CONTENTS

	SUMMARY	**3**
1	**INTRODUCTION**	**3**
1.1	**Project origins**	**3**
1.2	**Project design**	**7**
1.3	**Desk-based assessment sources**	**7**
1.4	**Archive**	**8**
2	**BACKGROUND**	**8**
2.1	**Location, topography and geology**	**8**
3	**HISTORICAL CONTEXT**	**9**
3.1	**Historical background**	**9**
3.2	**Cartographic research**	**14**
3.3	**Previous archaeological reconnaissance**	**14**
3.4	**Historic Environment Record**	**17**
3.5	**Lidar**	**19**
4	**FIELD SURVEY**	**20**
4.1	**Walkover survey**	**20**
4.2	**Sites identified**	**23**
5	**HISTORIC ENVIRONMENT APPRAISAL**	**23**
5.1	**Buried archaeological potential**	**23**
5.2	**Palaeo-environmental potential**	**24**
5.3	**Visual impacts**	**24**
6	**SUMMARY OF IMPACTS**	**24**
6.1	**Discussion**	**24**
7	**ACKNOWLEDGMENTS**	**24**
8	**BIBLIOGRAPHY**	**25**
Table A	**Heritage assets held in the Historic Environment Record**	**18**

FIGURES

Figure 1.	**Location of the development**	**4**
Figure 2.	**Development area (Curtilage in red outline)**	**7**
Figure 3.	**First Edition Ordnance Survey map 1867**	**15**
Figure 4.	**Second Edition Ordnance Survey map 1900**	**15**
Figure 5.	**Third Edition Ordnance Survey map 1926**	**16**
Figure 6.	**Ordnance Survey map 1946**	**16**
Figure 7.	**Ordnance Survey revision 1952**	**17**
Figure 8.	**Location of entries in the Historic Environment Record**	**18**
Figure 9.	**Lidar of the study area**	**19**
Figure 10.	**Redundant agricultural buildings**	**20**
Figure 11.	**Barn in Field**	**20**
Figure 12.	**Field 1 looking westwards**	**21**
Figure 13.	**Earthwork in Field 1**	**21**
Figure 14.	**Field 2 looking westwards**	**21**
Figure 15.	**Earthwork in Field 2**	**21**
Figure 16.	**Hedge in Field 2**	**21**
Figure 17.	**Field 3 looking westwards**	**21**
Figure 18.	**Southern boundary, Field 3**	**22**
Figure 19.	**Bank at south-west corner**	**22**
Figure 20.	**Bank looking north**	**22**
Figure 21.	**Raised bank looking east**	**22**
Figure 22.	**Field 4 looking north**	**22**
Figure 23.	**Building debris in Field 4**	**22**
Figure 24.	**Southern bank and hedgerow**	**23**
Figure 25.	**Western bank and hedgerow**	**23**

Summary

The desk-based assessment has not identified any heritage assets that could seriously impact upon the development. An undated earthen bank located around Field 4 probably relates to post-medieval re-organisation of space, possibly associated with enclosure. This feature can in all probability be preserved *in situ*.

Previous archaeological reconnaissance has not raised any archaeological issues and the likelihood remains that the archaeological potential is probably low.

The presence of former remediation and iron ore workings are likely to make the study area archaeologically sterile. However, the curatorial authority could advocate a programme of archaeological evaluation in order to test this assertion, perhaps allied to a complementary geo-physical survey that may highlight surviving anomalies with a past cultural origin.

1. INTRODUCTION

1.1 Project origins

As part of a potential housing development (figure 1) at land at Jacktrees Road, Cleator Moor, Cumbria, (NY 01700 14500) an archaeological desk-based assessment was commissioned by Mikey Hamer on behalf of the client, Gleeson Homes Ltd. The report attempted to ascertain whether any sensitive past cultural features and archaeological deposits may be extant within the curtilage of the proposed housing development, an area measuring approximately 4.59 hectares (figure 2).

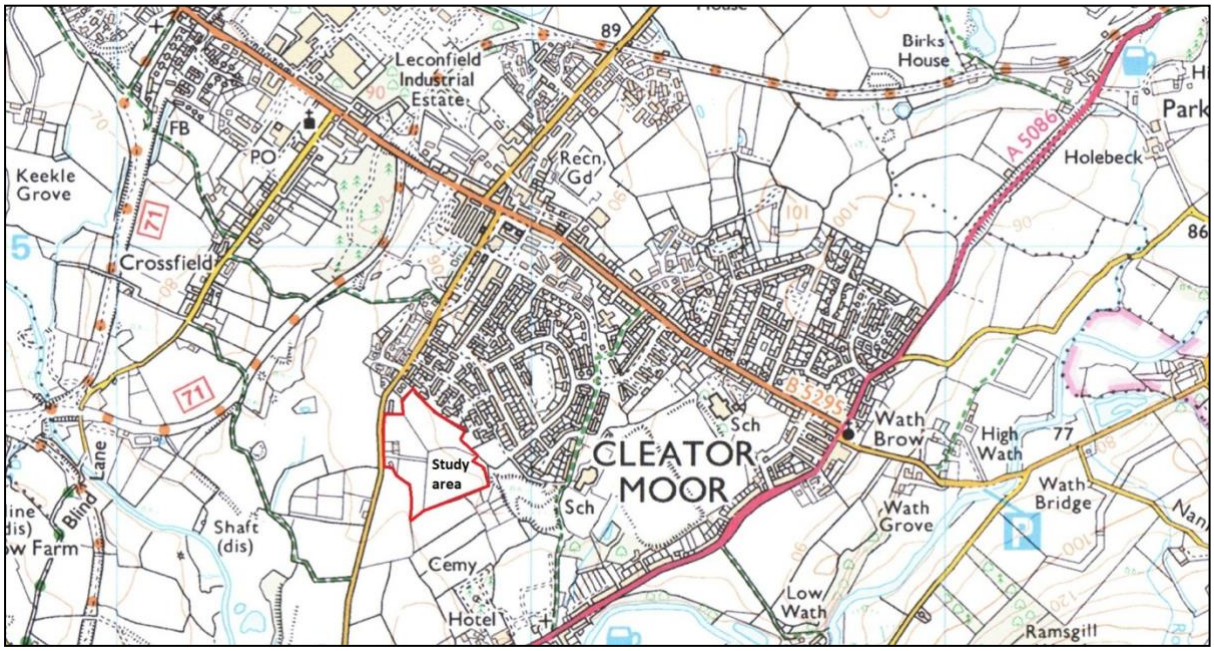


Figure 1. Location of the development. (OS Copyright, Licence no. 100044205)

The scheme will develop a polygonal block of land that has never been used for permanent settlement with the development seeking to provide an unspecified number of houses at the time the desk-based assessment report was compiled.

The following study revealed few tangible archaeological heritage assets of any merit, the study area being quite possibly archaeologically sterile. The suggestion is therefore, that few extant archaeological remains will be encountered should future development proceed.

The Copeland Plan area contains nearly 600 listed buildings and heritage assets and part of the Hadrian's Wall World Heritage Site with a Roman fort at Moresby. There are eight conservation areas in the Borough. The Council desires that these features are conserved and enhanced where possible and that they contribute to heritage-led regeneration within the main settlements.

Policy ENV4 sets out the Council's approach to enhancing the quality of the Borough's built environment and heritage assets. It is linked to the strategic principle in Policy ST1C.

The Council's policy is to maximise the value of the Borough's heritage assets by:

A Protecting listed buildings, conservation areas and other townscape and rural features considered to be of historic, archaeological or cultural value

B Supporting proposals for heritage led regeneration, ensuring that any listed buildings or other heritage assets are put to an appropriate, viable and sustainable use

C Strengthening the distinctive character of the Borough's settlements, through the application of high quality urban design and architecture that respects this character and enhances the settings of listed buildings (Copeland Borough Council 2013, 74)

Policy DM27 (Built Heritage and Archaeology) supports this policy, setting out the Council's approach to development which affects built heritage and archaeology. Its components are as follows:

A Development proposals which protect, conserve and where possible enhance the historic, cultural and architectural character of the Borough's historic sites and their settings will be supported. This will be particularly relevant in the case of:

i) Scheduled Ancient Monuments

ii) Conservation Areas

iii) Listed Buildings and structures

iv) Non-listed buildings and structures or landscape features of local heritage and archaeological value

v) Surface and below ground archaeological deposits

B Development proposals which have a significant adverse effect on a Scheduled Ancient Monument or its wider site or setting will not be permitted

C Development within Conservation Areas will only be permitted where it preserves or enhances the character or appearance of the area and, where appropriate, views in and out of the area. The Council will pay particular attention to:

i) How new development respects the character of existing architecture and any historical associations, landscape features, open spaces, trees, walls and quality of townscape

ii) The impact of any proposed works to trees with regard to policy DM28

iii) The design of any proposals for new or altered shop fronts and / or signage, which should be an integral part of the design and avoid the use of internally illuminated signage

D Development which affects Listed Buildings or their setting will only be permitted where it:

i) Respects the architectural and historic character of the building

ii) Avoids any substantial or total demolition, or any demolition that is not related to proposed development affecting the building

iii) Does not have a significant adverse effect on the setting or important views of the building

iv) Involves a change of use to all or part of the listed building which contributes to the conservation and overall economic viability of the building, and where the use can be implemented without any adverse alterations to the building

E Any development proposal which is considered to affect an existing or potential site of archaeological importance will be required to be accompanied by an archaeological assessment. Where archaeological deposits are evident, below ground or on the surface, evidence should be recorded and where possible preserved in-situ. Proposals for development where archaeological interest has been established will not be approved until evidence has been provided that the risk of archaeological disturbance has been adequately investigated and has been minimised. Planning permission will not be granted if the impact on potential archaeology is unacceptable.

