

13. Archaeology

Introduction

- 13.1 This Chapter reports the outcome of the assessment of likely significant environmental effects in relation to archaeology.
- 13.2 The Chapter describes the scope of the assessment and assessment methodology and a summary of the baseline information that has informed the assessment.
- 13.3 In line with **Chapter 2: Approach to EIA**, the assessment reports on the likely significant environmental effects, the further mitigation measures required to prevent, reduce or offset any significant adverse effects, or further enhance beneficial effects. The conclusions are provided both in terms of the residual effects and whether these are considered to be significant. The assessment of effects takes into consideration both primary and tertiary mitigation (see **Chapter 2: Approach to EIA** for further details).
- 13.4 This Chapter, and its associated detailed Desk-Based Assessment (**Appendix 13.1**), is intended to be read as part of the wider ES with particular reference to the introductory Chapters of this ES (**Chapters 1 – 5**) as well as **Chapter 14: Hydrology, Hydrogeology and Peat**.
- 13.5 In addition, this Chapter should be read in conjunction with **Chapter 16: Assessment of Cumulative Effects**.

Summary of Consultation

2025 ES

- 13.6 The Project Team undertook an EIA Scoping exercise (described further under the 'Scope of Assessment' section below) in support of the 2025 ES, which included consultation with RMBC and RBC and other stakeholders. The outcomes of this process are documented in **Chapter 2: Approach to EIA** and **Appendices 2.1** and **2.2**. No consultation was undertaken over and above that completed during the EIA Scoping and application processes.

2026 FEI ES

- 13.7 Since the submission of the 2025 ES, the Applicant has been in receipt of a number of statutory and non statutory consultation comments. The consultation responses have been reviewed by the project team and those that are directly relevant to this ES and its supporting material have been considered, with the outcomes documented in **Appendix 2.4**.

Scope of the Assessment

- 13.8 An EIA Scoping Report was submitted to RMBC and RBC on 16th December 2024, as presented as **Appendix 2.1**. At the time of writing (May 2026), no Scoping Opinion has been received. Therefore, the scope of assessment is the same as that submitted as part of the EIA Scoping Report with some minor updates to take account of the Project

for Assessment and the consultation comments received following the submission of the 2025 ES. Changes to the Chapter are focussed on direct impacts on known archaeological remains as a result of changes to infrastructure layout. Further detail with regards to commitment to undertake public engagement is also outlined.

Effects Unlikely / Not Significant

13.9 The following effects were not considered significant as part of the EIA Scoping Report (**Appendix 2.1**) and are not considered further in this Chapter:

- Direct disturbance to buried archaeological remains beyond the Assessment Boundary; and
- Direct disturbance / loss of the buried archaeological resource during operation.

13.10 Following the EIA Scoping process the following additional effect(s) are now considered unlikely / not significant and the evidence to support this determination is outlined below.

Direct disturbance to archaeological assets which have no potential for remaining physical buried remains (i.e. findspots or locations of previous archaeological works where associated remains and below ground deposits have been removed)

13.11 Findspots denote locations where archaeological assets finds were discovered but have since been removed from the Assessment Boundary. Previous archaeological works have in some cases (but not all) removed archaeological assets in their entirety. In both cases the cultural significance of their former locations will not be impacted by the Project for Assessment.

13.12 Therefore, direct disturbance to archaeological assets which have no potential for remaining physical buried remains is unlikely to be significant and has not been considered further within the EIA or reported in this ES. However, they are still considered in the Archaeological Desk-Based Assessment (**Appendix 13.1**) to inform the assessment of archaeological potential.

Effects Likely / Significant

13.13 **Table 13.1** outlines the effects that are considered likely / significant and are reported within this Chapter.

Table 13.1: Effects likely / significant

Likely significant effect	Receptor(s)	Applicable stage(s)*
Loss / disturbance to known archaeological assets	Archaeological assets ⁱ	Construction / decommissioning
Loss / disturbance to potential / unknown buried archaeological remains	Potential / unknown buried archaeological resource and palaeoenvironmental remains within the Assessment Boundary	Construction / decommissioning
Loss / reduction in deposits preserving paleoenvironmental remains as a result of dewatering activities	Peat deposits containing paleoenvironmental proxies both within and beyond the Assessment Boundary	Construction / operation / decommissioning

* The construction assessment will be used as a 'proxy' for decommissioning.

Assessment Methodology

Legislative Framework, Policy and Guidance

13.14 The following legislation and policy have informed the assessment of effects within this Chapter and is detailed further in **Appendix 13.1**:

- Historic Buildings and Ancient Monuments Act 1953¹;
- Ancient Monuments and Archaeological Areas Act 1979²;
- Planning (Listed Buildings and Conservation Areas) Act, 1990³;
- Town and Country Planning Act 1990⁴ (Section 58 as amended by LURA 2023⁵);
- The Levelling-up and Regeneration Act (LURA) 2023⁶;
- Public Services (Social Value) Act 2012⁷;
- National Planning Policy Framework (NPPF) (last updated December 2025)⁸;
- Planning Policy Guidance (PPG) (Historic Environment section last updated July 2019)⁹;
- Places for Everyone Joint Development Plan Document for Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan 2022 to 2039 ('PfE') (adopted 21 March 2024)¹⁰;
- Rochdale Borough Unitary Development Plan 1999-2016 (adopted 2006)¹¹; and

ⁱ See Figures 2 to 4 as compiled within **Appendix 13.1** showing the locations of known archaeological assets.

- Rossendale Local Plan 2019-2036 (adopted 2021)¹².

13.15 The following guidance has informed the assessment of effects within this Chapter and is detailed further in **Appendix 13.1**:

- Chartered Institute for Archaeologists' (CIfA) Code of Conduct (CIfA 2022)¹³;
- Regulations for Professional Conduct (CIfA 2024)¹⁴;
- Standards and Guidance for Historic Environment Desk Based Assessments (CIfA 2020)¹⁵; and
- Standard and guidance for commissioning work or providing consultancy advice on archaeology and the historic environment (CIfA 2020)¹⁶.

Defining the Study Area

13.16 A core study area, which includes all land within the Assessment Boundary, has been subject to assessment for potential direct effects. This study area has been subject to a detailed walkover survey and archaeological remains that may be directly or indirectly impacted by the Project for Assessment have been identified.

13.17 In addition, a wider 1km study area has been used to identify all known heritage assets and known previous archaeological interventions, in order to help predict whether any similar hitherto unknown archaeological remains are likely to survive within the Assessment Boundary and thus be impacted by the Project for Assessment.

