LAND AT MILL LANE, LOW MILL, CATON, LANCASHIRE

Archaeological Watching Brief

Client: MH Stainton Ltd

Planning ref: 1/2018/00002/FUL

NGR: 352633 464806

May 2022

The Site	
Site Name	Land at Mill Lane, Low Mill, Caton
County	Lancashire
NGR	352654 464776 (centre)

Client	
Client Name	MH Stainton Ltd

Planning	
Pre-planning?	No
Planning Application No.	1/2018/00002/FUL
Condition number	4
Local Planning Authority	Lancaster City Council
Planning Archaeologist	Doug Moir, Lancashire County Council
Groundworks subject to watching brief	Topsoil stripping for creation of site compound

Archaeological work	
Any previous archaeological work?	Desk-based assessment by North Star Archaeology; geophysical survey by Phase Site Investigations; archaeological evaluation by Greenlane Archaeology

Archiving	
Relevant Record Office(s)/Archive Centre(s)	Lancashire Record Office, Preston
Relevant HER	Lancashire County Council
Relevant Museum	Lancaster City Museum

Staffing	
Site work	Dan Elsworth
Report writing	Dan Elsworth
Report editing	Jo Dawson
Illustrations	Tom Mace
Date(s) site work carried out	6th May 2022

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Summary

Following submission of a planning application for residential development of land off Mill Lane, Caton, Lancashire, an archaeological evaluation was carried out by Greenlane Archaeology. This followed on from an archaeological desk-based assessment in 2018 and geophysical survey in 2021.

The desk-based assessment highlighted the potential to find undisturbed archaeological remains within the site boundary and recommended that a geophysical survey be carried out across the southern half of the development area followed by a programme of targeted trial trenching. The evaluation comprised the excavation of 10 trenches, each approximately 20m long. Plough scars were recorded that demonstrate the area had been ploughed previously and it was perhaps as a consequence of this disturbance that no features of archaeological interest were encountered. However, a number of flint artefacts were recovered from the subsoil in Trenches 3, 4 and 8, located on the north and east sides of the site.

Lithic material such as this has tended to be found in concentrations in coastal areas and along river valleys, as is the case here, the current course of the River Lune being around 200m to the north-west of the site. Similar material has been found eroding from the banks of the river at the Crook O'Lune to the west, and was recovered during archaeological work a short distance from the site in 2002.

As a result, Greenlane Archaeology was commissioned to carry out an archaeological watching brief on specific parts of the development site, in order to assess whether there was further evidence for prehistoric activity. The first phase of this was topsoil stripping an area of approximately 30m by 20m on the west side of the site, adjacent to the entrance, to enable a site compound to be created. This revealed that below the topsoil, which included a lot of dumped material, there was an area of gravel alongside the track, and an area of modern disturbance, but elsewhere the subsoil remained intact. Hand cleaning and sieving of this did not reveal any further lithic artefacts although medieval and post-medieval pottery was present and a single fragment of iron working slag, perhaps resulting from a bloomery.

The watching brief did not reveal any further finds of significance, in particular evidence for flint working, and while it is still likely that other remains of prehistoric date are present on the site, the potential for finding significant remains is probably limited.

Acknowledgements

Greenlane Archaeology would like to thank MH Stainton Ltd for commissioning the project, in particular Michael Stainton for his assistance with the project. Thanks are also due to Stuart for driving the plant, which was provided by the client.

