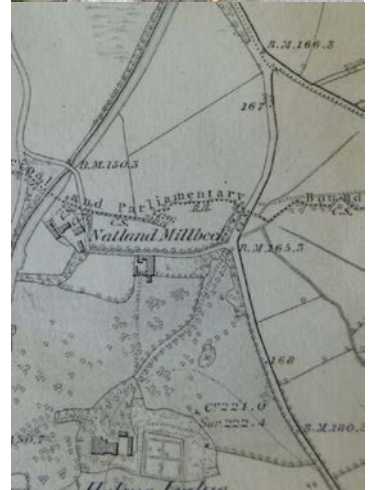


LAND AT NATLAND MILL BECK LANE, KENDAL, CUMBRIA

Heritage Assessment



Client: Oakmere Homes

NGR: 352055 490793
(centre)

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June 2016



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Contents

| | |
|---|----|
| Illustrations and Tables | 2 |
| List of Figures | 2 |
| List of Plates | 2 |
| List of Tables | 2 |
| Summary..... | 3 |
| Acknowledgements..... | 3 |
| 1. Introduction | 4 |
| 1.1 Circumstances of the Project..... | 4 |
| 1.2 Location, Geology, and Topography | 4 |
| 2. Methodology | 6 |
| 2.1 Heritage Assessment..... | 6 |
| 2.2 Site Visit | 6 |
| 2.3 Archive | 6 |
| 3. Results | 7 |
| 3.1 Introduction | 7 |
| 3.2 Heritage Assessment..... | 7 |
| 3.3 Map and Image Regression..... | 9 |
| 3.4 Site Visit | 12 |
| 4. Site History..... | 14 |
| 4.1 Introduction | 14 |
| 4.2 Prehistoric Period (c11,000 BC – 1 st century AD) | 14 |
| 4.3 Romano-British to Early Medieval Period (1 st century AD – 11 th century AD)..... | 14 |
| 4.4 Medieval Period (11 th century – 16 th century AD)..... | 15 |
| 4.5 Post-Medieval Period (16 th century AD – Present)..... | 16 |
| 4.6 Previous Archaeological Work..... | 16 |
| 5. Discussion..... | 17 |
| 5.1 Introduction | 17 |
| 5.2 Significance..... | 17 |
| 5.3 Potential for Unknown Archaeological Remains..... | 17 |
| 5.4 Disturbance..... | 18 |
| 5.5 Impact | 18 |
| 5.6 Conclusion | 19 |
| 6. Bibliography | 20 |
| 6.1 Primary and Cartographic Sources..... | 20 |
| 6.2 Secondary Sources..... | 20 |
| Appendix 1: Site Gazetteer | 22 |
| Appendix 2: Significance Criteria..... | 28 |

Illustrations and Tables

List of Figures

| | |
|---------------------------------|---|
| Figure 1: Site location | 5 |
| Figure 2: Gazetteer sites | 8 |