This Policy stresses the twin need to both protect assets of established heritage value and to draw upon that heritage to create places of quality and character. Not all listed structures are buildings. There are listed features such as doorways, piers, lighthouses etc. which, if well maintained, can contribute significantly to a sense of place.

There are also areas of archaeological significance that should be preserved for their potential to provide the enjoyment of discovery and the associated educational value of this, not just for ourselves but for future generations.

The main risk to our heritage assets, especially the many listed buildings is that they fall into disuse, become derelict and have to be demolished. The Council is keen to avoid situations like this and therefore will be supportive of any proposal that can bring a vacant listed building back into use, where that use is viable, sustainable and appropriate to its particular location.

In the context of managing development, the policy approach is to assess the implications of new development on features of historic value, including historic buildings, as part of the planning application process.

The policy covers not only designated heritage assets but those considered to be important by local communities but with no official designation i.e. landmark structures and landscape features. There is no official list of these assets but their existence will become apparent as development proposals are brought forward as part of the application process and local residents comment on these applications. Therefore, it is important that developers making applications are aware of any features in the vicinity of their sites which could be considered to be local landmarks and take account of the impact that their developments might have on these features and their settings. Pre-application advice should be sought on these matters where there is any uncertainty (Copeland Borough Council 2013, 169-170)

Finally, the Council concedes that all heritage assets cannot be preserved and that *preservation in situ* whilst desirable will not be a sustainable response to certain developments. The response to such a situation is that the developer must provide sufficient and adequate resources in order that a record can be assembled that fulfils the heritage protocols set by Cumbria County Council Historic Environment Service (CCCHES) and agreed before development proceeds by that curatorial body.

1.2 Project design

The subsequent report attempts to evaluate the archaeological potential in advance of development and highlight areas of potential research (figure 2).

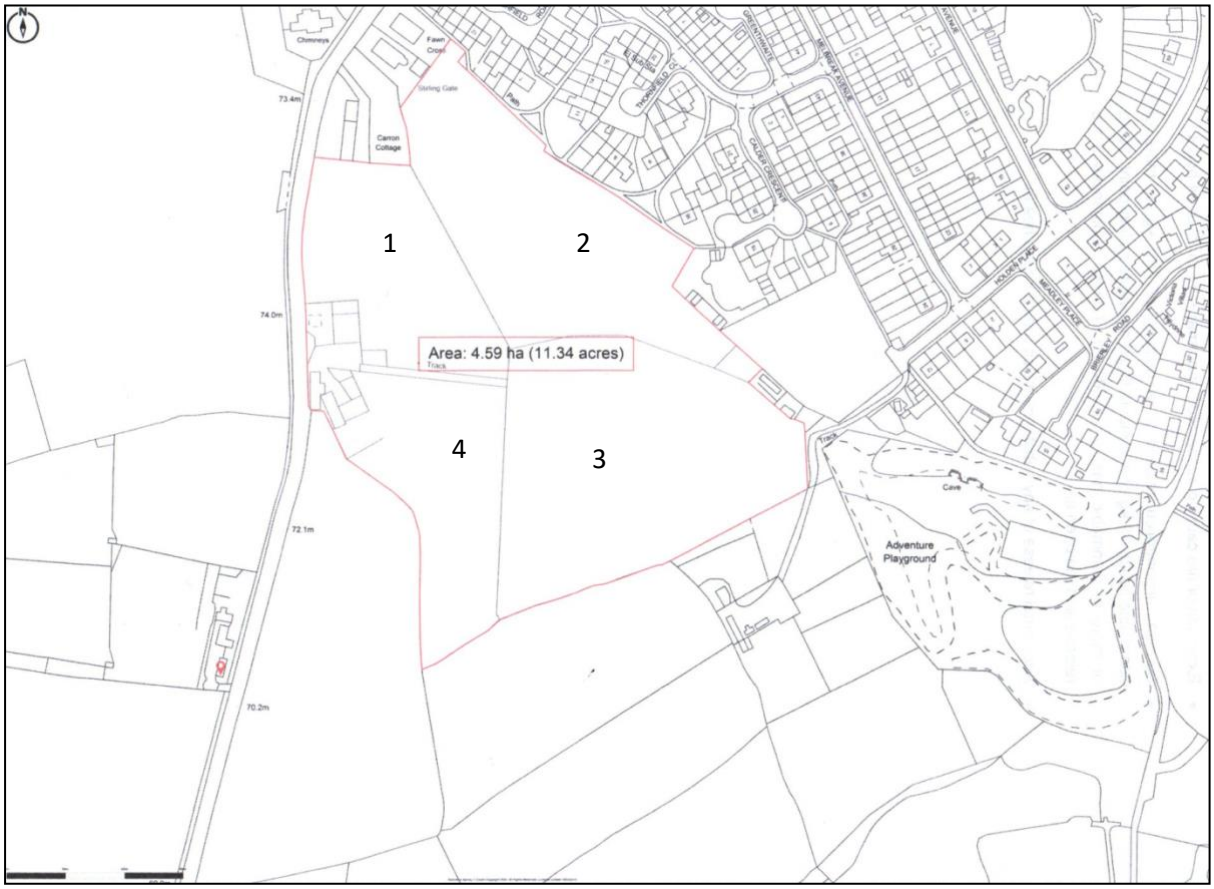


Figure 2. Development area. Curtilage in red outline

The impact of development upon the archaeological record is poorly addressed in the Cleator Moor area, as there have been relatively few archaeological interventions suggesting the deposit model is little understood.

All archaeological projects are carried out in accordance with National Planning Policy Framework (2021) and the guidelines and recommendations issued by the former Institute of Field Archaeologists (2014) and Management of Research Projects in the Historic Environment (Historic England 2015).

Research and a walk-over survey took place on November 11th 2022. Archaeological enquiry seeks to obey the heritage commitments of National Planning Policy Framework (NPPF 2021).

1.3 Desk-based assessment sources

The desk-based assessment investigated primary and secondary historical sources, maps and other literature in order to place the survey results into their past cultural, historical and topographic context.

The physical study area was within a 1,000m radius

The desk-based assessment required a search of four archival repositories:

- Whitehaven Library provided sources for published works including newspaper articles, archaeological and antiquarian reports and trade journals.
- Cumbria Record Office, Carlisle and Whitehaven provided the earliest enclosure and tithe maps for the parish, details of landowners and occupiers and cartographic evidence.
- The Historic Environment Record, Kendal provided the Sites and Monuments Record describing previous archaeological observations of the study area and aerial photographs relevant to the study area.
- British Newspapers Online provided newspaper articles
- Archaeological grey literature on the Archaeological Data Service (ADS).

1.4 Archive

The archive has been compiled in accordance with the project design and the guidelines set out by Management of Archaeological Projects (English Heritage, 1991) and the Chartered Institute of Field Archaeologists (1994, 2007 and 2012).

The archaeological desk-based assessment will become a public document as part of the planning application on behalf of the client's application.

The archive will be deposited with an appropriate repository and a copy of the report donated to the County Sites and Monuments Record.

A copy of the report will be deposited with the online *Oasis* archaeological database.

2 BACKGROUND

2.1 Location, topography and geology

The study area NY 01750 14600 (figure 1) located at Cleator Moor, lies to the south of the settlement and exists as open ground used for agricultural grazing. Cleator Moor, historically an industrial town dating from the mid 19th century for the exploitation of iron ore attracted a large migrant Irish population.

