (Event 1137) and Ragstone Brow Quarry (Event 1134). The study area of archaeological investigations at Whitworth Quarry extends into the eastern part of the Assessment Boundary and included desk-based assessment (Event 1079), walkover survey (Event 1146), borehole survey (Event 1144) and carbon-14 dating (Event 1145) to establish the earliest date of peat formation. Similarly, the study areas relating to archaeological investigations, including evaluation,

monitoring and survey of peat erosion scars, in advance of Scout Moor Windfarm extend into the western part of the Assessment Boundary (Events 1124, 1125 and 1070), as do those relating to extension of the Scout Moor Quarry (Events 1126, 1121, 1122 and 1123).

5.7 Aerial Imagery and LiDAR

- 5.7.1 Aerial and satellite photographs provide information relating to both previously unidentified archaeological heritage assets, any changes in condition/use of known assets over time, and past land use across the Assessment Boundary at various intervals. Within the Assessment Boundary, prospection for previously unknown remains is difficult in areas of peat and blanket bog, but consultation of images available on the HE APEX website (which, for example, includes a series of photographs taken by the RAF in 1946-48) will allow assessment to be made of changes to the condition of peatland; this may include areas that have been directly disturbed or where internal damage (including 'dewatering') may have occurred due to drainage, given that intensive land improvement and reclamation occurred widely during the mid-20th century. This area is not covered by previously completed National Mapping Projects, but HE's archive will be searched to identify and examine further images of potential relevance. Images held by the National Collection of Aerial Photography will also be consulted online via the AOC Archaeology Group subscription and other online and local archive collections will be searched to inform the detailed DBA and ES.
- 5.7.2 Figures 7-9 show some of the available LiDAR data, which has been downloaded from the National LiDAR Project (via DEFRA/The Environment Agency) and processed in various ways using RVT software. The available data provides full coverage of the Study Area at 1m resolution and allows digital elevation models to be produced using both digital surface model (DSM) and digital terrain model (DTM) data in order to recognise subtle topographic variations that may indicate the presence of archaeological features. Detailed analysis of the various visualisations (which each emphasize complementary landscape elements more clearly) will be thoroughly examined and checked by walkover survey, with findings incorporated into the EIA assessment and reported on in the ES. Initial observations suggest that a number of anthropogenic, and potentially archaeological, features remain present on the ground that are not currently recorded or included in other sources.

5.8 Walkover Survey

- 5.8.1 A preliminary walkover survey of the Assessment Boundary was undertaken on 25th and 26th September 2024 (see Plates 1 - 35). This provided an opportunity to evaluate current land use and historical activity that may have implications for the survival, or otherwise, of archaeological features within the Assessment Boundary. The walkover also enabled a general assessment of the current condition of recorded archaeological heritage assets to be made as well as giving an indication of the likelihood of previously unrecorded remains to be present. While previously un-recorded archaeological remains were noted when identified, given the size and ground conditions of the land within the Assessment Boundary the walkover did not constitute an exhaustive or systematic prospection survey.
- 5.8.2 The walkover was undertaken in overcast conditions; despite some light rain showers, visibility across the Assessment Boundary was generally excellent and low cloud/haze only precluded very distant views. The visit followed a period of very heavy rain and ground conditions were very wet. For this reason, and due to the possibility of unmapped disused mineshafts and quarries, AOC Archaeology staff undertook the walkover from, or staying relatively close to, established footpaths and firm ground (e.g. relatively short grassland or made ground).