Background Studies to Inform the ES

13.18 **Table 13.2** summarises all studies / surveys / analysis / evaluations undertaken to inform the assessment presented within this Chapter.

Table 13.2: Studies / surveys / evaluations / analysis undertaken to inform the ES

Study / survey / analysis / evaluation	Overview	Date of completion
Preliminary Archaeological Desk-Based Assessment	Review of archaeological baseline and preliminary walkover survey	October 2024
Phase 1 peat probing	Peat depth probing and peat condition assessment (further details in Chapter 14: Hydrology, Hydrogeology and Peat)	April 2024
Phase 2 peat probing		October 2024
Further Phase 2 peat probing Survey 2		December 2024 – February 2024
Phase 2 – peat probing Survey 3		February 2025
Phase 2 – peat probing Survey 4	1,665 completed probes	March 2026
Phase 2 – peat probing Survey 5	59 completed probes	April 2026

Study / survey / analysis / evaluation	Overview	Date of completion
Appendix 14.2: Peat Survey Report	Field survey and mapping of peat depths and characteristics across the Assessment Boundary utilising results from a total of 11,485 probes and 22 cores completed across the Phase 1 and Phase 2 surveys.	April 2026
Hydrology assessment / review	Review of dewatering activities and assessment of potential to lead to a reduction in groundwater level	Winter 2024 / Spring 2025
Walkover Survey of Alternative Grid Connection and Turbine Laydown Area	Walkover Survey of Alternative Grid Connection (Option C) and Turbine Laydown Area (shown in Figure 4.1)	May 2026
Detailed Archaeological Desk-Based Assessment (Appendix 13.1)	Detailed baseline assessment including detailed walkover survey, review of archival data, review of previous archaeological fieldwork, historic mapping and aerial imagery	May 2026

Assessment Process

- 13.19 This section sets out the methodology for assessing effects upon buried and upstanding archaeological remains and considered both direct and indirect impacts. It takes account of policies and guidance outlined in the NPPF and PPG as well as Local Planning Policy.
- 13.20 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 the resource / assets.
- 13.21 The assessment has been informed by a walkover survey of the Assessment Boundary 25th-26th September 2024, 4th-6th February 2025 and 11th May 2026.
- 13.22 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 National Heritage List for England (NHLE) – for data relating to designated heritage assets;

- RMBC and RBC – for details of Conservation 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;
- Historic England’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 the British History Online website; and
- 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.

13.23 Full references are provided in **Appendix 13.1**.

13.24 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; and

- Manchester Archives.

13.25 A qualitative assessment using the baseline data collected through the above activities has been undertaken.

Reporting of the Environmental Effect and Significance Criteria

13.26 The assessment of likely significant environmental effects as a result of the Project for Assessment has taken into account the construction, operational and decommissioning stages. The following sections define the approach adopted within the assessment for the determination of importance, magnitude of impact, the level of effect and significance.

13.27 It is noted that the term ‘heritage assets’ is used in the following sections whereas ‘archaeological’ assets or remains are used in the ‘Assessment of Effects, Secondary Mitigation and Residual Effects’ section below. This is to reflect wider cultural heritage resource considerations and to put archaeological assets into context of relative importance, etc.

Determining Importance of Receptor

13.28 The importance of affected receptors has been considered on a scale of **very high, high, medium, low** or **negligible**. It is noted that while ‘very high’ is set out in **Table 13.3**, this is not used within the assessment as no receptors of ‘very high’ importance have been identified within the Assessment Boundary. Therefore, it is not taken further beyond this section within the assessment to determine level of effect and significance.

13.29 The definition of ‘cultural significance’ is readily accepted by heritage professionals both in the UK and internationally and was first fully outlined in the Burra Charter, Article One of which identifies that ‘*cultural significance*’ or ‘*cultural heritage value*’ means aesthetic, historic, scientific, social or spiritual value for past, present or future generations¹⁷. This definition has since been adopted by heritage organisations around the world, including Historic England.

13.30 The NPPF defines significance (for heritage policy) as:

“The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset’s physical presence, but also from its setting.”

13.31 All heritage assets have some significance. However, some assets are judged to be more important than others. The level of that importance is, from a cultural resource management perspective, determined by establishing the asset’s capacity to inform present or future generations about the past. In the case of many heritage assets, their importance has already been established through the designation (i.e. scheduling, listing and register) processes applied by Historic England.

13.32 The rating of the importance of heritage assets is first and foremost made in reference to their designation and to the NPPF. For non-designated assets, importance is assigned based on professional judgement and guided by the criteria presented in

Table 13.3, which itself relates to the criteria for designations as drawn from the Department of Media, Culture and Sports (DMCS) publication, Principles for Selection of Listed Buildings¹⁸ and the Scheduled Monuments Policy Statements¹⁹ published by the same body, which outline the criteria for designating heritage assets, and the Historic England guidance written to expand upon the guidance by DMCS.

Table 13.3: Criteria for establishing importance of heritage assets

Importance	Criteria
Very High	World Heritage Sites; Other designated or non-designated assets with demonstrable Outstanding Universal Value.
High	Scheduled Monuments (Actual and Potential); Grade I and II* Listed Buildings; Grade I and II* Registered Parks and Gardens; Registered Battlefields; Outstanding examples of some period, style or type; or Non-Designated assets considered to meet the criteria for the designation as per the types and grades of designation noted above (as stated in NPPF and PPG).
Medium	Grade II Listed Buildings; Grade II Registered Parks and Gardens; Conservation Areas; Major or representative examples of some period, style or type; or Non-designated assets considered to meet the criteria for the designations as set out above (as stated in NPPF and PPG).
Low	Locally Listed Assets; Examples of any period, style or type which contribute to our understanding of the historic environment at the local level; or Non-designated heritage assets identified by local historic environment records protected by NPPF.
Negligible	Relatively numerous types of remains; Findspots or artefacts that have no definite archaeological remains known in their context; or Non-designated heritage assets of lesser heritage significance.

Determining the Magnitude of Impact

- 13.33 The magnitude of impact has been considered as the change experienced from the current baseline conditions and has been considered on a scale of **large, medium, small, negligible** or **none**.
- 13.34 Potential impacts, that is the physical change to known heritage assets, and unknown buried archaeological remains, or changes to their settings, in the case of the Project

for Assessment largely relate to the possibility of disturbing, removing or destroying in situ remains and artefacts during the construction (or decommissioning) stage.

- 13.35 The magnitude of the impact upon heritage assets caused by the Project for Assessment has been rated using the classifications and criteria outlined in **Table 13.4**.