The underlying geology of the area around Cleator Moor consists of the Frizington Limestone Formation deposited between 337 and 343 million years ago.

The superficial drift geology consists of clay, silt, sand and gravel. Sedimentary superficial deposits were formed between 118,000 years ago and the present during the Quaternary period.

The local landscape has been categorised as follows:

47. West Cumberland Plain

The West Cumberland Plain is a coastal area, stretching from the Solway Coast AONB in the north, to Egremont in the south. It forms part of both Allerdale and Copeland Districts. It is generally low-lying and coastal in nature, with generally low, eroding cliffs forming the seaward edge. Its dominant character is urban and industrial. It includes a number of large, urban nucleations, such as Maryport, Workington, Whitehaven, Cleator Moor and Egremont. Though industrial towns, there are significant elements within them relating to their origins and early growth.

Both Workington and Egremont are medieval settlements, with Egremont being a still-definable planned borough. Although the area has a long industrial and maritime history, 71% of the settlement post-dates 1900. These developments have largely obscured the planned, medieval, nucleated settlement character that predominated until the 19th century. The industrial nature of the area is not confined to the urban settlements; the coastal strip between Workington and Maryport is dominated particularly by current and past industries.

The field pattern has been much disrupted by modern developments. These include land restorations, for which the modern field pattern bears very little relationship to the historic pattern. Where the historic field pattern can be discerned, within Allerdale District it is a mix of former common arable fields and 19th century planned enclosures.

Designed landscapes are a feature of the area, both within the towns and as part of former country estates. One of the most noticeable is Curwen Park, Workington, which originated as a deer park.

Overall, the area has relatively little woodland.

3 HISTORICAL BACKGROUND

3.1 Historical background

Palaeolithic

No early Palaeolithic material has been recovered within Cumbria. The most recent geological period, the Pleistocene, witnessed the movement of massive north-south travelling ice sheets, which successively scoured the landscape during prolonged periods of glaciation.

Pollen samples from the Windermere Interstadial suggest that winter conditions were severe with excessive surface water and vegetation establishing itself only during the summer.

Around 13,000 years BP, Late Upper Palaeolithic people returned to Britain, although evidence for this activity extending to northwest England is extremely scarce. However, the discovery of Late Upper Palaeolithic blades near Grange-over-Sands and at Aldingham, on the Furness Peninsula, does not preclude the existence of a Cumbrian Palaeolithic culture.

Penetration into the hinterland did not occur.

Mesolithic

Our understanding of the Mesolithic period is heavily influenced by the exposure of diagnostic material in particular lithic assemblages although palaeo-environmental evidence indicates repeated woodland reduction episodes. Towards the later Mesolithic period there is considerable evidence for occupation on raised beaches. This activity tends to conform to the seasonal model of hunter-gatherers exploiting natural resources but with elements of a managed landscape emerging.

In western Cumbria, late Mesolithic flint scatters have been recovered from the raised beaches of the maximum marine transgression and along cliff tops north of St Bees. It has been suggested that there is little discernible technological difference between the later Mesolithic and early Neolithic assemblage perhaps indicating considerable longevity and a distinctive west Cumbrian tradition.

There is no known Mesolithic occupation in this area.

Neolithic

The early Neolithic period represents the transition from hunter-gatherer societies to sedentary agricultural communities. As societies became established, specific cultural traits emerged; the appearance of ceremonial and funerary landscape monuments and the development of distinctive ceramic styles and lithic forms

In the Late Neolithic, social hierarchies emerge through the intensification and increasing sophistication of settlement, land use and artefact production.

Evidence for settlement in Cumbria is primarily inferred by the distribution of polished stone axes from the Langdale axe factory.

Long distance trade and contact is suggested by the frequent appearance of these axes throughout the British Isles and by the third Millennium BC, the production of these axes was part of a trans-European trading network.

Within the immediate environs of the study area there is no direct evidence for Neolithic settlement.

Bronze Age

The Bronze Age in the north-west is noted by an increase in land clearance and the beginning of cereal cultivation from approximately 2000 BC. Despite much continuity from the Late Neolithic, the Bronze Age introduces bronze metalwork, changes in pottery styles and burial practice. However, archaeological visibility within Cumbria is poor and very few Bronze Age sites have been discovered in Cumbria, although in coastal, south-west Cumbria the earlier lithic tradition appears to continue into at least the early Bronze Age.

Cist burials appear from the beginning of the second Millennium BC and it is believed that they represent former monuments within a Bronze Age agricultural landscape. Aerial photography on the North Cumbrian Plain, suggests a number of crop-marks may represent barrows within a network of

linear ditches forming a *cursus*. However, there is no current evidence to suggest that this practice may have dispersed southwards into this study area.

In north and west Cumbria, clearance of woodland occurs from the third millennium BC but was accompanied by climate deterioration before a second major phase of clearance in the latter half of the first millennium BC (McCarthy 2003, 133).

Within the immediate environs of the study area there is no direct evidence for Bronze Age settlement.

Iron Age

The Iron Age is noted for the introduction of iron tools and weapons, increasing sophistication in pottery production, long-distance trade and the development of social hierarchies from kinships societies to tribal territories based on regional centres.

In Cumbria, the early and mid-Iron Age is poorly represented suggesting a low population threshold (Brennand 2006, 51). In the late Iron Age, there is considerable forest clearance suggesting population stress probably associated with proto-regional tensions between Iron Age tribes.

Iron Age agricultural practices have been discerned at Tarraby Lane, Carlisle in 1976 as a series of field boundaries and cultivation marks (Smith 1978, 21-23) known as cord-rig cultivation but unenclosed settlement appears to leave little trace.

Hillforts and enclosed settlement are largely missing from the archaeological record.

However, at Salterbeck an Iron Age enclosure was identified. The defended settlement 490m north east of Beckstone Bridge is preserved as a crop-mark and a partial earthwork and does contain archaeological deposits relating to its construction, use and abandonment and the environmental deposits relating to the use of the surrounding landscape.

The monument provides insight into the character of fortified settlements during the Iron Age. The monument includes the remains of a defended settlement of Iron Age date forming a protected promontory at the south west end of a ridge. The settlement, which is preserved as a crop-mark and partial earthworks, includes a sub-circular enclosure measuring 54m by 69m, surrounded by partial concentric double ditches and part of a rampart.

This form of settlement is not known in the immediate area.

Roman

The study area may have been part of the eastern fringes of a militarised zone defined as a continuation of the Cumbrian coastal defences (Mann 1989, 75) a further 45 km southwards beyond Maryport to link with the earlier fortlet measuring 0.47 hectares, the late Hadrianic fort at Ravenglass (Potter 1979, 18).

Western and northern Cumbria was a rich agricultural area during the Roman period growing wheat and barley for the nearby military centres and the coastal garrisons. This produced a landscape of rectilinear field systems bounded by ditches, tracks and hedges with intermittent farmsteads.

The typical farmstead was set inside a ditched and embanked enclosure, which varied in plan. Within the enclosure were rectangular and circular plan buildings (suggestive of both native and Roman influence), cobbled yards and some degree of drainage. These farmsteads do not appear to be materially ostentatious reflecting functional use rather than any suggestion of upward social mobility or development.

The Roman settlement at Carlisle is thought to have become the urban capital of the Carvetii, a sub-division of the Brigantian tribal group, and it has been postulated that the Solway Plain may have provided the economic platform necessary for the Carvetii to have been granted a degree of autonomy as the civitas Carvetiorum (Shotter 1993, 28).

There is no known Roman settlement in the vicinity of Cleator Moor.

Medieval

Following Roman withdrawal, it is believed that West Cumbria reverted to native autonomy before the Angles began to enter eastern Cumbria during the 7th Century AD followed by Anglo-Saxon, Scandinavian and Scottish incursions up to the 11th Century AD. Although little tangible evidence remains in the form of settlement, place-name evidence perpetuates these successive influences.

During the 12th century the area now known as Cumbria passed from the control of the Kingdom of Strathclyde to the Norman King Henry II. This region was sub-divided into baronies.

There is some evidence for a settlement of some form at Cleator from the 12th century. A manor of Cleator is referred to in 1315. At this time James Douglas did much damage at Egremont and despoiled the church of St Bega and burned the prior of St Bega's manors of Cleator and Stainburne' (Caine 1915, 25).

Post-Medieval and modern

The Cumbria iron ore field lies to the south of Workington, and produced extremely high grade phosphorus-free haematite. West Cumbria had a long tradition of iron smelting, but this became particularly important with the invention by Sir Henry Bessemer of the Bessemer process in 1856, the first process for mass production of mild steel, which previously had been an expensive specialist product. For the first 25 years of the process, until Gilchrist and Thomas improved upon it, phosphorus-free haematite was required, found locally around Cleator Moor.

