

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

AOC Project Number: 28937

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

On Behalf of:	Cubico UK Development Ltd
National Grid Reference (NGR):	SD 8555 1859 (centre)
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1 NON-TECHNICAL SUMMARY

- 1.1 This Archaeological Desk-Based Assessment (DBA) has been prepared by AOC Archaeology Group on behalf of Cubico UK Development (Wind 1) Limited ('the Applicant' or 'Cubico'). It is submitted as part of Further Environmental Information in respect of the cross-boundary applications for full planning permission ('the Applications') relating to the construction and operation of a new onshore wind farm (to be known as 'Scout Moor II'), alongside a comprehensive moorland restoration scheme (the 'Proposed Development'), on land at Rooley Moor (centred at NGR SD 8555 1859) (hereafter 'the Assessment Boundary').
- 1.2 The Assessment Boundary crosses the administrative boundaries of Rossendale Borough Council ('RBC') and Rochdale Metropolitan Borough Council ('RMBC') (collectively referred to as 'the Councils'). The Councils are the Local Planning Authorities ('LPA's') responsible for the determination of the Applications, which were originally submitted on 23 July 2025 and were validated by the Councils on 07 August 2025 (RBC ref. 2025/0267 and RMBC ref. 25/00680/FUL).
- 1.3 Following the completion of an extended period of statutory consultation on the Applications, the Applicant has evolved the Proposed Development to respond to comments received from statutory and non-statutory consultees, the public and other interested stakeholders and is hereby formally amending the Applications through the submission of Further Environmental Information ('FEI'). The FEI supersedes the information submitted in July 2025 ('the 2025 Submission') and will be subject to further statutory consultation by the Councils. A summary of the amendments to the Applications is set out in detail the Planning, Design and Access Statement (prepared by Turley), but in summary includes the reduction in turbine numbers from 'up to 17 turbines' to 'up to 12 turbines', alongside the relocation/repositioning of turbine positioning, access track layout and the layout and design of other associated infrastructure.
- 1.4 This phase of the assessment has established that the relevant Historic Environment Records (HERs) currently record the presence of 283 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 18 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.
- 1.5 Known archaeological remains in the Assessment Boundary include evidence of prehistoric activity (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 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 This DBA sets out an 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 have been incorporated into the EIA process, in order to minimise the potential for impacts on the archaeological record. recommendations regarding any necessary mitigation measures are also made.

- 1.8 In recognition of the potential, albeit limited, impact on the peat resource within the Assessment Boundary a programme of geoarchaeological investigation in the form of purposive borehole sampling survey will be undertaken within the west of the Assessment Boundary around Cowpe Moss where peat depths are modelled to be in excess of 2m. The sampling will be undertaken to allow for the identification and sampling of deposits which have the potential to preserve paleoenvironmental proxies and thus allow for investigation of past environmental conditions and provide opportunities for scientific dating. The completion of this investigation would allow for an enhancement of the current levels of knowledge regarding the survival and composition of the peat deposits across Cowpe Moor which would offset the potential localised direct and indirect effects upon any buried peat and organic deposits within the Assessment Boundary. The exact scope of the geoarchaeological investigation will be agreed through consultation with GMAAS and Historic England.
- 1.9 Suitably qualified archaeological and geoarchaeological personnel will be consulted during the process of micro-siting elements of the Project for Assessment in order to identify any previously unrecorded archaeological constraints and should be present on site to undertake archaeological monitoring of any geotechnical works and intrusive construction work.
- 1.10 In accordance with national and local planning policies on heritage, a programme of archaeological works are likely to be required prior to construction. A programme of intrusive archaeological investigation, initially via evaluation trenching, targeted on areas of highest potential will also be undertaken.
- 1.11 Any decision relating to the requirement for and scope of further works will be made by GMAAS and LCCHET as advisors to the Local Planning Authorities on archaeological matters. The scope and methodology of such works would be set out in a Written Scheme of Investigation for approval by these bodies prior to commencement. If significant archaeological features are encountered, further archaeological works, including full excavation and a programme of post-excavation works may be required.
- 1.12 If the results of the archaeological works produce findings of interest these will also be fed into both on-site and off-site interpretation resources and local / digital dissemination of information relating to the spatial and temporal archaeological landscape, based on the remains discovered during the archaeological works within the Assessment Boundary. The scope and requirement of any public benefit will be undertaken in consultation with the Client, HE and GMAAS/LCCHET.

2 INTRODUCTION

2.1. Assessment Boundary

- 2.1.1. This Archaeological Desk-Based Assessment (DBA) has been prepared by AOC Archaeology Group on behalf of Cubico UK Development (Wind 1) Limited ('the Applicant' or 'Cubico'). It is submitted as part of Further Environmental Information in respect of the cross-boundary applications for full planning permission ('the Applications') relating to the construction and operation of a new onshore wind farm (to be known as 'Scout Moor II'), alongside a comprehensive moorland restoration scheme (the 'Proposed Development'), on land at Rooley Moor (hereafter 'the Assessment Boundary' - Figure 1).
- 2.1.2. The Assessment Boundary crosses the administrative boundaries of Rossendale Borough Council ('RBC') and Rochdale Metropolitan Borough Council ('RMBC') (collectively referred to as 'the Councils'). The Councils are the Local Planning Authorities ('LPA's') responsible for the determination of the Applications, which were originally submitted on 23 July 2025 and were validated by the Councils on 07 August 2025 (RBC ref. 2025/0267 and RMBC ref. 25/00680/FUL).
- 2.1.3. Following the completion of an extended period of statutory consultation on the Applications, the Applicant has evolved the Proposed Development to respond to comments received from statutory and non-statutory consultees, the public and other interested stakeholders and is hereby formally amending the Applications through the submission of Further Environmental Information ('FEI'). The FEI supersedes the information submitted in July 2025 ('the 2025 Submission') and will be subject to further statutory consultation by the Councils. A summary of the amendments to the Applications is set out in detail the Planning, Design and Access Statement (prepared by Turley), but in summary includes the reduction in turbine numbers from 'up to 17 turbines' to 'up to 12 turbines', alongside the relocation/repositioning of turbine positioning, access track layout and the layout and design of other associated infrastructure.
- 2.1.4. The Assessment Boundary comprises c. 1,024ha of land to the northwest of Rochdale and lies within an area of upland moorland defined by the Irwell valley to the north and west, the Spodden valley to the east, and the line of the A680 along the southwest.
- 2.1.5. Much of the land within the Assessment Boundary is common land in use for rough grazing and includes extensive areas of blanket bog and upland acid grassland, crossed by a network of public rights of way that are used recreationally by walkers, cyclists and horse riders. 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, and is typical of the South Pennines National Character Area (NCA 36; Natural England 2014) in which it sits.
- 2.1.6. The existing Scout Moor Wind Farm, 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 the proposed Scout Moor II onshore wind farm, which comprises up to 12no. wind turbines (up to 180m above ground level to tip height). Associated infrastructure includes hard standing areas for erecting cranes at each turbine location, on-site access tracks and turning heads, an on-site substation and control building, underground 33kV electrical cables to connect the turbines to the on-site substation, underground 132kV electrical cables to connect the on-site substation to the Rossendale Bulk Supply Point (2no. route options proposed) and a temporary construction compound and laydown area. The lifetime of the Proposed Development would be time limited to 40 years from the date of final commissioning.

2.2.2. The Project for Assessment will include:

- Site securement;
- Enabling works and establishment of temporary construction staging areas / laydown areas / construction compound;
- Preparation of peat receptor sites ahead of excavation;
- Localised site clearance and implementation of protective measures around features to be retained;
- Remedial works (if required);
- 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 (e.g. concrete-batching) to create turbine foundations, and crane pads (alongside associated landscaping);
- Excavated peatland to be translocated to suitable receptor sites during groundworks;
- Wind turbine erection;
- Installation of electrical connections and construction of substation control and ops building alongside other electrical infrastructure;
- Turbine commissioning and testing;
- Decommissioning of temporary construction compound, reinstatement of turbine hardstanding / crane pads alongside site finishes; and
- Habitat management / peatland enhancement works.

2.2.3. The proposed access to the Assessment Boundary during the construction stage will be from the west, with the proposed grid connection running along one of two options north and then west from the northern edge of the Assessment Boundary (Grid Connection Option A) or west from the western edge of the Assessment Boundary (Grid Connection Option C) (see Figure 1).

2.3. Topographic and Geological Context

2.3.1. The Assessment Boundary extends across an upland plateau that generally 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.

2.3.2. 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.

- 2.3.3. The 1:50,000 scale geological mapping (BGS 2025) shows that the Assessment Boundary lies within an area of Carboniferous rocks that display a complex distribution at the surface 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.
- 2.3.4. 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).
- 2.3.5. Previous analysis of historical extraction remains and surviving documentation has determined that the quarrying industry was primarily concerned with the hard Millstone Grit sandstones (LUAU 1997: 6). In particular, the Upper and Lower Haslingden Flags provided high quality fine-grained sandstones that were in high demand for building stone during the 19th-century, both locally and for export further afield. Rough Rock beds provided somewhat softer, coarse-grained sandstone containing small pebbles of quartz and feldspar that was favoured for ornamental work and was exploited at an earlier date. The Dyneley Knoll Flags, of the Lower Coal Measures, are reported to have been quarried since the medieval period. The quality of the stone was such that, once established, the general industrial practice in this area was to selectively extract the best rock, thus producing large quantities of spoil (LUAU 1997: 7).
- 2.3.6. Areas across the southeastern (i.e. Top of Pike to Catley Lane Head), northwestern (Scout Moor to the head of the Naden valley) and northeastern (Brandwood Moor, Hamer Hill and Prickshaw Brook) parts of the Assessment Boundary, along with the summit of Knowl Moor (to the southwest of the Assessment Boundary) are categorised as areas of 'Surface Coal Resource' by the Mining Remediation Authority, which also records a large number of abandoned mine entrances within the Assessment Boundary. Four of the Lower Measures coals (the Holcomebrook Coal, the Sandrock Mine, the Lower Foot Mine and the Lower Mountain Mine) are known from documentary evidence to have been worked (RMNF n.d.).
- 2.3.7. The 1:50,000 geological mapping (BGS 2025) 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).
- 2.3.8. The BGS (2025) 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 confirm layers of superficial deposits and sedimentary bedrock as outlined by the geological mapping.

- 2.3.9. 1:250,000 scale soil mapping (Soilscapes 2025) records blanket bog peat soils across most of the plateau, with the ridge running south from Bagden Hillocks towards Catley Lane Head under very acid loamy upland soils with a wet peaty surface. These areas are flanked by zones of freely draining, slightly acid loamy soils (e.g. around the northeastern and northwestern periphery of the plateau and the upper Naden valley), interspersed with slowly permeable, wet, very acid upland soils with a peaty surface.
- 2.3.10. The plateau has been described as a '*landscape of erosion*' following a geomorphological walkover and auger survey of the area (Headland Archaeology, 2014), which concluded that many of the prominent geomorphological features dated to the end of the last Ice Age (e.g. substantial blockfields) and the early postglacial (e.g. translational and rotational slope failures and major gullies), with thick sedimentary sequences on valley slopes resulting from the reworking of upslope deposits.

2.4. Palaeoenvironmental Information

- 2.4.1. 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) indicates that peat deposits are widespread across the Assessment Boundary (Hammond 2024: Fig. 1a and 1b). They are both deepest and most extensive across the northwestern and northeastern parts of the area, with deposits greater than 2m thick recorded across the centre of Cowpe Moss; a band of deposits between 0.5m and 2m thick were recorded extending across Tottington High End Moor, Cowpe Moss, Clegg Ding, Brandwood Moor and Whitworth Lower End Moor, becoming patchier downslope of these core deposits. In almost all cases, areas where less than 10cm of peat were mapped correspond to areas dominated by extensive quarrying remains, with substantial ground disturbance and spoil accumulation.
- 2.4.2. While the Rossendale uplands, and those of Lancashire and Greater Manchester more widely, are well known for their palaeoenvironmental potential, synthetic analysis of existing data relating to, for example, the onset of peat accumulation, has demonstrated that environmental and vegetation conditions, the impacts of large-scale climate changes and anthropogenic influences were highly localised and generalisations cannot be successfully extrapolated to individual sites (Myers & Stallibrass, 2024). Currently available information pertaining to the Assessment Boundary is included in the chronological discussions below.

2.5. Government and Local Planning Policies and Guidance

Legislative Framework

- 2.5.1. 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).

- 2.5.2. 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

- 2.5.3. The National Planning Policy Framework (NPPF) was first published by the Ministry of Housing, Communities and Local Government (MHCLG) on 27th of March 2012 and last updated in December 2024. 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 document 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'* (MHCLG 2024, Para 202).
- 2.5.4. 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, the significance of a designated asset 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 213)
- 2.5.5. With regard to proposals that are predicted to lead to substantial harm to or the total loss of significance of a designated asset, Paragraph 14 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 214). Where *'a development proposal will lead to less than substantial harm to the significance of a designated asset'* Paragraph 215 states that *'this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use'* (*ibid.*, para 215).
- 2.5.6. Impacts upon non-designated heritage assets are also a pertinent planning consideration; Paragraph 216 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 216)
- 2.5.7. 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 218)
- 2.5.8. 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 203). Any proposal for a social value/public benefit strategy should take into account:

- d) *the desirability of sustaining and enhancing the significance of heritage assets, and putting them to viable uses consistent with their conservation;*
- e) *the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;*
- f) *the desirability of new development making a positive contribution to local character and distinctiveness; and*
- g) *opportunities to draw on the contribution made by the historic environment to the character of a place* (*ibid.*, para 203).

Planning Practice Guidance

2.5.9. The MHCLG published Planning Practice Guidance (PPG) in April 2014 to expand upon the NPPF; it is a live document and the section on the historic environment was last updated in July 2019 (DLUHC & MHCLG, Live Document). Section 18a of the guidance is concerned with '*Conserving and Enhancing 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, undesigned buried remains of archaeological interest'.

2.5.10. 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 (DLUHC & MHCLG, Live Document: para 18). 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.

2.5.11. 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. (DLUHC & MHCLG, Live Document: para 18)

2.5.12. PPG provides a definition and guidance for public benefit where a development can achieve sustainable objectives (as per the NPPF - MHCLG, 2025, 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 & MHCLG, Live Document).

Local Planning Policies

- 2.5.13. 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 Adopted Core Strategy (Rochdale Borough Council 2016), the Places for Everyone Joint Development Plan for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford And Wigan (Greater Manchester Combined Authority, 2024) 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 Adopted Core Strategy 2016

- 2.5.14. Policy P2 - Protecting and enhancing character, landscape and heritage states that:

1. We will protect and enhance the borough's character, the distinctiveness of its town centres, housing areas and countryside, and the qualities of its landscapes, utilising the considerable potential of these assets in development and regeneration schemes. We will do this by:

- a. Requiring new development to integrate successfully with the key natural features of the borough, e.g. river valleys and the Pennine landscape;*
- b. Requiring new development to take opportunities to protect and open up important views of hills and valleys which are part of the borough's unique character;*
- c. Restoring the River Roch and other water bodies to their place as key and attractive features of the borough, including opening up waterways where they have been covered, and enhancing their setting, heritage assets and biodiversity potential;*
- d. Protecting, enhancing and utilising outstanding cultural landscapes, such as the Cheesden Valley area and around Littleborough and Hollingworth Lake; and*
- e. Conserving and enhancing townscape character.*

2. We will protect the borough's heritage by:

a. Conserving, enhancing and promoting key heritage assets, both statutory and non-statutory, including consideration of their wider settings. Key heritage assets of the borough include:

- i. Four outstanding conservation areas: Central Rochdale, Middleton and Littleborough town centres and Rock Nook / Summit;*
- ii. Other designated assets such as listed buildings, conservation areas, registered parks and scheduled ancient monuments;*
- iii. The heritage of the Co-operative movement, the Rochdale Pioneers and the Labour movement;*
- iv. The Edgar Wood and J. H. Sellers cultural heritage;*
- v. The heritage of the seventeenth and eighteenth century vernacular tradition; and*
- vi. The engineering heritage, including mills, canals and railways.*

b. Conserving, enhancing and utilising other non-statutory heritage assets of local interest, be they buildings, parks, gardens or archaeological sites, including promoting their sensitive restoration;

c. Using heritage assets positively and intelligently to strengthen identity and image and support the visitor economy, particularly in development and regeneration schemes; and. Prioritising the conservation of heritage assets at risk from decay, giving special attention to designated heritage assets in this regard' (Rochdale Borough Council 2016).

Places for Everyone Joint Development Plan for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford And Wigan 2024

2.5.15. Policy JP-P2: Heritage states that:

'We will proactively manage and work with partners to positively conserve, sustain and enhance our historic environment and heritage assets and their settings. Opportunities will be pursued to aid the promotion, enjoyment, understanding and interpretation of heritage assets, as a means of maximising wider public benefits and reinforcing Greater Manchester's distinct character, identity and sense of place.

Local Plans will set out the key elements which contribute to the district's identity, character and distinctiveness and which should be the priority for conserving and enhancing in the future and demonstrate a clear understanding of the historic environment and the heritage values of sites, buildings or areas and their relationship with their surroundings. This knowledge should be used to inform the positive management and integration of our heritage by:

- 1. Setting out a clear vision that recognises and embeds the role of heritage in place-making;*
- 2. Ensuring that the heritage significance of a site or area is considered in accordance with national planning policy in the planning and design process and opportunities for interpretation and local engagement are optimised;*
- 3. Integrating the conservation and enhancement of heritage assets and their settings, with creative contextual architectural responses that contribute to their significance and sense of place;*
- 4. Delivering positive benefits that sustain and enhance the historic environment, as well as contributing to the economic viability, accessibility and environmental quality of a place, and to social wellbeing; and*
- 5. Exploring opportunities to reduce greenhouse gas emissions that restoration of historic buildings offer.*

Particular consideration will be given to ensure that the significance of key elements of the historic environment which contribute to Greater Manchester's distinctive identity and sense of place are protected from harm. These include historic town centres, places of worship, historic transport routes including the canal network, industrial buildings and structures including textile mills, farmsteads and other sites, buildings, and areas of identified archaeological, architectural, artistic and/or historic value.

Development proposals affecting designated and non-designated heritage assets and/or their settings will be considered having regard to national planning policy. Where heritage assets have been identified as being at risk, Local Plans should identify specific opportunities for them to contribute to regeneration and place-making, and they should set out strategies for their repair and re-use. Development proposals which will help safeguard the significance of and secure a sustainable future for Greater Manchester's heritage at risk will be supported in principle, provided they are not contrary to national policy or other policies in the development plan.

Proposals should be informed, as necessary, by the findings and recommendations of the appropriate heritage assessment(s) in the development plan evidence base and/or any updated

heritage assessment submitted as part of the planning application process' (Greater Manchester Combined Authority, 2024).

Rossendale Local Plan 2019-2036

2.5.16. 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' (Rossendale Borough Council 2021).

2.6. Key Planning Considerations Pertaining to the Assessment Boundary

- 2.6.1. 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.
- 2.6.2. In accordance with the data gathering parameters and methodology set out below, this assessment has identified a total of 1414 heritage assets within the 1km Study Area (see Figures 3-6 and appended Gazetteer), of which 283 are located within the Assessment Boundary.

- 2.6.3. The only designated asset located within the Assessment Boundary is Catley Lane Head Conservation Area (Asset 22), which extends into the southern tip of the Assessment Boundary, following a section of Rooley Moor Road (Asset 828). An additional Conservation Area (Prickshaw and Broadley Fold) and 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 1km Study Area.
- 2.6.4. 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 built heritage assets will be considered separately in the EIA and ES.