Table 13.4: Criteria for classifying magnitude of impact

Magnitude of impact	Criteria
Large	Substantial loss of information content resulting from total or large-scale removal of deposits from an asset.
Medium	Loss of information content resulting from material alteration of the baseline conditions by removal of part of an asset.
Small	Detectable impacts leading to minor loss of information content.
Negligible	Loss of a small percentage of the area of an asset's peripheral deposits or a reversible alteration to the fabric of the asset.
None	No loss / alteration predicted.

Determining the Level of Effect

- 13.36 The level of effect has been informed by the magnitude of impact due to the Project for Assessment and the evaluation of the importance of the affected receptor.
- 13.37 In order to provide a level of consistency, the assessment of importance (**Table 13.3**), the prediction of magnitude of impact (**Table 13.4**) and the assessment of level of effect is guided by pre-defined criteria. However, a qualitative descriptive narrative is also provided for each asset to summarise and explain each of the professional value judgements that have been made in establishing sensitivity and magnitude of impact for each individual asset.
- 13.38 The level of effect has been determined using professional judgement and **Table 13.5** has been a tool which has assisted with this process. Whilst **Table 13.5** provides ranges, the level of effect is confirmed as a single level and not a range, informed by professional judgement.

Table 13.5: Matrix to support determining the level of effect

		Importance ⁱⁱ			
		High	Medium	Low	Negligible
Magnitude of Impact	Large	Major	Moderate to Major	Minor to Moderate	Negligible
	Medium	Moderate to Major	Moderate	Minor	Negligible
	Small	Minor to Moderate	Minor	Negligible to Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible
	None	None	None	None	None

13.39 The following terms have been used to define the level of the effects identified and these can be '*beneficial*' or '*adverse*':

- **Major effect:** Where the Project for Assessment is likely to cause a considerable change from the baseline conditions and the receptor has limited adaptability, tolerance or recoverability or is of the highest sensitivity;
- **Moderate effect:** Where the Project for Assessment is likely to cause either a considerable change from the baseline conditions at a receptor which has a degree of adaptability, tolerance or recoverability or a less than considerable change at a receptor that has limited adaptability, tolerance or recoverability;
- **Minor effect:** Where the Project for Assessment is likely to cause a small, but noticeable change from the baseline conditions on a receptor which has limited adaptability, tolerance or recoverability or is of the highest sensitivity; or where the Project for Assessment is likely to cause a considerable change from the baseline conditions at a receptor which can adapt, is tolerant of the change and / or can recover from the change; and
- **Negligible:** Where the Project for Assessment is unlikely to cause a noticeable change at a receptor, despite its level of sensitivity or there is a considerable change at a receptor which is not considered sensitive to a change.

13.40 For the purposes of this Chapter, the duration of the effect has been assessed as either 'short-term', 'medium-term' or 'long-term'. Short-term is considered to be up to 2 years, medium-term is considered to be between 2 and 10 years and long-term is considered to be greater than 10 years.

Determining Significance

13.41 For each effect, a statement has been made as to whether the level of residual effect is '**Significant**' or '**Not Significant**'. Using professional judgement and with reference to guidelines on Heritage Impact Assessment²⁰, the assessment considers moderate and

ⁱⁱ See the note above regarding the use of 'very high' importance.

greater effects to be Significant, while minor and lesser effects are considered Not Significant.

- 13.42 Significance has only been concluded for residual effects (i.e. following the identification of secondary mitigation).

Baseline Conditions

Summary

- 13.43 Each archaeological heritage asset referred to in the text below is listed in the Gazetteer appended to the Desk-Based Assessment (**Appendix 13.1**). Heritage assets within the Assessment Boundary are shown in Figures 3 to 6 within **Appendix 13.1**. Each has been assigned an 'Asset Number' unique to this assessment, and the Gazetteer includes information regarding the type, period, grid reference, HER number, protective designation and other descriptive information, as derived from the consulted sources.
- 13.44 In addition to the digitised datasets provided by GMHER²¹, LHER²² and NHLE²³ a very high number of archaeological heritage assets located within the Assessment Boundary were identified and added to the Gazetteer (**Appendix 13.1**) through examination of aerial photographs, current and historical satellite imagery and LiDAR data. In accordance with the data gathering parameters noted above, this assessment has identified a total of 1,414 heritage assets within the 1km study area (see Figures 3 to 6 and Gazetteer in **Appendix 13.1**), of which 283 are located within the Assessment Boundary.
- 13.45 The detailed period by period discussion of the identified archaeological heritage assets is included within the Desk-based Assessment (**Appendix 13.1**) with the baseline conditions presented here being a summary of the findings of that assessment.
- 13.46 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.

Geoarchaeological background and palaeoenvironmental potential

- 13.47 A peat depth survey and modelling within the Assessment Boundary undertaken as part of the Project for Assessment (**Appendix 14.2**) functions as a deposit model for the Assessment Boundary and provides a description of the nature, preservation and depth variation of the peat deposits. **Figures 14.8** and **14.9** show the peat depth distribution across the Assessment Boundary.
- 13.48 The results of peat probing field investigation and modelling of peat depths suggest the presence of both extensive areas and smaller '*islands*' of peat across the Assessment Boundary, which have the potential to conceal earlier ground surfaces (and any associated anthropogenic artefacts), preserve organic (and other) remains in waterlogged, anoxic conditions and retain palaeoenvironmental evidence.

- 13.49 The peat depth model (**Appendix 14.2**) presents an accurate peat depth surface with peat depths verified by coring. A total of 11,485 probes were undertaken across the Assessment Boundary with each probe recording the depth of penetration. Of the 11,485 locations probed, a total of 4,820 probes (42.0%) recorded depths of 0.3 m or less (no peat), 964 probes (8.38%) recorded depths of penetration between 0.3 m and 0.4 m, 4,137 probes (36.0%) recorded depths of penetration between 0.4 m and 1.0 m, and 1,564 probes (13.6%) recorded depths of penetration >1.0 m. A shaded contour interval of 0 – 0.3m, >0.3m – 0.4m, >0.4m – 1.0m, >1.0m – 2.0m, >2.0m – 3.0m and >3.0m has been used on the **Figures 14.8** and **14.9** to provide a model of estimated peat depth across the Assessment Boundary. 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. 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 sites²⁴.
- 13.50 A range of geoarchaeological projects have taken place in and around the Assessment Boundary and have revealed evidence for preservation of peat deposits which in turn preserve paleoenvironmental proxies and have the potential to inform us about past environments. 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 lithics²⁵, 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 applicationⁱⁱⁱ and was designed to target micro-siting zones for a proposed development. As such, it is assumed that the core locations had already been refined during earlier phases of the design process to minimise potential archaeological harm.
- 13.51 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 circa 0.4m and 3.4m over the course of the transect²⁶.
- 13.52 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 in 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. The samples showed that dense woodland was present in the wider landscape as blanket mire spread in the immediate

ⁱⁱⁱ RBC planning reference: 14/00877/FUL.

vicinity of the sampling site, with the subsequent appearance of ribwort plantain suggesting clearance of woodland for grazing²⁷. The 31 auger cores taken from Rooley Moor (Event 1669, noted above) were also found to contain very well-preserved plant macrofossils due to waterlogging, with occasional beetle exoskeleton fragments also present²⁸.