With Cumbria as the world's premier source and the local coalfield providing energy for steel production, the world's first large-scale steelworks was opened in the Moss Bay area of Workington in 1872, although there are now no structural remains.

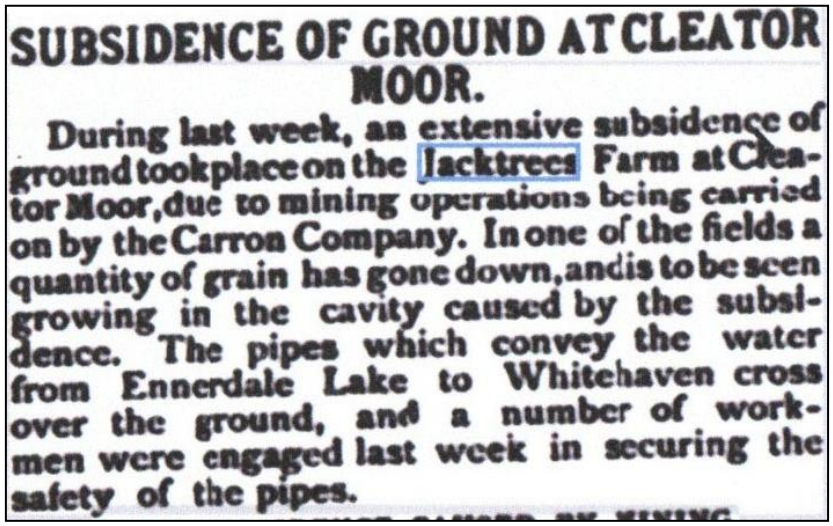
Cleator Moor was sustained by the iron works industry and was served in this capacity by two railways. There were major 19th century iron ore (haematite) mines at Todholes, Crossfield, Crowgarth, Jacktrees and Montreal most of which closed early in the 20th century.

The operation in Jacktrees Road probably began in 1882, as output is recorded from Colorado Pit, with the owners by the 1890's entitled Carron Iron Company and by 1900 Carron Company. In 1910, Jacktrees Mining Company Ltd with a capital of £10,000 of £1 shares was registered, replacing the

former company. The company was wound up on 28th April 1922 according to the London Gazette of 2nd May 1922:

The JACKTREES MINING CO. Ltd. At an Extraordinary General Meeting of the above named Company, duly convened, and held at 34, Lowther-street, Whitehaven, on the 13th day of April, 1922, the following Resolution was duly passed as an Extraordinary Resolution, and at a subsequent General Meeting of the Members of the said Company, duly convened, and held at the same place, on the 28th day of April, 1922, 'the said Resolution was duly confirmed as a Special Resolution, viz. :— That the Company be wound up voluntarily; and that Mr. William Walter Casson be and he is hereby appointed Liquidator for the purpose of such winding-up. Dated this 28th day of April 1922. H. CASSON, Chairman.

Several iron ore mines and excessive mining caused subsidence within Cleator Moor. Some parts of the town have been subsequently demolished due to undermining in the area, most notably the original Montreal Primary School and the whole of Montreal Street on which it stood. At Jacktrees Road the West Cumberland Times of 8th September 1886 records the following subsidence incident:



SUBSIDENCE OF GROUND AT CLEATOR MOOR.

During last week, an extensive subsidence of ground took place on the Jacktrees Farm at Cleator Moor, due to mining operations being carried on by the Carron Company. In one of the fields a quantity of grain has gone down, and is to be seen growing in the cavity caused by the subsidence. The pipes which convey the water from Ennerdale Lake to Whitehaven cross over the ground, and a number of workmen were engaged last week in securing the safety of the pipes.

The West Cumberland Times records a fatal accident of Felix Keogh at Jacktrees Pit on 4th September 1895.

The Whitehaven, Cleator and Egremont Railway (WC&ER) was the first railway opening for goods traffic in 1855, two years later it received passenger traffic. The WC&ER sold out to the London and North Western Railway in 1878 but when the Furness Railway objected to the sale it too became a partner, thus forming the Furness & London and North Western Joint Railway the following year.

The second railway to serve Cleator Moor was the Cleator & Workington Junction Railway. This new company had a station on the western edge of the town and its double track main line made a junction with the former company at Cleator Moor West Junction.

The Whitehaven, Cleator and Egremont Railway suffered from subsidence which forced it to build two deviation branch lines and stations. In Cleator Moor itself a new line was built curving further northwest than the original, with a new station being opened in 1866 approximately 600 metres further west along Leconfield Street than the original, which became a goods station. The new station was known simply as Cleator Moor, but was renamed Cleator Moor East in 1924.

Subsidence also necessitated a deviation at Eskett. As in Cleator Moor itself, a new line was built to the west of the original Eskett station which was retained as a goods station up to 1931. Yeathouse station was opened on the deviation line as a replacement.

The influx of Irish workers gave the town the nickname *Little Ireland*. World War I and World War II saw a fresh influx of immigrants from mainland Europe to join the settled Irish community.

In 1938, Jakob Spreiregen founded the company Kangol in Cleator, situated across the road from St Mary's Church. The original factory building still stands but empty, since the company ended its association with the town in 2009.

With the decline of traditional industries and the resulting high rate of unemployment, the town's economy is now dependent on the nearby Sellafield nuclear complex.

3.2 Previous archaeological research

Little archaeological reconnaissance has been undertaken in close proximity to the study area. There are no immediate excavated sites within close proximity. The National Monument Record Index indicated only two entries. Four archaeological projects have been identified, germane to this study listed below.

A geophysical survey at Cleator Mill, Cleator undertaken by Wardell Armstrong Archaeology in 2013 produced no discernible archaeological signature.

The Mission, Wath Brow, Cleator Moor: an historic building survey was undertaken by Jan Walker in 2011 of a Mission Church at Wath Brow prior to conversion to residential use. The chapel was noted to have been constructed in 1881 to replace a Wesleyan Chapel 'situated elsewhere in Cleator Moor' (HER Report Ref: 4/11/2413).

South Egremont Pipeline, Cumbria: an archaeological desk-based assessment and walkover survey was undertaken by Wardell Armstrong Archaeology in 2012 in advance of a proposed new pipeline, part of which passed through the 1,000m search area to the east and south of the proposed development site. In the vicinity of Cleator, the report highlighted the potential impact of the scheme on St Leonard's Church.

A desk-based assessment of Station Yard, Moor Row, Cleator Moor conducted in 2008.

3.3 Cartographic research

The First edition Ordnance Survey map of 1867 (figure 3) provides a detailed disposition of agricultural fields in the vicinity. Settlement was centred along the principal road to Whitehaven but had not encroached along Jacktrees Road.

Jacktrees appears as a farmstead but apart from a westerly field (Field 1) the modern field pattern was not articulated. This discrepancy was almost certainly due to later mining operations illustrated on the Second Edition Ordnance Survey map. Extensive Iron ore mines were already established to the north of Cleator Moor as well as Todholes and Crossfield.