- 5.8.3 Much of the Assessment Boundary comprises common land in use for rough grazing (sheep and cattle). Areas of blanket bog are most extensive across the northwestern, northeastern and central parts of the Assessment Boundary, with acid grassland and rushes predominating across the southern lobe and around the periphery. Views from the Assessment Boundary were observed to be extensive and, while local topographic variation screened views from any given point, generally included the surrounding Pennine uplands to the southeast, east and north, with Pendle Hill visible in the distance, and views across the low lying plain and Greater Manchester to the south and southwest. Plates 1 - 12 show general views across the interior and periphery of the Assessment Boundary, indicating broad patterns of topography and vegetation and placing the Assessment Boundary in its wider landscape context.
- 5.8.4 Plates 13 - 21 show various sections of Rooley Moor Road (Asset 828), which was followed across the Assessment Boundary from the southern edge of the Assessment Boundary at Catley Lane Head to the northern edge of the Assessment Boundary, where Rooley Moor Road descends the hillside to Rake Head, becoming an asphalt road. The proposed grid connection route then follows the line of modern roads through largely built-up areas. It was confirmed that extended sections of Rooley Moor Road are paved with sandstone setts (Plate 13). In some places, these are laid in different orientations and differential weathering of the bedding within the stone has created a distinct surface texture (Plate 14); as the distribution of such stones was not completely consistent, it was not clear whether this reflected deliberate changes in method/arrangement or different sources of stone. In places, the road is surfaced with smaller, irregularly shaped stones or small, rounded cobbles, while in other sections any metaling has been worn away to leave smoothed bedrock (Plates 15 and 16). In addition to extended sections of kerbs and stone drains, roadside drainage ditches and banks are often present (Plate 17), with several sections terraced into the slope of the hill (Plate 14). Construction of the road necessitated crossing small watercourses: Plate 18 shows a small stone bridge (Asset 923) (a modern pipe to the older stonework). Across the northern part of the Assessment Boundary, the line of the road and a former quarry tramway coincide, with raised stone tracks retained (not necessarily in situ) (Plate 19), beyond which it continues downslope (Plate 20 and 21) as an irregular, stony track. It was not possible to identify the absolute or relative dates of most elements of the road (some of which could be relatively recent) without further investigation.
- 5.8.5 Various recorded archaeological features were clearly identifiable on the ground during the visit and Plates 22 - 35 show a representative selection of the types of features encountered. Two possible prehistoric cairns (Assets 143 and 144) located close to the ruins of the Moor Cock Inn at Bagden Hillocks were identifiable as turf-covered mounds of large stones (that appear to have been partially robbed-out), apparently deliberately sited in locations with clear views (Plates 22 and 23). Large disused quarry complexes, such as Cragg Quarry (Asset 196) (Plate 24) and Ding Quarry (Asset 316) (Plates 25 and 26) are extremely prominent landscape features and include extensive and organised spoil tips, exposed quarry faces and a range of smaller features, some of which have been catalogued separately where they have been the subject of previous surveys (e.g. Assets 197-298).
- 5.8.6 The largest quarries were connected by tramways, many of which survive and have been re-purposed as footpaths: Plate 27 shows the line of one such trackway towards Cragg Quarry (a branch of Asset 189; the stones are not necessarily in situ), while Plate 28 shows a drystone structure (Asset 1152) (possibly a loading platform or similar) that appears to be associated with the raised line of a tramway (Asset 998) running southeast towards Ding Quarry from Cowpe Moss (a borrow pit located close by may associated with its construction) including tramway remains, in situ or re-laid as footpaths (Plate 27)). Asset 1152 was identified during the walkover survey, but not included on the HER or shown on the consulted historical maps (though it

is discernible on LiDAR), demonstrating the potential for unrecorded features to be present within the Assessment Boundary. Similarly, Plate 29 shows the remains of a reinforced concrete structure (of unknown purpose) located above Ding Quarry, not currently recorded on the HER.