1. Introduction

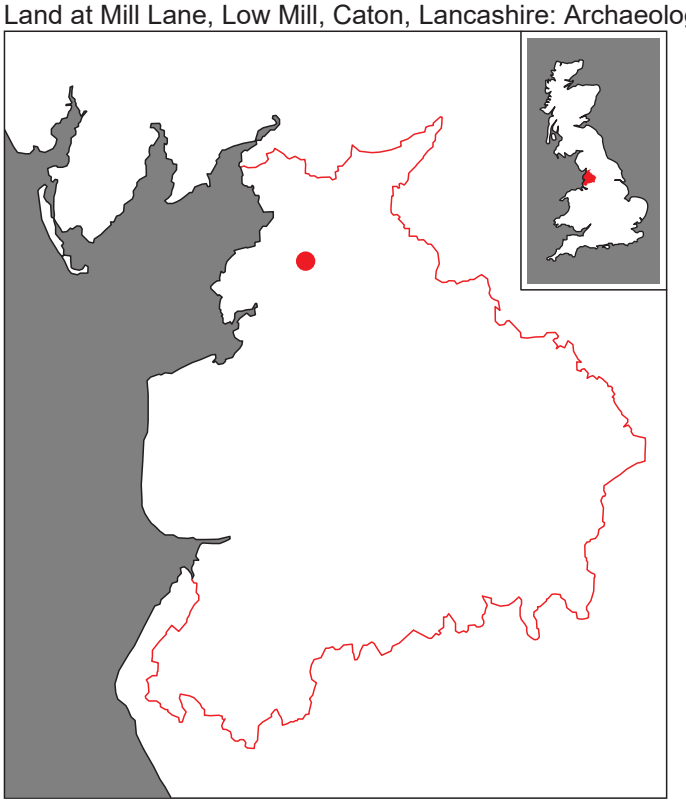
1.1 Circumstances of the Project

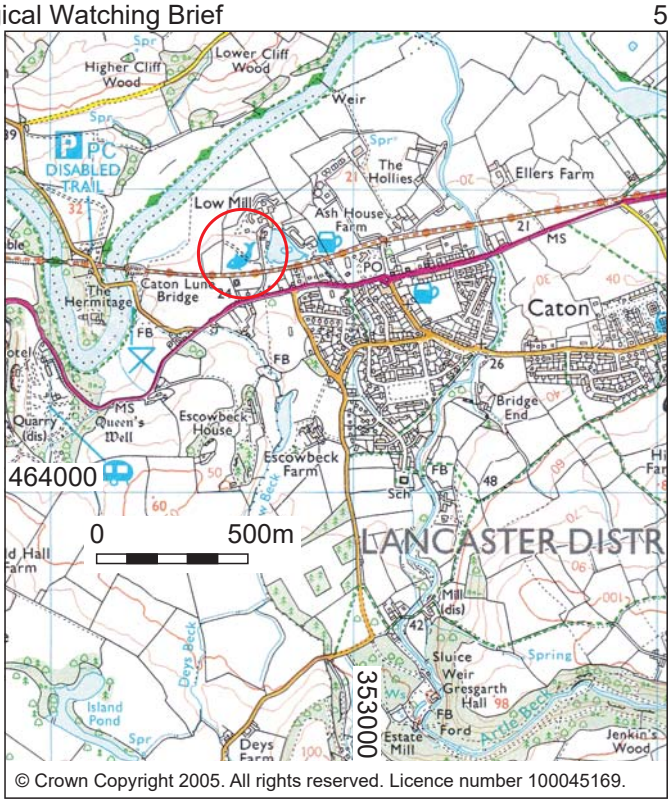
1.1.1 The circumstances of the project are set out in the tables on the inside cover of this report.

1.2 Location, Geology, and Topography

1.2.1 The site is to the north-west side of the village of Caton, which is approximately 5km north-east of Lancaster (Ordnance Survey 2005; Figure 1). The site lies approximately 20m above sea level (Ordnance Survey 2005).

1.2.2 The underlying solid geology is dominated by Namurian millstone grit (Moseley 1978, plate 1), which is overlain by glacially derived boulder clay on the higher ground and extensive alluvial deposits of gravel and silt within the wide Lune Valley (Countryside Commission 1998, 93). The site itself is situated within the lower part of the Lune Valley, which is dominated by gently undulating topography, supporting lush pasture with occasional woodland (*op cit*, 91).





Client: MH Stainton Ltd

Figure 1: Site location, showing location of watching brief and previous evaluation

2. Methodology

2.1 Previous Archaeological Work

2.1.1 A desk-based assessment was carried out by North Star Archaeology (2018), which was followed by geophysical survey (Phase Site Investigations 2021) and archaeological evaluation of the site (Greenlane Archaeology 2022).

2.1.2 The evaluation, carried out in January 2022, comprised the excavation of 10 approximately 20m long evaluation trenches, some of which targeted anomalies of potential archaeological interest identified by the geophysical survey (Greenlane Archaeology 2022). The same sequence of a dark-coloured silt topsoil, between 0.1m and 0.2m thick, above a subsoil on top of the natural was present in most of the 10 trenches. The natural was fairly consistently encountered between 0.3m and 0.4m below the current ground surface and varied across the site from a firm dark grey clay to a typically orange sandy-clay. Artefactual evidence recovered during the evaluation demonstrated activity at or near to the site dating from prehistoric, medieval, post-medieval and modern times, including a locally important collection of lithic artefacts of probable Mesolithic to early Neolithic date.

2.2 Archaeological Watching Brief

2.2.1 The watching brief monitored groundworks associated with the project set out in the tables on the inside cover of this report. This is potentially the first phase of archaeological watching brief, the original WSI (see *Appendix 1*) being for a larger area covering plots 1 and 6-9 of the development, which covered the areas where lithic artefacts were recovered during the evaluation.

2.2.2 All aspects of the archaeological recording were carried out according to the standards and guidance of the Chartered Institute for Archaeologists (CIfA 2014a) and Greenlane Archaeology's own excavation manual (2007). The deposits encountered were recorded in the following manner:

- ***Written record***: descriptive records of all deposits were made using Greenlane Archaeology's *pro forma* record sheets;
- ***Photographs***: photographs in colour digital format (both 12 meg JPEG and RAW file format) were taken of the site as well as general working shots. A selection of the colour digital photographs is included in this report. A written record of all of the photographs was also made using Greenlane Archaeology's *pro forma* record sheets;
- ***Drawings***: drawings were produced on site as follows:
    i. a plan showing the location of the watching brief area and the features revealed was drawn at a scale of 1:200.

2.3 Environmental Samples

2.3.1 No environmental samples were taken as no appropriate deposits were encountered. Areas of the subsoil were dry sieved on site through a 3mm mesh in order to recover small artefacts, in particular those relating to flint working, but this did not result in any additional discoveries.

2.4 Finds

2.4.1 ***Collection***: all of the finds were recovered by hand and stored in self-seal bags with white write-on panels on site before being removed for processing and assessment.

2.4.2 ***Processing***: all of the artefacts recovered from the watching brief were washed, with the exception of metal objects, which were dry-brushed. They were then naturally air-dried and packaged appropriately in self-seal bags with white write-on panels.

2.4.3 ***Assessment and recording***: the finds were assessed and identified in the first instance by Jo Dawson. The finds were recorded directly into the catalogue produced as part of this report (*Appendix 3*).

2.5 Archive

2.5.1 The archive of the project will be deposited with the relevant Record Office or Archive Centre, as detailed on the cover sheet of this report, together with a copy of the report. The archive has been compiled according to the standards and guidelines of the CIfA guidelines (CIfA 2014b). In addition, details will be submitted to the *Online Access to the Index of Archaeological Investigations* (OASIS) scheme. This is an internet-based project intended to improve the flow of information between contractors, local authority heritage managers and the general public. A copy of the report will be provided to the client and a digital copy of the report will be provided for the relevant Historic Environment Record, as detailed on the cover sheet of this report.