3 AIMS & OBJECTIVES

- 3.1.1. The aim of this assessment is to identify the cultural heritage value of land within 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.
- 3.1.2. The objectives to be undertaken in pursuing this study will be focused on the heritage significance of the land in the Project for Assessment. This will be done by examining a variety of evidence for upstanding and buried remains of heritage interest including designated and non-designated archaeological heritage assets up to 1km from the Assessment Boundary. The assessment is based upon data obtained from publicly accessible sources as described in the Data Sources section (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 National Planning Policy Framework (MHCLG 2024), Planning Policy Guidance (DLUHC & MHCLG Live Document), the Ancient Monuments and Archaeological Areas Act, 1979, Planning (Listed Buildings and Conservation Areas) Act, 1990, the Town and Country Planning Act, 1990 as amended by the Levelling up and Regeneration Act, 2023, and local planning policy.
- 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), *Regulations for Professional Conduct* (CIfA 2024), *Standards and Guidance for Historic Environment Desk Based Assessments* (CIfA 2020a), *Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment* (CIfA 2020b), 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 data sources were consulted during preparation of this assessment:

- The **Greater Manchester and Lancashire Historic Environment Records (GMHER and LHER)** - for data relating to archaeological assets and previous archaeological investigations;
- **Historic England's (HE) National Heritage List for England (NHLE)** - for data relating to designated heritage assets;
- **Rochdale and Rossendale Borough Councils** - for details of Conservations Areas and Local Lists of Non-designated Heritage Features;
- The **National Library of Scotland (NLS)**, **Old Maps Online** and **Lancaster University Library Map Resources** websites - for Ordnance Survey and pre-Ordnance Survey maps;
- **HE's Archive** and **Aerial Photo Explorer (APEX)** website, the **National Collection of Aerial Photography (NCAP)** website and other online photographic collections - for historical and modern aerial images of the Study Area;
- The **Genealogist.com** website - for copies of tithe maps/apportionments and census returns via AOC Archaeology Group's online subscription;
- The **Environment Agency** (via DEFRA website) - for 1m resolution LiDAR data;
- The **Archaeological Data Service (ADS)** - for heritage data including grey literature reports and accessible archaeological journals;
- **Google Earth Pro** and **Bing.com** - for current and historical satellite imagery of the Study Area;
- **British Geological Survey (BGS)** website - for digital information pertaining to the geological character of the Study Area;
- The **Mining Remediation Authority (UK Government)** online map viewer - for datasets pertaining to past shallow coal mine workings, coal outcrops and the location of abandoned mine entrances;
- The **Victoria County History** - for entries pertaining to the history of relevant parishes, available via British History Online website;
- Other relevant online and published resources - archaeological and/or historical accounts relating to land within the Assessment Boundary and Study Area e.g. local history websites and historical accounts published or digitally available online. Full references are provided in Section 7.

4.2.2. Catalogues and/or staff from the following archival collections were consulted:

- Lancashire Archives
- Rochdale Local Studies Library
- Chetham's Library
- John Ryland's Library
- Rawtenstall Library
- Manchester Archives.

4.2.3. Walkover survey of the Assessment Boundary was also undertaken as part of this assessment (detailed below).

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 3-6. All known previous archaeological investigations (Events) referenced are also detailed in 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 relating to the type, age, 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 in order 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.
- 4.3.4. For ease of reference, given the size of the Assessment Boundary and the number of historical divisions involved, specific locations referred to in the text are shown on Figure 2.

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 this resource/assets. 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 which are also set out in Appendix 1.
- 4.4.3. Levels of importance in the report are expressed as ranging between the scales of High, Medium, Low and Negligible. The importance of 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 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 Project for Assessment works is determined by identifying the degree of change from the Proposed Development 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 Large, Medium, Small, Negligible or None.
- 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 the walkover surveys. The Project for Assessment will be assessed against the established historic environment baseline, and potential direct impacts on known and unknown heritage assets will be identified.

4.5. Limitations of Scope

- 4.5.1. This assessment is based upon data obtained from publicly accessible archives as described in Section 4.2. Information from the National Heritage List for England was downloaded on the 28th April 2026. Data provided by the Greater Manchester and Lancashire HERs were received on the 29th May 2026 and 1st May 2026 respectively. The information presented in the gazetteer regarding known heritage assets is current to these dates.

- 4.5.2. This assessment deals with known and potential archaeological deposits. All identified heritage assets within 1km of the Assessment Boundary have been included as they contribute to an understanding of the historic environment baseline. This Study Area was considered suitable to enable sound conclusions to be drawn, based on the nature of the Proposed Development, the Assessment Boundary and its surroundings.
- 4.5.3. It should be noted that the report has been prepared under the express instructions and solely for the use of Cubico UK Development Ltd and their partners. All the work carried out in this report is based upon AOC Archaeology Group's professional knowledge and understanding of current (May 2026) and relevant United Kingdom standards and codes, technology and legislation.
- 4.5.4. 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 Cubico UK Development Ltd and their partners of the facts or implications of any such changes in the future.

5 ARCHAEOLOGICAL AND HISTORICAL EVIDENCE

5.1. Introduction

- 5.1.1. In addition to the digitised datasets provided by GMHER and LHER, a very high number of archaeological heritage assets located within the Assessment Boundary were identified and added to AOC Archaeology Group's Gazetteer (see Appendix 2) through examination of aerial photographs, current and historical satellite imagery, and LiDAR data. In order to avoid unnecessarily duplicating information, details of the approaches employed and general evaluation of outcomes are provided in the following sections (Sections 5.2 and 5.3) but individual assets of interest are discussed in the relevant chronological section (below). Similarly, known archaeological works previously undertaken within the Study Area (Events) are outlined in Section 5.4 in order to provide an indication of the type and distribution of investigations and their contribution to the current known baseline; however, the specific findings of these works, where relevant, will be included in the following chronological sections.
- 5.1.2. It is apparent that historical documentary sources associated with the Study Area are numerous and diverse, but also scattered and somewhat fragmentary. A balance therefore had to be struck between original historical research and the practicalities of the project, that would allow robust conclusions to be drawn regarding the anticipated impacts upon known and potential archaeological remains, while also ensuring a timely, efficient and proportionate approach. Where professional judgements have been made as to the value of sources, the reasoning behind these has been set out within the following text alongside the relevant material.
- 5.1.3. The walkover surveys have also informed compilation of the baseline evidence; details of the approaches taken and findings are set out in Section 5.11.

5.2. Aerial Photography and Satellite Imagery

- 5.2.1. A priority search of the Historic England Archive held in Swindon was undertaken and select digital images were purchased for consultation (relevant images are listed in Section 7.3). The online catalogues of the HE Aerial Photo Explorer (APEX) collection and the National Collection of Aerial Photography (held by Historic Environment Scotland but also containing material covering England) were also searched and images of the Assessment Boundary and Study Area examined online (see Section 7.3). Cambridge University Collection of Aerial Photos and Britain from Above online collections were also searched, but no additional digitised images were available. The area has not been covered by any previously completed National Mapping Projects.

- 5.2.2. Prospection for previously unknown archaeological remains using aerial photography is difficult in areas of peat and blanket bog, but the images purchased from the HE archive and available online provide useful snapshots of the land within the Assessment Boundary during the decades from the mid-20th century onwards. Of particular use are a series of good quality images taken in the 1940s and early 1960s (see Section 7.3) that record the maximum extents of quarrying activity with minimal vegetation colonisation.
- 5.2.3. Satellite imagery was also consulted: Google Earth images demonstrated a general continuity of land use across the Assessment Boundary at various recent intervals, while Bing was found to provide the best quality current (2024) coverage of the Assessment Boundary.
- 5.2.4. The satellite and aerial images were particularly useful when used in combination with LiDAR data and historical OS mapping, to contribute to the identification of assets related to post-medieval extraction of coal and sandstone. For example, a number of disused coal shafts (e.g. Asset 1149) were identified from their distinctive annular spoil heaps: the microtopography of these features shows up well in LiDAR visualisations, while the spoil is typically better drained than the surrounding moorland soils, and the vegetation changes show prominently in photographs (particularly in colour images, where the preferentially grazed green turf stands out against the surrounding heather and bracken).

5.3. LiDAR

- 5.3.1. LiDAR data downloaded from the Environment Agency/DEFRA includes 1m resolution LiDAR, collected in 2022 as part of the National LiDAR Programme. The data were visualised using Relief Visualization Toolbox (RVT version 2.2.1) and SAGA GIS, and a Digital Surface Model (DSM) and Digital Terrain Model (DTM) have been produced for the Study Area. The DSM was enhanced by implementing different visualisation techniques, including Analytical (Multidirectional) Hillshading, Sky View Factor, Visualisation for Archaeological Topography (VAT), Simple Local Relief Modelling, Laplacian Filter and combined VAT and Analytical Hillshading.
- 5.3.2. Hillshading is the most common visualisation technique for archaeological purposes and is effective for identifying earthwork features (Challis et al. 2011). However, Challis *et al.* (2011) and Doneus (2013) warn against reliance on a single technique and note that while hillshading may be the most common form of visualisation, in some cases it can be the least likely to identify archaeological remains in detail. Simple Local Relief Modelling (SLRM) can greatly enhance the visibility of small-scale, shallow topographic features (Hesse 2010).
- 5.3.3. Figures 30-33 show the available LiDAR data visualised as a multidirectional hillshade plot. Note that a vertical exaggeration has been applied in order to render the most subtle microtopographic changes visible. The various visualisations, which each emphasise different, complementary, landscape elements, were analysed in detail and alongside georeferenced aerial/satellite imagery and historical maps. In addition to providing clear, spatially accurate data regarding mapped earthwork or cut/negative features, a large number of localised topographic anomalies were identified that were not already recorded on the HER dataset but which were interpreted as being of anthropogenic origin, with the majority likely to reflect small-scale coal pits or borrow pits perhaps used for nearby field walls etc. Faint linear features were also identified that correspond to former field boundaries depicted on historical OS maps (e.g. Asset 1594) or to probable tracks or tramways associated with mining/quarrying (e.g. Asset 1590). Other features (typically smaller discrete features) were more difficult to attribute a definitive origin to from the LiDAR data and may reflect human activity or natural processes. Where relevant, such features were visited for assessment during the walkover survey; a number of 'false positives' were subsequently removed from the Gazetteer when it became clear that they represented natural boulders or peat erosion scars.

5.4. Previous Archaeological Events

- 5.4.1. A number of previous archaeological investigations recorded on the HER relate to assessment of the physical remains of the post-medieval quarrying industry in Rossendale and were undertaken to inform decisions as to the future management of disused quarry sites in the area (Events 1078, 1082, 1100, 1095 and 1132-39). The work included desk-based research into individual sites and the local industry more generally, alongside walkover surveys, photographic recording and heritage value assessments of Ragstone Brow, Scout Moor, Ab Top, Facit, Bagden, Cragg, Green Moor and Ding Quarries amongst others. The current assessment has drawn widely on information presented in these reports (LUAU 1997; LUAU 1998; UMAU 2003; UMAU 2004). A desk-based study and walkover survey of the section of Rooley Moor Road between Catley Head Lane and Ding Quarry (Event 1118) was also undertaken.
- 5.4.2. Archaeological investigations have been conducted in advance of the extension of quarries that remain currently operational. Extension of Scout Moor Quarry (west of the Assessment Boundary) involved a desk-based cultural heritage assessment and walkover survey, followed by archaeological recording of features associated with several phases of post-medieval industrial activity (Events 1121 and 1122). In the northeast of the Study Area, c. 376 ha of peat moorland surrounding the Whitworth Quarry complex were subject to walkover survey, resulting in the identification of several previously unrecorded heritage assets, with subsequent borehole survey to assess the archaeological potential of peat deposits (Events 1079, 1144, 1145 and 1146).
- 5.4.3. Construction of the current Scout Moor Wind Farm, on the western side of the Assessment Boundary, involved a programme of desk-based research and walkover survey, followed by archaeological evaluation and monitoring (Events 1124 and 1125), including the excavation of 52 evaluation trenches and observation of 30 geotechnical pits and wind turbine construction sites. Access roads were not generally monitored where they were constructed as 'floating' rafts on top of peat. The overall study areas of these works overlap with part of the current Assessment Boundary, however, no archaeological remains were identified within the latter. An archaeological survey of peat erosion scars (Event 1070) and palynological assessment of sediment samples (Event 1110) were also undertaken.
- 5.4.4. Sixty additional archaeological events are recorded within the wider Study Area. This includes 31 building surveys as well as small-scale geophysical surveys, watching briefs and desk-based assessments, primarily relating to properties and land in the surrounding valleys.

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

- 5.5.1. 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). 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). Just beyond the southwestern edge of the 1km Study Area, GMHER records a large concentration of Mesolithic and Neolithic flint and chert finds from the summit of Knowl Hill, including bladelets, flakes, scrapers and microliths, along with over 500 waste flakes and cores that suggest a manufacturing location (HER IDs: 2697.1.0; 348.1.0; 348.1.1).
- 5.5.2. 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 6), found in the late 19th century. The HER entries for this collection both contain the same description of the implements: '*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 appears to have been taken (Fishwick 1889: 3) simply includes Hunger Hill and Turnshaw Hill among *'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'*. 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 mostly come from a zone within the upland moorland but below the most elevated areas appears plausible. It is also notable that the finds are recorded as underlying the peat.

- 5.5.3. It is considered highly likely that the current recorded distribution and frequency of prehistoric finds is strongly influenced by patterns of modern sample bias and visibility, rather than reflecting a 'true' usage or survival rate: flint scatters or other small artefacts and ephemeral features, such as hearths, would not readily come to light in areas of blanket bog or grassland where ground disturbance is usually limited, while these relatively inaccessible habitats do not encourage a large number of potential 'finders'.
- 5.5.4. An archaeological survey of peat erosion scars conducted across the area between Knowl Hill, Whittle Hill and Rooley Moor in advance of the construction of Scout Moor Wind Farm (Event 1070) found only one artefact, a patinated flint nodule showing evidence of burning (Asset 1632), from the 23 locations examined. It was concluded that the *'negligible evidence'* of the survey results *'suggest[s] limited activity'* and was interpreted as a contrast with more numerous (previously recorded) finds from the wider surrounding area that would indicate that *'the distribution of knapping floors and/or settlement loci, be they Mesolithic or later, appears to favour, or even to be confined to, in the intermediate slopes of hills such as those around Knowl Hill and Whittle Hill'* (Gifford and Partners, 2004). However, while preferential occupation of particular parts of the landscape, particularly in a region with such topographic and environmental extremes, does not seem improbable, it should be born in mind that the surveyed peat scars represent an extremely limited and non-intrusive sample area (determined primarily by the development requirements rather than by systematic sampling) in relation to the total scars across the wider plateau and, indeed, to the full extent of the plateau itself.
- 5.5.5. Even relatively substantial features would no longer be apparent from the surface once sealed by encroaching peat. For example, a linear drystone bank-type feature (Asset 896) was 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); sealed by overlying peat deposits, the feature could not be dated absolutely, given the unknown date of peat inception in the vicinity, but was interpreted by the excavators as being of possible prehistoric date (OAN, 2005: 11-12). The function of the feature was unclear but it appeared to have been deliberately constructed and may have been part of a wider construction. Fragments of birch (Asset 895), also undated but growing at the time of peat inception, were also recovered during the evaluation. Subsequent archaeological monitoring of the construction of wind turbine sites and sections of the access tracks that were cut through the peat (i.e. were not floating tracks) identified no further archaeological remains; it was concluded that this, at least in part, reflected the deliberate positioning of the turbines and infrastructure to preserve (i.e. avoid) buried remains.
- 5.5.6. Examination of 31 auger cores taken from Rooley Moor (the central, southern and eastern parts of the Assessment Boundary) (Event 1669) identified a general lack of mineral soils in the cores, with peat

found to be resting directly on weathered bedrock; it was concluded that this situation would reduce, though not preclude, the potential for finding *in situ* lithics (Headland Archaeology, 2014), although it should be noted that this study was undertaken as part of an evaluation of the cultural and palaeoenvironmental potential of peats on Rooley Moor in support of a planning application and was designed to target micro-siting zones for the proposed development. As such, the core locations had presumably already been refined during earlier phases of the design process to minimise potential archaeological harm. Conversely, analysis of 14 cores from peat moorland above the Whitworth Quarry complex (i.e. from Lee Moss on the northeastern side of the plateau) (Events 1144 and 1145) found potential for the survival of prehistoric land surfaces beneath the peat layer, which varied in depth between c. 0.4m and 3.4m over the course of the transect (ARS 2011: 12-13).

- 5.5.7. Downslope of the most extensive peat deposits, two possible Bronze Age cairns are recorded on (Asset 143) and below (Asset 144) the crest of Bagden Hillocks (c. 410m - 417m aOD). They survive as grassed over mounds, with some evidence of stone robbing; the uppermost of the two (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 southwest across the Naden valley to Knowl Hill. From Asset 143, there are also clear views towards the surrounding Pennine uplands and valleys to the east/southeast. Similar features are known from other hills in the area, including Hades Hill (c. 2.9km east of the Assessment Boundary) and Wind Hill (c. 3.2km southwest). A small mound has been identified from the LiDAR data on the northern side of the summit of Hunger Hill (Asset 1388) that may indicate the presence of a prehistoric cairn, but was not visited to confirm this interpretation on the ground; this may be the same feature as a prehistoric cairn and nearby cist burial reported from Hunger Hill (Asset 1672), although no precise locational information has been obtained with regard to the reported feature.
- 5.5.8. No further later prehistoric features are currently known from within the Assessment Boundary itself. In the southeastern portion of the Study Area, earthwork remains of probable banks and ditches (Asset 1629) within agricultural land at Smallshaw Clough appear to enclose the end of a 'promontory' defined by steep-sided water-cut gullies and are likely to represent a later prehistoric defended settlement (Mendelsohn 2009-14: 12.24.2012). A stone head found at Knack Farm (Asset 549) is recorded as being of Iron Age date, while an undated *ex situ* saddle quern was identified on the modern ground surface near Whittle Hill (Event 1125). Outside the western side of the Assessment Boundary, earthworks indicate remains of probable enclosures or fields (Assets 1362, 1630 and 1673) underlying the enclosure period extant field walls; the earlier remains have not been closely dated but may be prehistoric (Mendelsohn 2009-14: 25.03.2014).

Palaeoenvironmental Evidence

- 5.5.9. As noted above (Section 2.4), peat depth survey and modelling within the Assessment Boundary undertaken as part of the current Proposed Development (Hammond, 2024) suggests the presence of both extensive areas and smaller 'islands' of peat across the area, which have the potential to conceal earlier ground surfaces (and any associated anthropogenic artefacts), preserve organic (and other) remains in waterlogged, anoxic conditions and retain palaeoenvironmental evidence. Modelled depths range up to c. 2.6m (Hammond, 2024: Fig. 1a and 1b), although AOC Archaeology understands that no turbines will be sited in areas where the depth of peat deposits exceeds 1m.
- 5.5.10. Previous assessment of core samples from within and immediately surrounding the Assessment Boundary, though limited, confirms the potential to recover palaeoenvironmental information from the area. For example, analysis of preserved pollen and radiocarbon dating of a sediment sample from Fecit Hill (Event 1110), close to the proposed access route to the west of the Assessment Boundary (undertaken prior to the construction of Scout Moor Wind Farm), demonstrated that peat

formation began around 4,500 BC at this location. Samples contained high concentrations of well-preserved pollen and indicated the presence of birch fen during the early phases of peat accumulation, with mixed deciduous woodland in the surrounding landscape. The samples showed that 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). Just beyond the northeastern side of the Assessment Boundary, a radiocarbon date for peat inception on Lee Moss, suggested accumulation from the end of the Iron Age c. 60 cal BC - AD 20 (Event 1145; ARS 2011: 12); note that this sample location is situated approximately 35-45m lower than the Fecit Hill cores. Although limited in number, these two radiocarbon dates broadly conform with regional palynological evidence outlining prehistoric climatic conditions while also demonstrating the potential for local variability.