- 13.53 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 and it was 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*²⁹.

Prehistoric (circa 14,000 BC – AD 43)

- 13.54 The earliest of the recorded heritage assets recorded within the Assessment Boundary are two small flint implements (Assets 351 and 353), thought likely to be of Mesolithic date and found by chance on Rooley Moor and at Ding Quarry respectively. In the late 19th century, Neolithic flints were also found on Brandwood Moor (Asset 104) and on Hunger Hill / Turnshaw Hill (Assets 514 / 352), where various finds, recorded as *'knives, scrapers, arrowheads, spear tips and very small implements'* were found below the layer of peat. Mesolithic and Neolithic flints have also been recorded from the moorland outside but close to the Assessment Boundary, including Great Ding (Asset 350), Scout Moor (Asset 879) and Knowl Moor (Asset 551). Two possible Bronze Age cairns are located on (Asset 143) and just below (Asset 144) the crest of Bagden Hillocks.

Roman (AD 43 – circa 410)

- 13.55 There is no recorded evidence of Roman activity within the Assessment Boundary or the 1km study area.

Early Medieval (circa AD 410 – 1066)

- 13.56 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 reasons³⁰.
- 13.57 The frequency of elements within the Assessment Boundary and study area 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 Moor (probably from *'scorian'*, a steep rock or the projecting stones of a cliff), Cowm (from *'cumb'*, valley), Facit (the bright - ?^{iv} 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

^{iv} This denotes uncertainty about the translation of Old English.

meeting place or council³¹. 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.

Medieval (1066 – 1540)

- 13.58 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 Cheshire³². Soon after the conquest, large swathes of the north-west 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.
- 13.59 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 a relatively limited impact on the day-to-day lives of most of the inhabitants and on the archaeological resource.
- 13.60 Over the 12th and 13th centuries, Whalley Abbey became one of the primary landowners in the area, where the study area and the Assessment Boundary are situated. 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. 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 eleven 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.
- 13.61 Of the placenames identified by Fishwick as '*places mentioned in very early deeds mostly of the Twelfth or Thirteenth Centuries*'³³, 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*'. 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. This supports the overall impression that much of the Assessment Boundary and surrounding study area was largely used for grazing and potentially held in common.
- 13.62 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, a 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*

quary 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 Quarryes of ffreestone. Which ffreestone hath beene usually gotten fetched and used by the inhabitants & others from the Comons and Waste grounds without interupcion to the knowledge and Remembrance of this Jury’³⁴.

- 13.63 Sources from the 13th century set out by Fishwick³⁵, 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 centuries. Although many of the deeds set out by Fishwick refer to pasture, woods or meadow (i.e. land uses 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.

Post-medieval to Modern (1540 – present day)

- 13.64 The earliest available mapping of the area is Saxton’s map of Lancashire from 1579 (see Figure 8, **Appendix 13.1**), which uses a schematic approach and small scale to depict only the primary landscape features. The maps show 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. Blaeu’s map of Lancashire dated to 1662 (see Figure 9, **Appendix 13.1**), 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 the Assessment Boundary).
- 13.65 Following the Dissolution, lands in Spotland and surrounding townships that had previously belonged to Whalley Abbey were sold off. 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 elsewhere³⁶.
- 13.66 Several of the farmhouses and barns within the 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.
- 13.67 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 comprises a track between circa 4.5m and 5.5m wide. Extended sections of the route are surfaced with sandstone setts, with kerbstones along the edges and roadside ditches, banks or terracing of the road into the hillside.
- 13.68 The first known documentary reference to it as a formalised and maintained route is from 1729, although it may have functioned as a packhorse route earlier and it is

shown on William Yates's map of Lancashire in 1786³⁷. It is widely held that improvements to the road were undertaken in the early 1860s as a public works initiative during the Cotton Famine, hence the local names of '*Cotton Famine Road*' or '*Famine Road*'.

- 13.69 On the western side of Bagden Hillocks, the ruined remains of the Moor Cock Inn (Asset 639) are located adjacent to Rooley Moor Road. The Inn is marked on post-medieval maps and though it no longer stands, the surrounding intake walls and masonry associated with small, mapped outbuildings are identifiable.
- 13.70 The remaining recorded assets within the Assessment Boundary are heavily biased towards post-medieval extraction activities, primarily sandstone quarrying and coal mining, though the surviving assets may have had earlier origins. Much of this evidence has been gathered from historical maps, which cumulatively show the development and decline of these industries over the late 19th and 20th centuries and from which the locations of numerous small and medium-sized quarries, collieries and spoil heaps have been transcribed (see the Gazetteer in **Appendix 13.1**).
- 13.71 The largest disused quarry complexes within the Assessment Boundary, namely Cragg Quarry (Asset 196) and Ding Quarry (Asset 316) have been subject to archaeological survey work (Events 1078 and 1082) and thus incorporate a large number of individually numbered heritage assets (such as spoil heaps, building remains, cranes, leats, tanks and adits) (see Figures 3 to 6, **Appendix 13.1**). By the late 19th century, many of the quarries were linked to each other and to surrounding transport links, by tramways. Sections of these tramways partially survive within the Assessment Boundary, often reused as public footpaths (Assets 27, 59 and 189).
- 13.72 A number of recorded assets within or immediately adjacent to the Assessment Boundary relate to post-medieval farmsteads and related agricultural activity (though these assets also have the potential to have earlier origins). Various historical township, parish and county boundaries converge within the Assessment Boundary and a number of boundary mounds and stones (e.g. Assets 99, 100, 441, 442, 444 and 1150) are recorded, some of which remain extant.

Past archaeological investigations

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

extend into the western part of the Assessment Boundary (Events 1124, 1125 and 1070) as do those relating to the extension of the Scout Moor Quarry (Events 1126, 1121, 1122 and 1123).

Future Baseline

- 13.75 Without the Project for Assessment, the archaeological baseline would be stable and the condition of any buried remains is unlikely to substantially change.
- 13.76 It is recognised that for above ground heritage assets, there may be some decay over time due to trampling by livestock and continued grazing of the land, natural erosion or as they near the natural end of their design lifespan.