3. Site History

3.1 Prehistoric Period (c11,000 BC – 1st century AD)

While there is limited evidence for human activity in the region in the period immediately following the last Ice Age, this is typically found in the southernmost part on the north side of Morecambe Bay. Finds from the Palaeolithic period (*c*11,000-8,000 BC) are relatively scarce in Lancashire. Evidence for activity in the Mesolithic is better represented, including concentrations of lithic material found in wetland and upland areas and coast and river valleys (Barrowclough 2008, 48-65; Middleton *et al* 1995, 202), which is a general pattern in the wider region (Hodgson and Brennand 2006, 26) and finds of this period are encountered across the Morecambe Bay area (Elsworth 1998). Finds of Mesolithic date were found during archaeological work on the edge of a former river channel in advance of the construction of the 'Bay Gateway' to the north side of Lancaster (Bradley and Howard-Davis 2018), reaffirming that such material can often be encountered in these sorts of locations. Closer to the site flint artefacts of Mesolithic to Neolithic date have been found in several locations around the Crook O'Lune, c950m to the west of the current site. These include finds found in a ploughed field and eroding from the river bank (Penney 1978, 43; Williams 1998) and during a programme of archaeological work carried out in advance of the installation of a water pipeline, which yielded Mesolithic and Neolithic flint and chert artefacts, including burins, microliths and leaf-shaped arrowheads (OA North 2006, 18-19).

3.1.2 In the following period, the Neolithic (*c*4,000 – 2,500 BC), large scale monuments such as burial mounds and stone circles begin to appear nationally, although this was seemingly quite a gradual process in the North West (Barrowclough 2008, 74-75). One of the most recognisable tool types of this period, the polished stone axe, is found in large numbers across the wider region, having been manufactured at Langdale in the central Lake District (Hodgson and Brennand 2006, 45). Evidence is generally fairly sparse for activity in this period in North Lancashire, with stray finds, albeit sometimes in quite large numbers, being the norm (Barrowclough 2008, 78-84), and evidence for settlement again perhaps concentrated in the lowlands along the coast and in the river valleys (Middleton 1996, 40). Neolithic pottery was discovered *in situ* in the centre of Lancaster on Church Street (White 2003, 26) and flints of this date were also found on the Bay Gateway project, demonstrating the continuity that existed on some sites (Bradley and Howard-Davis 2018).

3.1.3 During the Bronze Age (*c*2,500 – 600 BC) monuments, particularly those thought to be ceremonial in nature, become more common still. Burial remains, typically in the form of cremation burials in urns, are found across the region, and there is a particular concentration in Lancaster (Barrowclough 2008, 98-99; Iles 2009). Other finds such as Bronze tools and weapons are also present in the region, but often as stray finds discovered accidentally in the 19th and early 20th century, often in wetland locations, or more recently through the use of metal detectors, with several regional groups defined (*op cit*, 150-176). By contrast settlements from this period are still very rare. Some non-funerary remains of Bronze Age date were found on the Bay Gateway project (Bradley and Howard-Davis 2018) and a possible fragment of Bronze Age pottery was found during the course of an archaeological watching brief *c*135m south-west of the current site at Caton River Terrace (OA North 2006; North Star Archaeology 2018, 13, site 54).

3.1.4 Sites and remains thought to belong to the Iron Age (*c*600 BC – 1st century AD) are very rare. Settlements thought to be of this period are often revealed as crop marks in aerial photographs but they are typically undated and little understood. However, there is likely to have been a considerable overlap between the end of the Iron Age and the beginning of the Romano-British period, and it is evident that in this part of the country, initially at least, the Roman invasion had a minimal impact on the native population in rural areas (Philpott 2006, 73-74).

3.2 Romano-British to Early Medieval Period (1st century AD – 11th century AD)

3.2.1 During the Roman period a fort was established in Lancaster in the AD 70s on the hill later occupied by the medieval castle (Shotter and White 1990, 18). It acquired a civilian settlement, a *vicus*, by at least the 2nd century (*op cit*, 32), which extended outwards from the east side of the fort. Outside of

Lancaster itself the settlement pattern is less well understood as many rural sites probably continued to be used from the Iron Age, and Roman settlement of the area may have had minimal impact upon established Iron Age agricultural practices (North Star Archaeology 2018, 13). Caton itself is on the route of a Roman road out of Lancaster along the south bank of the River Lune to Over Burrow (Margary 1957, 114; North Star Archaeology 2018, 13-14).

3.2.2 The place-name 'Caton' probably combines Old Norse and Old English elements (Ekwall 1922, 177) and perhaps derives from *cae* (hedge) and *ton* (town), meaning a hedged town (Bulmer 1913, 242; North Star Archaeology 2018, 14). However, physical evidence for activity in the early medieval period is generally quite limited. In Lancaster it is primarily found in a few objects such as pieces of carved stone cross and coin finds (Edwards 1988), but recent archaeological work in Lancaster demonstrates the potential for waterlogged early medieval remains to survive on the edge of the former line of the River Lune (Elsworth and Mace 2017).

3.3 Medieval Period (11th century AD – 16th century AD)

3.3.1 Caton was first recorded in the Domesday survey of 1086, as one of the twelve manors granted to Torfin, a Norman baron (Farrer and Brownbill 1914, 79). By the 13th century it became part of the manor held by the Gernet family of Heysham who adopted the surname Caton (Potts 1984, 26). The origins of Caton church may also be traced back to the 13th century (Caton Village Exhibition Committee 1979; North Star Archaeology 2018, 14). Pottery production is evidenced nearby in the form of wasters and kiln fabric discovered during the course of an archaeological watching brief at Escowbeck Farm in 2002, *c*200m to the south; however, no kiln structures were discovered during the watching brief or the subsequent open area excavation (OA North 2003, 3; North Star Archaeology 2018, 15, sites 40 and 41).