- 5.8.7 A number of former coal pits were identified, including a water-filled disused shaft, spoil mounds and a linear feature (probably a former tramway) at Bartle Cwm Colliery (Asset 78) (Plate 30), which is shown on the 1851 OS map and subsequently depicted as an unlabelled spoil heap in 1893. A prominent former mine shaft c. 250m northwest, within the moorland boundary upslope of Bartle Cwm Pasture, was also identified (Asset 1149; Plate 31) that was not present on historical maps; it was noted that such features were primarily identifiable from the vegetational differences and preferential grazing opportunities afforded by the better-drained shaly spoil material. Plates 32 and 33 show typical former sandstone quarries of small-medium size, both located within the southern tip of the Assessment Boundary. The former is Clough Quarry (Asset 1148), the latter (Asset 1153) an unnamed quarry off Rooley Moor Road; both are shown on old mapping but have not been transcribed onto the HER. Similarly, the reservoir and former colliery complex (Asset 1147) on the northeastern side of Hunger Hill (Plate 34) is shown on the 1893 OS map as an expansion of earlier phases of Rooley Moor Colliery but is not included in the HER data.
- 5.8.8 Plate 35 shows an upstanding boundary stone (Asset 1150), identified during the walkover as one of several marked on 19th-century OS maps (not included on the HER) immediately west of Bartle Cwm Colliery. A linear ditch was also noted, following the same orientation as the mapped line of stones (i.e. parallel but c. 25m east of the moorland boundary wall that also marks the current parish boundary) and these features may be associated with an earlier phase of the historic parish boundary.
- 5.8.9 More detailed site visits will be undertaken as part of an upcoming phase of the EIA assessment and findings will be incorporated into the ES.

6 CONCLUSIONS

6.1 Direct Impacts

- 6.1.1 Potential impacts on known or unknown buried archaeological remains which may survive relate to the possibility of disturbing, removing, or destroying in situ remains and artefacts during ground-breaking works (including excavation, construction, and other works associated with the Project for Assessment) within the Assessment Boundary. In the context of this development, direct impacts have the capacity to result in impacts of high magnitude as they could potentially result in the destruction or removal of any archaeological deposits which may be present.
- 6.1.2 It should be noted that this report relates to a Preliminary Desk-Based Assessment and will form the basis of more detailed upcoming desk-based analysis of available sources and walkover survey that will support the EIA process and be included in the ES.
- 6.1.3 This assessment has established that the land within the Assessment Boundary has been in use by humans since early prehistory, as evidenced by finds of Mesolithic and Neolithic lithics, although information relating to the nature of this use is very limited. Based on current evidence, it is considered likely that contemporary ground surfaces and additional artefacts may be preserved below peat deposits, although the potential for this varies across the Assessment Boundary. The potential for peat deposits containing palaeoenvironmental proxies to be present has also been identified.
- 6.1.4 While previous intrusive archaeological works within the Assessment Boundary and its immediate surroundings (e.g. in advance of Scout Moor Wind Farm, Events 1124 and 1125) have recorded limited buried archaeological

remains, such work has largely been confined to specific locations, including test pits at the locations of wind turbine foundations and an electrical substation, that had presumably been selected to minimise the potential for direct impacts on the archaeological resource and the limited finds reported cannot be directly extrapolated as representative of subsurface conditions across the entire plateau. The implications of such recent works for the potential survival of archaeological remains within the Assessment Boundary will be considered in more detail as part of the EIA process.

- 6.1.5 The land within the Assessment Boundary is likely to have been considered marginal land for extended periods of history and has probably been used for activities, such as seasonal grazing and the exercise of commoners' rights at a subsistence scale, that generally leave limited archaeological evidence. However, the careful marking of numerous territorial, administrative and political boundaries that historically crossed this land reflect its importance to surrounding communities and a number of the boundary markers remain extant. The most visible remains within the Assessment Boundary relate to post-medieval and later quarrying and coal extraction, most prominently at an industrial scale, but also at a more localised level. While the currently recorded archaeological heritage assets are individually of relatively low archaeological importance, given their relatively recent date and the type of physical remains that survive, cumulatively the landscape is considered to retain a high degree of legibility, as well as the potential for time depth and distinguishable phasing over space and time. Initial consultation of historical mapping, for instance, indicates that information gleaned from any given source must be combined with multiple other complementary datasets in order to obtain the most complete and effective baseline. This also applies to attempts to establish the most robust picture of areas where later extraction activity (destructive by its nature) may have impacted, directly or indirectly, on the survival of earlier archaeological remains.
- 6.1.6 As demonstrated above, a more detailed analysis of the available source material (particularly of historical mapping, online/local archival material and LiDAR data) and additional walkover survey is required to more fully understand the archaeological resource within the Assessment Boundary, given the high likelihood that currently unrecorded archaeological features are present (as noted during the preliminary walkover survey). Establishing a better-refined baseline will enable the assessment of the probable nature, extent and distribution of existing (but hitherto not formally recorded) and potential (i.e. buried and not currently known or visible) archaeological resource across the Assessment Boundary to be predicted with a higher level of confidence. In the first instance, this would inform the process of finalising the design of the Project for Assessment, in order to avoid or minimise direct impacts on archaeological and palaeoenvironmental remains.