List of Plates

| | |
|---|----|
| Plate 1: Extract from Jefferys' map of 1770 showing 'Mill Beck' | 9 |
| Plate 2 (left): Extract from <i>A Plan of the Township of Kendal with Part of Nethergraveship</i> , nd (CAC(K) WQ/R/C/8 nd)..... | 10 |
| Plate 3 (right): Extract from the <i>Plan of the Township of Natland in the Parish of Kendal and County of Westmorland</i> , 1836 (CAC(K) WQ/R/C/12 1836) | 10 |
| Plate 4: Extract from the <i>Plan of Helm Lodge Estates Belonging to WD Crewdson Esquire</i> , 1838 (CAC(K) WD/Cr/4/201 1838)..... | 10 |
| Plate 5 (left): Extract from the Ordnance Survey map of 1863..... | 11 |
| Plate 6 (right): Extract from the Ordnance Survey map of c1863..... | 11 |
| Plate 7 (left): Extract from the Ordnance Survey map of 1898..... | 11 |
| Plate 8 (right): Extract from the Ordnance Survey map of 1914 | 11 |
| Plate 9 (left): General view of the southern field, viewed from the east | 12 |
| Plate 10 (right): General view of the northern field, viewed from the north-west | 12 |
| Plate 11 (left): General view along Natland Beck, viewed from the west..... | 12 |
| Plate 12 (right): The bridge over Natland Beck, viewed from the east..... | 12 |
| Plate 13 (left): Boundary marker, showing carved letters..... | 23 |
| Plate 14 (right): Boundary marker..... | 23 |
| Plate 15 (left): General view of the mill leat surviving as a ditch, viewed from the east..... | 25 |
| Plate 16 (right): General view of the mill leat surviving as a ditch, viewed from the west | 25 |
| Plate 17 (left): Stone blocks edging part of the mill leat | 26 |
| Plate 18 (right): Structure against the south end of the western boundary, presumed to be part of the leat..... | 26 |
| Plate 19: Structure against the south end of the western boundary, presumed to be part of the leat, showing the iron 'pipe' and leat..... | 26 |

List of Tables

| | |
|---|----|
| Table 1: Summary of the gazetteer sites identified within the study area | 7 |
| Table 2: Significance by site | 17 |
| Table 3: Degree of potential for unknown archaeological remains by period | 18 |

Summary

As part of the submission of a planning application for the construction of a residential development on land at Natland Mill Beck Lane, Kendal, Cumbria, Greenlane Archaeology was commissioned to carry out a heritage assessment of the site. This was intended to establish at an early stage whether there were likely to be any sites of archaeological interest within the proposed development area and potential for as yet unknown sites to be present, but is also intended to enhance a previous heritage assessment following specific comments about the site by the Historic Environment Officer at Cumbria County Council. The work for the project, including a site visit, was carried out in June 2016.

The site largely comprises an area of pasture to south of Kendal, divided by Natland Beck. Early maps demonstrate that the beck formed the boundary between the townships of Kendal to the north and Natland to the south and that it was therefore somewhat peripheral to both. It had clearly taken its current form by the early 19th century, and the area was of historic interest for a number of reasons. Firstly, its peripheral location meant that it was close to the site of the gallows belonging to Kendal, which were most likely situated in a field just to the west of the proposed development area. Secondly, it was the location of a number of important industrial sites, initially a water mill of medieval origin, the leat for which ran along the southern edge of the proposed development area and part of which ran through the south-west corner, and later an 18th century bloomforge. The site is also in close proximity to the Lancaster to Kendal Canal, which began construction in the 1790s and was completed in 1819.

The heritage assessment identified 13 sites of archaeological interest within the study area, of which all but two, a stone boundary marker of uncertain purpose identified during the site visit and the site of the gallows revealed in early maps, were already recorded in the Historic Environment Record. Across the study area the sites identified are all of medieval and post-medieval date, and include four Listed Buildings. Of the 13 sites recorded, two are within the proposed development area – the mill leat and the boundary stone, although a small structure and a well recorded on the Ordnance Survey maps of 1898 and 1914 respectively are too, but these are considered to be of very low importance. The significance of the other two recorded sites of archaeological interest is assessed, as is the potential for previous disturbance across the site, the likely impact of any development, including its effect on the setting of the Listed Buildings, and the potential for previously unknown archaeological remains to be present. The need for appropriate mitigation including preservation of remains where possible and further investigation is also outlined.

Acknowledgements

Greenlane Archaeology would like to Oakmere Homes for commissioning the project, in particular Mark Brown and Jenna Wearing for their help during the project. Further thanks are due to the staff of the Cumbria Archive Centre in Kendal (CAC(K)) for help with accessing their archives.

The project was managed by Dan Elsworth, who also carried out the desk-based assessment and site visit, and wrote the report with Tom Mace, who produced the illustrations. The final report was edited by Jo Dawson.