3.4 Post-medieval Period (16th century AD – present)

3.4.1 Caton grew from a predominantly agricultural community into a textile manufacturing area in the early post-medieval period (Caton Village Exhibition Committee 1979). Caton mills manufactured a variety of textiles, including silk, flax and cotton, and bobbins. The railway line between Lancaster and Clapham opened in 1847. Other nearby sites of post-medieval date close to the site include the road bridge, *c*450m west of the site, at the Crook o' Lune, originally built in 1806 and rebuilt in 1883, and two Grade II listed railway viaducts nearby, originally built in 1849, now used as footbridges (North Star Archaeology 2018, 15, sites 19, 22 and 29). The site is recorded as arable on the tithe map of 1843.

4. Watching Brief

4.1 Introduction

4.1.1 The watching brief monitored the topsoil stripping of an area approximately 30m (east/west) by 20m (north/south) carried out in advance of creating a compound area for the wider development, on the east side of the site, next to the entrance from Mill Lane. Excavation was carried out by a tracked mechanical excavator fitted with a wide toothless ditching bucket. The site extended up to the boundary on the east side, against an area of woodland, where there had been some prior disturbance due to the felling of trees. An area along the gravel track to the south had also been partially stripped before the watching brief began (Plate 1).

Plate 1: The site prior to the watching brief beginning, viewed from the south

4.2 Results

4.2.1 The initial deposit comprised a loose dark greyish brown soft silt with some modern inclusions and typically up to 0.2m – 0.3m thick (***1000***), although a *c*5m wide strip along the east side was about 0.5m thicker as additional mid-brown silty clay with modern inclusions and building rubble had been dumped as part of it. Alongside the track a deposit of pale pink gravel was revealed (***1001***), evidently modern bedding relating to the track surface, and comprised a 4m wide strip alongside the track. Beyond this, and across the rest of the site, was a deposit of mid-orangey brown sandy silt subsoil with 10% rounded gravel (***1002***). Excavation essentially finished at this level, with much of ***1002*** remaining *in situ*. Across a large part of the west side of the site there was a substantial area of disturbed ground containing modern inclusions, building rubble and the like. Samples of subsoil ***1002*** were cleaned by hand and sieved, but this did not produce any additional artefacts.

Plate 2 (left): Gravel *1001* exposed below topsoil *1000* alongside the track, viewed from the west

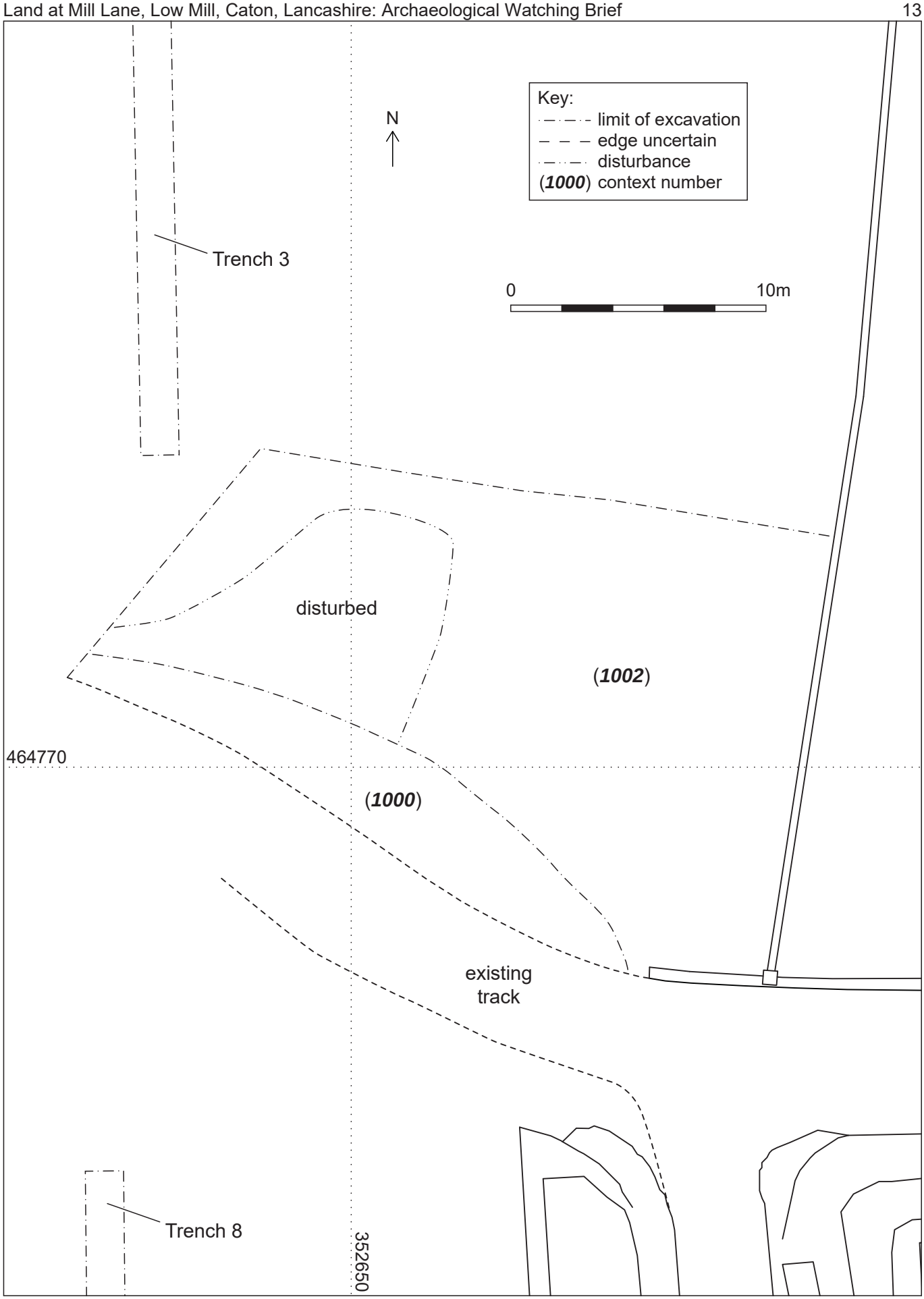
Plate 3 (right): Gravel *1001* exposed below topsoil *1000* alongside the track and subsoil *1002* beyond, viewed from the south-east