- 5.5.11. The 31 auger cores taken from Rooley Moor (Event 1669) were also found to contain very well-preserved plant macrofossils due to waterlogging, with occasional beetle exoskeleton fragments also present (Headland Archaeology, 2014). Overall, the species present indicated a transition of the habitat from wooded (willow-dominated) wetland to more open, sedge-dominated ground. Based on the observed preservation levels, it was considered likely that microfossils such as pollen and fungal spores would also survive in the peats, providing further evidence of environmental change in the area. The potential for anaerobic conditions in the organic deposits to preserve a variety of archaeological remains was recognised, though it was noted that the distribution and depth of suitable peaty deposits and humic silts and clays across the survey area varied. A high potential for sediments across the surveyed area to have been reworked (and their palaeoenvironmental usefulness consequently reduced) was suggested, due to the types of geomorphological processes observed (see Section 2.3.10), but it was also concluded that deposits with the highest potential for palaeoenvironmental reconstruction would be expected to be located on the '*higher flatter plateau* [i.e. outside the surveyed area but potentially within the Assessment Boundary] ... *where the remains could be nationally important in terms of their palaeoenvironmental archive*' (Headland Archaeology, 2014: 9).

5.6. Romano-British (AD 43 - c. 410)

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

5.7. Early Medieval (c. AD 410 – 1066)

- 5.7.1. There is currently a paucity of direct archaeological or historical evidence for Early Medieval activity within the Assessment Boundary and the Study Area, though this situation is somewhat typical of upland landscapes in the north of England, where Early Medieval remains have traditionally been under-recognised for a variety of reasons (Newman, 2025).
- 5.7.2. A degree of settlement in the area can be inferred from placenames and, while recent placename projects such as the English Place Name Survey (University of Nottingham, 2025) are yet to be updated to cover the Study Area, the frequency of elements widely held to reflect Old English and Old Norse influences is appreciable. Ekwall's 1922 study includes, for instance, Norse examples such as Scout Moor (from '*skúti*', a projecting cliff), Clegg (from '*kleggi*', a haystack or hill/hillock, presumably of similar shape) and Hamer Hill (from '*hamarr*', a steep rock or cliff). Names derived from Old English include Shore Moor¹ (probably from '*scorian*', a steep rock or the projecting stones of a cliff), Cowm (from '*cumb*',

¹ Rooley Moor was previously known as 'Shore Moor'. This necessitates careful reading of the documentary sources as another Shore Moor was (and is) located in the east of Rochdale parish, in the township of Hundersfield.

valley), Facit (the bright - ?flowery - slope), and Cowpe (incorporating 'hope', an upland side valley branching off the main valley i.e. cow valley); Brandwood is attributed to the Middle English, meaning the burnt wood. It has been suggested that 'Ding' reflects Scandinavian activity, specifically the location of a meeting place or council (Stuart Mendelsohn, pers. comm.), and the topographical amphitheatre at the head of the Naden valley would feel like a fitting location, although alternative interpretations suggest the name, first documented in the early 17th century, may be derived from the Middle English '*dingle*', meaning a deep hollow or narrow valley or clough (Hodson 1981: 160, cited in Gregory & Arrowsmith 2004: 8). More generic elements, such as 'brook' (stream) and 'slack' (valley), also have Germanic origins, but as they became widely adopted into the regional dialect it is more difficult to trace these more specifically than providing general context of settlement in the area, though it is noted that the lordship of Rochdale was held by one Gamal the Thane at the time of the Norman conquest in 1066. In terms of the Assessment Boundary, it should be noted that the majority of these elements are landscape (primarily topographic) descriptors. While the land may have been named and possibly 'owned' (by whatever tenurial custom), this does not necessarily equate to a human presence or to land use of a type that would result in surviving archaeological remains (though, of course, later features may have earlier roots).

5.8. Medieval (1066 - 1540)

- 5.8.1. Much of the region is poorly attested in the Domesday survey: the Study Area lay within a sparsely populated parcel of land described as covering the area 'between the Ribble and the Mersey' that was treated as part of Cheshire (HDP, n.d.). This area included the Hundred of Salford, within which the Assessment Boundary was located (Open Domesday, n.d.; see also pink hundred boundary on Figure 8). Soon after the conquest, large swathes of the northwest were given to Roger de Poitou, but passed to the de Lacy family in 1102 following Poitou's involvement in rebellion against the crown and subsequently became part of the Duchy of Lancaster and the county palatine of Lancashire in 1351; when Henry Bolingbroke, Duke of Lancaster, became Henry IV in 1399, the Duchy estates became linked to those of the crown, but were deliberately maintained separately. The Lancashire estates comprised a large number of manors (including Rochdale and Tottington) that were held variously in demesne or by tenants of the lord. While documentary sources indicate various changes to the administration of landholdings, it is arguable that these would have had relatively limited impact on the day-to-day lives of most of the inhabitants and on the archaeological resource.
- 5.8.2. The Domesday survey records that the manor of Rochdale included 9.5 x 5 leagues of woodland (Powell-Smith, n.d.); while this is of limited value with regards to the Assessment Boundary itself, given the large size of the estate, substantial areas of woodland seem to be recorded as part of the resources of many of the surrounding estates, giving a general impression of the regional landscape; the term 'woodland' would not necessarily refer to dense tree cover, but it suggests less intensive land use or settlement. Although not named in the 1086 survey, the northwestern part of the Assessment Boundary, including Tottington High Moor, extends into the former Royal Manor of Tottington (see Figure 8), which was also subsumed into the Duchy of Lancaster (Farrer & Brownbill, 1911).
- 5.8.3. The northern part of the Assessment Boundary and Study Area is thought to have lain within the Forest of Rossendale, one of several parcels that, along with the Forests of Pendle, Trawden and Accrington, lay within the Forest of Blackburnshire (Newbigging, 1893: 32). Although the forest boundaries are uncertain, Newbigging suggests that Rossendale was the largest of the four, covering some 30.5 square miles. Rather than indicating tree cover *per se*, the term 'forest' determined that the area was maintained as a royal/noble hunting ground and subject to Forest Law; primarily designed to maintain sufficient game stocks and appropriate habitat, Forest Law also generated an income for the landholder via fines from violations by local inhabitants. While the specific habitat distribution within the forest is uncertain,

it would nevertheless imply a relatively sparse and scattered population with areas of scrub and rough grazing in addition to stands of denser woodland (see below).

- 5.8.4. The parish boundaries set out on post-medieval maps and parish surveys are likely to have been relatively stable entities with their origins in estate and territorial boundaries of earlier periods (Winchester, 2000: 34). In the north of England, parish and township boundaries were heavily influenced by traditions of transhumance, often driven by the complementary seasonal resources of upland and lowland topography, and the need to ensure communities had access to a variety of ecological zones (Winchester 2000: 61), and it seems likely that the radial pattern seen in the Study Area, with boundaries converging within the elevated moorland (see Figure 2), reflects an arrangement to ensure that surrounding settlements had access to the resources they required, including grazing land, less exposed agricultural land, water sources etc. The northwestern part of the Assessment Boundary (Cowpe Moss, Hail Storm Hill and Tottington Higher End Moor) lay within the township of Cowpe with Lench, a subdivision of the parish of Bury, and also part of the Forest of Rossendale; the *Victoria County History* states that '*there is practically nothing to record of this township*' (Farrer & Brownbill, 1911).
- 5.8.5. The eastern side of the Assessment Boundary was part of Spotland township, one of four subdivisions of Rochdale parish. The Church of St Chad, Rochdale (Grade II* Listed Building: NHLE No. 1045812) served as the centre of the parish. The earliest surviving fabric of the church is 13th-century, although it is not clear if it stands on the site of an earlier building. The town was granted a market charter in 1251, with a short-lived borough also established around this time (Farrer & Brownbill, 1911). The township of Spotland was subdivided into the hamlets of Catley Lane, Woodhouse Lane, Chadwick, Clay Lane, Wolstenholme and Cheesden, Falinge, Healey, Whitworth (Higher and Lower Ends), Brandwood (Higher and Lower Ends) (Farrer & Brownbill, 1911) (see Figure 2), although some of these hamlets are not included in a parish survey of 1626. The relationship between the parish and manor of Rochdale is somewhat unclear and while the jurors (21 local inhabitants) responding to a royal survey of 1610² were able to clearly describe the parish boundaries, it was recorded that: '*what and wherever Bee the meares [boundary markers] and boundaries of the manor of Rachdall and whether the meares and boundaries of the said manor of Rachdall bee all one with those of the parishe of Rachdall above named the Jurye knoweth not*' (Curren, 1610). A register of rate payers paying tax to the king in 1332 to fund Scottish wars includes a total of 33 individuals from the entire parish of Rochdale, of whom nine were inhabitants of Spotland (Fishwick, 1889: 32). A reference to '*occasional charters indicating houses and barns [were] built*' (Fishwick, 1889: 32) suggests the agricultural fringe to the moorland plateau probably has medieval origins, however, these developments are likely to have occurred first on the lower valley slopes.
- 5.8.6. Over the 12th and 13th centuries, Whalley Abbey became one of the primary landowners within the Study Area and the Assessment Boundary. The house, a Cistercian monastery, was originally founded at Stanlaw in 1178 but moved to a new site at Whalley donated by Henry de Lacy in 1296. The Abbey's Coucher Book contains a collection of deeds and charters relating to land transactions, including around one hundred relating to lands in the township of Spotland, some of which are likely to fall within the Study Area. With the assistance of map and placename regression, it is possible to locate some of the parcels of land referred to in these documents, though detailed study of the texts (published in Latin (Hulton, 1847)) is beyond the remit of this archaeological assessment. In any case, it seems that Fishwick has previously undertaken such an exercise and his *History of the Parish of Rochdale* (1889)

² Undertaken on the orders of King James, in advance of the manorial lease coming up for renewal (Curren, 1610).

collates extensive details and numerous examples from the Coucher Book deeds alongside a range of other documentation such as a 1626 parish survey and assorted court rolls. It is therefore judged unlikely that further attempts to analyse the original documents ‘from scratch’ would result in significant hitherto unknown information of direct relevance to the current assessment, particularly given the typical form of many land transfer documents of this time where the focus is on the parcel boundaries and financial arrangements, with only general land use details referenced.

- 5.8.7. Of the examples that have been translated and reproduced in the secondary literature, the following is pertinent to the Assessment Boundary and evidences the donation of the northern portion of the Assessment Boundary to the Abbey by Roger de Lacy around 1200 (confirmed in 1328). In addition to four oxgangs of land in Castleton township, de Lacy gave:

‘to them [the Abbot and monks of Whalley] in my Forest, that Pasture which is called Brendewod [Brandwood], to feed their Animals by the divisions undermentioned, to wit from Gorischelache [close to Old Sink Slack] to Cuhupeved [Cowpe Head] and as the Cuhope [Cowpe Beck] descends to the Irewell and so following the Irewell to Fulbachope [Bacup], then going up to Saltergate and Hamstaleslogh and so to Denesgreve [Deansgreave] and across the moss to Cumbehop [the valley of the Cowm Brook] and Gorsichelache. In this the abbots were to have pasture for 100 cows with the offspring of two years old.’ (Fishwick, 1889: 42)

- 5.8.8. A 1349 copy of the deed states that the Abbot and Convent, and their successors, had permission to

‘enclose the said pasture and to reduce it to cultivation, or to make any other profit thereof, at their free will, without contradiction or impediment of us or our heirs, saving to us and our heirs in the aforesaid Pasture our right to hunt without injury or troubling the said Abbot and Convent of Whalley or their successors and servants, &c.’ (Fishwick, 1889: 43).

However, while the Cistercian order was well known for actively developing their estates as economic ventures, there is no indication that the abbey did cultivate the area. A document listing the values of 11 vaccaries within the bounds of the Forest of Rossendale in 1311 includes one at *Cowhope* [Cowpe]. Although its specific location is unclear, the record supports the likelihood that the area was dominated by rough grazing.

- 5.8.9. Along the southern and eastern sides of the Study Area, various deeds refer to plots of land that are broadly identifiable as part of the improved and semi-improved pasture fringe of the plateau, where it descends into the Spodden valley. For example, a deed of unknown 13th-century date records that *‘Jordan de Whitworth gave to Thomas of the Forest a meadow which formed part of a bovat of land near Harewythnes (now called Withens), to wit between Bikeden (Bagden) and Gorsichelache [close to Old Sink Slack]’* (Fishwick 1889: 83). Jordan de Cumba gave to Stanlaw *‘all his lands in Whitworth which he had from Andrew the son of Hugh de Whitworth in exchange for nine acres of land in Whythinfeld [Withins] in Spotland, the annual rent to be six silver pennies...’* and in 1298, John del Schagh gave *‘all his part of the waste of Withens’* to the Abbey (Fishwick 1889, 83). A charter of similar date relates to land at Prickshaw, *‘whereby Henry the son of Andrew de Whiteword granted to his younger brother certain lands called Harstandencroft which were within the following limits, vix., ascending Prikkeschaghliche to the Little Clogh on the west of the croft, and following the Clogh to the ditch, and following the ditch to Methrocschagheuit, and then ascending to the lake of Kor of Harsenden [now called Horsendale], and so back to Prikkeschagh. The lake “Kor” has long ago disappeared’*; Fishwick notes that there is *‘nothing of special interest about the buildings here’* (Fishwick 1889 508-9).
- 5.8.10. Of the placenames identified by Fishwick as *‘places mentioned in very early deeds mostly of the Twelfth or Thirteenth Centuries’* (1889: 12-13), those located within, or close to, the Assessment Boundary

include *Bikeden* [Bagden], *Cateshagh* [Catley], *Fagheside*, *Falinge*, *Naden*, *Prickshaw* and *Withers*. Fishwick suggests that a 1418 reference to *Catcloghgate* can ‘*be no other than what is now known as Catley Lane*’ (1889: 92). While the deeds undoubtedly indicate an established system of land ownership at this date and the names provide a series of identifiable points of reference, the names themselves provide little evidence for specific activities or land use. If anything, cumulatively, they support the overall impression that much of the Assessment Boundary was largely used for grazing and potentially held in common.

- 5.8.11. The concept of Common Land in England appears to have developed at an early (pre-Conquest) date, out of early networks of obligation and the practical resourcing of communities and estates, with boundaries and rights developing through custom and practice to become an institutional structure within society with a more formal legal basis that allowed greater exploitation of the lands by the later medieval period (Winchester, 2024: 21-26). In 1236, the Statute of Merton confirmed the system, already established in practice by this date, whereby the Lord of the Manor owned the ‘manorial wastes’, but manorial tenants held customary use rights. Such ‘common rights’ enabled a holder to take or make use of the naturally occurring products of land that belonged to another person. The details of rights and customs varied by location but traditionally included rights of common pasture (i.e. the taking of vegetation by the mouths of livestock), pannage (i.e. the grazing of pigs in woodland in autumn), estovers (i.e. to harvest wood and/or heather, gorse or bracken for fuel or building materials), turbary (i.e. to cut peat and turf), piscary (i.e. to take fish) and rights in the soil (i.e. to extract sand, gravel or stone); rights were customarily tied to a holding and quantitatively restricted to ‘reasonable’ or ‘necessary use’ to support that holding.
- 5.8.12. The exercising of traditional common rights would generally leave limited archaeological remains, while any that do survive are notoriously difficult to date and, particularly in the case of extraction, prone to later destruction by continued use of the resource. It is likely, for example, that prior to large-scale post-medieval quarrying activity, smaller scale exploitation occurred. This is supported by, for example, a 1610 description of sandstone quarrying in Rochdale parish, which identifies three particular ‘*Quaryes of Stone hereafter named vis; on[e] Quarye upon Brownwardle, one other quarry upon Middle Hill, one other Quarry upon ffarcett Moss* [all located along the Spodden Valley, east of the Assessment Boundary]’ but also notes that:

‘beside that in sundry places of the said List there is Rocke and Quarries of ffreestone. Which ffreestone hath beene usually gotten fetched and used by the inhabitants & others from the Comons and Waste grounds without interrupcion to the knowledge and Remembrance of this Jury’. (Curren, 1610)
- 5.8.13. Access to resources held in common could also be obtained through the purchase of a relevant licence from the landowner and in many places commercial interests became increasingly influential by the late 13th and 14th centuries (Winchester, 2024: 31-32). The landowner retained the legal liberty to enclose plots from the manorial wastes (‘*approvement*’) providing ‘sufficient’ pasture remained for tenants, as well as retaining a monopoly over any other natural resources not subject to customary rights, including minerals, timber and game. Given that practical organisation and management of the commons often fell to the community of commoners, and a feeling generally prevailed that the township ‘owned’ the resources (Winchester, 2024), the potential for rising tensions is clear (see Section 5.9).
- 5.8.14. Thirteenth-century sources set out by Fishwick, including the assizes court rolls, suggest that at least some of the lower and mid valley sides were divided up by the 12th and 13th century. Although the medieval court documents appear to include a large number of land disputes, the general impression from Fishwick’s account is that these were driven by turnover of ownership and by financial motivations, rather than disputes of the physical boundaries of the plots themselves, which might suggest that the

valley side plots were unambiguously divided (presumably using stockproof boundaries). Although many of the deeds set out by Fishwick refer to pasture, woods or meadow, i.e. that would leave little archaeological trace, it raises the possibility that some of the extant boundaries surrounding the plots along the eastern edge of the Assessment Boundary may be of a relatively early date.

5.9. Post-Medieval (1540 - 1750)

- 5.9.1. The earliest available mapping of the area is Saxton's map of Lancashire from 1579 (Figure 7), 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 maps shows settlements at Rochdale and Whitworth (on the River Spodden), Bacup, Rossendale, Haslingden, Edenfield ('*Aytenfelde*') and Newhall (on the Irwell), and Ashworth Chapel (to the south of the Study Area), surrounding a series of stylised hills representing the upland on which the Assessment Boundary is situated. Saxton's atlas strongly influenced mapping over the following centuries and several post-medieval maps of Lancashire, including those by Smith (1602; not illustrated), Speed (1610; not illustrated), Blaeu (1662; Figure 8), Morden (1695; not illustrated) and Bowen (1781; not illustrated), show a similar pattern of settlements surrounding the upland. Blaeu's map of 1662 (Figure 8) shows an additional hamlet at Wolstenholme as well as the boundaries of Ye K[ing]'s *Manner of Tottington*, which incorporated the western part of the plateau (and Assessment Boundary); both Tottington Manor and Rochdale are depicted within Salford Hundred.
- 5.9.2. Following the Dissolution, lands in Spotland and surrounding townships that had previously belonged to Whalley Abbey were sold off. The manor of Rochdale was held by the Byron family from the crown almost continuously until the family purchased it in 1638 (Farrer & Brownbill, 1911), though other families, including the Holts and the Saviles, also held significant portions of land in the parish and the surviving body of documentary evidence (as set out by Fishwick, Newbiggin and others) gives the overall impression of various ongoing boundary and ownership disputes. It is apparent that a large quantity of documentary evidence survives that pertains primarily to manorial administration and legal wranglings associated with these large estates. While this builds a broad picture of estate management across Rochdale and evidences the minutiae of legal proceedings, a full examination of the primary material is beyond the remit of this assessment of buried archaeological remains, though many of the sources have been intensively examined by historians of Rochdale parish and their analyses published.
- 5.9.3. It appears that the evident pattern of settlement, including numerous farms scattered throughout the upper valley side agricultural fringe to the moorland plateau, developed and was formalised during the post-medieval period. Tupling has described an overall trend in this area by the 17th-century as being towards a large number of small land owners rather than a small number of individuals with very large holdings, as occurred elsewhere (Tupling, 1927: 97), which would contribute to this pattern. 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 and 21), while the geographic and topographic conditions underpin a generally pastoral tradition. As noted above, it is likely that the majority of the upland plateau within the Assessment Boundary continued as common land into this period.