1. Introduction

1.1 Circumstances of the Project

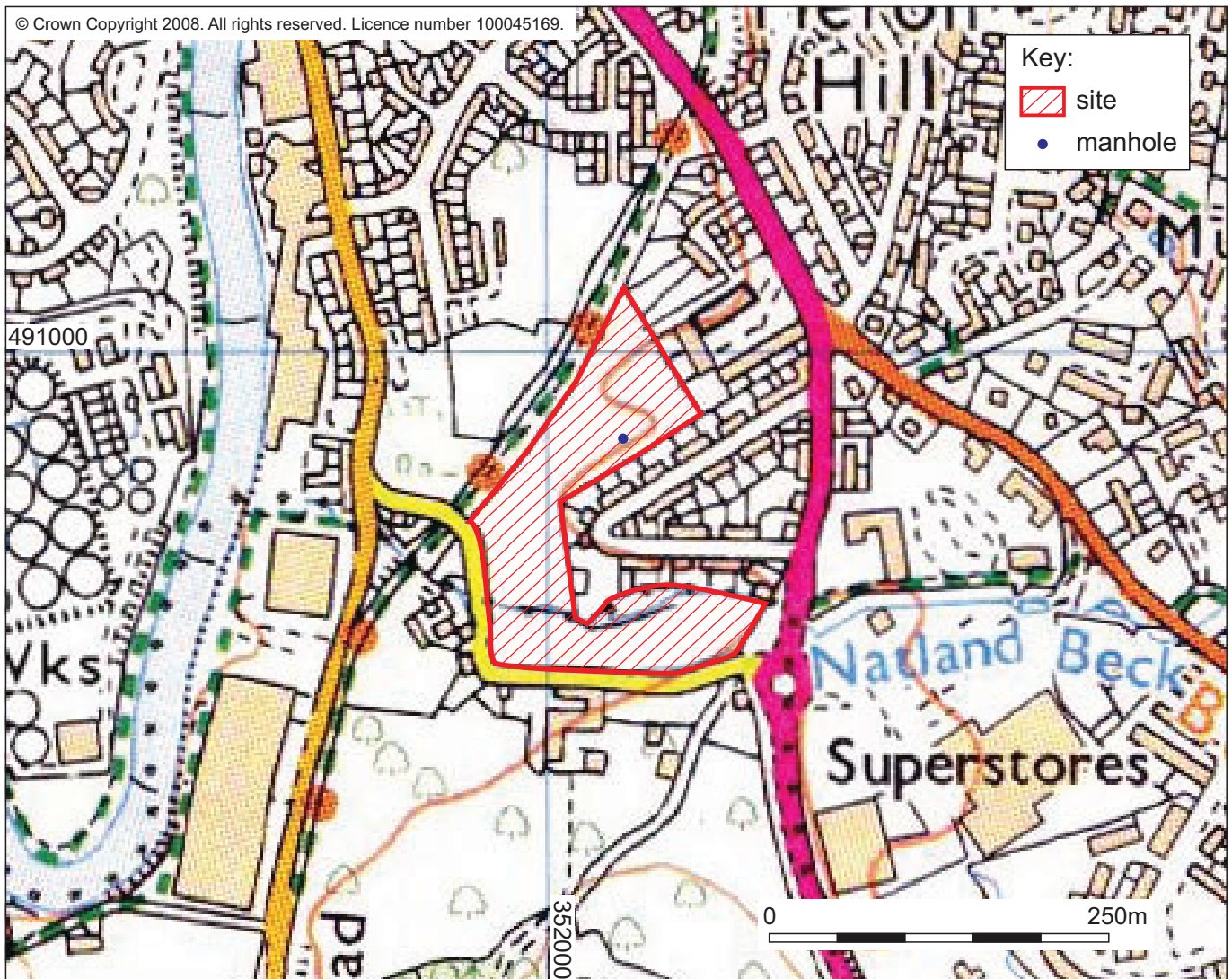
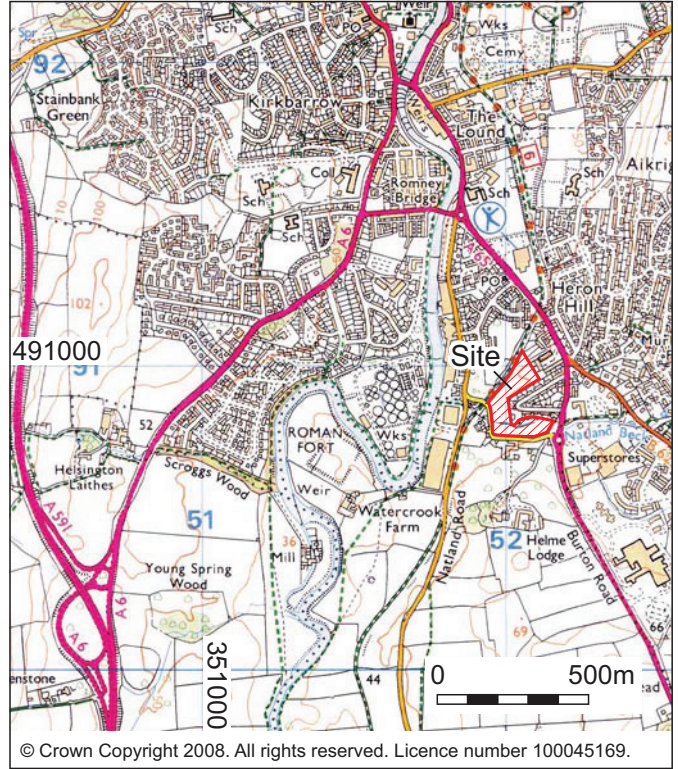
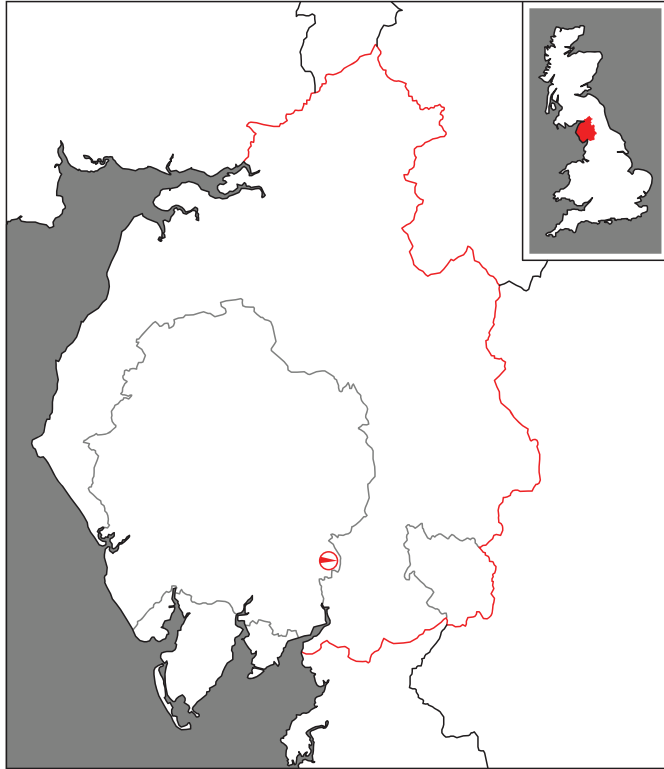
1.1.1 As part of the submission of a planning application for the construction of a residential development on land at Natland Mill Beck Lane, Kendal, Cumbria (NGR: 352055 490793 (centre)) Greenlane Archaeology was commissioned by Oakmere Homes (hereafter 'the client') to carry out a heritage assessment for the site. This was intended to establish at an early stage whether there were likely to be any sites of archaeological interest within the proposed development site and potential for as yet unknown sites to be present, but is also intended to enhance a previous heritage assessment (Stephen Abbott Associates 2016) following specific comments about the site by the Historic Environment Officer at Cumbria County Council.