6.2 Mitigation

- 6.2.1 National planning policies and planning guidance contained within the National Planning Policy Framework (DLUHC 2023), Planning Practice Guidance (DLUHC & MHCLG Live Document), as well as local plan policies, require a mitigation strategy that is designed to take cognisance of the possible impacts upon archaeological heritage assets by a proposed development and avoid, minimise, or offset any such impacts as appropriate. It is noted that the NPPF states that a local planning authority should require developers to "record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact" (DLUHC 2023, para 211).
- 6.2.2 As stated above, this report relates to findings of preliminary desk-based research undertaken with regard to the Project for Assessment. The potential for currently unrecorded and hitherto unknown archaeological and palaeoenvironmental remains to be present within the Assessment Boundary has been identified, as has the potential for the Project for Assessment to impact upon the archaeological resource.

- 6.2.3 Further desk-based research will be undertaken and assessment findings (e.g. detailing the significance of known archaeological heritage assets and any specific identification of potential impacts) set out in a future archaeological DBA report that will inform the EIA and accompany the ES. Recommendations regarding any necessary mitigation measures will also be made.
- 6.2.4 In accordance with national and local planning policies on heritage, additional intrusive archaeological evaluation works may be required. Any decision relating to the requirement for and scope of further works would be made by GMAAS and LCCHET as advisors to the local planning authorities on archaeological matters. If significant features are encountered, further archaeological works, including full excavation and a programme of post-excavation works may be required.
- 6.2.5 The Public Services (Social) Act 2013 states that development proposals should provide positive benefits to communities through developments. The Levelling-up and Regeneration Act 2023 notes that where heritage assets are to be impacted a consideration should be given to “enhancing” heritage assets. ClfA and The Association of Local Government Archaeological Officers (ALGAO) (Mann 2023) have also recently noted the need for public benefit in archaeology. In this case if a programme of public engagement and/or enhancement were to be considered, engagement could include on-site interpretation resources and local/digital dissemination of information relating to the archaeological landscape through time based on the remains surviving within the Assessment Boundary. This would be particularly relevant, given its current use for recreation by visitors and local people. The scope and requirement of any public benefit should be agreed by the Client and be undertaken in consultation with the Client and GMAAS/LCCHET.

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6 Inch Series:

1851 Lancashire 80. Surveyed 1844-48, published 1851.

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1893. Lancashire. Sheet LXXII. 15. Surveyed 1891, published 1893.

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7.3 Aerial Photography

Online aerial photographs were identified from the Historic England Aerial Photo Explorer website (<https://historicengland.org.uk/images-books/archive/collections/aerial-photos/>) and the National Collection of Aerial Photography website (<https://ncap.org.uk/>). Full references will be included in the Detailed DBA.

Plates



Plate 1: View southeast across the centre and southeast of the Assessment Boundary from Hail Storm Hill.



Plate 2: View southwest towards Scout Moor Windfarm and Knowl Hill from Hail Storm Hill.



Plate 3: View west towards across the northwest of the Assessment Boundary (Cowpe Moss) from the Windfarm track on Hail Storm Hill.



Plate 4: View west across Cowpe Moss (northwest of Assessment Boundary) from footpath above Cragg Quarry.



Plate 5: View east across the centre and northeast of the Assessment Boundary from Asset 998 (former tramway) in the centre of the Assessment Boundary.



Plate 6: View ENE along the eastern end of Cragg Quarry and the northern part of the Assessment Boundary, showing the edge of the moorland plateau in this area.