Primary and Tertiary Mitigation

Construction Stage

13.77 The following primary and tertiary mitigation which has been evaluated as part of the construction stage assessment is outlined below.

- Localised site clearance will be undertaken at the temporary laydown area / construction compound, substation site access tracks / crossings and the wind turbine locations with associated hardstanding (e.g. crane pads) as shown in **Figure 4.2**;
- The following heritage assets will be retained via avoidance and demarcation (where appropriate) during the site clearance works: Foe Edge Sandstone Quarry (Asset 354); Old Sink Colliery (Asset 756); Rooley Moor Road (Asset 828); Extraction Pit (Asset 1278); Disused Quarry Pit (Asset 1304); Spoil Heap (Asset 1320); Stone (Asset 1338); Linear Feature (Asset 1594); Disused Mine Shaft or Quarry Pits (Assets 1604 and 1605);
- The proposed grid connection route follows part of the line of the Cowpe Lowe/Cragg Quarry Tramway (Asset 189) which is used as a public footpath. Within the Assessment Boundary, the former tramway primarily has a gravel surface although some lengths of stone surface survive south of Cragg High Level Tank. In areas of surviving stone surface, the cable will be laid outside of the track surface to allow for its preservation *in situ*;
- Where new tracks are proposed across areas of deep peat (>1m), floating road construction techniques will be used to limit the potential for ground penetration and damage to the underlying peatland;
- No wind turbines / infrastructure will be sited in areas where the depth of peat deposits exceeds 1m, where possible;
- Internal site track layout has been designed to limit vehicular crossings of Rooley Moor Road as a non-designated heritage asset and public route (with a single crossing point proposed as shown in **Figure 4.2**). A layer of terram (or similar) will be laid over the existing road surface to prevent aggregate migration, followed by a geogrid with a layer of crushed stone to create the crossing

surface. The historic road will be reinstated to its original form for the operational life of the wind farm, with a maintenance track junction re-graded to match the roads original levels; and

- New signage and interpretation boards will be installed at the remains of the Moor Cock Inn (Asset 639) as well as other locations within the Assessment Boundary considered to be leisure destinations or landscape / heritage / ecological assets.

Operational Stage

13.78 No primary and tertiary mitigation has been evaluated as part of the operational stage assessment.

Assessment of Effects, Secondary Mitigation and Residual Effects

Construction Stage

Loss / disturbance to known archaeological assets

13.79 The direct effects (from excavation, earthwork activities, etc.) upon known heritage assets within the footprint of proposed construction stage works are set out in **Table 13.6**.

13.80 While many of the individual archaeological heritage assets identified in **Table 13.6** are individually judged to be of **negligible** or **low** importance, 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 and accordingly the 'archaeological landscape' is also included for assessment in **Table 13.6**.

Table 13.6: Direct effects upon known archaeological assets

Asset no.	Asset name and location	Assessment of importance	Description of magnitude of impact	Level of effect
189	Cowpe Lowe/Cragg Quarry Tramway	The Cowpe Lowe/Cragg Quarry Tramway enters the Assessment Boundary at the former Cragg Quarry south of Black hill running approximately NW to SE between Cragg Quarry and Ding Quarry. The tramway is used as a public footpath and has a gravel surface for much of its route although elements of stone surfacing remain although stones are not necessarily in situ. The route of the Quarry tramway is crossed by the Alternate Grid Connection Route (Option C) where nearby sections of it survive as an elevated drystone built and stone surfaced tramway. Its date is uncertain but likely contemporary with the quarries although an earlier date cannot be ruled out. It is judged to be of low importance.	Possible ground disturbance below route of road for cable installation. Primary mitigation measures will minimise disturbance within areas of stone surface and result in a negligible magnitude of impact. Secondary mitigation measures will ensure that any below ground remains relating to the road would be preserved by record.	Direct, permanent, long-term, adverse effect which is considered to be negligible. Application of micrositings allowance does not change the level of effect reported above.
668	New Hall, Gin Croft Lane Edenfield. Partially within footprint of grid connection route	Former location of a farmstead shown on 1851 and 1893 mapping. Since mostly demolished and new house built on adjacent site. Walkover revealed no sign of this former structure, which was potentially entirely cleared as part of the new house build on the adjacent site. The potential for buried remains cannot, however, be discounted.	Removal of any surviving below ground remains of part of this feature during grid connection works would result in a medium magnitude of impact.	Direct, permanent, long-term, adverse effect which is considered to be minor. Application of micrositings allowance does not change the level of effect reported above.

Asset no.	Asset name and location	Assessment of importance	Description of magnitude of impact	Level of effect
		The fragmentary remains of this former barn are judged to be of low importance.		
772	Field Barn located within the hardstanding for Turbine 1	Remains of former field barn shown on Ordnance Mapping (OS) 1:10560 mapping and surviving as partially tumbled remains of two roomed building with gate piers built into the field wall. The fragmentary remains of this former barn are judged to be of low importance.	Removal of this feature during clearance works associated with the construction of Turbine 1 would result in a large magnitude of impact.	Direct, permanent, long-term, adverse effect which is considered to be minor. Application of micrositing allowance could allow for the remains of the building to be avoided entirely, reducing the effect to none.

Asset no.	Asset name and location	Assessment of importance	Description of magnitude of impact	Level of effect
828	Rooley Moor Road	Rooley Moor Road bisects the Assessment Boundary, running approximately NNW-SSE between Catley Lane Head and Rake Head. The 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 may have functioned as a packhorse route. It is judged to be of medium importance.	Possible compaction / deposit deformation of below ground deposits associated with the single crossing point proposed as shown in Figure 4.2 . Ground disturbance below route of road for cable installation at crossing point. Primary mitigation measures will minimise disturbance and any compaction below ground remains would result in a negligible magnitude of impact. Secondary mitigation measures will ensure that any below ground remains relating to the road would be preserved by record.	Direct, permanent, long-term, adverse effect which is considered to be negligible. Application of micrositeing allowance does not change the level of effect reported above.
1299	Disused Quarry Pit within proposed track extent adjacent to Turbine 1	Former extraction pit located within the footprint of the track to Turbine 1. This type of former quarry pit is considered to be of low importance.	Removal of this feature during clearance works associated with the construction of Turbine 1 would result in a large magnitude of impact.	Direct, permanent, long-term, adverse effect which is considered to be minor. Application of micrositeing allowance does not change the level of effect reported above.