1.1.2 The site occupies an area of pasture the south of the centre of Kendal, to the east of which there has been substantial development in the form of the Murley Moss Business Centre and a large retail site, while to the west is the former line of the Lancaster to Kendal Canal. To the south a new residential development on land forming part of Natland Mill Beck Farm has recently taken place.

1.2 Location, Geology, and Topography

1.2.1 The site is located to the south of the centre of Kendal between Burton Road (the A65) to the east, Natland Road and the line of the former Lancaster and Kendal Canal to the west, and Natland Mill Beck Lane to the south with Natland Beck running approximately east/west through the centre. It is at approximately 45m above sea level (Ordnance Survey 2008; see Figure 1). The underlying geology of the area comprises Dinantian Carboniferous limestone covered by glacial till (Moseley 1978, plate 1). The landscape is characterised by well-managed farmland of improved pasture with the occasional area of mature trees (Countryside Commission 1998, 66).

1.2.2 The site comprises two areas of former meadow with some trees along the boundaries, which mainly comprise dry stone walls. The former mill leat survives as a substantial ditch along parts of the southern edge, against the north side of Natland Mill Beck Lane.



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Figure 1: Site location

2. Methodology

2.1 Heritage Assessment

2.1.1 A study area comprising an area of approximately 0.5km around the proposed development area was used, which was intended to be large enough to take in areas outside this and also gather enough information from the locality to assess the archaeological potential of the whole area. The heritage assessment was carried out in accordance with the guidelines of the Chartered Institute for Archaeologists (CIfA 2014). This principally comprised an examination of early maps of the site and published secondary sources. A number of sources of information were used during the heritage assessment:

- **Cumbria County Council Historic Environment Record (HER):** this is a list of all the known sites of archaeological interest within the county (excluding the Lake District National Park, which has a separate list maintained by the Lake District National Park Authority) and is the primary source of information for an investigation of this kind. The data for all known sites recorded in the HER within the study area was obtained from the HER and in addition unpublished reports of previous archaeological investigations of the site were examined;
- **Cumbria Archive Centre, Kendal (CAC(K)):** this was visited in order to examine early maps and plans of the site, and local and regional histories;
- **Greenlane Archaeology library:** additional secondary sources and unpublished reports were examined to provide information for the site background.

2.2 Site Visit

2.2.1 A brief site visit was carried out covering the main part of the proposed development area and other areas that might be affected. This primarily had the intension of identifying any sites or features of archaeological interest, but also areas that might prove constraining to any subsequent archaeological work and whether the site had been affected by any modern activity that might have impacted upon archaeological remains. Brief written notes were made during the site visit and areas of interest noted on a plan of the site. Colour digital photographs showing the general arrangement of the site and any features of interest were also taken.

2.3 Archive

2.3.1 A comprehensive archive of the project has been produced in accordance with the project design and current CIfA and English Heritage guidelines (Brown 2007; English Heritage 1991). The paper and digital archive and a copy of this report will be deposited in the Cumbria Archive Centre in Kendal following the completion of the project. A copy of this report will be provided for the client, a digital copy for the client's agent, and a copy will be retained by Greenlane Archaeology. In addition, at a suitable time a digital copy will be provided for the Cumbria County Council HER, and a record of the project will be made on the OASIS scheme.

3. Results

3.1 Introduction

3.1.1 A total of 13 sites of archaeological interest were identified within the study area during the heritage assessment and site visit (Figure 2; summarised in Table 1 below), all of which are medieval or post-medieval in date, although the origins of some are uncertain, and one is of completely unknown date (**Site 12**). Of the sites, four are Listed Buildings (**Sites 5, 6, 9, and 13**), one was identified in documentary sources (**Site 4**), one was identified during the site visit (**Site 3**), and the remaining seven were already recorded in the HER. In addition, the information relating to two sites (**Sites 7 and 10**) was enhanced during the heritage assessment and site visit.