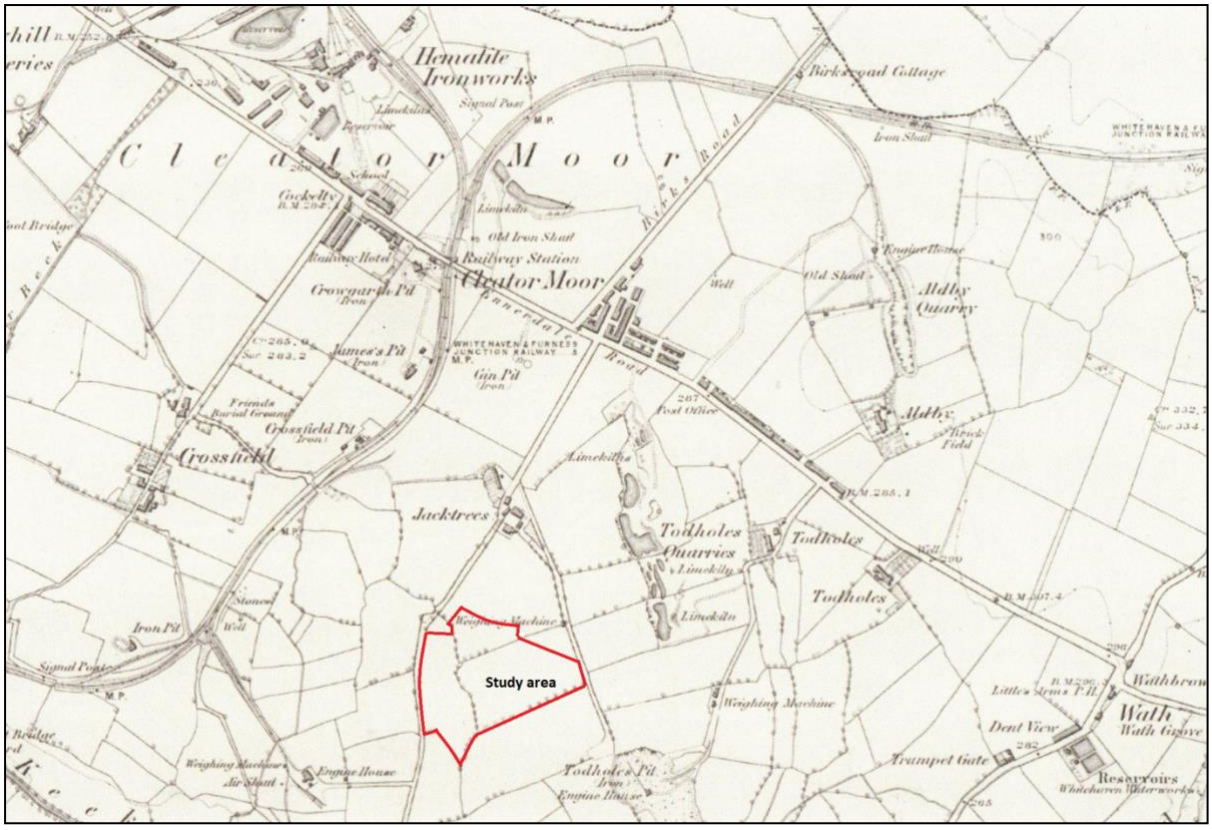


Figure 3. First Edition Ordnance Survey map 1867

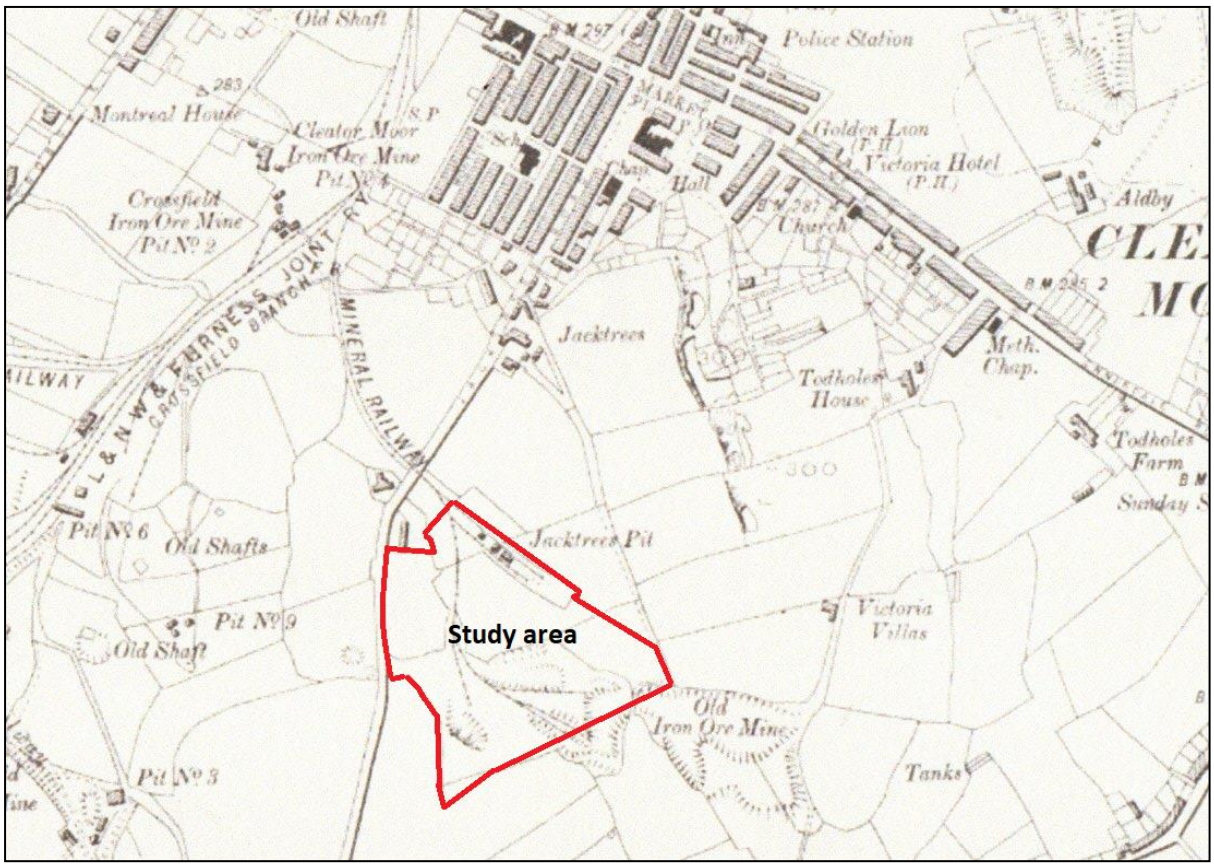


Figure 4. Second Edition Ordnance Survey map 1900

The Second Edition Ordnance Survey map of 1900 (figure 4) depicts massive reorganisation of space. A spur branches from the Crossfield Branch Line as a mineral railway to Jacktree Pit with further tendrils leading southwards to open quarries possibly as tramways. One quarry is titled Old Iron Ore Mine despite being absent from the first edition map. Historically, the ore mine was known to be active and it appears highly likely that Jacktree Pit was located within the curtilage of the study area.

The Third edition Ordnance Survey map of 1926 (figure 5) was compiled after the closure of the mine in 1922. The railway spur had been removed as had the tramway within the iron ore pit. The former pits were named as "Old Shaft". None of the quarry appeared to have been remediated and no internal field boundaries had been initiated.