Asset no.	Asset name and location	Assessment of importance	Description of magnitude of impact	Level of effect
1300	Disused Quarry Pit within clearance / cut area for Turbine 1.	A medium-sized water-filled former extraction pit located within the clearance / cut area for Turbine 1. This type of former quarry pit is considered to be of low importance.	Removal of this feature during clearance works associated with the construction of Turbine 1 would result in a large magnitude of impact.	Direct, permanent, long-term, adverse effect which is considered to be minor. Application of micrositing allowance does not change the level of effect reported above.
1513	Ruins of Pre-cast Concrete Building and Line of Concrete Marker Posts within cut/fill earthworks for Turbine 6.	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. Noted during walkover survey in February 2025. Unclear origin, perhaps associated with later phases of quarrying and considered to be of low importance.	Removal of this feature during clearance works associated with the construction of Turbine 6 would result in a large magnitude of impact.	Direct, permanent, long-term, adverse effect which is considered to be minor. Application of micrositing allowance does not change the level of effect reported above.
1567	Disused Quarry Pit within clearance / cut area for Turbine 3.	A small former extraction pit and spoil heap located within the northern end of the clearance / cut area for Turbine 3. This type of former quarry pit is considered to be of low importance.	Removal of this feature during clearance works associated with the construction of Turbine 3 would result in a large magnitude of impact.	Direct, permanent, long-term, adverse effect which is considered to be minor. Application of micrositing allowance does not change the level of effect reported above.
1594	North to south aligned linear feature which	Faint linear feature visible in LiDAR data; unclear function, possibly the remains of a former field boundary.	Removal of short section of this feature during works associated with establishing the access track between	Direct, permanent, long-term, adverse, effect which

Asset no.	Asset name and location	Assessment of importance	Description of magnitude of impact	Level of effect
	passes through route of access track between T1 and T2	This feature is considered to be of low importance.	T1 and T2 would result in a small magnitude of impact as most of the feature would survive beyond the extent of the track.	is considered to be negligible. Application of micrositng allowance does not change the level of effect reported above.
1614	Sandstone extraction pit located within the hardstanding for Turbine 1.	A slight depression and uneven ground adjacent to former barn identified from LiDAR. Probably a sandstone extraction pit. This type of former extraction pit is considered to be of low importance.	Removal of this feature during clearance works associated with the construction of Turbine 1 would result in a large magnitude of impact.	Direct, permanent, long-term, adverse effect which is considered to be minor. Application of micrositng allowance does not change the level of effect reported above.
1641 and 1642	Boundary Stones located within hardstanding area for Turbine 4.	The two boundary stones are recorded from historic mapping but neither could be identified during the walkover survey (though ground conditions were such that their presence cannot be ruled out). These former boundary stones are considered to be of low importance.	Removal of these features during clearance works associated with the construction of Turbine 4 would result in a large magnitude of impact.	Direct, permanent, long-term, adverse effect which is considered to be minor. Application of micrositng allowance does not change the level of effect reported above.
N/A	Drystone Field Boundary within clearance / cut area for Turbine 1.	North-west to south-east aligned field boundary wall (in poor condition) that may appear to demarcate post-medieval or earlier land divisions. Poor condition and relative prevalence of feature type results in this asset being assessed to be of	Removal of this feature during clearance works associated with the construction of Turbine 1 would result in a large magnitude of impact.	Direct, permanent, long-term, adverse effect which is considered to be negligible.

Asset no.	Asset name and location	Assessment of importance	Description of magnitude of impact	Level of effect
		negligible importance (and not assigned a unique Asset number).		Application of micrositeing allowance does not change the level of effect reported above.
N/A	Drystone Field Boundary within clearance / cut area for Turbine 4.	North-west to south-east aligned field boundary wall (in poor condition) that may appear to demarcate post-medieval or earlier land divisions. Poor condition and relative prevalence of feature type results in this asset being assessed to be of negligible importance (and not assigned a unique Asset number).	Removal of this feature during clearance works associated with the construction of Turbine 4 would result in a large magnitude of impact.	Direct, permanent, long-term, adverse effect which is considered to be negligible. Application of micrositeing allowance does not change the level of effect reported above.
N/A	Archaeological landscape	The identified assets particularly extraction remains dating from the post-medieval and industrial periods, contribute to the local sense of place, and emphasise clear links between the surrounding valley communities and their wider surroundings and form part of a legible archaeological landscape of medium importance.	The Project for Assessment will result in removal of some assets and disturbance to below ground deposits. However, the overall footprint of the Project for Assessment is low and clear links between the identified assets and associated upstanding and buried remains would remain legible. The Project for Assessment is judged to have a low magnitude of impact on the historic landscape.	Direct, permanent, long-term, adverse effect which is considered to be minor. Application of micrositeing allowance does not change the level of effect reported above.

Secondary mitigation or enhancement

- 13.81 Prior to commencement of works all historic landscape features that will be impacted by the Project for Assessment will be subject to a programme of archaeological and / or historic building recording details of which will be set out in a Written Scheme of Investigation.
- 13.82 Prior to any ground breaking works at the Rooley Moor Road crossing and in well preserved areas of Cowpe Lowe/Cragg Quarry Tramway surface along grid connection Option C, a full photographic and measured survey of the road surface will be undertaken to provide a permanent record of its current condition and to allow for full reinstatement. The surface of the road will be removed under archaeological supervision and all ground breaking works for cable trench excavation will also be undertaken under archaeological supervision. Following installation of the cable, the surface of the roads will be restored to their current form and a photographic survey will be undertaken for comparison to ensure that it is restored to its previous ground level, alignment and condition.
- 13.83 Undertaking of archaeological survey and recording works in advance of development will also allow for development of a programme of public benefit which will include the engagement of Rossendale Civic Trust and other local community groups and individuals in taking part in surveys allowing them to benefit through lifelong learning, community involvement and skills development and ensuring that valuable local knowledge about the history and archaeology of the area is recorded. The results of the survey 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 surviving within the Assessment Boundary. Public interpretation would contribute towards promoting a legacy of public engagement whilst benefitting heritage, tourism, local education and health agendas. Such interpretation could take the form of history trails, guided tours, information booklets and boards, and local museum displays. The scope and requirement of any public benefit and interpretation will be undertaken in consultation with the Applicant, Historic England, GMAAS / LCCHET and the CBA.
- 13.84 Where archaeological features or upstanding assets are to be preserved in situ but are located within 50m of working areas an archaeologist will supervise the erection of fencing to prevent inadvertent damage by vehicle movements (tracking of heavy vehicles can cause damage via deposit deformation).
- 13.85 Application of micro-siting allowance does not change the level of direct or indirect effects reported above for most of the recorded receptors. It does, however, present an opportunity to reduce the magnitude of impact upon the remains of a former field barn (Asset 772) to none, by avoiding the feature entirely, which would reduce the magnitude of impact to none.