Commons and Enclosure

- 5.9.4. In 1626 a survey of the parish of Rochdale was made, prior to the sale of the manor of Rochdale to the Byron family. Fishwick, writing in 1889, considered the survey to have been '*made in a very complete and exhaustive manner ... the description of the properties in the parish are given with such particulars as to leave no difficulty in identification*', although he notes that small portions of the parish held by private individuals were not included and, as such, it '*is not safe to assume that because the name of a homestead is not mentioned in the Survey, it was not built until after that date*' (Fishwick 1889: xv). In

summarising the findings of the survey, he was struck by the '*vast track of waste or common land*' which, he reasons, must have been particularly extensive in earlier centuries, given that even in 1626 more than a quarter of the parish remained unenclosed. Common lands in Spotland are recorded as covering some 1,000 acres in the 1626 survey (Farrer & Brownbill, 1911), with, for example, the subdivision of Catley Lane and Woodhouse (extending across the southern part of the Assessment Boundary) including 29 freeholders, holding 126 acres of land, 40 copyholders with 312 acres, and '*the open commons of Dinge (where the copy holders had an interest), Shore [Rooley] Moor, Hunger Hill and Gorsie Leach*' comprising nearly 700 acres worth £56 per annum (Fishwick, 1889: 92).

- 5.9.5. The 1610 inquisition evidences the process of piecemeal enclosure of the open moor, which was firmly underway by the second half of the 1500s. For example, in 1568-9, one Roger Chadwick held '*for himself and his heirs by Copy ... ten acres of land, at eight yards to the rod, lately improved from the earth and waste called Shore More in Spotland, for rent [of] seven shillings and sevenpence*'. At the same date, one Thomas Whitehead held '*by Copy two and a half acres improved from the waste of Shore moss in Spotland at a rent of 10d.*' The following year, the same Roger Chadwick acquired by copyhold '*three acres at eight yards to the rod, improved from Shore Moss in Spotland, [a] parcel of the whole parcel of land called Bagden, for twelve pence rent*' (Curren, 1610). The exact locations of these parcels remain unclear, although it is possible that the latter was part of the enclosed land within the southeastern edge of the Assessment Boundary. The 1610 account suggests that the process of granting '*enclosures out of the Commons within the said Parishes of Rachdall*' was ongoing and describes as '*dyvers [those] which are now become Copyholders of the said parcells [over] this Twentie Yeeres last past*' and in 1626 it was recorded that 73 acres of land at Birchen Holts (Asset 1449) (c. 240m southwest of the Assessment Boundary) had been '*recently*' '*reclaimed from waste*' to form five closes. The details of '*what fines [i.e. costs of agreeing assarts] or pompositions were paid themefore*', other than the examples listed above, remained unknown by the survey jurors, though the process was sufficiently lucrative for the Duchy of Lancaster to establish a commission to oversee it.

- 5.9.6. In addition to physically parcelling up land with boundaries, the process of enclosure also involved extensive land improvement in order to facilitate agricultural profitability. As lessee of the manor of Rochdale in 1585, Lord Byron applied to the Chancellor of the Duchy of Lancaster for permission to '*improve so much of the wastes and commons as "conveniently might be improved"*', given that '*a large portion of the land was "craggy and stony, and moss ground"*' (Fishwick 1889: 23). Consequently,

Upon this appeal the Chancellor declared that he was informed that great advantage would accrue to the Queen, and also to the county, by bringing into tillage these waste places, and he at once granted a Commission to empower the Lord of the manor and the tenants to divide the wastes into two equal parts, according to the cust[o]m of the manor: the former to have the right to grant to whom he pleased portions of the wastes and commons, only reserving to Her Majesty a yearly rental of 4d. per acre; all the coal mines [none are individually recorded within the Assessment Boundary] already opened were to be demised to Sir John Byron. This Commission was dated 17th February, 1588. (Fishwick 1889: 23).

- 5.9.7. A further insight into the management of the periphery of the moor at this date is given by the response of the jurors to the questions of the 1610 inquisition, who noted that they could not,

conveniently soe distinguish between the arable land meadow & pasture as is required in the said article by reason that the most p[ar]te of the said Coppihould land excepting such as Lyeth upon or neere the heights of the Montaynes which much of it is Heathie Mossie and Stoney Land & unfit for husbandry is used for all the said purposes of plowing mowing and pasturing as occasion & necessitie doth urge the occupiers therof.' (Curren, 1610).

The same document noted that the cost of '*enclosing, manuring and husbanding ... land* [that had been] *improved from off the Commons and Wastes*' was reflected in higher rents; it was estimated that 178 acres of enclosed land on Shore Moor, Spotland, was worth 6d per acre, while 4d rent was paid to the crown for each of the 140 acres of unenclosed land there.

- 5.9.8. Within the agricultural fringe of the plateau, various parcels of ridge and furrow (Asset 1515; Figures 3-6) have been identified from aerial photographs and LiDAR, along with extensive arrays of land drains (the remains of the two are difficult to tell apart in some cases). No clear date can be determined from the surviving earthworks and soilmarks, but it is likely that some of them may be associated with land improvement in this period. The general straightness and narrowness of the ploughing regimes would suggest a later date (i.e. post-medieval rather than medieval), though it is anticipated that such improvements are likely to have been ongoing into the modern period.
- 5.9.9. Fishwick's analysis of the documentary sources suggests that Byron's 1588 Commission on improvement raised tensions locally, with a number of freeholders seeking to disrupt the process through a series of machinations including legal challenges regarding landownership within the parish and manor of Rochdale. For example, one William Hallowes petitioned the Duchy Court as to whether Shore Moor (in Spotland) was equally divided. Having failed to succeed in this case, the same individual attempted to stir up tenants in Whitworth and Rossendale and, in 1595, was arrested when he '*confederated with Richard Okes (the constable of Rochdale), Otewell Smith and Laurence Booth, and broke down divers inclosures and pulled up the fences*' (Fishwick 1889: 23). Several months later, an expedition made by a number of Lord Byron's allies, freeholders and undertenants '*to the wastes to drive therefrom strangers' cattle*' found there to be '*a great number of sheep*'. Proceeding to round up the sheep and drive them to the parochial fold in Rochdale, they were met by an opposing faction (including several members of the Holte family), who, '*being assembled in the market place of Rochdale, violently assaulted them with swords, rapiers, and daggers*' (Fishwick 1889: 24).
- 5.9.10. While the social, economic and political tensions are likely to be largely invisible (or at least unidentifiable) in terms of the archaeological record within the Assessment Boundary, these accounts support the picture of the area as a combination of rough and improved pasture with bog on the highest ground. The prevalence of surface stone supplies would suggest enclosure boundaries probably included drystone field walls (many of which may survive in use), while the documentary reference to fences that could be 'pulled up' also indicates less substantial land divisions.

Boundary Markers

- 5.9.11. The 1610 survey of Rochdale largely confirms the historical continuity of parish boundaries as shown on the early (mid-19th-century) Ordnance Survey maps. In the north of the Study Area, for example, the boundary is described as running:

from Bakupp to Rockliffe lume from thence following the River to the Bryndwood [Brandwood], from thence to the care Yate, from Care Yate to Cowapp Broocke, from Cowpp Broocke assending the same broocke to the head of the same and from thence to the height of the Mosse to Atkyn Butte, from thence to the Jumpe Holes, from thence to the west graine of Cheesden, and from thence following Cheesden Brooke to Chesden Lume ... then following the Water of Norden to the Wolfe Stone in Naden.' (1610 Inquisition).

From the walkover survey and OS maps, it is clear that many sections of the parish and township boundaries follow prominent topographic features such as water courses. Elsewhere a series of intervisible artificial markers were required to provide physical manifestations of sightlines, particularly over areas of relatively featureless moorland. Across the Assessment Boundary, the 1850 OS maps indicate a combination of boundary mounds (e.g. Assets 1331-1335) and stones (e.g. Assets 99, 444,

1341-1343) were used, although the former were often marked as '*boundary posts*' or '*stones*' on the 1893 mapping (e.g. Assets 1331-1335). Stones may have taken a variety of forms depending on the date and responsibility for erection (Winchester 2000: 50).

- 5.9.12. The walkover survey did not attempt to systematically confirm the survival or otherwise of all the boundary markers identified from historic mapping, though the presence of several (e.g. Assets 1326, 1150) was noted, while others appear to no longer survive in place (e.g. Assets 1338, 1348, 1349, 1640). In the east of the Assessment Boundary, examination of the historical maps in combination with the walkover survey suggests a possible modification of the township boundary at the upper (western) end of Bartle Cwm Pasture. A line of '*stones*' are marked on the 1851 and 1893 OS maps (Assets 1338, 1340-1343, 1338, 1348, 1349, 1640-1642), appearing to continue the line of the head dyke of the pastures to the southeast and northwest, while the field wall and township (and later county) boundaries run parallel to the line of stones c. 35m to the west. Alternatively, the mapped stones may have marked other boundaries, such as coal prospection rights.

Coal Mining and Quarrying

- 5.9.13. References to the working of specific coal mines in Rochdale from the 1570s and 1580s onwards mainly concern examples in the township of Hundersfield, although Cheesden is also mentioned, and it has been surmised that '*coal pits, no doubt, such as are now known as 'breast-highs' (i.e. worked by a passage cut into the side of the hill) were ... at work in various parts of the parish*' (Fishwick 1889: 43) and it would not be unreasonable to assume, given the presence of shallow coal deposits (see Section 2.3) that this included the Assessment Boundary. The 1610 survey states that there were no lead mines in the parish, but lists five '*Cole Mynes*', of which the closest to the Assessment Boundary were at Trough and Brown Wardle Hill on the eastern side of the Spodden valley, while legal documents from 1784 concerning manorial rights (specifically income from coal extraction) suggest extraction activities had developed and been focused in this area in the intervening years: a number of active collieries are listed, located along the eastern side of the Spodden valley and in Hundersfield township (Fishwick 1889: 29). Similarly, the lack of post-medieval references to quarrying on the Rooley Moor plateau should not be taken as evidence of its absence, although it contrasts with several specific examples from the eastern Spodden valley.

Rooley Moor Road (Asset 828)

- 5.9.14. 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 distinct trackway. It is clear from a reference in the 1729 Lancashire Quarter Sessions that the routeway was in existence by this date and its upkeep was the responsibility of the local community as '*the Court doth enlarge the time to the inhabitants of Catley Lane for the repair of the highway in Spotland from Spotland Bridge to Gorse Hill Leach [i.e. the stretch of the road within the hamlet of Catley Lane] till the Midsummer sessions*' (UMAU, 2003: 6). It is likely that the origins of the route are much older, and it may have functioned as a packhorse route (Maxim, 1927: 45 cited in UMAU, 2003: 6).

5.10. Industrial and 20th Century (1750 - present)

- 5.10.1. The manor of Rochdale was sold by Lord Byron (the poet) to James Dearden, Esq. in 1823 in order to resolve a protracted legal dispute over land ownership (Fishwick 1889: 29-30), and the manor has remained in the ownership of the Dearden family since. 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 and, where corresponding documentary or cartographic evidence does not exist, are very

difficult to date closely). As noted above, many such features have been identified from examination of LiDAR data, satellite/aerial imagery and historical maps; while the former sources give a good indication of the final extent of the extraction activities, the sequence of historical maps (primarily the Ordnance Survey maps of the area) gives an indication of the chronological development (see Figures 14-29). Similarly, a large number of the identified archaeological heritage assets within or immediately adjacent to the Assessment Boundary relate to the post-medieval and later agricultural landscape. It is worth noting that there appears to have been a high degree of overlap between the extraction and farming communities and families inhabiting farms close to the moorland edge often derived their income from a combination of both industries: for example, census returns from the late 19th and early 20th centuries record individuals employed in various trades, including farmers and agricultural labourers, coal miners, quarrymen, labourers, transport workers and navvies, within the same family; many families also included wives and children recorded as cotton workers. In contrast to the upland area, the surrounding valleys became increasingly densely populated, with textile mills and other industrial works taking advantage of the available waterpower, communication routes and local building stone, and associated settlement extending rapidly.

Map Regression

- 5.10.2. Yates's 1786 map of the County Palatine of Lancaster (Figure 9) 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 Rochdale and Bury), valley-bottom villages surrounding the Assessment Boundary (such as Bacup and Whitworth, that include numerous mills, churches and chapels), and scattered 'farmhouses', with the occasional 'gentlemens 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.
- 5.10.3. 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 southeastern 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 the generic label 'Moors'. This is the earliest map 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), presumably the feature from which Rooley Moor acquired its updated name, is labelled and is located at a fork in Rooley Moor Road, with a second branch of the route running south across Rooley Moor and past farms at Wood Houses (now broadly followed by paths and Woodhouse Lane). Although Yates'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.
- 5.10.4. Greenwood's 1818 map (Figure 10) of the county is broadly similar to the 1786 map, although additional detail, such as farmstead names and administrative boundaries, is included. The topographic and land use boundaries of the plateau (which are broadly, but not exactly, coincident) 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' is applied to the full common area. Rowley House (later the Moor Cock Inn, Asset 639) 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 directly from their labels e.g. Naden Head (Asset 643) and Intake (Asset 533).

- 5.10.5. Hennet & Bingley's 1828 map (Figure 11) of Lancashire is also broadly similar to Yates' and Greenwood's maps, though the selection of farms that are labelled is slightly different and the western branch of Rooley Moor Road (Asset 828) is shown again. The boundaries of the common land on the eastern side of the plateau appear somewhat schematic, while *Brandwood Moor* is labelled separately. A '*colliery*' is labelled on the northern side of Hunger Hill.
- 5.10.6. The first OS survey of the area, the 'Old Series' mapping produced at a scale of one inch to the mile, was published in 1839 (Figure 12). This map names the main tracts of moorland within the Assessment Boundary as Rowley Moor in the south, Ding in the centre, Cowpe Moss in the west and Brandwood Moor in the east. More locally, Pike, Warmlack Hill [Warm Slack Hill on later maps], Top of Leach, Mill Moor, Greens Moor and Lee Moss are also labelled, along with the Moorcock Inn (Asset 639) depicted within a small enclosed area off both sides of Rooley Moor Road. The head dyke of some of the enclosed pastures on the eastern side of the Assessment Boundary is shown, along with several farmsteads and a scatter of collieries and quarries; of these, *Ding Delph* and *Flag Quarries* are named, while three shafts are depicted close to Intake on the northern edge of the Assessment Boundary (Assets 538 and 535/536/537), with an additional two (unlabelled) at Old Sink Colliery (Assets 756 and 758). A reservoir (Asset 388) is shown underlying the proposed access route to the west of the Assessment Boundary; although now drained, the dam survives as an upstanding earthwork.
- 5.10.7. 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 (Figure 13). The exceptions are allotments that lie within the southeastern edge of the Assessment Boundary at Lower Bagden, the northeastern edge at Hey Bottom, and the northwestern edge at Cowpe. The accompanying apportionment details for these plots are summarised in the following table. More generally, the tithe maps confirm a pattern of tenure across the agricultural moorland fringe whereby each of the scattered farmsteads held a group of broadly contiguous fields surrounding the farmhouse; where a land use description is recorded, they are either pasture, meadow or 'rough'. Around the western fringe of the plateau, in Tottington township, holdings also include frequent stone quarries.

Plot No.	Owner	Occupier	Description	Notes
Township of Whitworth				
163 164 165	Mary Lomax	Samuel Lord	Lower Bagden	Farm buildings (Asset 596) shown within plot 165
166 167	Mr Holt	Thomas Rhodes	Higher Croft Hole	Associated with farmstead c. 320m south (immediately outside Assessment Boundary), Asset 1459

Plot No.	Owner	Occupier	Description	Notes
299 -306	Executors of Joseph Jackson	Robert Parker	Hey Bottom Cowm	Buildings and pond shown on map are described as rubbing/water mill by HER (Asset 470)
Township of Cowpe				
45a	Richard Ashworth Esq.	John Ormerod	Higher Rough - rough	Associated with farmstead at Wicken Slack (Asset 1058), immediately beyond Assessment Boundary
1a	John & Richard Townend Esq.	Sarah Howarth	Cowpe Moss	c. 230 acres, part of Cowpe Common.
-	-	-	Stone Quarries	A band of 'Stone Quarries' separate the common land on Cowpe Moss from the enclosed pasture/rough grazing.
Township of Tottington Higher End				
76b		Common		c. 299 acres; one of two parcels of common land shown for this township.

- 5.10.8. The 1st Edition Six Inch OS mapping for this area was published in 1851 (Figures 14-17) and provides the first detailed survey of the moorland area. 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 (Figures 18-21), with revisions in 1910 (not illustrated) and 1930 (Figures 22-25)) that include greater detail, show additional features and modifications to land use within the Assessment Boundary. The most striking content of these map series is the number of features depicted that relate to the extraction of coal (including coal pits, collieries, ventilators and disused pits) and sandstone (including sandstone and flagstone quarries, disused quarries, spoil heaps and processing facilities, such as rubbing mills and their reservoirs). Some are already marked as 'old' or 'disused' on the earliest map (1851), while other examples that appear to have been in use in 1851 have been either abandoned or enlarged (in some cases, substantially) by the early 1890s. Over the early 20th century, quarry expansion appears to have been limited to the major sites, both inside and along the eastern edge of the Assessment Boundary.
- 5.10.9. Around the fringe of the open moor, the intake and improvement of land continued over the decades between the publication of the 1851 and 1893 maps, although this pattern appears to have reversed in subsequent decades, with areas previously shown as improved once again depicted as rough grazing or moor on early 20th-century editions. However, the general field layout remains little changed between the late 19th-century and current maps. These maps also show the development and spread of settlement and industry along the surrounding valley bottoms.
- 5.10.10. 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. While the potential for detailed analysis of trends in the distribution and chronological development of these features at localised or broader scales is clear (particularly when associated documentary sources are incorporated), this lies beyond the remit of this assessment. It is noticeable that by the late 19th century, many of the quarries were linked to

each other, and to surrounding transport links, by tramways (often reused as public footpaths) that form a broader network across the plateau; as such, these remains should be considered as part of a wider group rather than solely in isolation.

- 5.10.11. The 1962 OS map (Figures 26-29) shows almost all of the Assessment Boundary as moorland/bog, with the exception of improved agricultural land around the periphery, predominantly along the southeastern edge. The improved land has expanded slightly compared with the previous map, indicating that this process continued into the middle of the 20th century. The majority of the industrial remains shown on this map are the most prominent, large scale features, which are depicted at their maximum extent and as disused, although a small number of quarrying remains are shown for the first time on this map, reflecting continuing activity into the modern period. These include spoil remains (Asset 1571) and a small building (Asset 1513) alongside the track connecting Ding Quarry and Rooley Moor Road, and spoil tips at Cat Stones (Asset 1494). Various overhead powerlines/pylons are also shown crossing the Assessment Boundary.