Plate 4 (left): Raised topsoil (*1000*) being removed along the east side of the site, viewed from the south-west

Plate 5 (right): Subsoil *1002* revealed across the east side of the site, viewed from the south-west

Plate 6 (left): Disturbed area on the west side of the site, viewed from the south-west

Plate 7 (right): Subsoil *1002* below raised topsoil *1000* on the east side of the site, viewed from the south-west



Client: MH Stainton Ltd

Figure 2: Plan of watching brief area

4.3 Finds

4.3.1 ***Introduction***: a total of five artefacts were recovered during the watching brief. These are discussed by type below and a complete list of all the finds is provided in *Appendix 3*.

4.3.2 ***Medieval pottery***: a small body fragment of a thin-walled gritty ware vessel was recovered from the subsoil (***1002***). Gritty wares dominate 12th and early 13th century assemblages in the region (McCarthy and Brooks 1992, 22; Whitehead *et al* 2013) and persist into the 14th century (Bradley and Miller 2009, 664).

4.3.3 ***Industrial residue***: a single small fragment of iron working slag was recovered from the subsoil (***1002***). Although not particularly diagnostic, and only a single find, its relative density and 'flowed' surface is suggestive of it having derived from the bloomery process and so it could be medieval or earlier in date. Such material is, however, typically very hard wearing and was often moved for use as hardcore and such a small quantity is not likely to be indicative of iron working in the immediate vicinity.

4.3.4 ***Post-medieval pottery***: three fragments of post-medieval pottery were recovered from the subsoil (***1002***). These were all types of red earthenware and as such are not particularly diagnostic as such fabrics were made from the 17th century well into the 20th, although these are likely to be 18th or 19th century. They undoubtedly derived from household waste distributed onto fields as manure collected from middens in the local area.

5. Discussion

5.1 Results

5.1.1 The purpose of the watching brief was ultimately to recover additional evidence relating to the prehistoric occupation of the site, as indicated by the evaluation (Greenlane Archaeology 2022). However, no additional flint or chert artefacts were found despite the equivalent subsoil being uncovered and samples of this hand cleaned and dry-sieved. The only finds that were revealed indicate that this subsoil was being actively ploughed in the medieval and post-medieval periods, which concurs with the results of the evaluation.

5.2 Conclusion

5.2.1 The watching brief has revealed that while the subsoil uncovered in this area during the evaluation is present across a wider part of the development site as a whole, it has been substantially mixed by ploughing and disturbed by dumped material, probably deriving from when the site was used for storing building material, although there is still no doubt the potential for further prehistoric finds to be present. While there is potential for further finds of prehistoric date to be recovered from elsewhere on the site, hand cleaning and sieving the subsoil did not reveal any evidence for flint working in the immediate area, in the form of debitage, or smaller artefacts such as microliths. There is therefore, arguably limited potential for further significant remains to be discovered during further monitoring across the site.

6. Bibliography

6.1 Primary Sources

Ordnance Survey, 2005 *Forest of Bowland and Ribblesdale: Showing Pendle Hill, Clitheroe and Settle*, **OL41**, 1:25,000

6.2 Secondary Sources

Barrowclough, D, 2008 *Prehistoric Lancashire*, Stroud

Bradley, J, and Howard-Davies, C, 2018 *From Mesolithic Encampment to Medieval Estate: The Archaeology of the Bay Gateway*, Lancaster Imprints **24**, Lancaster

Bradley, J, and Miller, I, 2009 The Medieval and Post-Medieval Pottery, in C Howard-Davis (ed) *The Carlisle Millennium Project. Excavations in Carlisle, 1998-2001. Volume 2: The Finds*, Oxford, 660-677

Bulmer, T, 1913 *History, Topography and Directory of Lancaster and District*, Preston

Caton Village Exhibition Committee, 1979 *Caton – Past and Present*, Lancaster

Chartered Institute for Archaeologists (CIfA), 2014a *Standard and Guidance: Archaeological Field Evaluation*, revised edn, Reading

CIfA, 2014b *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*, revised edn, Reading

Countryside Commission, 1998 *Countryside Character, Volume 2: North West*, Cheltenham

Edwards, BJN, 1988 Post-Roman Lancaster, in GDB Jones and DCA Shotter (ed), *Roman Lancaster: Rescue Archaeology in an Historic City 1970-75*, Britannia Monograph **1**, Manchester, 223-224

Elsworth, DW, 1998 *The Mesolithic Around Morecambe Bay*, unpubl dissertation, University of Edinburgh

Elsworth, DW, and Mace, T, 2017 Archaeological Excavations off Damside Street, Lancaster, *Contrebis*, **35**, 4-18

Ekwall, E, 1922 *The Place-Names of Lancashire*, Manchester

Farrer, W, and Brownbill, J, 1914 *The Victoria History of the County of Lancaster*, **8**, London

Greenlane Archaeology, 2007 *Archaeological Excavation Manual*, unpubl rep

Greenlane Archaeology, 2022 *Land at Mill Lane, Low Mill, Caton, Lancashire: Archaeological Evaluation*, unpubl rep

Hodgson, J, and Brennand, M, 2006 *Prehistoric Period Resource Assessment*, in The Archaeology of North West England, An Archaeological Framework for North West England: Volume 1 Resource Assessment, 23-58