Residual effects

- 13.86 With the application of secondary mitigation outlined above, the level of residual effects upon the remaining known buried heritage assets (Assets 189, 668, 828, 1299, 1300, 1513, 1594, 1641, 1642 and Drystone Field Boundaries and Archaeological Landscape) would remain unchanged from that set out in **Table 13.6**.

- 13.87 The application of micrositeing allowance does not change the residual level of effect reported for the assets outlined above.
- 13.88 As above, the application of secondary mitigation does not change the magnitude of impact identified for Asset 772. However, the magnitude of impact on Asset 772 will be none accounting for the micrositeing allowance. Therefore, there is likely to be a direct, permanent, long-term residual effect which is considered to be none. Without the application of micrositeing, the residual level of effect remains as reported above in **Table 13.6**.

Significance

- 13.89 The residual effects upon known buried heritage assets (Assets 189, 668 828, 1299, 1300, 1513 1594, 1641, 1642, Drystone Field Boundaries, Trackway surface and Archaeological Landscape) are **Not Significant**.

Loss / disturbance to potential / unknown buried archaeological remains

- 13.90 The direct effects (from excavation, earthwork activities, etc.) upon potential or unknown heritage assets within the footprint of the proposed construction stage works are set out in **Table 13.7**.

Table 13.7: Direct effects upon potential or unknown buried archaeological remains

Asset	Asset name	Assessment of importance	Description of magnitude of impact	Level of effect
Previously unknown prehistoric artefacts and features	Previously unknown prehistoric artefacts and features (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 high importance. However, the likelihood that any remains coincide with the footprint of the Project for Assessment is manifestly reduced by the relatively small footprint of the Project for Assessment.	Removal features during works associated with the Project for Assessment could potentially result in a large magnitude of impact.	Direct, permanent, long-term, adverse effect which would be considered to be major. Application of micrositeing allowance would potentially reduce change the level of effect reported above if important remains

Asset	Asset name	Assessment of importance	Description of magnitude of impact	Level of effect
				could be preserved in situ.
Previously unknown medieval and post-medieval remains	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 importance and are unlikely to be more than low importance.	Removal features during works associated with the Project for Assessment could potentially result in a large magnitude of impact.	Direct, permanent, long-term, adverse and effect which would be considered to be minor. Application of micro-siting allowance does not change the level of effect reported above.

Secondary mitigation or enhancement

- 13.91 National planning policies and planning guidance contained within the NPPF, PPG, 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'*.
- 13.92 In accordance with national and local planning policies on heritage, a programme of archaeological works is 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.
- 13.93 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 (WSI) 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.
- 13.94 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 Applicant, Historic England GMAAS / LCCHET and the CBA.

- 13.95 If significant archaeological features are encountered, micro-siting of the Project for Assessment may be required to allow for remains to be preserved in situ.

Residual effects

- 13.96 While the importance of hitherto unknown remains is unknown, it is considered that the completion of any agreed archaeological mitigation works would result in direct impacts upon buried archaeological remains being mitigated via programmes of archaeological investigation. This would allow any remains that were to be destroyed to be '*preserved by record*'.
- 13.97 The level of residual direct and indirect effects upon buried archaeological remains would depend upon the mitigation employed following the initial archaeological investigations outlined above and would range from negligible to major adverse dependant on the nature of any encountered remains and mitigation strategy employed. Where avoidance of impacts is not possible the residual levels of effect would be unchanged from that set out in **Table 13.7**, although excavation and recording of the assets would ensure that impacts are offset by ensuring preservation by record.
- 13.98 Application of micro-siting allowance does not change the residual level of effect reported above.

Significance

- 13.99 The residual effects upon unknown buried archaeological remains (prehistoric artefacts and features) would depend upon the nature of any encountered remains and the mitigation strategy employed but has the potential to be **Significant**.
- 13.100 The residual effects upon all other unknown buried archaeological assets are **Not Significant**.

Loss / reduction in deposits preserving palaeoenvironmental remains as a result of dewatering

- 13.101 The potential for indirect effects upon hitherto unknown buried archaeological remains is considered to be limited to changes in drainage patterns that affect the ground saturation levels and anoxic conditions which might result in deterioration of peat deposits and any associated well preserved archaeological remains or paleoenvironmental proxies both within and beyond the Assessment Boundary.
- 13.102 Drainage designs for the Project for Assessment incorporate attenuation and flow control measures to mimic natural runoff regimes and minimise downstream impacts. The Project for Assessment will include peat restoration (which will be undertaken in line with Historic England Guidance³⁸) and drain blocking, and in these areas the groundwater level would be expected to rise a small amount (10s of cms) and thus is not expected to impact below ground remains. In infrastructure areas, effects on peat

will be mitigated through drainage and sustainable drainage systems (SUDS) design that retains water on site, promotes saturation of peat rather than draining it and maintains hydrological continuity where any infrastructure dissects any peat bodies. Impacts on palaeoenvironmental deposits beyond the Assessment Boundary are not predicted. Further information about anticipated changes in groundwater can be found in **Chapter 14: Hydrology, Hydrogeology and Peat**.

Table 13.8: Direct effects upon deposits preserving palaeoenvironmental remains

Asset	Asset name	Assessment of importance	Description of magnitude of impact	Level of effect
Peat deposits within the Assessment Boundary	The potential for peat deposits (that may contain important palaeoenvironmental information) is considered to be high.	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 importance as they provide information on regional vegetation change. However, the likelihood that any remains coincide with the footprint of the Project for Assessment is manifestly reduced by its relatively small footprint of the Project for Assessment.	Removal or damage to peat deposits during works associated with the Project for Assessment could potentially result in a small magnitude of impact. This is due to the primary mitigation with siting the turbines (which are located in areas with peat depths anticipated to be less than 1m) and the proposed utilisation of floating road construction techniques where peat depths exceed 1m.	Direct, permanent, long-term adverse, effect which would be considered to be minor. Application of micro-siting allowance does not change the level of effect reported above.

13.103 As noted above any peat deposits containing palaeoenvironmental information are considered to be of potential medium importance. The primary mitigation in relation to peat deposits is related to the locating of the proposed turbines in areas where peat depths are not anticipated to exceed 1m and the use of floating road construction

methods for construction access in areas where the peat is anticipated to exceed 1m. It is, therefore, considered that potential changes in groundwater levels and drainage regimes resulting from the construction stage would result in, at worst, a small magnitude of impact upon buried peats and preserved organic deposits (which would likely be localised to the areas already directly impacted).