Coal Mining

- 5.10.12. Work by local history groups has concluded that though coal extraction identified from historic mapping and surface remains across Rooley Moor appears to have occurred at a relatively small scale, this is a product of the pattern of the system of land ownership and leases, whereby pit extents were defined by plot boundaries; in practice, the extraction of coal was '*more than a cottage industry*' (RMNF, n.d) and formed an important local supply for industry in the surrounding valleys. The productivity and scale of mining in the Rochdale area appears to have increased rapidly in the later 1700s with the introduction of steam technology, however, it is likely that many of the smaller drift mines across the Assessment Boundary did not invest in this. The 19th-century census returns for the area have not been fully examined, but they suggest that many of the farms within or immediately surrounding the Assessment Boundary were occupied by miners by the end of the century: for example, the head of the family with five children under nine at Doldrum Farm (on the southwestern edge of the Assessment Boundary) was enumerated as a '*coal miner*' on the 1901 returns; at Brown Hill Farm, c. 300m to the west, John Scholes was a Colliery Manager and lived there with his wife, daughter and two sons, who are recorded as a coal miner and a navvy.
- 5.10.13. As is to be expected, the archaeological remains reflect the distribution of the relevant geology and there is relatively little obvious evidence of prospection and abandoned trial pits (although such remains could be mistaken for sandstone borrow pits). The identified assets are broadly located in a band across the southeast of the Assessment Boundary (Hunger and Warm Slack Hills and Rooley Moor), spreading north to Brandwood Moor along the eastern side of Rooley Moor Road, with an additional cluster between Hailstorm Hill and Top of Leach, and, beyond the Assessment Boundary, a dense group along the western edge of Scout Moor. A total of 121 assets relating to coal mining (including disused shafts and pits, drift/adit entrances, colliery equipment and spoil), have been identified within the Study Area (see Figures 4-6), though this is an underestimate and does not include extraction remains that are not clearly identified as relating to coal rather than stone. The earliest traceable documented activity is associated with Intake (Assets 534-538), Old Sink Collieries (Assets 755, 756 and 758), Bartle Cwm Colliery (Asset 78) and Rooley Moor Colliery (Asset 1377), but as the 1839 OS map is likely to have not marked old workings, these are not necessarily the oldest mines within the Assessment Boundary. Records accessed from the Mining Remediation Authority indicate that coal mining continued as late as the 1940s just beyond the Assessment Boundary on the eastern side of Whittle Hill, Jackson's Moor and the northern side of Whitworth Lower End Moor, while remains at Rooley Moor Colliery at Cat Stones (Asset 1494) reflect short-lived efforts from the 1950s.

5.10.14. The following table summarises research carried out by Rossendale Collieries Group³ into coal extraction within and immediately surrounding the Assessment Boundary, along with details from the HER and historical mapping. Historical maps of the underground workings have not been closely consulted, but it should be noted that in some cases these are relatively extensive and have the potential to be relatively shallow.

Asset No.	Name	Documented Working		Coal Worked	Notes (see also Figures 3-6, 13-21)
		From	To		
468 (and 1623?)	Helm Clough Colliery	-1851	1901	Sandrock	Situated on east side of Helm Clough. Worked by James Hardman (owner of Greens Quarry and Acre Mill). Coal was sent down an incline in Helm Clough to the quarry and down to the mill. Employed 20 men underground in the mid-1890s, but little else known.
?105	Bunkers Hill/Greens Moor Colliery	1851	1865/66	Sandrock	Located above Bunkers Hill Farm. Existed in antiquity. Worked up the west side of Helm Clough. Inspectors' reports name the pit from 1851; it worked until 1865/66 by the Munn Brothers (well-known local industrialists). Briefly re-opened by Richard Siddal in the 1890s. Horses and Donkeys used underground for haulage.
1623	'Colliery'	-1851	1860s+	Sandrock	Located next to Bunkers Hill. Shown on 1851 map as 'Colliery'. Two stone arched drifts about 2'6" high. Reason to believe that the Brearleys used these drifts when they started working Brandwood Moor Colliery in the 1860s.
106	Brandwood Moor Colliery (Brearleys)	Mid-1860s	c. 1908	Sandrock	Opened during the mid-1860s, possibly from the two drifts noted above. A large haulage drift later driven further to the west and an incline constructed down to the staith at Blackwood. Clay was also worked, with a brick kiln at the pit. Closed c.1908 as hit an underground [?stream] and had insufficient investment to deal with this. Believed to have worked a large area of coal, but no plans known.
1297 1298	Brandwood Moor Colliery (Ashworths)	1851	1886	Sandrock	Worked from two drifts between Heights Farm and Brandwood Moor Farm from 1851 to the mid-1870s by the owners of Cowpe Mill. David Moor later worked a small patch of coal from the north drift before abandoning the pit in 1886.

³ This a summary of information presented on the Rooley Moor Neighbourhood Forum website: <https://www.rmnf.org.uk/industry/>. Last accessed 16.12.2024.

Asset No.	Name	Documented Working		Coal Worked	Notes (see also Figures 3-6, 13-21)
		From	To		
534	Intake Colliery (Henpeck)	?1830s /40s	Post-1870s	Sandrock	Very old. Remains still visible beside Rooley Moor Road, opposite Intake Farm. Possibly worked by Ashworth and Livesey of Cowpe Mill in the 1830s/40s. John Woodhead worked the pit from the early 1860s; his brother was killed there. David Law took over in the 1870s; appears to have been working small areas left by previous owners. Plan shown on RMNF webpage.
535; 536; 537	'Old Collieries'	Pre 1839	Pre-1851		Shown on 1839 map (S of Intake Farm and Colliery) but nothing definitive known.
538	Part House Colliery	Pre-1851; 1830s?		Sandrock	Shown on the 1851 OS map, straddling track leading up to Cragg Quarry. Probably worked by Thomas Livesey of Cowpe Mill in 1830s. Plan shown on RMNF webpage shows how ownership/workings fit together.
1374?	Part Bank Colliery	1870s		Sandrock	Highest colliery on this track before the 80 yard fault. Worked by David Law in the 1870s (in addition to Intack). The drift had a substantial stone arch so could have been driven before Law's tenure, perhaps when the Liveseys ran the pit. Appears that Law had been a normal collier and worked in these pits before taking them on himself when other owners gave up. [?Shown on 1893 map as 'old coal pit']
?1493 ?1553 ?1554	Two drifts on Bare Rake	?	?1926	?Lower Foot	Further up Rooley Moor Road, approaching top road into Cragg Quarry; field on the western side known as Bare Rake. Remains of two drifts. Nothing known about them. Folklore suggests last worked in the 1926 strike. Perhaps driven as drainage levels for Old Sink Colliery. [Three adits have been identified in this area]
980	Mill Moor Colliery	-1851		Lower Mountain	Just above the top road into Cragg Quarry; marked on 1851 map as 'Colliery'. Possibly part of Old Sink Colliery or, more doubtfully, of Mill Moor Colliery. The 80 yard fault is a little to the west.
981	Mill Moor Colliery	-1851		Sandrock	West of the above. Marked 'Coal Pit' on the 1851 map. Probably developed by the Ormerod Brothers and worked during the 1850s.

Asset No.	Name	Documented Working		Coal Worked	Notes (see also Figures 3-6, 13-21)
		From	To		
?440 ?1418 ?1491 ?1660	Cragg Colliery Hailstorm Colliery	c. 1870s/ 80s		Sandrock	Cragg Colliery was located further west than the above and above the quarry. Pit heap still very visible. Worked by Butterworth and Brooks. The coal went to the quarry. Met up with Hailstorm Colliery. Hailstorm was situated above Ding Quarry with an incline from the pit down to the quarry. Owned by Butterworth and Brooks; worked for the quarry. Destroyed by the building of turbines. The pit connected underground with Cragg Colliery.
754 755 756 757 758 1540 1541 ?1518 ?1149	Old Sink Colliery	1820s		Lower Mountain, Lower Foot	At least 1820s, perhaps earlier. 1839 map shows two shafts (Assets 756 and 758). 1851 map labels three collieries (Assets 756, 757, 754), a coal pit (Asset 758) and an old coal pit (Asset 755). 1854 Mine Inspectors reports state that it was owned by Townsend Hargreaves and Barlow, who had worked it for a number of years, but no indication of where it was worked (though most likely the two shafts marked on the 1839 map and possibly the drift at Mill Moor). Mr Howarth worked the pit from the 1830s from the shafts labelled 'Colliery' and 'Coal Pit' on the 1851 map (Assets 754 and 758). A track runs from RMR down towards Walstead Clough: there is the remains of an old shaft that is not marked on any map (Asset 1540?). A level (Asset 1545?) into the Lower Mountain and a shaft (Asset 1541?) down to the Lower Foot located 'down in the clough', run by the Ormerod Brothers and worked during the 1850s. Going back to RMR and starting to climb out of Old Sink Slack, just at the point where the cobbles start: a track leaves the moor to the very visible remains of a shaft (Asset ?1149): sunk by the Lomax's and traded as Rooley Moor Iron Co; sunk in c. 1866 and also known as Old Sink, worked in conjunction with Greenland.
78 169	Bartle Cwm	1851		Lower Mountain	Worked by Zachariah and James Howarth. Shown on the 1851 OS map and shaft (Asset 78) still visible. Lower down the hill to the SE are at least three drifts (Assets 169-171) joined by a

Asset No.	Name	Documented Working		Coal Worked	Notes (see also Figures 3-6, 13-21)
		From	To		
170 171 1065					series of old tracks; the easternmost of these is marked as Withens Meadow Coal Pit on the map (Asset 1065). Unclear if these were also linked by ownership. The sandrock further S (above Withens Farm) was worked from Withens Colliery (Assets 1503, 1314, 1664, 1618?) with coal sent down to Hall Fold.
436 1056 1057 1373 1656 1657	Hall Cowm and Kruger	1890s	1944	Sandrock	All worked by Henry Heys for the quarries – located from the N side of Walstead Clough across the top of the Cowm Quarries to beyond Robin Hoods Well Clough. Kruger pits were working in the 1890s; Hall Cowm closed 1944. Adjacent to Walstead Clough there appears to have been a drift (Asset 1657), with further earthworks running down the Clough.
1368	Greenland Coal Pit	?	1850	Sandrock	Located behind Prickshaw Dam; marked on 1851 map but abandoned by 1850. Believed to be 'quite deep' but actual depth uncertain.
1425?	Greenland Colliery	-1872	1878	Lower Mountain	Owned by John Lomax & Co. and run in conjunction with Old Sink. Open in 1872 but not listed after 1878. Appeared to be at the top of Broadley incline where it branches off to Bagden Quarry, there is a large depression that looked like a drift (Asset 1425?). Marked on Dickenson's map in this position. A further drift is to be found to the SE nearer Whimsey Pit (Asset 1293??) and 'looks like they were running pillars out of that pit'.
1494	Rooley Moor Colliery	1950s		Lower Mountain	Situated near Cat Stones and consisted of two drifts into the coal driven in the 1950s by three local men who also opened up a drift on Hunger Hill and also tried Scout Moor Colliery. The pit appears to be a few yards deep.
1377 1147 1364	Rooley Moor Colliery	c. 1850	Early 20th C	Lower Mountain and Sandrock	Clearly visible. The Pit ran over 50 years, operated by Lomax. Consisted of at least two shafts near Rooley Moor Road and almost exhausted by early 20th C. 1851 map shows main RM colliery (Asset 1377) to the north, on Forsyth Brow, connected by water feature to reservoir with additional 'colliery' (Asset 1364) and quarry (Asset 1430) at the Bottom of Rooley Moor. The 1893 map shows

Asset No.	Name	Documented Working		Coal Worked	Notes (see also Figures 3-6, 13-21)
		From	To		
					nothing remaining to the north (Asset 1377), but expansion at the southern site (Assets 1147, 1364 and 1430). The southern site was disused by 1910. Also connected underground to Hunger Hill Colliery and most of its life worked the Lower Mountain mine; an underground drift into the Sandrock mine existed where it met up with Hunger Hill and Doldrum Collieries.
1379	Whimsey Coal Pit	Pre 1850	Pre 1893	Lower Mountain	Old pit predating 1850 – name comes from the method of winding. Shaft 60yards deep.
1633	Doldrum Colliery	1896	1910	Sandrock	Worked and owned in 1896 by John Lomax. Managed by John Scholes; John Shorrocks as under-manager; employed 20 men underground and three on surface. In 1901 employed 27 men underground, later rising to 31. Conflicting reports that it was discontinued in 1906 and that it employed 25 men underground and three on the surface. Abandoned by 1910 (marked on 1910 map).
?1370	Hunger Hill Colliery	1850s	1904	Lower Mountain and Sandrock	Drift driven in 1850s near old Rooley Moor Colliery but not productive for long. Hunger Hill itself listed as working in 1877 owned by Lomax & Co, managed by James Lord. 1882: manager is L.G. Robinson. 1896 John Scholes is manager; John Sharrock under-manager; 30 men underground, 4 on surface. Discontinued in 1904. Rochdale Observer, 5th August 1914: Coroner returns verdict of accidental death after 16 year old falls down disused shaft. Witnesses' accounts include description: old shaft surrounded by (partially tumbled down) high stone wall; covered by two flags (one of which broke); body recovered from landing at depth of 45 yards; owned by John Lomax & Co.
?1634 ?1635 ?1636	Naden Head Colliery	1901	1904	Lower Mountain	1901 - small drift driven at Naden Head to exploit a small patch of reserves near Rooley Moor Road. Manchester Couriers & Lancashire General Advertiser Oct 22, 1901, reports Rooley Moor pit disaster: Colliery company censured at the Inquest, insufficient supervision. Two fatalities occurred during the driving of one of the drifts.

Asset No.	Name	Documented Working		Coal Worked	Notes (see also Figures 3-6, 13-21)
		From	To		
					'Rooley Moor new coal pit, at Naden Dean'. Drift 50 yards long. Manager of a colliery in the neighbourhood named as James Lord. Mr J Hartly chairman of RM Colliery Company. Discussion as to whether collapse caused by insufficiently strong timber/props/lids or heavy rain. Didn't use stone (a stone arch suggested as better) as they didn't expect to get much coal out of the drift. Jury verdict returned as accidental deaths and noted that insufficient supervision had been provided and that company should be censured. Naden Head drift worked until 1904. Rooley Moor Colliery was very old and was coming to an end at this time.
1289 1290 1291 1292 1293 1658					A number of discrete features identified from LiDAR data across Rooley Moor, Whimsy Hill and Hunger Hill suggest the presence of additional shafts that are likely to be associated with the activities documented above.

Quarrying

5.10.15. Previous study of the quarrying industry in this area has been limited, although documentary sources, including newspapers and photographs, have been collated by various local history groups and this information has provided the foundation for several archaeological assessments larger quarry sites (e.g. Event 1078). Such assessments have established that the quarrying industry has had a significant impact on the landscape, both within the Assessment Boundary and the wider Study Area, from the late 1700s onwards. The overall development of the industry in the Rossendale area has been broadly divided as follows:

- Pre-late 18th century: quarrying was generally small scale and for local use (e.g. house building, field boundaries etc);
- 1770-1840: increasing scale of quarrying from the late 18th century/early 19th century, driven by local demand for building stone (e.g. textile mills, housing) and walling materials (i.e. agricultural enclosure). Turnpike improvements facilitated easier transport of such materials. The 1851 OS map shows numerous small shallow quarries with several larger concerns (e.g. Cragg Quarry) already having developed by this date.
- Mid-19th century: Great expansion of quarries, fuelled by demand caused by urban growth. The railway built through Rossendale in 1846-52 facilitated growth and export, and connections with mineral tramways were largely complete by the 1870s. Methods included underground quarrying, while developments in stoneworking techniques and mechanisation (e.g. cranes,

saws, polishing mills) allowed building stone to be produced increasingly quickly. Selective quarrying for the hardest and best quality stone resulted in large quantities of waste. Most quarries had reached their greatest extents by the 1890s.

- Post World War I: Huge decline in quarrying in the area, due to decreasing demand (competition with brick/concrete etc) and rising costs of extraction (the most accessible deposits had been exhausted). Many quarries closed after a series of strikes in 1919, and mineral tramways were scrapped. A few notable exceptions (e.g. Lee Quarry (Asset 580)) continued to work through the 20th century.
- Late 20th century: a small number of individual large examples remained in use, meeting demand for aggregate for road construction and similar projects. (After LUAU, 1997: 7-8)

5.10.16. The quarries in the Study Area generally developed from hillside workings, whereby rock was removed from an outcrop, though in many cases this was combined with open pit working as cranes became available to remove material, and extensive underground mining of stone (i.e. from adits within the working faces of open quarries) has also been documented (LUAU, 1997:8).

5.10.17. A total of 290 assets in the Gazetteer (Appendix 2) are recorded as directly associated with sandstone quarrying in the Study Area in the industrial and/or modern periods, with an additional 60 assets that also relate to extraction, but which have not yet been confirmed as specifically indicative of quarrying rather than mining (see Figures 3-6). This is a somewhat nominal figure as the remains have not been systematically catalogued. The archaeological remains that have been identified at quarry sites across the area include various components pertaining to stone extraction (e.g. working faces, spoil heaps, dams/reservoirs/leats, cranes and other mechanical remains, and structures such as blast shelters, engine/compressor houses and powder houses, as well as associated buildings such as offices, quarrymen's shelters, stores and smithies), transportation (e.g. access ramps, incline planes, tramways and railway sidings), and processing sites (e.g. crushing mills, rubbing/polishing mills, sawing mills and dressing floors). Within the Assessment Boundary, the layout of many of the mapped tramways connecting the quarries and the railways have survived as linear features (including terraces or embankments) and are now used as footpaths.

5.10.18. Within the Assessment Boundary, Cragg Quarry (Asset 196) is of particular interest, given both its size and the surviving remains. It is documented in the mid-19th century (Figures 12- 15) as a crescent-shaped band of workings extending along the contour on the northwestern edge of Cowpe Moss, separating the moorland from the enclosed pasture of the valley side and probably following the natural outcrop. Over the second half of the 19th-century, the quarried area expanded south and west, to incorporate several formerly distinct quarries along Foe Edge (including Assets 354, 356 and 357) and was connected to Brow Edge Quarry (1192) and Hurdles Quarry (Assets 516-526) and associated processing components to the west by a tramway and incline plane (Assets 189 and 779). The same tramway (Asset 189) also runs southeast to Ding Quarry (Asset 316) and a range of associated components (e.g. collieries and processing facilities such as a rubbing mill/reservoir) are located around the eastern end of the quarry. Note that, for clarity, Cragg Quarry is represented in this assessment using a single Asset Number, however, this groups together individual HER entries within the footprint of the quarry that relate to individually identified archaeological heritage assets noted during previously undertaken desk-based assessment and walkover survey (Event 1078). The previous study included assessment of the archaeological value of Cragg Quarry (alongside a number of other examples within the current Study Area) and concluded that it is:

an exceptional archaeological site. There is a high level of survival on this site and high potential for further archaeological investigation. The working faces and spoil heaps are extensive, and in excellent condition. The associated features are numerous and aid

considerably in the understanding of how the quarry functioned. The quality of the remains and their accessibility have clear educational value; in combination with the situation of this major landscape feature on a significant public footpath following the historic transport routes, this gives the site a high amenity value. The site also has a high group value in relation to the inter-quarry tramway system and linked quarries, Whinberry Naze scrubbing mill, and the quarry's own rubbing mill to the east [Asset 843]. (LUAU, 1997: 19).