| Site No. | Type | Period |
|----------|-----------------|---------------------------|
| 1 | Ford | Medieval? |
| 2 | Sandpit | Post-medieval |
| 3 | Stone | Post-medieval |
| 4 | Site of gallows | Medieval? |
| 5 | Icehouse | Post-medieval |
| 6 | Bridge | Post-medieval |
| 7 | Bloomforge | Post-medieval |
| 8 | Mill | Medieval to post-medieval |
| 9 | Farmhouse | Post-medieval |
| 10 | Mill leat | Medieval to post-medieval |
| 11 | Canal | Post-medieval |
| 12 | Arch | Unknown |
| 13 | House | Post-medieval |

Table 1: Summary of the gazetteer sites identified within the study area

3.2 Heritage Assessment

3.2.1 The results of the heritage assessment have been used to produce two separate elements. Firstly all sites of archaeological interest recorded within the study area were compiled into a gazetteer (*Appendix 1*). The gazetteer is used to assess the general type of historic landscape that makes up the study area, contribute to the compilation of the general history of the site (see *Section 4*) and, more importantly, identify sites that are likely to be affected by the proposed development. The significance of each of these sites and the degree to which they are likely to be affected is considered in *Section 5* and from this a discussion of the nature of mitigation works has been produced.

3.2.2 The second purpose of the heritage assessment is to produce a background history of the site. This is intended to cover all periods, in part to provide information that can be used to assess the potential of the site (particularly for the presence of remains that are otherwise not recorded in the study area), but more importantly to present the documented details of any sites that are known (see *Section 4*).

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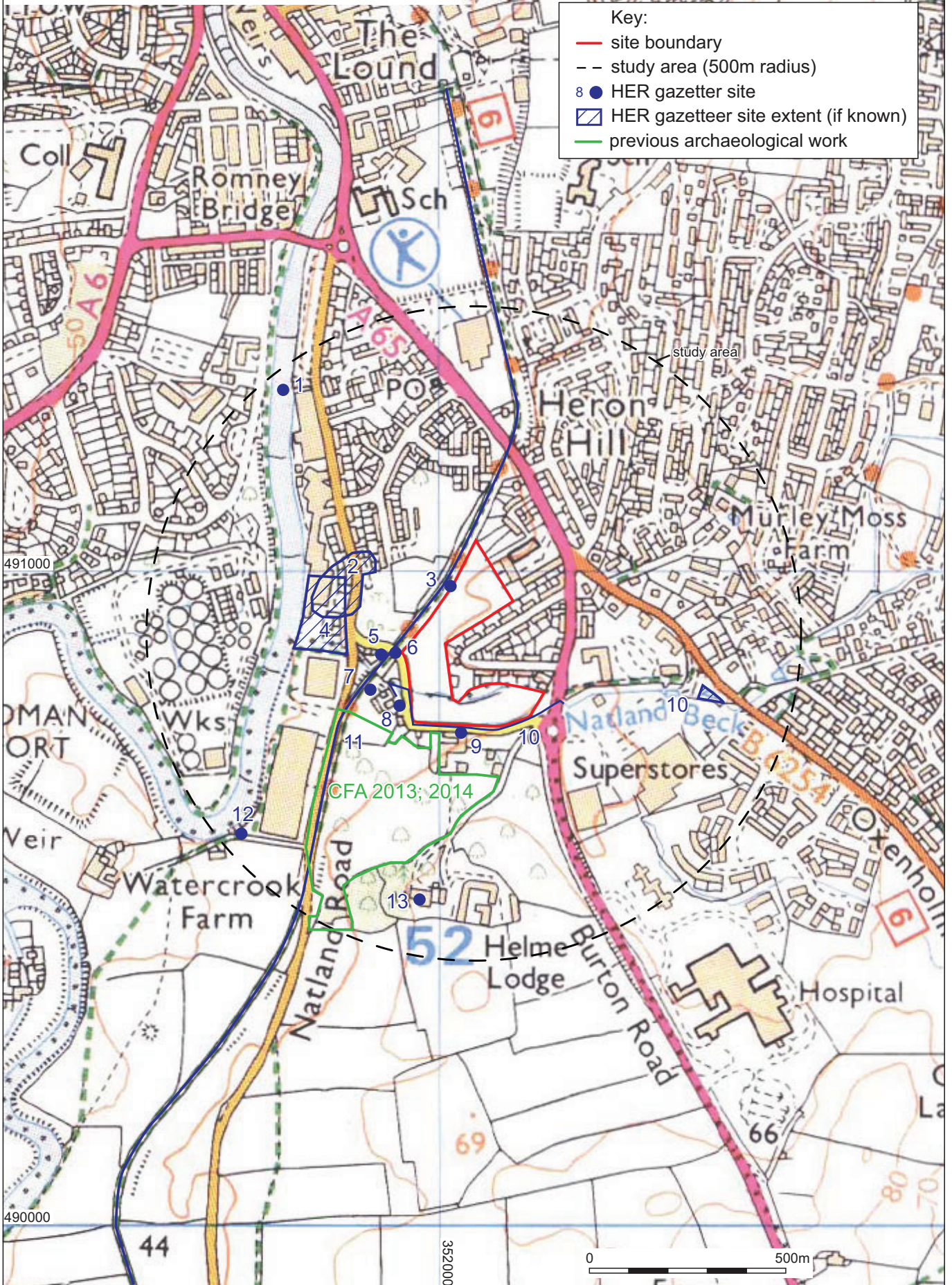