Iles, P, 2009 Early Evidence for Burials in Lancaster, in P Iles and DCA Shotter (ed), *Lancaster's Roman Cemeteries*, Centre for North-West Regional Studies resource papers, n ser **4**, Lancaster 1-19

Margary, ID, 1957 *Roman Roads in Britain*, Volume 2, London

McCarthy, MR, and Brooks, CM, 1992 The Establishment of a Medieval Pottery Sequence in Cumbria, England, in D Gaimster and M Redknap (eds) *Everyday and Exotic Pottery from Europe c.650-1900*, Exeter, 21-37

Middleton, R, 1996 *The Neolithic and Bronze Age*, in R Newman (ed) *The Archaeology of Lancashire*, Lancaster, 35-59

Middleton, R, Wells, CE, and Huckerby, E, 1995 *The Wetlands of North Lancashire*, North West Wetlands Survey **3**, Lancaster Imprints **4**, Lancaster

Moseley, F (ed), 1978 *The Geology of the Lake District*, Yorkshire Geological Society, occ publ **3**, Leeds

North Star Archaeology, 2018 *Land at Low Mill Lane, Caton, Lancashire: Archaeological Desk-Based Assessment*, unpubl rep

Oxford Archaeology (OA) North, 2003 *Escowbeck Farm, Caton, Lancashire: Archaeological Excavation Assessment Report*, unpubl rep

OA North, 2006 *The River Terrace, Caton, Lancashire: Archaeological Excavation Assessment Report*, unpubl rep

Penney, SH, 1978 Gazetteer, *Contrebis*, **6**, 43-44

Phase Site Investigations, 2021 *Land at Low Mill Lane, Caton, Lancashire: Archaeological Geophysical Survey*, unpubl rep

Philpott, R, 2006 The Romano-British Period Resource Assessment, in Brennand, M, (ed) *The Archaeology of North West England: An Archaeological Research Framework for the North West Region – Volume 1, Resource Assessment*, Archaeology North West **8**, Manchester, 59-90

Potts, WTW 1984 The Origin of the Gresgarth Estate and the date of Gresgarth Hall, *Contrebis*, **11**, 26-31

Shotter, DCA, and White, AJ, 1990 *The Roman Fort and Town of Lancaster*, Lancaster

Whitehead, S, Williams, D, and Mace, T, 2013 'Excavation of Medieval Burgage Plots to the Rear of 130-136 Stricklandgate, Kendal', *Trans Cumberland Westmorland Antiq Archaeol Soc*, 3rd series, **XIII**, 89-115

Williams, R, 1998 A Conjectural Mesolithic Scatter Site on the River Lune at Halton, *Contrebis*, **23**, 2-8

Appendix 1: Project Design

Archaeological Watching Brief Cover Sheet and Project Design

The Site	
Site Name	Land off Mill Lane, Low Mill, Caton, Lancaster
County	Lancashire
NGR	352633 464806 (centre)

Client	
Client Name	MH Stainton Ltd

Planning	
Pre-planning?	No
Planning Application No.	1/2018/00002/FUL
Condition number	4
Local Planning Authority	Lancaster City Council
Planning Archaeologist	Peter Iles, Planning Officer (Archaeology), Lancashire County Council
Groundworks subject to watching brief	Groundworks associated with building plots 1 and 6-9 (see plan appended to the end of this document)

Archaeological work	
Desk-based assessment done as previous phase of work?	Yes, by North Star Archaeology
Previous phase of geophysical survey	Phase Site Investigations (2021)
Evaluation	Ten 20m long trenches; Greenlane Archaeology (2022)

Archiving	
Relevant Record Office(s)/Archive Centre(s)	Lancashire Record Office, Preston
Relevant HER	Lancashire County Council
Relevant Museum	Lancaster City Museum

1. Introduction

1.1 Project Cover Sheet

1.1.1 All the details specific to this project are set out on the cover sheet of this project design. The project design itself covers all elements that are involved in an archaeological watching brief.

1.2 Greenlane Archaeology

1.2.1 Greenlane Archaeology is a private limited company based in Ulverston, Cumbria, and was established in 2005 (Company No. 05580819). Its directors, Jo Dawson and Daniel Elsworth, have worked continuously in commercial archaeology since 2000 and 1999 respectively, principally in the north of England and Scotland. Greenlane Archaeology is committed to a high standard of work, and abides by the Chartered Institute for Archaeologists' (CIfA) Code of Conduct. The watching brief will be carried out according to the Standards and Guidance of the CIfA (CIfA 2014a).

1.3 Staff

1.3.1 ***Dan Elsworth (MA (Hons)), ACIfA)*** graduated from the University of Edinburgh in 1998 with an honours degree in Archaeology, and began working for the Lancaster University Archaeological Unit, which became Oxford Archaeology North (OA North) in 2001. Daniel ultimately became a project officer, and for over six and a half years worked on excavations and surveys, building investigations, desk-based assessments, and conservation and management plans. These have principally taken place in the North West, and Daniel has a particular interest in the archaeology of the area. He has managed many recent projects in Cumbria and Lancashire including several archaeological building recordings and watching briefs. He is very experienced at building recording, having carried out numerous such projects, mainly in Cumbria and Lancashire.

1.3.2 ***Tom Mace (BA (Hons), MA, MIfA)*** has extensive experience of working on a variety of archaeological projects, especially watching briefs, but also excavations, evaluations, and building recordings, as well as report writing and illustration production. He joined Greenlane Archaeology in 2008 having worked for several previous companies including Archaeological Solutions and Oxford Archaeology North. He currently works on a broad range of projects and is also responsible for the production of all illustrations for reports and publications as well as some post-excavation assessments. He is a Member of the Chartered Institute for Archaeologists.