- 5.10.19. Ding Quarry (Asset 316), located at the head of Ding Clough, also constitutes a major landscape feature within the Assessment Boundary. It was the subject of previous desk-based research and archaeological walkover survey (Event 1082), which identified a documentary reference to '*Ding stone pit*' in the Spotland Rate Book of 1768 and traced ownership and management of the commercial quarry through the 19th and early 20th centuries (UMAU, 2004: 9-10). The historical OS maps (Figures 12, 16, 20) show the currently visible workings to be an amalgamation of several small quarries (Assets 1389, 1437, 1438, 1439) located close to Ding House (Asset 315; no longer extant). By the later 19th century, the quarry was linked by a tramway system (still partially discernible and used as a path) to Cragg Quarry and thence processing facilities in Cowpe township (UMAU, 2004: 11). While the surviving remains, particularly in the western part of the quarry, include an impressive and somewhat coherent series of finger tips, relatively few components of the quarry survive in good condition. The previous survey concluded the quarry had high group value as part of the wider industrial landscape but is one of the less significant and less complex examples of its type in the area, with potential earlier phases largely subsumed by more recent workings and damaged by recreational activities (UMAU, 2004: 24); it was, however, noted that the tramways to the north of the quarry survive relatively well.

Rooley Moor Road (Asset 828)

- 5.10.20. Rooley Moor Road continues to be present on the OS mapping from 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). Rochdale council organised its own Cotton Famine Relief Fund and by 1863 almost 20,000 individuals were in receipt of 'outdoor relief'; the 1864 Public Works (Manufacturing Districts) Act allowed the Board of Guardians to borrow money for public works projects, with '*improvements to Catley Lane*', for which £500 was borrowed, one such project (Anon. N.d.; Godman, 1995). It is generally presumed that this resulted in the paving of the track with sandstone sets, cobbles and kerbstones. There is no evidence that the road was a turnpike route, but previous survey of the section south of Top of Leach describes it as '*heavily engineered*' (UMAU, 2003: 6), with aggers, terracing, drainage and a stone bridge (Asset 923) crossing a watercourse.
- 5.10.21. As noted above, Yate's map of 1789 is the earliest representation of the road and shows '*Rooley House*' (alternatively named '*Rowleys House*' on later maps) located adjacent to it, within a small rectangular intake. The walls of the intake currently survive, albeit in a ruined condition, with a pair of gate posts on the western side of the road forming a prominent local landmark on the Rooley Moor Road path. The house itself is marked as the *Moorcock Inn* (Asset 639) on maps from 1839 until the mid-20th century, after which it is labelled as a ruin, although its former position now survives only as a levelled building platform. The 1901 census returns for the Moor Cock Inn record that Thomas Wadsworth (aged 38, born in Todmorden) was the publican at this date and lived on the premises with his wife, Sarah Ellen (aged 44, from Ramsbottom) and their 10-year-old son Thomas. Two boarders were also enumerated, both of whom were recorded as labourers in stone quarries.

5.11. Walkover Survey

- 5.11.1. This section is supported by Plates 1-103. Plates 1 - 12 show general views across the interior and periphery of the Assessment Boundary, illustrating broad patterns of topography and vegetation and placing the Assessment Boundary in its wider landscape context.

Preliminary Walkover Survey: September 2024

- 5.11.2. A preliminary walkover survey was undertaken on 25th-26th September 2024. Given the size and topography of the land within the Assessment Boundary and the relatively small footprint of the Proposed Development, this was not designed to be an exhaustive high-resolution survey, but to provide an overview of the current state of the archaeological resource that would allow more detailed and focused assessment at a later stage of the design process. It provided an opportunity to evaluate current and recent land use that may have implications for the survival, or otherwise, of archaeological features within the Assessment Boundary. The walkover survey also enabled a general assessment of the condition of recorded archaeological heritage assets to be made, along with the chance to gauge how thoroughly heritage assets in this area have been recorded in the HER database. A better understanding of the topography and natural landscape of the Study Area has informed the conclusions of this assessment, in particular evaluation of the potential for currently unknown (buried) archaeological heritage assets to be present within the Assessment Area and the identification of potential impacts on assets.
- 5.11.3. 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 potential for unmapped disused mineshafts and quarries, AOC Archaeology staff were cautious about straying too far from established footpaths and firm ground (e.g. cropped grassland or made ground) and did not closely examine the most open peatlands and blanket bog. Nevertheless, this approach allowed a representative impression of the Assessment Boundary to be obtained, alongside appraisal of land use and observation of a large proportion of the known archaeological heritage assets.
- 5.11.4. The plateau on which the Assessment Boundary is located is well defined, with steep slopes dominating the approach from all directions. It was confirmed that 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 southeastern lobe and the periphery. Views from the Assessment Boundary were 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 prominent in the distance. To the south and southwest of the plateau, views extended across Greater Manchester and the low-lying plain, with the summit of Knowl Hill presenting a prominent focal point in the foreground.
- 5.11.5. Many of the identified archaeological heritage assets within the Assessment Boundary were clearly identifiable on the ground during the visit and Plates 13-34 illustrate a representative selection of the types of features encountered.
- 5.11.6. 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) where a modern pipe may indicate that the stonework is a later insertion into the road. 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.

- 5.11.7. 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 - 24).
- 5.11.8. 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). 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).
- 5.11.9. Plate 29 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 to 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.
- 5.11.10. 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.
- 5.11.11. It was clear from the preliminary walkover survey that many of the archaeological heritage assets present within the Assessment Area were not already included in the digital HER dataset. Some of these

were depicted on historical mapping, while others, such as the former mineshaft in Bartle Cwm Pasture (Asset 1149), were not. It was established that identification of surface archaeological remains from LiDAR, followed by confirmation of their character on the ground (rather than vice versa) was a more efficient way of identifying such features over the area. As a result of these observations, the locations of probable archaeological features were identified from thorough searches of the historical maps and LiDAR datasets and added to the gazetteer compiled by AOC Archaeology (Appendix 2); where such features were later identified as being of relevance to the Project for Assessment, their presence and condition was confirmed during the detailed site visit.

Walkover Survey of Proposed Development Footprint: February 2025

- 5.11.12. A more detailed walkover survey was undertaken over three days between 4th and 6th February 2025. This primarily targeted the proposed locations of turbines and associated infrastructure elements and allowed fuller consideration of potentially sensitive areas.
- 5.11.13. The weather conditions during the walkover survey ranged between low cloud with heavy rain, and bright sunshine with hard frost. While inclement weather limited distance views at times, it did not affect the visibility of the archaeological remains under assessment. Given the time of year, vegetation was minimal. However, the Assessment Boundary is dominated by blanket bog and acid grassland, with areas of rushy pasture and flushes, and it is noted that the ground cover (and, indeed, the peat itself) may still have obscured potential remains of archaeological interest during a non-intrusive survey of this type. The locations of T17 and T13 could not be accessed directly at the time of visiting, due to surrounding wet ground conditions, but were viewed from nearby.
- 5.11.14. Similarly, it was not possible to walk the entire length of the proposed access track routes due to boggy ground conditions in places. The inaccessible sections of the proposed routes were, however, assessed in a GIS environment against georeferenced datasets including the compiled gazetteer of heritage assets, historical mapping and LiDAR data; potentially sensitive sections and the locations of any identified possible archaeological remains in close proximity to the proposed track routes were visited for further evaluation.
- 5.11.15. The following table sets out observations made in relation to individual elements of the Proposed Development.

Location	Notes	Plate Nos.
T1	The proposed location of T1 was found to be located in the southeast of the Assessment Boundary, on rushy pasture between Prickshaw Slack and Lower Bagden. The ground slopes down to the southeast and, at c. 345m aOD, overlooks the Spodden valley. The proposed development footprint would straddle the field boundary that runs NW-SE, forming the southwestern side of a roughly rectangular allotment; this boundary is shown on the earliest OS mapping of the area and, as it forms part of the Catley-Whitworth hamlet boundary, is likely to represent the enclosure of land at Bagden at a relatively early date, although the date of the extant wall (currently in poor condition) is unknown. On the southwestern side of the field wall is a sub-circular, waterfilled extraction pit (Asset 1300) located within the footprint of the proposed development. Another likely sandstone extraction (Asset 1299) is also located within the development footprint. The ruins of a rectangular building presumed to be a field barn (Asset 772), also shown on the OS 'Old Series' map, are located within the footprint of the proposed development area and a small depression (visible on the ground and in the LiDAR data) may be a related	35 36 37

Location	Notes	Plate Nos.
	borrow pit (Asset 1614). A faint linear feature (Asset 1593) is visible on the LiDAR running northeast across the field from this building but appears only to run as far as the head of a watercourse and may have provided a water supply to the building. Possible remains of ridge and furrow (in addition to evidence of land drainage) are visible on satellite photographs within the field i.e. across the area of the proposed development footprint. Approximately 160m east of the proposed development footprint, a north-south aligned embankment marks the line of the former tramway (Asset 59) running from Bagden Quarry. This embankment is currently in use as a public footpath. The remains of several small quarry pits are scattered across the surrounding hillside. The walkover survey confirmed the presence of the archaeological assets identified during the desk-based research, but did not identify any additional archaeological remains in this area.	
T3	The proposed location of T3 was found to be located just to the east of the plateaued ridge that forms the watershed between the Spodden and Naden valleys at Bagden Hillocks. This part of the moor is characterised by a mix of tussocky grass and blanket bog. No archaeological remains have been identified within this area from desk-based research or walkover survey. No additional assets were identified in this area by the walkover survey; however, it was possible to confirm that several maculae identified during examination of LiDAR data and aerial imagery close by this area were natural features. The probable prehistoric cairn (Asset 143) situated on the summit of Bagden Hillocks is located c. 190m west of the proposed location of T3.	39
T4	The proposed location of T4 is located on the eastern slopes of Hamer Hill. It lies just within the upper limit of the enclosed allotments of Whitworth township, extending across the western corner of a pasture historically referred to as Coal Pit Field and into the southwestern corner of Bartle Cwm Pasture; the latter is not shown as enclosed on the OS Old Series (1839) map, but both are shown on the 1851 Six Inch edition. The remains of a field wall aligned SW-NE and running through the proposed development footprint appears to mark an earlier position of the 'head dyke', as shown on the OS Old Series, although the age of the wall itself is uncertain. Ground cover was dominated in this area by very tussocky grass, with rushes and, in the southern portion of the proposed development footprint, a patch of boggy ground with cushions of moss (possibly associated with the head of a small watercourse draining southeast). A large number of sandstone boulders were present across the area but appeared to be part of a naturally occurring band of surface stone extending north around the contour. The two 'stones' (Assets 1641 and 1642), depicted on the 1893 and 1851 OS maps respectively, which probably served as boundary markers, could not be identified during the walkover survey, although it is noted that they may have been obscured by vegetation (particularly if fallen) and their presence cannot be ruled out entirely. Similarly, a linear feature shown following the line of the boundary stones on the 1851 map (see Figure 16) and identified further north	40 41

Location	Notes	Plate Nos.
	as taking the form of a shallow ditch, could not be confidently identified within the proposed development area. No additional archaeological remains were identified during the walkover survey.	
T6	The proposed location of T6 is located at the north of Clegg Ding, and across the track running between Ding Quarry (Asset 316) to the west and Rooley Moor Road (Asset 828) to the east. The proposed development footprint would overlie the ruins of what appears to have been a pre-cast concrete building, located on the southern side of the trackway between Ding Quarry and Rooley Moor Road. The feature has unclear origins and is perhaps associated with later phases of quarrying. No additional archaeological remains were identified.	44
T7	The proposed location of T7 is situated on Clegg Ding on a slight plateau formed by the levelling out of the gradient of the wedge-shaped section of hillside between the narrow gullies of Ding Clough to the west and an unnamed watercourse to the east. The location lies within a mix of acid grassland and bog, although the ground appears to be generally wetter upslope. The location affords commanding views overlooking the upper Naden valley. It is noted that earthwork remains indicative of earlier activity of unknown date underlie the 19th-century field boundaries c. 150m southeast of T7; these remains (including Assets 1362, 1673, 1630, 1653) are located at a similar elevation to T7, although are separated by the steep-sided small valley of the Naden tributary. No archaeological remains were identified at T7 by the desk-based research or the walkover survey.	45
T8	The proposed location of T8 is located in an area of blanket bog to the south of the summit of Top of Leach. It lies on the southern side of the watershed and affords panoramic views of moorland across the southeast and southwest of the plateau and distant views across the lowlying plain beyond. The area is under a mixture of bog vegetation and mosses, pools of water and exposed peat, with numerous low erosion scars. No archaeological heritage assets are recorded in this area and no additional assets were identified during the walkover survey.	46
T9	The proposed location of T9 is located on the northeast-facing slope of the southern part of Brandwood Lower End Moor. This part of the moor generally comprises an extensive area of blanket bog with rushy areas associated with a number of small watercourses. A number of sandstone boulders are scattered across this area and are presumed to be natural. The area is cut by a relatively new, roughly metalled path/cycle track that runs between Rooley Moor Road (Asset 828) and Greens Moor Quarry, following Well Clough. Approximately 100m north of the T9 proposed development footprint, a path (Asset 829) is marked on current OS mapping (running approximately east-west) that corresponds to a footpath first marked on the 1893 OS map (erroneously described as part of Rooley Moor Road in the HER). This could not be located on the ground and satellite imagery (Google Earth Pro) gives no indication of its presence as a path.	47

Location	Notes	Plate Nos.
T10	The proposed location of T10 is located close to the northeastern Assessment Boundary, on the eastern side of Brandwood Lower End Moor at c. 394m aOD. The area is relatively flat and under blanket bog, which extends east as far as Britannia Quarries (beyond the Assessment Boundary). This turbine location could not be accessed directly at the time of visiting, due to poor ground conditions, however, its location was viewed from surrounding areas and no upstanding archaeological remains could be identified. The proposed location of T10 is surrounded to the north, east and south by remains associated with Helm Clough Colliery (Assets 468) and Hallcwm Quarries (Assets 541, 1575), including the remains of a mineral railway (Asset 542) and a quarry track now in use as paths. The remains of a coal shaft (Asset 436, located outside the Assessment Boundary) are prominent some 205m NNE of T10, while a group of features, probably small reservoirs associated with extraction on Jackson's Moor or water-filled disused quarry pits (Assets 1390, 1391 and 1613), are depicted on historical maps c. 80m to the south (these were not apparent during the walkover due to their expected low-lying nature and flat surrounding topography). The 1910 OS map indicates that a rifle range was located on this part of the moor, aligned SW-NE, with rectangular earthworks labelled 'Targets' and 'Butts' located c. 88m north of T10: these appear to survive as slight earthworks, visible in LiDAR data and on the ground. The map also shows a flagstaff (Asset 1671) located within the proposed development footprint: no remains were identified during the walkover and no indication of its location is discernible in the LiDAR data, although limited upstanding remains of such a feature would be expected.	48
T11	The proposed location of T11 is located on a small plateau formed by a 'step' in the hillside as it drops down from Top of Leach, across Brandwood Moor into the Irwell valley. T11 lies at c. 445m aOD, within a geometrically shaped parcel of land on the eastern side of Rooley Moor Road (Asset 828) that appears to have been enclosed between the surveys of the 1851 and 1893 OS maps; the allotment is bounded along the eastern side by a conspicuous north-south aligned field wall. The wall (comprised of sandstone flags and of drystone construction) is in moderate to poor condition, although some sections survive to full height. The allotment in which T11 is located is currently under rushy pasture. Attempts have been made (date unknown) to improve the land (e.g. ridges indicating land drains are visible in LiDAR and on the ground and a more substantial drainage ditch is present running parallel to the eastern field wall), but the ground remains boggy and exposed sections show peat. Asset 1278 is located just outside the proposed development footprint. At the time of visiting, ground conditions were such that it was difficult to identify this feature, but it appeared to be related to land drainage.	49
T14	The proposed location of T14 could not be directly accessed due to poor ground conditions at the time of visiting, however, it was viewed from the southeast. It is located at around 465m aOD and the southwestern side of Cowpe Moss, within an extensive area of peat bog. No archaeological features were noted.	52

Location	Notes	Plate Nos.
T15	The proposed location of T15 is located close to the northwestern Assessment Boundary on Foe Edge within the footprint of Cragg Quarry (Asset 196). This area was originally part of Foe Edge Quarry (Asset 354), but was subsumed by expansion of the former in the second half of the 19th century. The proposed development footprint lies on the southwestern periphery, beyond the largest and most coherent zones of tipping, but within a landscape of multiple small spoil heaps. The partial remains of several small rectangular structures (of unknown function, probably small stores or shelters) were identified during the walkover survey (possibly including PRN11542 and PRN11543), along with partially surviving sections of walling that appeared to serve as retaining walls alongside areas of tipping.	53 - 61
T16	T16 is located on the very gently sloping northeast-facing moorland of Old Laurence Top. The area comprises an expanse of largely uniform ground divided into allotments by wire-and-post fences and is dominated by blanket bog with grasses and rushy patches. No archaeological heritage assets are recorded in this area and no additional assets were identified during the walkover survey.	62
Compound	The proposed location of the Compound is on moorland (blanket bog and grassland) on Old Laurence Top. No archaeological features were identified in this area.	67
Substation	The proposed location of the Substation is at the northern end of a plateau on the eastern side of Rooley Moor Road, within an allotment enclosed from Brandwood Lower End Moor. The allotment comprises semi-improved pasture with evidence for extensive land drainage, although the ground conditions remained boggy at the time of visiting. No archaeological features were identified within the proposed development footprint, although a circular water-filled extraction pit/coal shaft (Asset 1285) surrounded by a slight spoil mound is located east of the substation area.	68 69
Rooley Road Crossing	Plate 70 shows the condition of Rooley Moor Road at the proposed crossing point of the wind farm access track, close to Old Sink Slack. The road surface is metalled, with two lines of sandstone slabs; it is unclear when these slabs were laid, although it appeared likely that they may be contemporary with the use of the road for quarry/colliery traffic and form part of the network of communication and transport links between the various industrial areas on the northern side of the plateau. The location of a disused mine shaft (Asset 756), formerly part of Old Sink Colliery, was confirmed immediately to the north of the proposed crossing point.	70

Walkover Survey of Proposed Development Footprint: May 2026

- 5.11.16. A walkover survey of the Alternative Grid Connection route (Option C) and proposed turbine laydown area was undertaken on 11th May 2026. The walkover survey was undertaken in clear and dry conditions.
- 5.11.17. The proposed turbine laydown area is comprised of an area of uneven and rough grassland (Plates 78 and 79) which slopes downward from east to west and is cut through by two small watercourses. The northwestern part of the area comprised an area of gravel and stone with piles of overgrown debris (Plate 80). No archaeological features or remains were identified within the proposed laydown area during the survey.