- 13.104 The importance of the peat deposits is considered to be medium. The magnitude of impact is considered to be small. Therefore, there is likely to be a direct, permanent, long-term, adverse effect which would be considered to be minor.

Secondary mitigation or enhancement

- 13.105 The potential for peat deposits within the Assessment Boundary to yield paleoenvironmental data has been demonstrated by analysis of pollen and plant macrofossils from coring undertaken within the area.
- 13.106 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 in accordance with Historic England Guidance³⁹ 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.
- 13.107 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 a 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 sampling strategy will be designed in consultation with Historic England. 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.
- 13.108 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.
- 13.109 It is considered that the completion of the above outlined geoarchaeological works would allow for an enhancement of the current levels of knowledge regarding the survival and composition of the peat deposits across the Assessment Boundary.

13.110 If significant archaeological features are encountered, micro-siting of the Project for Assessment may be required to allow for remains to be preserved in situ. However, the location of such features is currently unknown.

Residual effect

13.111 The residual effect on deposits preserving palaeoenvironmental remains will be unchanged from that assessed in **Table 13.8**.

13.112 Application of micro-siting allowance does not change the residual level of effect reported above.

Significance

13.113 The residual effects are **Not Significant**.

Operational Stage

Loss / reduction in deposits preserving palaeoenvironmental remains as a result of dewatering

13.114 The potential for indirect effects upon hitherto unknown buried archaeological remains is considered to be limited to the potential effects of any changes to the ground conditions within the Assessment Boundary (due to ongoing effects of new drainage systems, etc.) that could affect the preservation of any buried peats and preserved organic deposits.

13.115 As noted above, any peat deposits containing palaeoenvironmental information are considered to be of potential medium importance. The primary mitigation in relation to peat deposits is related to the locating of the proposed infrastructure in areas where peat depths are not anticipated to exceed 1m and the proposal to use floating road construction methods for access in areas where the peat is anticipated to exceed 1m.

13.116 Drainage measures installed during construction - such as cross drains, culverts, and diffuse discharge points - will remain functional, ensuring continued groundwater recharge and minimising the potential for long-term changes in groundwater distribution. No active groundwater abstraction or discharge is proposed during operation. Further information about anticipated changes in groundwater can be found in **Chapter 14: Hydrology, Hydrogeology and Peat**.

13.117 During the operational period, it is assumed that maintenance vehicles would use access infrastructure and would not track across open peat moorland. It is, therefore, considered that potential changes in the ground conditions resulting from the operational stage (e.g. due to the localised impacts of the drainage strategy) could result in small magnitude impacts upon buried peats and preserved organic deposits (which would likely be localised to the areas already directly impacted).

13.118 The importance of the peat deposits is considered to be medium. The magnitude of impact is considered to be small. Therefore, there is likely to be a direct, permanent, long-term, adverse effect which would be considered to be minor.

13.119 Application of micro-siting allowance does not change the level of effect reported above.

Secondary mitigation or enhancement

13.120 No secondary mitigation has been identified in relation to the potential for ongoing indirect effects upon any buried peats and preserved organic deposits.

Residual effects

13.121 In the absence of secondary mitigation, the residual effects on any buried peats and preserved organic deposits is that same as that reported in the pre-mitigation scenario.

13.122 Application of microsinning allowance does not change the residual level of effect reported above.

Significance

13.123 The residual effect is **Not Significant**.

Limitations and Assumptions

13.124 To ensure transparency within the EIA process, the following limitations and assumptions have been identified.

- This assessment is based upon data obtained from publicly accessible archives as described in **Appendix 13.1** (Section 4.2). Information from the NHLE was downloaded on 28th April 2026. Data provided by the Greater Manchester and Lancashire HERs were received on 23rd September 2024 and 1st May 2026 respectively. The information presented in the Gazetteer (appended to **Appendix 13.1**) regarding known heritage assets is current to these dates; and
- The walkover survey undertaken in support of the desk-based assessment (**Appendix 13.1**) was undertaken from publicly accessible common land and rights of way.

Summary

13.125 **Table 13.9** provides a summary of the effects, receptors, residual effects and conclusions of significance considered within the Chapter.

13.126 The table only provides a summary of the residual effects identified within the assessment and details of all primary, secondary and tertiary mitigation measures that have been taken into account are set out in detail within the Chapter and summarised in the Environmental Management Plan included in **Volume 3: Environmental Management Plan**.

Table 13.9: Summary of residual effects

Effect	Receptor	Residual effect	Is the residual effect Significant?
Construction stage			
Loss / disturbance to known archaeological assets	Known heritage assets including: Cowpe Lowe/Cragg Quarry Tramway (Asset 189)	Negligible adverse	No
	New Hall Gin Croft Lane (Asset 636)	Negligible Adverse	No
	Remains of Field Barn (Asset 772)	Minor adverse	No
	Rooley Moor Road (Asset 828)	Negligible adverse	No
	Disused Quarry Pits (Assets 1299 and 1300)	Minor adverse	No
	Ruins of pre-cast concrete building and marker posts (Asset 1513)	Minor adverse	No
	North to south aligned linear feature (Asset 1594)	Negligible adverse	No
	Sandstone extraction pit (Asset 1614)	Minor adverse	No
	Boundary Stones (Assets 1641 and 1642)	Minor adverse	No
	Drystone Field Boundary within clearance / cut area for Turbine 1	Negligible adverse	No
	Drystone Field Boundary within clearance/cut area for Turbine 4	Negligible adverse	No

Effect	Receptor	Residual effect	Is the residual effect Significant?
	Trackway along grid connection route	Negligible adverse	No
	Archaeological landscape	Minor adverse	No
Loss / disturbance to potential / unknown buried archaeological remains	Potential / unknown buried archaeological remains (prehistoric artefacts and features)	Negligible to major adverse (dependant on nature of any encountered remains and mitigation strategy employed)	Potentially Yes (dependant on nature of any encountered remains and mitigation strategy employed)
	Potential / unknown buried archaeological remains (medieval and post-medieval remains relating to agricultural land use within the Assessment Boundary).	Negligible to minor adverse (dependant on nature of any encountered remains and mitigation strategy employed)	No
Loss / reduction in deposits preserving palaeoenvironmental remains as a result of dewatering activities	Deposits preserving palaeoenvironmental remains	Minor adverse	No
Operational stage			
Loss / reduction in deposits preserving palaeoenvironmental remains as a result of dewatering activities	Deposits preserving palaeoenvironmental remains	Minor adverse	No

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