1.3.3 ***Jo Dawson (MA (Hons), ACIfA)*** graduated from University of Glasgow in 2000 with a joint honours degree in Archaeology and Mathematics, and since then has worked continuously in commercial archaeology. Her professional career started at Glasgow University Archaeological Research Division (GUARD), following which she worked for Headland Archaeology, in Edinburgh, and then Oxford Archaeology North, in Lancaster. During this time she has been involved in a range of different archaeological projects. She has extensive experience of both planning and pre-planning projects, and has undertaken assessments of all sizes. Since establishing Greenlane Archaeology in 2005 she has managed numerous projects in south Cumbria, including desk-based assessments and evaluations. She currently mainly carries out quality control of reports and post-excavation assessments. She is an Associate member of the Chartered Institute for Archaeologists.

1.3.4 ***Specialists:*** Greenlane Archaeology have a range of outside specialists who are regularly engaged for finds and environmental work. Engagement is dependent upon availability, but specialists typically engaged are as follows:

Specialism	**Specialist**
Animal bone	Naomi Sewpaul
Ceramic building material, medieval and Roman	Phil Mills
Conservation	York Archaeological Trust
Clay tobacco pipe	Peter Davey (or Tom Mace in house for smaller assemblages)
Flots	Headland Archaeology, Edinburgh
Human bone	Malin Holst
Industrial residue	Gerry McDonnell
Medieval pottery	Chris Cumberpatch for assemblages from the North East of England
Miscellaneous find types, for example Roman glass and medieval and earlier metalwork	Chris Howard-Davis
Prehistoric pottery	Blaise Vyner
Radiocarbon dates	Scottish Universities Environmental Research Centre
Roman pottery	Ruth Leary
Samian	Gwladys Monteil
X-ray of metal finds	York Archaeological Trust

2. Objectives

2.1 Desk-Based Assessment

2.1.1 Where an archaeological desk-based assessment has not already been carried out in a previous phase of work, the objective will be to examine early maps of the site and any other relevant primary and secondary sources in order to better understand its dating and development, and set it in its historic context.

2.2 Watching Brief

2.2.1 To carry out an archaeological watching brief on the relevant areas of groundworks, in order to identify any and record surviving any archaeological remains that are revealed.

2.3 Report

2.3.1 To produce a report detailing the results of the watching brief.

2.4 Archive

2.4.1 Produce a full archive of the results of the project.

3. Methodology

3.1 Desk-Based Assessment

3.1.1 Where an archaeological desk-based assessment has not already been carried out in a previous phase of work, an examination of various sources, particularly early maps and plans relating to the site, will be carried out, including other relevant primary and secondary sources. The sources that will be used as part of the desk-based assessment will include:

- ***Record Office/Archive Centre***: the majority of original and secondary sources relating to the site are deposited in the relevant Record Office(s) or Archive Centre(s), as specified in the cover sheet of this project design. Of principal importance are early maps of the site. These will be examined in order to establish the development of the site, date of any structures present within it, and details of land use, in order to set the site in its historical, archaeological, and regional context. In addition, any details of the site's owners and occupiers will be acquired where available;
- ***Online Resources***: where available, mapping such as Ordnance Survey maps and tithe maps will be consulted online;
- ***Greenlane Archaeology***: Greenlane Archaeology's office library includes maps, local histories, and unpublished primary and secondary sources. These will be consulted where relevant, in order to provide information about the history and archaeology of the site and the general area.

3.2 Watching Brief

3.2.1 The relevant area of groundworks will be monitored, with one archaeologist on site. If there are several areas being excavated concurrently it may be considered necessary to have more than one archaeologist on site.

3.2.2 The watching brief methodology will be as follows:

- All excavation will be carried out under supervision by staff from Greenlane Archaeology;
- All deposits of archaeological significance will be examined by hand if possible in a stratigraphic manner, using shovels, mattocks, or trowels as appropriate for the scale;
- The position of any features, such as ditches, pits, or walls, will be recorded and where necessary these will be investigated in order to establish their full extent, date, and relationship to any other features. If possible, negative features such as ditches or pits will be examined by sample excavation, typically half of a pit or similar feature and approximately 10% of a linear feature;
- All recording of features will include detailed plans and sections at a scale of 1:20 or 1:10 where practicable or sketches where it is not and photographs in both colour print and colour digital format. In addition, photographs will also be taken of the site before work begins and after completion;
- All deposits, drawings and photographs will be recorded on Greenlane Archaeology *pro forma* record sheets;

- All finds will be recovered during the watching brief for further assessment as far as is practically and safely possible. Should significant amounts of finds be encountered an appropriate sampling strategy will be devised;
- All faunal remains will also be recovered by hand during the watching brief as far as is practically and safely possible, but where it is considered likely that there is potential for the bones of fish or small mammals to be present appropriate volumes of samples will be taken for sieving;
- Deposits that are considered likely to have, for example, preserved environmental remains, industrial residues, and/or material suitable for scientific dating will be sampled. Bulk samples of between 20 and 60 litres in volume (or 100% of smaller features) where possible, depending on the size and potential of the deposit, will be collected from stratified undisturbed deposits and will particularly target negative features (e.g. gullies, pits and ditches) and occupation deposits such as hearths and floors. An assessment of the environmental potential of the site will be undertaken through the examination of samples of suitable deposits by specialist sub-contractors, who will examine the potential for further analysis. All samples will be processed using methods appropriate to the preservation conditions and the remains present;
- Any articulated human remains discovered during the watching brief will be left *in situ*, and, if possible, covered. The client will be immediately informed as will the local coroner. Should it be considered necessary to remove the remains this will require a Home Office licence, under Section 25 of the Burial Act of 1857, which will be applied for should the need arise;
- Any objects defined as 'treasure' by the Treasure Act of 1996 (HMSO 1996) will be immediately reported to the local coroner and securely stored off-site, or covered and protected on site if immediate removal is not possible;
- Should any significant archaeological deposits be encountered during the watching brief these will immediately be brought to the attention of the Planning Archaeologist so that the need for further work can be confirmed. Any additional work will be carried out following discussion with the Planning Archaeologist and subject to a new project design, and the ensuing costs will be agreed with the client.