Plate 7: View west along north side of Cowpe Moss, showing Cragg Quarry, looking along the public footpath from close to its junction with Rooley Moor Road.



Plate 8: View south along the north-south ridge forming the southern part of the Assessment Boundary from the ruins of the Moor Cock Inn.



Plate 9: View northwest across the head off the Naden Valley towards Scout Moor Wind Farm and the centre of the Assessment Boundary from the ruins of Moor Cock Inn.



Plate 10: View southeast from Old Sink Slack (looking across Asset 1149, an old coal pit) showing the eastern side of the plateau.



Plate 11: View southeast from Rooley Moor Lane on Whimsy Hill, showing the southeast tip of the Assessment Boundary and its surroundings.



Plate 12: View east towards the plateau, including the proposed access route, from Scout Barn Farm close to the A680.



Plate 13: Looking southeast along a section of Rooley Moor Road (Asset 828) at Bagden Hillocks.



Plate 14: Looking south along a section of Rooley Moor Road (Asset 828) at Top of Pike.



Plate 15: Looking NNW along a section of Rooley Moor Road (Asset 828) at Top of Pike.



Plate 16: Looking southeast along a section of Rooley Moor Road (Asset 828) at Pike Brow.



Plate 17: Looking north along a section of Rooley Moor Road (Asset 828) at Hamer Hill.



Plate 18: Looking north along a section of Rooley Moor Road (Asset 828) at Hamer Hill with a stone bridge (Asset 923).



Plate 19: Looking northeast across a section of Rooley Moor Road (Asset 828) at Top of Leach.



Plate 20: Looking NNW along a section of Rooley Moor Road (Asset 828) crossing Brandwood Moor.



Plate 21: Looking northwest over Rooley Moor Road (Asset 828) at as it descends from Brandwood Moor into the Irwell valley.



Plate 22: Prehistoric cairn (Asset 144) at Bagden Hillocks, viewed from the southwest.



Plate 23: Prehistoric cairn (Asset 143) at Bagden Hillocks, viewed from the northeast looking towards Knowl Hill.



Plate 24: Interior of Cragg Quarry (Asset 196) looking east.



Plate 25: View east across Ding Quarry (Asset 316), looking towards Scout Moor Wind Farm.



Plate 26: View south overlooking tips at Ding Quarry (Asset 316).



Plate 27: Looking east along the former tramway (a branch of Asset 189), now a footpath, at the eastern end of Cragg Quarry, close to its junction with Rooley Moor Road.



Plate 28: Sandstone construction (Asset 1152) probably associated with former tramway (right of frame), northwest of Ding Quarry, viewed from the northwest.



Plate 29: Structural remains alongside the track above (northeast of) Ding Quarry, looking southeast.



Plate 30: Former coal mining activity and probable tramway at Bartle Cwm Colliery (Asset 78), looking northwest.



Plate 31: Former coal pit above Bartle Cwm Pasture (Asset 1149).



Plate 32: View north across earthwork remains of Clough Quarry (Asset 1148) on the eastern side of Rooley Moor Road (southern end).



Plate 33: Unnamed former sandstone quarry on the western side of Rooley Moor Road (Asset 1153), looking northwest.



Plate 34: Reservoir and spoil heaps associated with Rooley Moor Colliery (Asset 1147), looking southeast.



Plate 35: Boundary stone (Asset 1150) close to colliery remains at Bartle Cwm Colliery, looking south.

Figures

Appendix 1: Assessment Scope and Criteria

ASSESSMENT SCOPE & CRITERIA

Scope of the Assessment

This report aims to identify the known and likely archaeological potential of the land within the Assessment Boundary and surrounding study area and the relative value or importance of such resource / asset. Where possible, the assessment will evaluate the likely impact from Project for Assessment, upon the known and potential heritage resource.

This report will include recommendations for mitigation measures and / or further archaeological works; where the archaeological potential of the assessment boundary warrants, or where additional information is required.