- 5.11.18. The Alternative Grid Connection route (Option C), from east to west, is initially comprised of a steep slope with a rough stone footpath which extends from the main site to the junction of moorland access tracks (Plate 81). This section of the Grid Connection Route passes over two sections of the Cowpe Lowe/Cragg Quarry Tramway (Asset 189) which survives as a visible upstanding trackway which is, in places, formed of a dry stone construction surface which elevates the trackway to create a level route above the undulating topography (Plate 82).
- 5.11.19. The Alternative Grid Connection route (Option C) continues westward from the junction of the moorland of access tracks with the ruined remnants of the Slacks, Foe Edge, Cowpe farmstead (Asset 897) located just to the south of the route (Plate 83). The moorland access track in this area is comprised of a stone slab surface, which is weathered and broken in places (Plates 84 and 85).
- 5.11.20. The Alternative Grid Connection route (Option C) passes between the ruined remains of the Brown Hill Close (later Back o' th' Lowe) farmstead (Asset 128 – Plate 86) and the Brown Hill sandstone quarry (Asset 129 – Plate 87), though neither extend to within the Assessment Boundary.
- 5.11.21. From here, the Alternative Grid Connection route (Option C) continues on a broadly west southwest alignment and is comprised of a weathered stone surface (repaired in places with brick fragments) which passes through several field boundaries (largely formed of tumbled drystone wall, augmented in places with post and wire fencing) and in places, crosses over watercourses which run down from the hill to the northwest to join Dearden Brook at the bottom of the valley (Plates 88 to 90).
- 5.11.22. A section of Alternative Grid Connection route (Option C) appears to have been more recently repaired and includes a section of metal barrier along a steeper section of the hillside (Plates 91 and 92). This section of the route also included a drystone retaining wall along its northern edge, which appears to still be in functional condition (despite some evidence of damage and tumble in places).
- 5.11.23. From here the Alternative Grid Connection route (Option C) reverts back to a weathered stone and gravel surface which runs southwest (Plate 93) towards a recently constructed house. The route runs westward, passing a public footpath stile, and passing through a field (currently in grass) which is bound along its northern edge by a large drystone wall (Plate 94).
- 5.11.24. At the junction with Gincroft Lane there are two proposed options for the continuation of the Alternative Grid Connection route (Option C), here discussed as the northern and southern branches. The northern branch continues northwards along the stone and tarmacked surfaced Gincroft Lane (Plate 95) before turning westward and following the route of a public footpath which passes through a grassy area, which is initially lined on both sides by drystone wall (Plate 96) before looping around a farmhouse and garden plot (Plate 97). The last section of the route is a more formal public footpath route (labelled on maps as East Street at its western end) which has a well maintained concrete surface (Plate 98), and is bound on its southern side by a drystone wall, for much of its length, with an area of cobbled surface towards its western extent (Plate 99). The southern branch extends southwestward along Gincroft Lane (Plate 100) before turning westward in to fields and running along the rear of field plots that front on to Gincroft Lane (Plate 101). From here the route returns to run along Gincroft Lane before turning northwestwards, along the edge of fields that are bound by the plot boundaries of buildings along Heycrofts View and Market Street (Plates 102 and 103). Much of this route was not directly accessible as although the western end of the route was signposted as a public footpath the eastern access to the area had been blocked off, though all of it was observable from the elevated position to the northeast. No new archaeological features or remains were identified during the walkover survey of the Alternative Grid Connection route (Option C).

6. CONCLUSION

6.1. Archaeological Potential

- 6.1.1. This assessment has established that the plateau on which the Assessment Boundary is located, including land within the Assessment Boundary itself, has been used by humans since at least the Mesolithic period, with indications that Knowl Hill, for example, may have served as the focus for early activity, while the possible Bronze Age cairns in the southeast of the area may have formed part of a ceremonial and funerary landscape. There is considered to be a high potential for additional, currently unrecorded, prehistoric artefacts and features to be present within the Assessment Boundary. These may include, for example, lithic implements or buried features, the earliest of which would probably be relatively ephemeral, preserved by overlying peat deposits. The importance of any such remains would require further assessment on discovery, but it should be recognised that they have the potential to be of medium or high importance.
- 6.1.2. However, the likelihood that any remains coincide with the footprint of the Project for Assessment is manifestly reduced by its relatively small footprint. As was apparent during the walkover survey, it would be difficult to identify or predict the presence of peat-sealed remains due to the current depth and extent of peat deposits. The peat appears to have accumulated across the upper part of the plateau during prehistory and is likely (in tandem with other climatic and anthropogenic environmental changes) to have influenced contemporary patterns of land use and activity, though insufficient data currently exists to confidently identify specific areas of higher potential. While it is possible to identify some parts of the plateau that would theoretically be advantageous or favourable for occupation, based on topography, geomorphology or viewsheds, this would be speculative.
- 6.1.3. The potential for peat deposits within the Assessment Boundary to themselves contain important palaeoenvironmental information is also considered to be high. As noted above, previous survey work has recorded marked depths of peat in addition to excellent levels of preservation of pollen and plant macrofossils. The potential for saturated anoxic ground conditions to facilitate the preservation of organic remains, which are often of particular archaeological importance due to their generally limited survival, is well known (HE 2016).
- 6.1.4. Map regression, augmented by documentary evidence, has established that the majority of the Assessment Boundary has historically formed part of the upland commons and manorial wastes of several parishes/estates. Portions of the Assessment Boundary are documented as forming part of the royal forest of Rossendale and the holdings of Whalley Abbey, during which time it is likely that land use and management was similarly unintensive. Common land provided an essential resource for local inhabitants and was well used for grazing and the harvest of natural materials. It would also have had an important 'identity' within the communities, associated with being on the 'edge' of the townships both in spatial terms and psychologically, with 'wild' and 'untamed' connotations of the space contrasting with the physical boundaries of clearly delineated individual holdings and cultivated land. Nevertheless, despite its importance, the exercising of commoners' rights and other transient activities that were customarily associated with peripheral areas (e.g. fairs, gallows, camps of travelling groups or drovers) would normally be expected to leave only limited identifiable archaeological remains.
- 6.1.5. An agricultural fringe of improved and/or enclosed land surrounding the open moorland is broadly congruent with the Assessment Boundary around much of its northern, eastern and southern sides. Assarts and approvals could typically be expected to preferentially enclose the lower, more easily habitable, cultivatable and accessible valley slopes first, but it would seem that piecemeal enclosure was occurring along the western side of the Spodden valley by the late medieval and post-medieval periods. Based on current evidence, there is considered to be a high potential for additional, currently

unrecorded, medieval and post-medieval remains relating to agricultural land use within the Assessment Boundary. Such remains, which may include, for example, evidence of ridge and furrow ploughing, land drainage and former field boundaries, would generally be considered to be of negligible heritage value and are unlikely to be more than low importance. There is judged to be a low potential for other types of archaeological remains from these periods to survive, although the possibility cannot be ruled out.

- 6.1.6. The most visible archaeological remains across the Assessment Boundary are those related to sandstone and coal extraction; where illuminated by documentary sources, these remains reflect activity in the industrial and modern periods, although, given the difficulty of dating small borrow pit type features, it is entirely possible that some may be considerably older. In general, these types of features are of limited individual heritage importance, though the Assessment Boundary also contains some examples of high importance, such as Cragg Quarry. Although LiDAR and historical maps were used to identify as many industrial remains as possible across the Assessment Boundary, it is acknowledged that the Gazetteer may not be exhaustive, due to the frequency with which they appear and the prevailing ground conditions that can make anthropological features less easily visible. There is generally considered to be a high potential for the survival of additional, unrecorded archaeological remains relating to small-scale industrial or modern extraction, though it is unlikely that this would include any extensive complexes of high importance.
- 6.1.7. With regard to mining remains, while the archaeological remains at the surface may be limited to disused shaft and adit entrances, it should be noted that more extensive underground galleries may remain and follow relatively shallow geological strata. Any such remains would be avoided for engineering reasons or be too deeply buried to be impacted by the Proposed for Assessment and accordingly full evaluation of their extent and presence has not formed part of this assessment. However, where they exist, they have the potential to be of archaeological interest; the survival of associated artefacts and ephemeral evidence such as footprints and graffiti is possible.
- 6.1.8. While the origins of Rooley Moor Road cannot be definitively ascertained, its later phases survive as a prominent feature within the Assessment Boundary. As noted above, the road is considered to be heavily engineered and various elements, including terracing, ditches and kerbs survive alongside the route itself, sections of which survive in varying states of preservation. Overall, the potential for finds, deposits and features that retain archaeological information to survive beneath or alongside the route is considered to be high.
- 6.1.9. It is considered important to bear in mind that, while many of the individual archaeological heritage assets identified in the course of this assessment are individually judged to be of negligible or low heritage value (as per the assessment criteria set out in Appendix 1), their cumulative value is higher. Together, they form part of a legible archaeological landscape, demonstrating time depth and chronological development, clearly relating to the topographic and geological situation, and augmented by surviving documentary evidence. The upland remains, particularly the commons and agricultural evidence and extraction remains dating from the post-medieval and industrial periods, contribute substantially to the local sense of place, and emphasise clear links between the surrounding valley communities and their wider surroundings (for example, through continuity of use and as a source of building stone).

6.2. Direct Impacts

- 6.2.1. 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. Tracking of heavy vehicles can cause damage via deposit deformation. 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.

- 6.2.2. It is important to recognise that the impacts of construction can extend beyond the footprint of the works themselves. Preservation of buried remains generally relies upon the stability of the conditions that have contributed to their survival; biological, physical and chemical decay are likely to occur where works result in, for example, changes to pH levels, water saturation, the presence of microorganisms, temperature or the presence of oxygen. It should be noted that such subsurface changes may extend or occur beyond the immediate extent of works. Of particular relevance to the Project for Assessment, given the peat deposits within and surrounding the Assessment Boundary, is the potential for hydrological changes during and after construction to affect ground saturation levels and anoxic conditions, which could potentially result in negative impacts of high magnitude on the archaeological resource, with the degradation or destruction of any preserved archaeological (including palaeoenvironmental) material that may be present.

6.3. Mitigation

- 6.3.1. National planning policies and planning guidance contained within the National Planning Policy Framework (MHCLG 2024), 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'* (MHCLG 2024, para 211).
- 6.3.2. Interdisciplinary discussions (i.e. including relevant archaeological, hydrological, geotechnical and geoarchaeological specialists) have formed part of the development design process and should continue throughout the detailed design / refinement process in order to ensure that potential implications of the Project for Assessment on the condition of peat deposits within and surrounding the Assessment Boundary continues to be a priority, and areas of deeper peat are fenced off or avoided as appropriate to ensure that vehicles only use agreed routes across the moor as tracking of heavy vehicles can cause damage via deposit deformation. In recognition of the potential, albeit limited, impact on the peat resource within the Assessment Boundary a programme of geoarchaeological investigation in the form of purposive borehole sampling survey will be undertaken within the west of the Assessment Boundary around Cowpe Moss where peat depths are modelled to be in excess of 2m. The sampling will be undertaken to allow for the identification and sampling of deposits which have the potential to preserve paleoenvironmental proxies and thus allow for investigation of past environmental conditions and provide opportunities for scientific dating. The completion of this investigation would allow for an enhancement of the current levels of knowledge regarding the survival and composition of the peat deposits across Cowpe Moor which would offset the potential localised direct and indirect effects upon any buried peat and organic deposits within the Assessment Boundary. The exact scope of the geoarchaeological investigation will be agreed through consultation with GMAAS and Historic England.
- 6.3.3. Suitably qualified archaeological and geoarchaeological personnel will be consulted during the process of micro-siting elements of the Project for Assessment in order to identify any previously unrecorded archaeological constraints and should be present on site to undertake archaeological monitoring of any geotechnical works and intrusive construction work.
- 6.3.4. In accordance with national and local planning policies on heritage, a programme of archaeological works are likely to be required prior to construction. A programme of intrusive archaeological

investigation, initially via evaluation trenching, targeted on areas of highest potential will also be undertaken.

- 6.3.5. Any decision relating to the requirement for and scope of further works will be made by GMAAS and LCCHET as advisors to the Local Planning Authorities on archaeological matters. The scope and methodology of such works would be set out in a Written Scheme of Investigation for approval by these bodies prior to commencement. If significant archaeological features are encountered, further archaeological works, including full excavation and a programme of post-excavation works may be required.
- 6.3.6. If the results of the archaeological works produce findings of interest these will also be fed into both on-site and off-site interpretation resources and local / digital dissemination of information relating to the spatial and temporal archaeological landscape, based on the remains discovered during the archaeological works within the Assessment Boundary and would include publication in a suitable regional journal (Transactions of the Lancashire & Cheshire Antiquarian Society). The scope and requirement of any public benefit will be undertaken in consultation with the Client, HE and GMAAS/LCCHET.

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One Inch 'Old Series' Maps

Sheet LXXXVIII NW Huddersfield. Surveyed 1839; railways 1852; printed 1863.

Sheet LXXXIX NE Bolton. Surveyed 1839-40; printed 1863.

<https://maps.nls.uk/geo/find/#zoom=10.4&lat=53.73594&lon=-2.10140&layers=257&b=1&z=0&point=53.70930,-2.16817&i=257403556>
6 Inch Scale Maps

	1851⁴		1894-95		1911-13		1938		1946-7	
	Surveyed	Pub.	Surveyed	Pub.	Revised	Pub.	Rev'd	Pub.	Rev'd	Pub.
Lancashire 72	1844-1847	1849								
Lancashire 80	1844-48	1851								
LXXII.SW			1891	1894	1908	1913	1928	1931	1938	1947
LXXII.SE			1891	1894	1909	1912	1928	1932	1938	1947
LXXX.NE			1891	1894	1909	1912	1928	1931	1938	1947
LXXX.NW			1891	1895	1908	1912	1927	1930	1938	1947
LXXX.SW			1891	1894	1908	1912	1928	1930	1938	1947
LXXX.SE			1890	1894	1908- 1909	1911	1928	1931	1938	1946

25 Inch Series Maps

	1893		1910-11		1929-30	
	Surveyed	Published	Revised	Published	Revised	Published
LXXII.9	1891	1893	1908	1911	1928	1930
LXXII.10	1891	1891	1908	1911	1928	1930
LXXII.13	1891	1893	1908	1911	1928	1930
LXXII.14	1891	1893	1908	1911	1928	1930
LXXII.15	1891	1893	1908	1910	1928	1930
LXXII.16	1891	1893	1909	1910	1928	1930
LXXX.1	N/A	N/A	1908	1911	1927	1929

⁴ For clarity, the map editions are referred to in the text by the dates in bold, which encompass multiple individually published sheets, the details of which are set out in these tables.

LXXX.2	1891	1893	1908	1911	1921	1929
LXXX.3	1891	1893	1908	1910	1928	1929
LXXX.4	1891	1893	1909	1910	1928	1929
LXXX.5	1891	1893	1908	1910	1927	1929
LXXX.6	N/A	N/A	1908	1910	1927	1929
LXXX.7	1891	1893	1909	1910	1928	1929
LXXX.8	1891	1893	1909	1910	1928	1929
LXXX.10	1891	1893	1908	1910	1923	1929
LXXX.11	1890	1893	1908	1910	1928	1929
LXXX.12	1890	c.1893	1908	1910	1928	1929
LXXX.15	1890	1893	1908	1910	1923	1929
LXXX.16	1890	1893	1908	1910	1928	1929
N.B. Where 1893 sheets are not available for consultation, they have been replaced with the 1910 revision of the same sheet in Figures 18-21.						
https://maps.nls.uk/geo/find/#zoom=11.1&lat=53.68126&lon=-2.17306&layers=101&b=1&z=0&point=53.66312,-2.28380&i=126519542						

1:10,560 Scale Maps

	1956		1967	
	Revised	Published	Revised	Published
SD82SW – A	Pre-1930 to 1955	1956	1960 to 1967	1968
SD82SE – A	Pre-1930 to 1955	1956	1959 to 1964	1967
SD82SE – A	Pre-1930 to 1955	1956	1959 to 1964	1967
SD81NE – A	Pre-1930 to 1955	1956	1958 to 1965	1967

1:1,250 Scale Maps

	1963-4	
	Revised	Published
SD8018-SD8118 – AA	1962	1963

SD8220-SD8320 – AA	1961	1963
SD8219-SD8319 – AA	1962	1964
SD8218-SD8318 – AA	1962	1963
SD8421-SD8521 – AA	1960-1961	1963
SD8420-SD8520 – AA	1961	1963
SD8419-SD8519 – AA	1962	1963
SD8418-SD8518 – AA	1962	1963
SD8417-SD8517 – AA	1962	1963
SD8620-SD8720 – AA	1961	1963
SD8619-SD8719 – AA	1962	1964
SD8618-SD8718 – AA	1962	1964
SD8617-SD8717 – AA	Rev 1962	1964
SD8616-SD8716 – AA	Rev 1962	1964
SD8615-SD8715 – AA	1962	1963
Sheets available for the proposed cable route along the Rossendale Valley: surveyed c. 1960, published 1960-1962. https://maps.nls.uk/geo/find/#zoom=12.6&lat=53.66347&lon=-2.20532&layers=61&b=1&z=0&point=53.65387,-2.22416		

7.3. Aerial Photographic References

The following photographs including parts of the Assessment Boundary are available from the Historic England Aerial Photo Explorer website (<https://historicengland.org.uk/images-books/archive/collections/aerial-photos/>) and the NCAP website (<https://www.ncap.org/>).

Date	Flight/Sortie	Frame No.	Type	Link
09/05/1946	RAF/3G/TUD/UK/188/VP3	5179	Vertical	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/raf_3g_tud_uk_188_vp3_5179
09/05/1946	RAF/3G/TUD/UK/187/VP4	5379	Vertical	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/raf_3g_tud_uk_187_vp4_5379
26/04/1948	RAF/CPE/UK/2614/V	5022	Vertical	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/raf_cpe_uk_2614_v_5022
17/05/1948	RAF/541/27_RP	3187	Vertical	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/raf_541_27_rp_3187
12/07/1955	RAF/540/1673/F22	0323	Vertical	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/raf_540_1673_f22_0323

20/12/1963	RAF/58/6102/F22	0087	Vertical	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/raf_58_6102_f22_0087
30/07/1963	RAF/543/2336/V2	0007	Vertical	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/raf_543_2336_v2_0007
20/06/1989	GEONEX/0039/89	0041	Vertical	https://airphotofinder.ncap.org/image/474366
20/06/1989	GEONEX/0039/89	0042	Vertical	https://airphotofinder.ncap.org/image/474367
20/06/1989	GEONEX/0039/89	0043	Vertical	https://airphotofinder.ncap.org/image/474368
20/06/1989	GEONEX/0039/89	0044	Vertical	https://airphotofinder.ncap.org/image/474369
20/06/1989	GEONEX/0039/89	0045	Vertical	https://airphotofinder.ncap.org/image/474370
20/06/1989	GEONEX/0039/89	0048	Vertical	https://airphotofinder.ncap.org/image/474373
20/06/1989	GEONEX/0039/89	0049	Vertical	https://airphotofinder.ncap.org/image/474374
20/06/1989	GEONEX/0039/89	0050	Vertical	https://airphotofinder.ncap.org/image/474375
20/06/1989	GEONEX/0039/89	0051	Vertical	https://airphotofinder.ncap.org/image/474376
20/06/1989	GEONEX/0039/89	0135	Vertical	https://airphotofinder.ncap.org/image/474460
28/06/1995	AF/95C/0372	6758	Vertical	https://airphotofinder.ncap.org/image/670551
28/06/1995	AF/95C/0372	6760	Vertical	https://airphotofinder.ncap.org/image/670553
28/06/1995	AF/95C/0372	6761	Vertical	https://airphotofinder.ncap.org/image/670554
28/06/1995	AF/95C/0372	6762	Vertical	https://airphotofinder.ncap.org/image/670555
28/06/1995	AF/95C/0372	6763	Vertical	https://airphotofinder.ncap.org/image/670556
28/06/1995	AF/95C/0372	6796	Vertical	https://airphotofinder.ncap.org/image/670589
28/06/1995	AF/95C/0372	6797	Vertical	https://airphotofinder.ncap.org/image/670590
28/06/1995	AF/95C/0372	6798	Vertical	https://airphotofinder.ncap.org/image/670591
28/06/1995	AF/95C/0372	6799	Vertical	https://airphotofinder.ncap.org/image/670592
28/06/1995	AF/95C/0372	6845	Vertical	https://airphotofinder.ncap.org/image/670637
28/06/1995	AF/95C/0372	6845	Vertical	https://airphotofinder.ncap.org/image/670638
28/06/1995	AF/95C/0372	6846	Vertical	https://airphotofinder.ncap.org/image/670639
28/06/1995	AF/95C/0372	6800	Vertical	https://airphotofinder.ncap.org/image/670639
28/06/1995	AF/95C/0372	6801	Vertical	https://airphotofinder.ncap.org/image/670594
28/06/1995	AF/95C/0372	6802	Vertical	https://airphotofinder.ncap.org/image/670595
28/06/1995	AF/95C/0372	6803	Vertical	https://airphotofinder.ncap.org/image/670596
15/10/2021	3380	35134_036	Oblique	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/35134_036
15/10/2021	3380	35134_037	Oblique	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/35134_037
15/10/2021	3380	35134_038	Oblique	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/35134_038
15/10/2021	3380	35134_039	Oblique	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/35134_039
15/10/2021	3380	35134_040	Oblique	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/35134_040
15/10/2021	3380	35134_041	Oblique	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/35134_041
15/10/2021	3380	35134_042	Oblique	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/35134_042
15/10/2021	3380	35134_043	Oblique	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/35134_043
15/10/2021	3380	35134_044	Oblique	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/35134_044
15/10/2021	3380	5134_045	Oblique	https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/35134_045

The following photographs covering the Assessment Boundary and 1km Study Area were identified by a Priority Search of the Historic England Archive. Digital copies of those highlighted were purchased for examination.