3.3 Report

3.3.1 The results of the watching brief will be compiled into a report, which will provide a summary and details of any sources consulted. It will include the following sections:

- A front cover including the appropriate national grid reference (NGR);
- A concise non-technical summary of results, including the date the project was undertaken and by whom;
- Acknowledgements;
- Project Background;
- Methodology, including a description of the work undertaken;
- Results of the watching brief, including finds and samples;;
- Discussion of the results including phasing information;
- Bibliography;
- Illustrations at appropriate scales including:

  - a site location plan related to the national grid;

  - a plan showing the location and extent of the area subject to archaeological watching brief;

  - plans and sections of any features discovered during the watching brief;

  - photographs of any features encountered during the watching brief;

  - copies of selected historic maps and plans of the site relevant to the understanding of its development.

3.4 Archive

3.4.1 The archive, comprising the drawn, written, and photographic record of any deposits of archaeological interest and/or working shots identified during the watching brief, formed during the project, will be stored by Greenlane Archaeology until it is completed. Upon completion it will be deposited with the relevant Record Office or Archive Centre, as detailed on the cover sheet of this project design, together with a copy of the report. The archive will be compiled according to the standards and guidelines of the CIfA (CIfA 2014b). In addition details will be submitted to the Online AccesS to the Index of archaeological investigationS (OASIS) scheme. This is an internet-based project intended to improve the flow of information between contractors, local authority heritage managers and the general public.

3.4.2 A copy of the report will be provided to the client and a copy will be provided for the relevant Historic Environment Record, as detailed on the cover sheet of this project design.

4. Work timetable

4.1 Greenlane Archaeology will be available to commence the project on the date specified on the Order Form, or at another date convenient to the client. It is envisaged that the elements of the project will carried out in the following order:

- ***Task 1***: rapid desk-based assessment (where this has not already been carried out as a previous phase of archaeological work);
- ***Task 2***: archaeological watching brief;
- ***Task 3***: production of draft report including illustrations;
- ***Task 4***: feedback on draft report, editing and production of final report;
- ***Task 5***: finalisation and deposition of archive.

5. Other matters

5.1 Access and clearance

5.1.1 Access to the site will be organised through co-ordination with the client and/or their agent(s). It is assumed that the watching brief will be able to be undertaken without obstruction. Greenlane Archaeology reserves the right in increase the price if problems with access result in delays to the work.

5.2 Health and Safety

5.2.1 Greenlane Archaeology carries out risk assessments for all of its projects and abides by its internal health and safety policy and relevant legislation. Health and safety is always the foremost consideration in any decision-making process.

5.3 Insurance

5.3.1 Greenlane Archaeology has professional indemnity insurance to the value of **£1,000,000**. Details of this can be supplied if requested.

5.4 Environmental and Ethical Policy

5.4.1 Greenlane Archaeology has a strong commitment to environmentally and ethically sound working practices. Its office is supplied with 100% renewable energy by Good Energy, and uses ethical telephone and internet services supplied by the Phone Co-op. In addition, the company uses the services of The Co-operative Bank for ethical banking, Naturesave for environmentally-conscious insurance, and utilises public transport wherever possible. Greenlane Archaeology is also committed to using local businesses for services and materials, thus benefiting the local economy, reducing unnecessary transportation, and improving the sustainability of small and rural businesses.

6. Bibliography

CIfA, 2014a *Standard and Guidance for an Archaeological Watching Brief*, Reading

CIfA, 2014b *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*, Reading

Appendix 2: Summary Context List

Location	Context	Type	Description	Interpretation
Compound	***1000***	Deposit	Dark greyish brown soft silt with modern inclusions, between 0.2m and 0.3m thick, 0.5m thicker on west side where there is additional dumped material	Topsoil
Compound	***1001***	Deposit	Pale pink gravel, 4m wide alongside north edge of track	Spread of material from track
Compound	***1002***	Deposit	Mid-orangey brown sandy silt with 10% rounded gravel	Subsoil

Appendix 3: Summary Finds List

Context	Type	Qty	Description	Date range
1002	Pottery	3	Two body fragments of brown-glazed red earthenware (one part of the base) and one of black-glazed red earthenware	17th – early 20th century
1002	Pottery	1	A small body fragment of a thin-walled (*c*5mm thick) gritty ware vessel; the fabric is a soft (it will mark paper), lightly gritted, sandy fabric, with a pale/light orange section and redder orange surfaces and no glaze apparent	12th – 14th century
1002	Industrial residue	1	Small lump of ironworking slag, not very diagnostic but relatively heavy and with smooth flowed surface so perhaps from bloomery process	Not closely dateable

Appendix 4: Archive Index

Project name:	Land off Mill Lane, Low Mill, Lancashire: Archaeological Strip, Map and Record		
Project Code:	G1523	**Site Code:**	LM22
Description	**Material**	**Size**	**Quantity**
Report	Paper, comb-bound	A4 with	13 sheets printed double-sided
Watching brief record sheet	Paper	A4	1 printed sheet, double-sided
Photo record sheet	Paper	A4	1 printed sheet, double-sided
Drawing index	Paper	A4	1 sheet, single-sided
Drawings	Drafting film	29 x 32cm	1 sheet, single-sided
Digital archive index	Paper	A4	1 sheet, single-sided
Digital archive	DVD	-	1