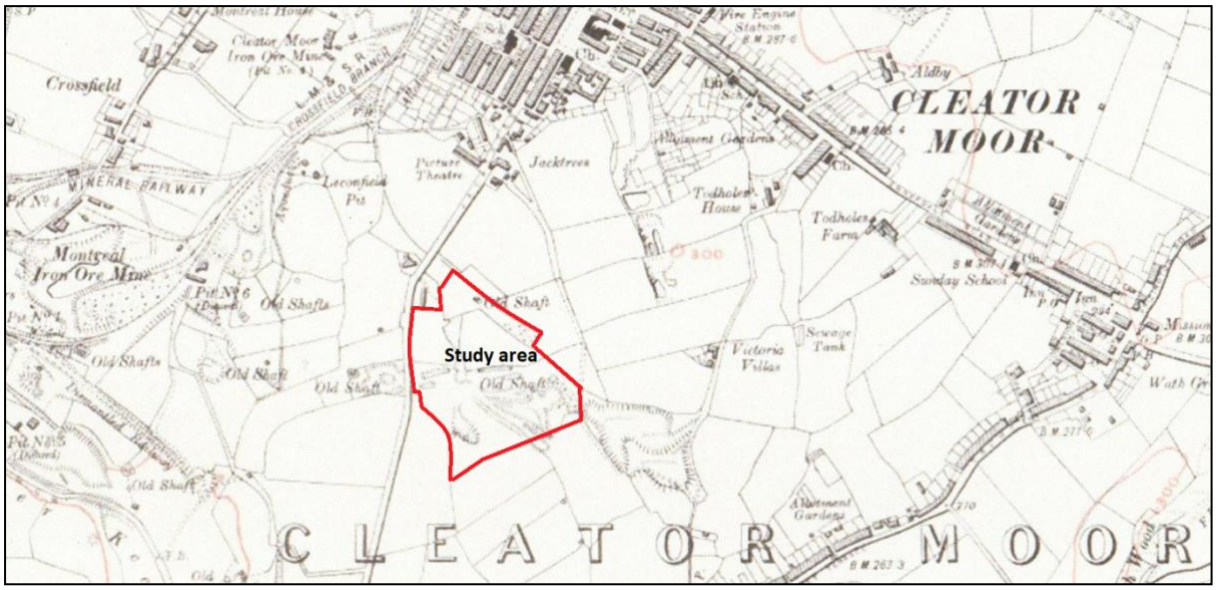


Figure 5. Third Edition Ordnance Survey map 1926

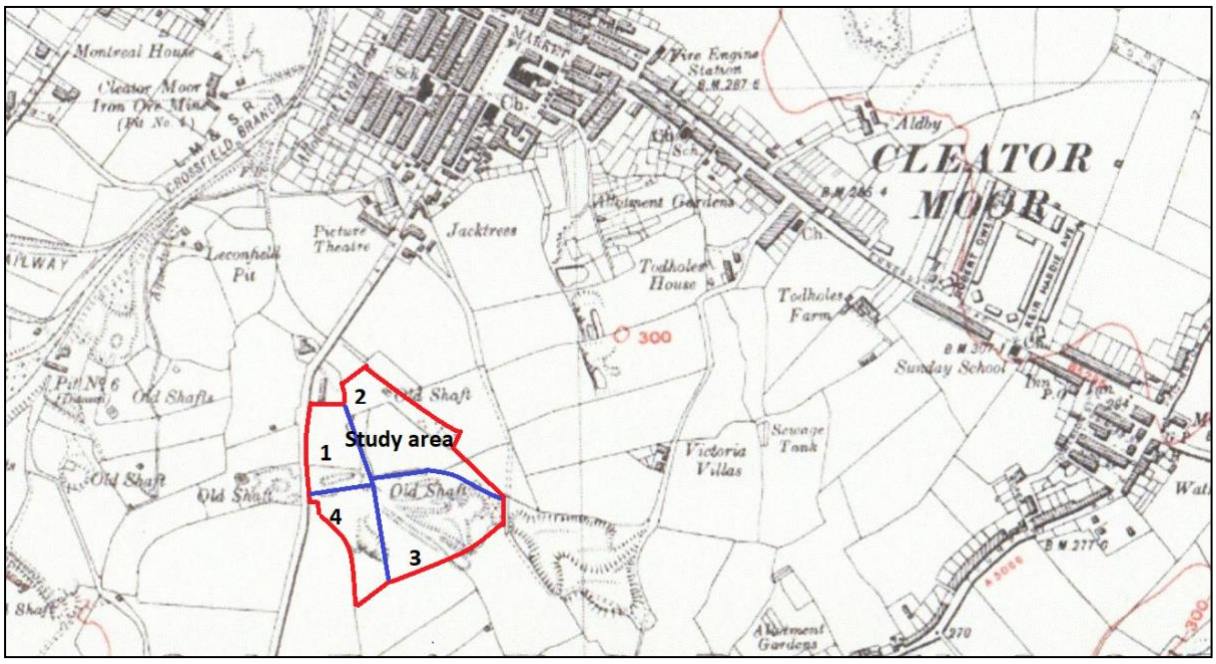


Figure 6. Ordnance Survey map 1946

The 1946 revision still depicted the quarry as being open but there appears to have been internal field boundaries (blue outline, figure 6) that closely approximate to the present spatial disposition (figure 1). Many of the iron ore pits were now disused but the physical disposition of Cleator Moor was still similar to approximately fifty years ago.

By 1952 there had been widespread remediation of the iron ore pits (figure 7). Jacktrees Pit and its accompanying quarries had been infilled with raised areas denoted on the map as hachures. This process appears to have been widespread as Montreal and Crossfield pits just to the west had also disappeared. There appears to have been the onset of urban sprawl just off the main east-west road to Whitehaven and which continued into the 1960's.

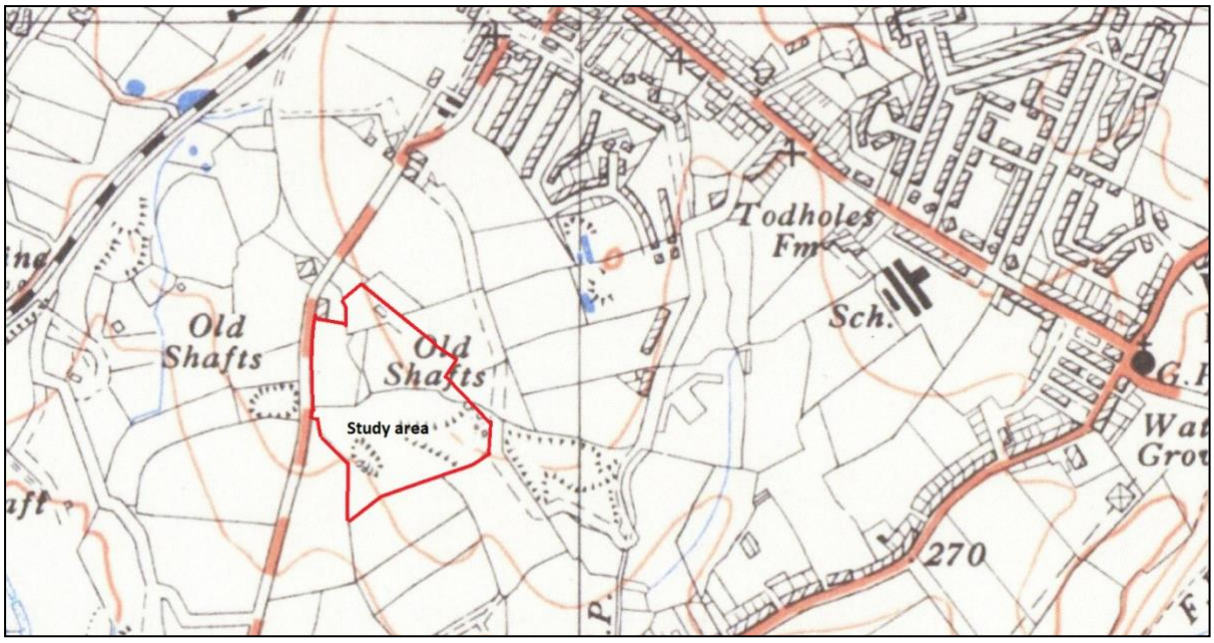


Figure 7. Ordnance Survey revision 1952

3.4 Historic Environment Record

Twenty out of twenty-one of the Historic Environment Record entries found within a 500m radius of the study area relate to 19th and 20th century features and therefore of minimal impact (figure 8). These are largely industrial heritage assets dating to the second half of the 19th century, although oddly the Jacktrees Pit does not appear on the county Historic Environment Record.

The following table (Table A) lists all the entries on the Historic Environment Record found within a minimum 500m radius of the study area (figure 8).

Undated Entry 9 bears the only possible antiquity.

Entries 1 to 8 are Listed Buildings that have no immediate proximity to the study area. The study area has no bearing as to the setting of these heritage assets.

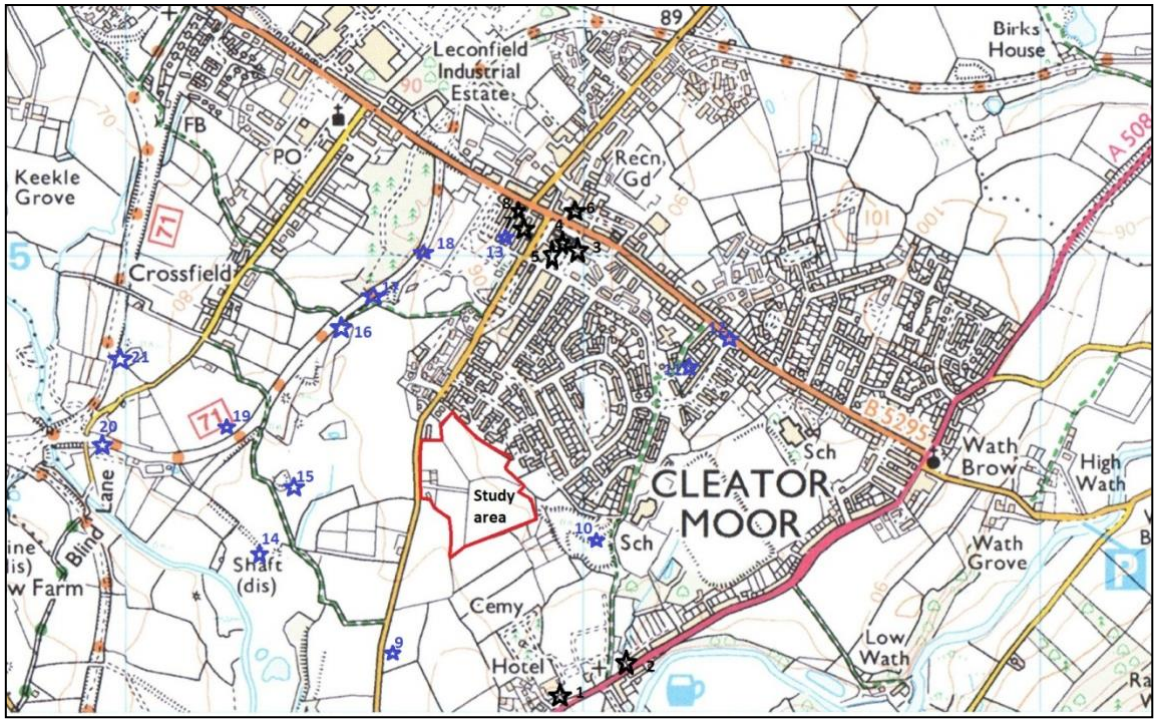


Figure 8. Location of entries in the Historic Environment Record. (OS Copyright, Licence no. 100044205)