Vertical Photographs						
Sortie number	Library No.	Frame No.	Centre	Run	Date	Scale 1:
RAF/3G/TUD/UK/188	327	5147	SD 850 173	6	09 MAY 1946	5400
RAF/3G/TUD/UK/188	327	5148	SD 853 172	6	09 MAY 1946	5400
RAF/3G/TUD/UK/188	327	5149	SD 857 170	6	09 MAY 1946	5400
RAF/3G/TUD/UK/188	327	5150	SD 860 168	6	09 MAY 1946	5400
RAF/3G/TUD/UK/188	327	5151	SD 863 166	6	09 MAY 1946	5400
RAF/3G/TUD/UK/188	327	5179	SD 858 176	7	09 MAY 1946	5400
RAF/3G/TUD/UK/188	327	5180	SD 862 174	7	09 MAY 1946	5400
RAF/3G/TUD/UK/188	327	5181	SD 865 173	7	09 MAY 1946	5400
RAF/3G/TUD/UK/187	359	5377	SD 834 181	8	09 MAY 1946	10600
RAF/3G/TUD/UK/187	359	5378	SD 842 182	8	09 MAY 1946	10600
RAF/3G/TUD/UK/187	359	5379	SD 850 182	8	09 MAY 1946	10600
RAF/CPE/UK/2496	786	3099	SD 854 170	2	11 MAR 1948	10000
RAF/CPE/UK/2496	786	3100	SD 862 171	2	11 MAR 1948	10000
RAF/CPE/UK/2496	786	3101	SD 871 172	2	11 MAR 1948	10000
RAF/541/27	852	3292	SD 865 183	7	17 MAY 1948	10000
RAF/541/27	852	3293	SD 856 184	7	17 MAY 1948	10000
RAF/541/27	852	3294	SD 847 185	7	17 MAY 1948	10000
RAF/541/27	852	3295	SD 839 186	7	17 MAY 1948	10000
RAF/541/27	852	3305	SD 856 167	8	17 MAY 1948	10000
RAF/541/27	852	3306	SD 864 166	8	17 MAY 1948	10000
RAF/541/27	852	4187	SD 836 195	15	17 MAY 1948	10000
RAF/541/27	852	4188	SD 843 195	15	17 MAY 1948	10000
RAF/541/27	852	4189	SD 851 194	15	17 MAY 1948	10000
RAF/541/27	852	4190	SD 858 194	15	17 MAY 1948	10000
RAF/541/27	852	4191	SD 865 193	15	17 MAY 1948	10000
RAF/541/27	852	4293	SD 857 204	16	17 MAY 1948	10000
RAF/541/27	852	4294	SD 848 205	16	17 MAY 1948	10000
RAF/541/62	890	4062	SD 866 177	7	12 JUN 1948	10000
RAF/541/62	890	4063	SD 858 177	7	12 JUN 1948	10000
RAF/541/62	890	4064	SD 851 177	7	12 JUN 1948	10000
RAF/541/62	890	4065	SD 844 178	7	12 JUN 1948	10000
RAF/541/62	890	4066	SD 837 180	7	12 JUN 1948	10000
RAF/541/117	917	4472	SD 858 194	26	29 JUL 1948	10500
RAF/541/117	917	4473	SD 865 194	26	29 JUL 1948	10500
RAF/58/1729	1632	175	SD 868 185	6	20 APR 1955	10000
RAF/58/1729	1632	176	SD 862 185	6	20 APR 1955	10000
RAF/58/1729	1632	177	SD 856 185	6	20 APR 1955	10000
RAF/58/1729	1632	178	SD 851 185	6	20 APR 1955	10000
RAF/58/1729	1632	366	SD 834 192	9	20 APR 1955	10000
RAF/58/1729	1632	367	SD 841 193	9	20 APR 1955	10000
RAF/58/1729	1632	368	SD 847 193	9	20 APR 1955	10000

RAF/58/1729	1632	369	SD 854 193	9	20 APR 1955	10000
RAF/58/1729	1632	370	SD 860 194	9	20 APR 1955	10000
RAF/58/1729	1632	371	SD 867 194	9	20 APR 1955	10000
RAF/58/1729	1632	176	SD 861 202	15	20 APR 1955	10000
RAF/58/1729	1632	177	SD 855 202	15	20 APR 1955	10000
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RAF/540/1673	1676	321	SD 848 199	10	12 JUL 1955	10000
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RAF/540/1673	1676	378	SD 840 194	11	12 JUL 1955	10000
RAF/540/1673	1676	379	SD 846 193	11	12 JUL 1955	10000
RAF/540/1673	1676	380	SD 852 192	11	12 JUL 1955	10000
RAF/540/1673	1676	381	SD 858 191	11	12 JUL 1955	10000
RAF/540/1673	1676	382	SD 864 191	11	12 JUL 1955	10000
RAF/540/1673	1676	380	SD 850 174	23	12 JUL 1955	10000
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RAF/58/6102	2189	86	SD 865 190	12	20 DEC 1963	10000
RAF/58/6102	2189	87	SD 858 191	12	20 DEC 1963	10000
RAF/58/6102	2189	88	SD 852 191	12	20 DEC 1963	10000
RAF/58/6102	2189	89	SD 845 191	12	20 DEC 1963	10000
RAF/58/6102	2189	90	SD 838 191	12	20 DEC 1963	10000
RAF/58/6102	2189	91	SD 832 192	12	20 DEC 1963	10000
RAF/58/6102	2189	215	SD 852 203	13	20 DEC 1963	10000
RAF/58/6102	2189	216	SD 857 203	13	20 DEC 1963	10000
RAF/58/6102	2189	217	SD 863 203	13	20 DEC 1963	10000
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RAF/543/2750	2198	340	SD 850 209	9	11 MAR 1964	11000
OS/88218	13328	101	SD 846 210	1	06 AUG 1988	12600
OS/88218	13328	102	SD 858 210	1	06 AUG 1988	12600
OS/92311	14106	418	SD 855 170	5	16 MAY 1992	6700
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OS/92311	14106	420	SD 864 172	5	16 MAY 1992	6700
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OS/92311	14106	473	SD 841 181	6	16 MAY 1992	6700
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OS/99982	23181	141	SD 864 191	4	19 DEC 1999	10400
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OS/99982	23181	143	SD 850 191	4	19 DEC 1999	10400
OS/99982	23181	144	SD 843 192	4	19 DEC 1999	10400
OS/99982	23181	214	SD 850 206	5	19 DEC 1999	10400
OS/99982	23181	215	SD 858 206	5	19 DEC 1999	10400
OS/99982	23181	216	SD 865 206	5	19 DEC 1999	10400
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OS/03661	24216	311	SD 852 201	9	05 AUG 2003	10000
OS/03661	24216	312	SD 859 201	9	05 AUG 2003	10000

Plates



Plate 1: View west across the head of the Naden valley towards Knowl Hill and Scout Moor Wind Farm, from the northern slopes of Top of Pike.



Plate 2: View south across blanket bog to the south of Top of Leach, looking towards Top of Pike (L) and Knowl Hill (R).



Plate 3: View SSW from Warm Slack Hill, looking across Greenbooth Reservoir towards the lowlying plain and Manchester.



Plate 4: View of the western end of the plateau, looking east towards Scout Moor Quarries along the proposed access route, from Scout Barn Farm close to the A680.



Plate 5: View west towards Whittle Hill from Moss Top, Tottington Higher End Moor.



Plate 6: View northwest along the valley of the Scout Moor Brook, between the edge of Tottington Higher End Moor and Scout Moor, close to the western end of the Assessment Boundary.



Plate 7: View west along the public footpath running along the northern side of Cragg Quarry, from close to its junction with Rooley Moor Road.



Plate 8: 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 9: View northeast from close to Rooley Moor Road at Top of Leach, looking towards Bacup (L) and Britannia Quarries (R).



Plate 10: View east across moorland in the northeast of the Assessment Boundary, looking towards Britannia Quarries and the Spodden valley, from close to Old Sink Slack.



Plate 11: View southeast from the upper (western) part of Bartle Cwm Pasture, looking towards the Spodden valley and Rochdale.



Plate 12: View southeast from Top of Pike, looking across Spring Mill Reservoir towards Rochdale and the Pennine uplands.



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.

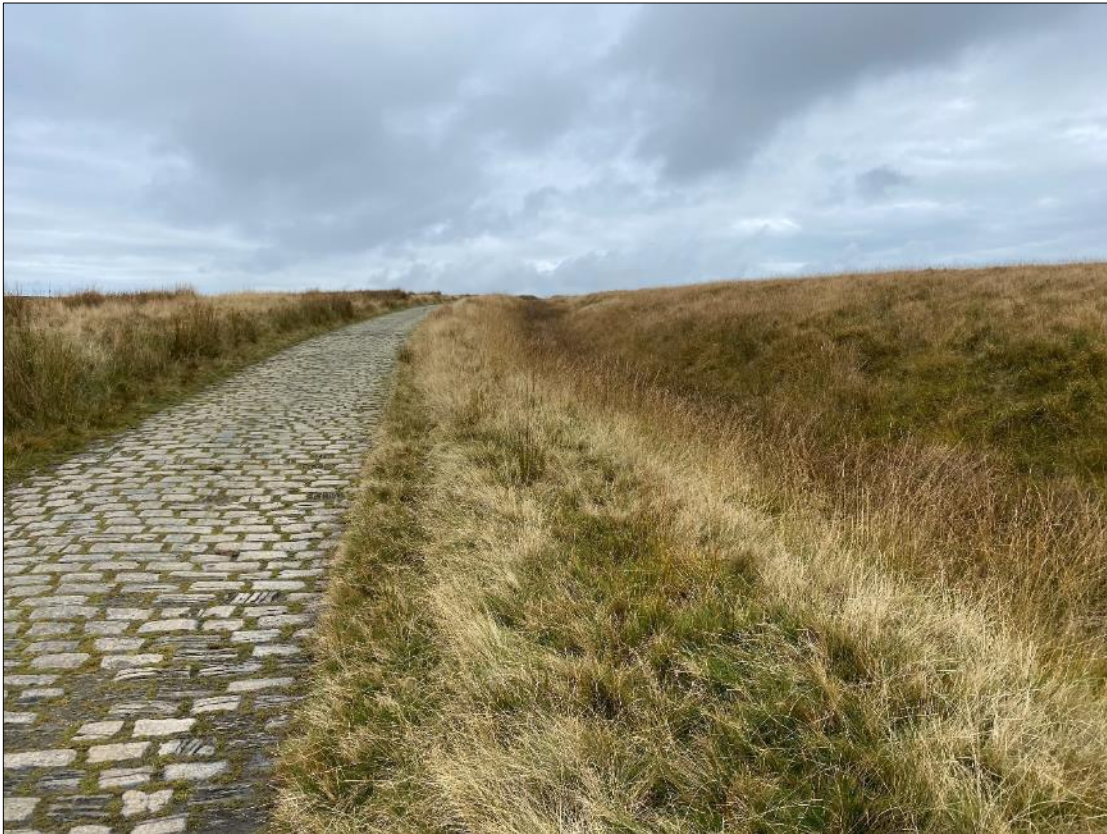


Plate 17: Looking north along a section of Rooley Moor Road (Asset 828) at Hamer Hill.



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



Plate 30: Former coal mining activity and probable tramway at Bartle Cowm 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: General view across T1, looking southeast along the field boundary; the tramway embankment (Asset 59) can be seen behind the return of the field wall across the centre of the frame.



Plate 36: Extraction pit (Asset 1301) at T1, looking southeast.



Plate 37: Ruined building (Asset 772) at T1; the gate piers have been built into the field wall.



Plate 38: General view, looking northeast across the proposed development area towards the Spodden valley.



Plate 39: General view across T3, looking NNE from the SW side of the area.



Plate 40: View of ground conditions in the southern end of the proposed development area at T4, looking southeast towards Rochdale.



Plate 41: View upslope (northwest) from the approximate location of T4, showing ground conditions and frequent natural sandstone blocks.



Plate 42: General view ENE along the northern bank of Walstead Clough.



Plate 43: General view across the head of Walstead Clough, looking north from the linear tramway bank adjoining the northern side of Bartle Cwm Colliery, looking across Asset 79 (mound in centre) towards extraction remains (Asset 1545) at Old Sink Slack.



Plate 44: General view across T6, looking south from the spoil heap (Asset 1571) adjacent to the extant trackway between Ding Quarry and Rooley Moor Road.



Plate 45: General view across T7 (middle distance), looking west across Clegg Ding from Rooley Moor Road at the Moorcock Inn (Asset 639).



Plate 46: Ground conditions at T8, looking southwest towards Knowl Hill.



Plate 47: Ground conditions, including natural boulders, at T9, looking north along the former field boundary, with the modern cycle path on the right.



Plate 48: General view across T10 from upslope, looking ENE towards Britannia Quarry; earthworks of a disused shaft (Asset 436) are visible in the middle distance (left) with those of a former rifle range (Asset 1610) in front.



Plate 49: General view across T11, looking northwest from the field boundary at the southeastern corner of the works area across the intervening drainage ditch.



Plate 50: General view, looking SSW into the interior of the Assessment Boundary, with Rooley Moor Road running along the skyline on the right of the frame.



Plate 51: General view, looking north across the interior of Cowpe Moss.



Plate 52: General view from the proposed location of the access track for T14, looking northwest towards T14.



Plate 53: Location of T15 within SW edge of Cragg Quarry, looking east.



Plate 54: Location of T15 within SW edge of Cragg Quarry, looking southwest.



Plate 55: Remains of rectangular structure within proposed development area at T15, within Cragg Quarry.



Plate 56: Remains of rectangular structure (from above) within proposed development area at T15, within Cragg Quarry.



Plate 57: Quarry remains within proposed development area at T15, Cragg Quarry.



Plate 58: Remains of revetment wall within proposed development area at T15, Cragg Quarry.



Plate 59: Remains of small structures within spoil heaps in proposed development area at T15, Cragg Quarry.



Plate 60: Quarry tipping within proposed development area at T15, Cragg Quarry.



Plate 61: Possible remains of former structure within proposed development area at T15, Cragg Quarry.



Plate 62: Ground conditions at T16, looking north; the fence line marks the Assessment Boundary.



Plate 63: General view, looking west across Cowpe Moss towards Cragg Quarry (right) and the turbines of Scout Moor Wind Farm.



Plate 64: Disused coal pit (left of ranging rod) and colliery remains (Asset 981), looking northwest towards Rawtenstall.



Plate 65: Asset 1326, looking NNW towards the summit of Top of Leach.



Plate 66: Boundary marker stones (Asset 1326) on the southern side of Top of Leach.



Plate 67: View across the proposed compound location, looking east from its western corner.



Plate 68: General view towards the proposed substation location, looking from the southwest.



Plate 69: View of water filled extraction pit (Asset 1285) c.160m east of the proposed substation location.



Plate 70: Condition of Rooley Moor Road at proposed crossing point of access track, just south of Asset 756.



Plate 71: Disused shaft at Old Sink Colliery (Asset 756), looking south with Rooley Moor Road (Asset 828) just visible on L of frame.



Plate 72: View southwest into interior of Ding Quarry (Asset 316), from the extant track on its northeastern side.



Plate 73: Finger tips in the interior of Ding Quarry.



Plate 74: Remains of small rectangular structure of unknown function, Ding Quarry.



Plate 75: Remains of drystone structure of unknown function, Ding Quarry.



Plate 76: Revetment wall at end of spoil tip, Ding Quarry.



Plate 77: Possible crane base amongst spoil tips within interior of Ding Quarry.



Plate 78: View southeast across proposed laydown area



Plate 79: View east across proposed laydown area



Plate 80: View south across northwestern part of the proposed laydown area



Plate 81: View west across eastern end of Alternate Grid Connection Route (Option C)



Plate 82: View southwest along section of the Cowpe Lowe/Cragg Quarry Tramway (Asset 189)



Plate 83: View south towards ruined remnants of Slacks, Foe Edge, Cowpe farmstead (Asset 897)



Plate 84: View west along eastern section of the Alternate Grid Connection Route (Option C)



Plate 85: View east along eastern section of the Alternate Grid Connection Route (Option C)



Plate 86: View east of the remains of Brown Hill Close (later Back o' th' Lowe) farmstead (Asset 128)



Plate 87: View northeast towards Brown Hill sandstone quarry (Asset 129)



Plate 88: View west along central section of the Alternate Grid Connection Route (Option C)



Plate 89: View west of detail of structure along section of route which crosses a brook



Plate 90: View east along central section of the Alternate Grid Connection Route (Option C)



Plate 91: View west along barriered section of the Alternate Grid Connection Route (Option C)



Plate 92: View east along barriered section of the Alternate Grid Connection Route (Option C)



Plate 93: View northeast across western section of the Alternate Grid Connection Route (Option C)



Plate 94: View west across section of the Alternate Grid Connection Route (Option C) located to east of Gincroft Lane



Plate 95: View north along Gincroft Lane



Plate 96: View west view along public footpath off of Gincroft Lane



Plate 97: View south along route of public footpath which passes by currently uninhabited farmhouse



Plate 98: View west along route of public footpath (which becomes East Street) from farmhouse complex towards Market Street



Plate 99: View east along East Street



Plate 100: View southwest along Gincroft Lane Street



Plate 101: View west of route of central part of southern branch option of Alternate Grid Connection Route (Option C)



Plate 102: View northwest view of route of western part of southern branch option of Alternate Grid Connection Route (Option C)



Plate 103: View northeast of western part of route of southern branch option of Alternate Grid Connection Route (Option C)

Appendix 1: Assessment Scope & Criteria

Scope of the Assessment

This report details the results of a Heritage Impact Assessment and aims to identify and map the nature of the heritage resource within the land within the Assessment Boundary and surrounding Study Area. Where possible, the assessment will evaluate the likely impact from Proposed Development, 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 on the Assessment Boundary 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 Proposed Development.

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 within 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 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 Gardens 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.
NEGLIGIBLE	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).

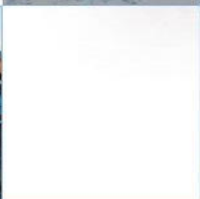
The likely magnitude of the impact of the Proposed Development works is determined by identifying the level of change from the Proposed Development upon the 'baseline' conditions of the land within the Assessment Boundary and the heritage resource identified in the assessment. This effect can be either 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

LARGE	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.
SMALL	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.
NEGLIGIBLE	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.
NONE	
NONE	No loss / alteration predicted.
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.
SMALL	Minimal enhancement to an asset 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.
LARGE	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 Heritage Assets and Events



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