Further works could include additional research, monitoring of geotechnical investigations, programmes of archaeological surveying and / or field evaluation. The results of any further studies can be used to inform the nature of any subsequent mitigation measures (if required) and provide advice upon the scope and design of the Project for Assessment.

The assessment has used the sources listed in the main text to identify and map heritage assets and other relevant find spots or evidence within the Assessment Boundary and defined study area. Heritage assets are defined in national planning guidance and can include designated assets (Scheduled Monuments, Listed Buildings etc.), standing, buried or submerged remains, historic buildings and structures, parks and gardens and areas, sites and landscapes - whether designated or not.

Assessment Criteria

Archaeological Potential

Consideration of archaeological potential will be informed by the number, density and distribution of known heritage assets of a specific period and/or type within the Study Area. The proximity of such assets to the Assessment Boundary and/or the similarities/dissimilarities in topographical location between the Assessment Boundary and the location of known assets will also be a factor in determining potential. Previous land use on the Assessment Boundary will also be a consideration in assessing potential, as later disturbance may have removed or damaged earlier buried archaeological remains and therefore may have reduced the potential for archaeological remains to survive within the Assessment Boundary. Consideration will also be given to evidence from landform change in the study area and the possibility that natural deposits such as colluvium or alluvium may have buried archaeological remains. The potential for surviving archaeological evidence of past activity within the Assessment Boundary is expressed in the report as ranging between the scales of:

- High – The available evidence suggests a high likelihood for past activity within the Assessment Boundary and a strong potential for archaeological evidence to survive intact or reasonably intact;
- Medium – The available evidence suggests a reasonable likelihood for past activity within the Assessment Boundary and consequently there is a potential that archaeological evidence could survive.
- Low – The available evidence suggests archaeological evidence of activity is unlikely to survive within the Assessment Boundary, although some minor land-use may have occurred.
- Uncertain - Insufficient information to assess.

Buried archaeological evidence is, by its very nature, an unknown quantity which can never be 100% identified during a desk-based assessment. The assessed potential is based on available evidence but the physical nature and extent of any archaeological resource surviving within the Assessment Boundary cannot be confirmed without detailed information on the below ground deposits or results of on-site fieldwork.

Where known heritage assets are identified, the importance of such assets is determined by reference to existing designations where available. For assets where no designation has been assigned, an informed assessment has been made of the likely historic, artistic, or archaeological importance of that resource based on professional knowledge and judgement.

Adjustments to the classification (Table 2, below) are occasionally made, where appropriate; for some types of finds or assets where there is no consistent value, and the importance may vary. Levels of importance for any such areas are generally assigned on an individual basis, based on professional judgement and advice.

TABLE 1: Assessing the Importance of a Heritage Assets	
HIGH	Assets of high importance and rarity and those considered to be important at a national level., e.g. Scheduled Monuments (or non-designated assets of schedulable quality and importance), Grade I and II* Listed Buildings, Grade I and II* Registered Parks and Garden and Registered Battlefields. Well preserved historic landscapes, whether inscribed or not, with exceptional coherence, time depth, or other critical factor(s)
MEDIUM	Assets of medium importance and rarity and those considered to be important at a regional level. Designated or non-designated assets including Grade II Listed Buildings and Conservation Areas; well preserved structures or buildings of historical significance, historic landscapes or assets of a reasonably defined extent and significance, or reasonable evidence of occupation / settlement, ritual, industrial activity etc. Examples may include burial sites, deserted medieval villages, Roman roads and dense scatters of finds.
LOW	Assets of low importance and rarity and those considered to be important at a local level. Locally listed buildings or non-designated assets with some evidence of human activity which have the potential to contribute to local research objectives, structures or buildings of potential historical merit. Examples include assets such as historic field systems and boundaries, agricultural features such as ridge and furrow, etc.
NEGLECTIBLE	Assets of very low importance which are common. Heritage assets with very little or no surviving archaeological interest or buildings and landscapes of no historical significance. Examples include destroyed antiquities, buildings of no architectural merit, or relatively modern landscape features such as quarries, field boundaries, drains and ponds etc.
UNKNOWN	Insufficient information exists to assess the importance of a feature (e.g. unidentified features on aerial photographs).