No.	Her No.	Location	Description	Site type	Period	Status
1	1086723	The Flosh	Large House c 1832	Building	19th C	LB II
2	1392915	Church of St Mary	Roman Catholic church built 1872	Church	19th C	LB II
3	1086699	Library	Library built 1906	Building	20th C	LB II
4	1336036	High Street	Memorial Fountain built 1903	Building	20th C	LB II
5	1086700	Council Office	Local government building built 1879	Building	19th C	LB II
6	1086697	13-20 High Street	Row of shops	Building	Late 19 C	LB II
7	1086668	Phoenix House	Co-operative shop and verandah	Building	1856-1876	LB II
8	1336034	NatWest Bank	Provincial bank	Building	Late 19th C	LB II
9	1209	Fawn Cross	Farmhouse, cross	Documentary	Post-Medieval	None
10	16826	Todholes Mine	Ironstone Mine	Documentary	Unknown	None
11	43258	Todholes Farm	Farmstead	Documentary	Post-Medieval	None
12	43256	Ennerdale Road	Methodist Chapel	Documentary	Post-Medieval	None
13	12868	Cleator Moor	Gin pit	Documentary	Post-Medieval	None
14	12859	Crossfield No. 9	Ironstone mine	Documentary	19th C	None
15	12858	Crossfield No. 4	Ironstone mine	Documentary	19th C	None
16	12214	Cleator & Workington	Railway	Documentary	19th C	None
17	12857	Crossfield Pit	Ironstone mine	Mine	19th C	None
18	12869	James Pit	Ironstone mine	Documentary	19th C	None
19	12861	South Crossfield	Pit, mineral railway	Documentary	19th C	None
20	14798	Montreal No. 12	Pit, mineral railway	Documentary	19th C	None
21	14182	Montreal No. 4	Pit, mineral railway	Documentary	19th C	None

Table A. Heritage assets held in the Historic Environment Record

3.5 Lidar

Examination of the Lidar data suggested two landscape features (figure 9) with a past cultural origin described below:

- Feature 1 was a curvilinear earthwork aligned north-south with the northern terminal veering eastwards. This may have represented a remnant tramway or mineral railway, albeit the eastwards limb does not accord with the known cartography.
- Feature 2 was a polygonal shaped plateau with rounded corners appearing in relief. This feature corresponds with a remediated quarry. Surplus spoil appears to have been landscaped into a pediment with a steep angle of repose and rounded corners.

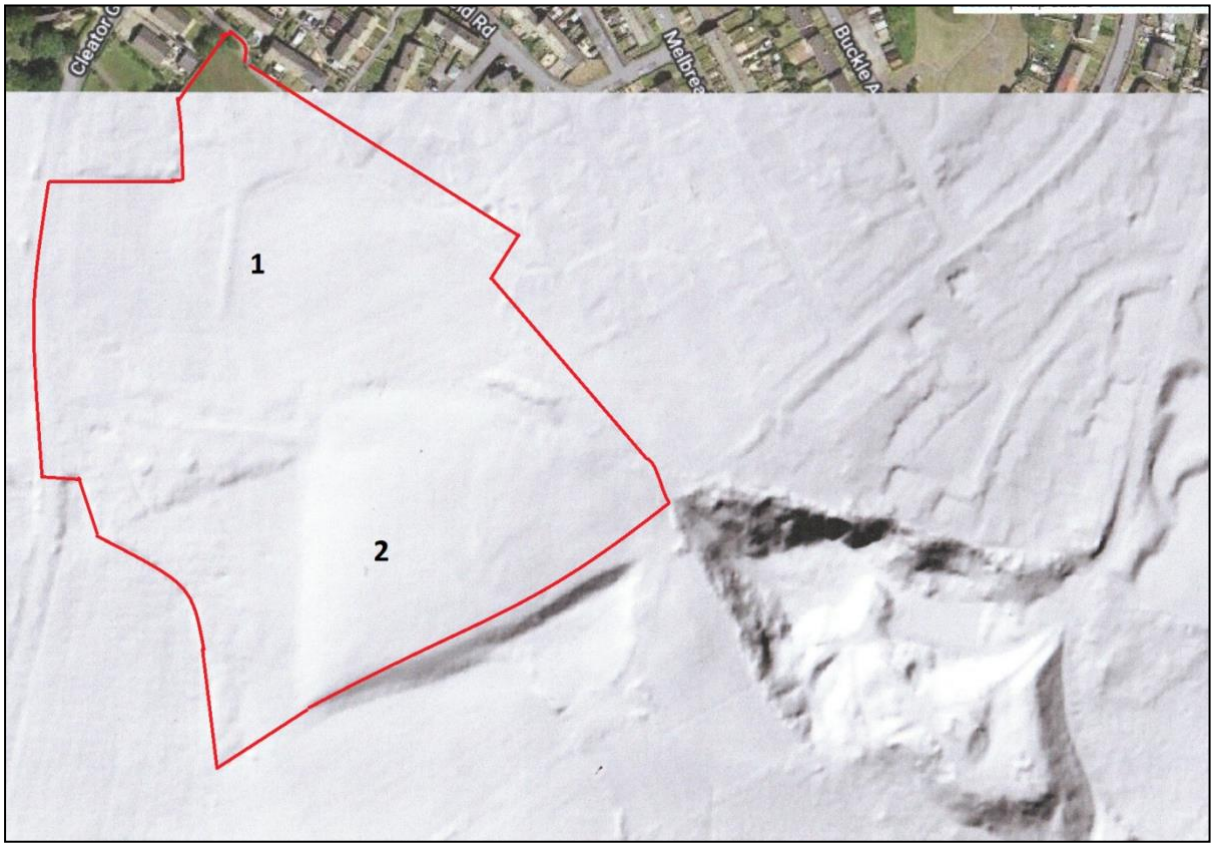


Figure 9. Lidar of the study area

Examination of any aerial photographs would have been a superfluous exercise due to relatively modern industrial activity that would have destroyed any putative past cultural remains visible as a crop-mark.

4 FIELD SURVEY

4.1 Walkover survey

A walkover survey was undertaken on Friday 11th November 2022 in overcast, wet conditions. Access was unimpeded. The site was grassed and the four study fields (figure 2) served as pasture, negating the visibility of any potential past cultural features or artefacts.

The study area was divided into four fields:

1. A small western field NY 01697 14545 that was bounded to the west by Jacktrees Road and Carron Cottage to the north. Stock fencing provided a division to Fields 2 and 4. The land was flat and contained a number of semi-redundant, mid 20th century agricultural buildings (figure 10).
2. A large northern field NY 01777 14573 that was bounded on the northern side by a modern housing development developing into allotments. Stock fencing provided a division to Field 1 and a combination of hedge and trees, a boundary to Field 3.
3. A south-eastern field NY 01832 14454 that was bounded by a steep fall to a hedge to the south, stock fencing to the west and a private lane to the east.
4. A south-western field NY 01767 14501 that was bounded by a remnant bank and hedge to the south and west, stock fencing to the east and a track to the north.

Field 1

A collection of agricultural buildings located beside the ingress to the field (figure 11). Field 1 was relatively flat, the ground heavy and well-grassed (figure 12). In the north-west of the field and veering into Field 2 was an earthen bank covered in grass, approximately 5.00m in width and 0.40m in height. Aligned north-south, the bank was located between NY 01723 14535 and NY 01725 14564 up to the stock fence a distance of approximately thirty metres (figure 13).

Figure 10. Redundant agricultural buildings

Figure 11. Barn in Field 1

Field 2

Field 2 rose from south to north as a modest gradient, the ground heavy and grassed (figure 14).

In the south-west of the field and continuing into Field 1 was an earthen bank covered in grass, approximately 5.00m in width and 0.40m in height. The northern terminal was poorly defined but appeared to arc eastwards before bearing an alignment north-south. The bank was located between NY 01750 14599 and NY 01729 14560 up to the stock fence a distance of fifty metres (figure 15).

The western boundary was a mix of hawthorn hedge and mature deciduous trees by Carron Cottage which must have taken its name from the iron ore pit dating from the 1890's (figure 16).