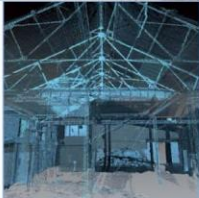
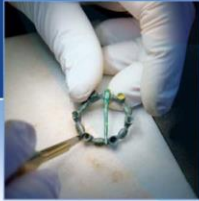
The likely magnitude of the impact of the Project for Assessment works is determined by identifying the level of change from the Project for Assessment upon the 'baseline' conditions of the Assessment Boundary and the heritage resource identified in the assessment. This effect can be either adverse (negative), beneficial (positive) or neutral. The criteria for assessing the magnitude of impact are set out in Table 2 below.

TABLE 2: Criteria for Determining Magnitude of Impact	
LEVEL OF MAGNITUDE	DEFINITION
ADVERSE	
HIGH	Considerable impacts fundamentally changing the baseline condition of the receptor, leading to total or considerable alteration of the asset or its setting – e.g. complete or almost complete destruction of the archaeological resource; dramatic visual intrusion into the setting of the asset resulting in considerable adverse change; significant increase in noise or changes in sound quality; extensive changes to use. Considerable impacts to or loss of designated heritage assets of the highest significance, notably Scheduled Monuments, Protected Wreck Sites, Registered Battlefields, Listed Buildings, Registered Parks and Gardens, and World Heritage Sites.
MEDIUM	Impacts changing the baseline condition of the receptor materially but not entirely, leading to partial alteration of the asset or its setting – e.g. a large proportion of the archaeological resource damaged or destroyed; visual intrusion into key aspects of the setting of the asset; and changes in noise levels or use of an asset that would result in detrimental changes to character.
LOW	Detectable impacts which alter the baseline condition of the receptor to a small degree – e.g. a small proportion of the surviving archaeological resource is damaged or destroyed; minor severance, change to the setting or structure or increase in noise; and limited encroachment into character of a historic landscape.
NEGLECTIBLE	Barely distinguishable adverse change from baseline conditions, where there would be very little appreciable impact on a known asset, possibly because of distance from the development, method of construction or landscape or ecological planting, that are thought to have no long term effect on the significance of the asset
NEUTRAL	

NEUTRAL	A change to the asset or its setting which does not result in harm or benefit. This may occur where there is a perceptible change but that change does not diminish or enhance the significance of the asset or the ability to appreciate its significance
BENEFICIAL	
NEGLIGIBLE	Barely distinguishable beneficial change from baseline conditions, where there would be very little appreciable impact on a known asset and little long-term effect on the significance of the asset.
LOW	Minimal enhancement to an assets or its setting, such as removal of minor inappropriate features, limited improvements to setting or reduction in severance; slight changes in noise or sound quality; minor changes to use; resulting in a small improvement which would lead to enhancement of the ability to appreciate the significance of an asset.
MEDIUM	Changes to key to an asset or its setting resulting in material enhancements which allow for greater appreciation of the asset and/or its setting. For example, removal of an inappropriate later addition allowing for the assets significance to be reveal; removal of an inappropriate feature in an asset's setting allowing the contribution of setting to the assets significance to be better understood or substantial reductions in noise or disturbance such that the significance of known asset would be enhanced.
HIGH	Substantial positive changes to an asset and key elements of its setting which would greatly enhance its significance and the ability to appreciate that significance; this might result from the removal of adverse or considerably distracting features from the setting of an asset; significant decrease in noise or changes in sound quality; changes to use or access.

In certain cases, it is not possible to confirm the magnitude of impact upon a heritage resource, especially where anticipated buried deposits exist. In such circumstances a professional judgement as to the scale of such impacts is applied.

Appendix 2: Gazetteer of Assets and Events



AOC Archaeology Group, Edgefield Industrial Estate, Edgefield Road, Loanhead EH20 9SY

tel: 0131 555 4425 | fax: 0131 555 4426 | e-mail: edinburgh@aocarchaeology.com

www.aocarchaeology.com