The ground was drier underfoot with tufty grass. Bounded by modern development to the north, the interface with Field 3 comprised hawthorn hedge and saplings.

Figure 12. Field 1 looking westwards

Figure 13. Earthwork in Field 1

Figure 14. Field 2 looking westwards

Figure 15. Earthwork in Field 2

Figure 16. Hedge in Field 2

Figure 17. Field 3 looking westwards

Field 3

Field 3 consisted of a plateau or pediment rising from the north (figure 17). It was wet underfoot with a proliferation of clumps of reeds. The northern hawthorn hedge develops into *ad hoc* fencing beside the allotments. The boundary becomes a series of trees approximately fifty years old below a steep bank (figure 18). The bank formed a right-angle at the south-western corner of Field 3 (figure 19), before returning northwards (figure 20).

At this location, the scarped bank appeared to be unnaturally formed probably the result of remediation by box scrapers.

Figure 18. Southern boundary, Field 3

Figure 19. Bank at south-west corner

Figure 20. Bank looking north

Figure 21. Raised bank looking east

The bank continued prominently northwards raised above Field 4 (figure 21) with a slight holloway forming access to the raised ground.

Figure 22. Field 4 looking north

Figure 23. Building debris in Field 4

Field 4

Field 4 consisted of a neglected flat, damp, grassy area (figure 22) with a modern pile of building debris close to a collection of agricultural buildings (figure 23). Respecting the Field 3 plateau, the

southern (figure 24) and western boundary (figure 25) was formed from hawthorn hedgerow surmounting an earthen bank approximately 0.80m in height that may bear some antiquity, albeit as part of some past enclosure.

Figure 24. Southern bank and hedgerow

Figure 25. Western bank and hedgerow

4.2 Sites identified

Two sites were potentially identified: an earthen bank straddling Field 1 and Field 2 and the raised plateau that forms the western part of Field 3.

The scarping of Field 3 into an earthwork is almost certainly remediation in the 20th century of an iron ore pit or quarry dating from the 19th century. Cartographic evidence appears to be unambiguous in this matter.

The earthen bank straddling Fields 1 and 2 is likely to be a residue from the tramway or railway when the iron ore pit was active. There remains a possibility that it belonged to earlier spatial organisation although the chances that it survived the later industrial activity would appear very low.

5 HISTORIC ENVIRONMENT APPRAISAL

5.1 Buried archaeological potential

The proposed development based on this desk-based assessment and walk-over does not physically impact upon any known archaeological features. The study area was probably unfavourable to past settlement as the ground remains boggy.

According to Caron Newman, between larger west Cumbrian urban hubs, “the settlement pattern featured nucleations, commonly in the form of two-row settlements, but some with more organic, less organised plan forms. The two-row settlement was commonly associated with enclosed strip fields, many originating as common arable fields, but also outfields (Newman 2014, 70)”.

The earthen bank on the extremity of Field 4 is undated but could be compatible with post-medieval enclosure of common land.

Other than this feature, there appeared to be no obvious heritage assets within the study area bearing any antiquity.

5.2 Palaeo-enviromental potential

The paucity of archaeological features suggests that the recovery of any palaeo-environmental evidence of any merit is slim. However, the clay drift geology allied to wet conditions would be favourable to preservation of organic remains in an anaerobic environment.

5.3 Visual impacts

No other non-statutory buildings of local importance have settings that can be considered to be negatively impacted by the proposals.

There are no Registered Parks and Gardens within close proximity.

There are no listed buildings in close proximity to the study area.

6 SUMMARY OF IMPACTS

6.1 Discussion

The purpose of the desk-based assessment was to identify past cultural features and heritage assets that may require targeting during a phase of future archaeological fieldwork or a strategy of mitigation in order to preserve the integrity of any identified monument.

The desk-based reconnaissance exercise has not identified any obvious signatures for past cultural activity that could be considered significant.

This survey does not preclude the possibility that sub-surface deposits of a past cultural origin may exist but based on the disposition of the terrain and known environmental conditions the site does appear to be unfavourable.

The effects of quarrying and mining for iron ore has truncated any putative archaeological remains, the bulk of the land surface having been removed. This does not preclude pockets of archaeological survival but based on the evidence garnered, predicting a deposit model would be extremely difficult.

The apparent presence of considerable remediation and former mine workings may have a significant impact on the feasibility for the future course of the project.

It is possible a programme of archaeological evaluation will be requested in order to ascertain whether the study area can be deemed archaeologically sterile and therefore provide no heritage impediment for future development. It is very unlikely that trenches will be required above remediated ground.

In terms of Magnitude of Impact, this study area based on current knowledge can be designated as minor to no change.

7 ACKNOWLEDGMENTS

I am grateful to Mikey Hamer from Gleeson Homes Ltd for commissioning this report and organising my site visit.

I would like to thanks the staff of Whitehaven Library with my research into the local history of the area and the staff at Cumbria Record Office, Whitehaven especially with the maps and other documentary material.

8 BIBLIOGRAPHY

Andrews, G. Management of Archaeological Projects, English Heritage, London 1991

Bagshawe, R. Roman Roads, Princes Risborough, 1979

Bellhouse, R.L. "The Roman fort at Burrows Walls, near Workington" Cumberland & Westmorland Arch Trans, 1955 30-44

Bidwell, P. & Hodgson, N. The Roman Army in Northern England. Newcastle, 2009

Birley, R. "The Roman Fort at Ravenglass" Cumberland & Westmorland Arch Trans, 1958 14-30

Blood, K. & Pearson, T. "The Roman Fort at Ravenglass". Romans in the Solway: Essays in Honour of Richard Bellhouse, Carlisle, 2004 95-101

Brennand, M. Ed The Archaeology of North West England, Loughborough, 2006

Caine, C. Cleator and Cleator Moor: Past and Present, 1916, Republished in 1973 by Michael Moon, Whitehaven

Collingwood, R. G. "Roman Ravenglass" Cumberland & Westmorland Arch Trans, 1928 353-366

Copeland BC Copeland Local Plan. Whitehaven 2013

Cumbria CC Extensive Urban Survey Archaeological Assessment Report: Workington. English Heritage, 2002

Curwen, J.F. Castles and Towers of Cumberland and Westmorland, Kendal, 1913

Dilley, R.S. Common Land in Cumberland 1500-1800. D Phil Thesis, Cambridge 1972

Dilley, R.S. Agricultural Change and Common Land in Cumberland 1700-1850. Phd Thesis. Hamilton, Ontario 1991

Ferguson, R.S. 1888, *Report of Excavations in Cumberland.* Cumberland & Westmorland Arch Trans Series 12, 159-171

Graham, T.H.B. Barony of Gilsland. Lord William Howard's Survey 1603, Cumberland & Westmorland Extra Series XVI, Kendal 1934

Hindle, B.P. Thomas Donald Historic Map of Cumberland 1774, Manchester, undated

Hindle, B.P.	Roads, Tracks and Their Interpretation, London, 1993
Hunter-Mann, K.	Romans in Ravenglass, Sheffield, 2015
IFA	Institute of Field Archaeologists' Standards & Guidance documents, Reading 2001.
Jollies	Jollies Cumberland Guide and Directory, 1811
Kain, R.J.P. & Prince, H.	Tithe Surveys for Historians, Chichester 2000
Mann, J.C.	"Birdoswald to Ravenglass". Britannia, London 1989, 75-81
Mannix & Whellan	History, Gazateer and Directory of Cumberland 1847
McCarthy, M.R.	Prehistoric settlement in northern Cumbria. 131-140, Bradford, 2003
Newman, C.E.	Mapping the Late Medieval and Post Medieval Landscape of Cumbria. Phd Thesis, University of Newcastle, 2014
Potter, T.W.	Romans in North-West England, Kendal 1979
Railton, M.	Geophysical Surveys of Land at Cleator Mills, Cleator, Cumbria, Wardell Armstrong Archaeology Ltd, Carlisle, 2013
Shotter, D.	Romans and Britons in North-West England, Centre for North West Regional Studies 27, University of Lancaster, 1993
Smith, G.	Excavations near Hadrian's Wall at Tarraby Lane. Britannia 9, 19-56, 1978
Symonds, M.F.A. & Mason, D.J.P.	Frontiers of Knowledge, Durham 2009
Winchester, A.J.L .Ed	Thomas Denton: A perambulation of Cumberland 1687-1688. Cumberland & Westmorland Antiquarian Society, Woodbridge, 2003
Whellan, W.	The History and Topography of the Counties of Cumberland & Westmorland, Pontefract, 1860