Figure 2: Gazetteer sites

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3.3 Map and Image Regression

3.3.1 **Introduction:** the study area is fortunate in having a number of early estate maps covering it, although these typically only include parts, as well as their being other useful regional maps of which Jefferys' map of the county of 1770, is the most detailed. In addition, the site's location, either side of the Natland Beck, which forms the boundary between the townships of Natland to the south and Kendal to the north, means that it is covered by two different corn rent maps. There is also a full range of early Ordnance Survey maps covering the late 19th to the early 20th centuries.

3.3.2 **Jefferys', 1770:** this is one of the earliest detailed maps of the county and although not detailed enough to show individual buildings or fields it shows the area before the construction of the canal and does clearly show the mill (**Site 8**) and names 'Mill Beck'. Confusingly it shows the mill as being positioned on Natland Beck itself rather than on the mill leat as it is later depicted. Interestingly, the bloomforge (**Site 7**), which should have still been operating at this point, is not apparently shown, unless it was actually on the same site as the mill.



Plate 1: Extract from Jefferys' map of 1770 showing 'Mill Beck'

3.3.3 **Map of Estate at Natland, 1824 (CAC(K) WD/Cr/11/104 1824):** this plan mostly comprises land to the east of the proposed development area, but it includes the field on the south side of Natland Beck. Interestingly this is named 'Croft' rather than 'Mill Close' as it is on the later maps (see Sections 3.3.5 and 3.3.6 below).

3.3.4 **A Plan of the Township of Kendal with Part of Nethergraveship, nd (CAC(K) WQ/R/C/8, nd):** the area occupies fields to the east of the river (Plate 2). It principally occupies parts of fields labelled 724 and 726, the names of neither of which is given but they are both said to have belonged to John Wilson and were occupied by William Thompson. The south end of the site is not shown, but the course of Natland Beck, which divides the two townships, is shown as dividing in two places along its length.

3.3.5 **A Plan of the Township of Natland in the Parish of Kendal and County of Westmorland, 1836 (CAC(K) WQ/R/C/12 1836):** only the south end of the site is shown on this map (Plate 3). The site occupies plot 167 to the south of Natland Mill Beck. This is named 'Mill Close' and is owned by James Webster (CAC(K) WQ/R/C/12 1836). Again Natland Beck is shown as dividing along its length, although only once, and the line of the mill leat is just visible running along the southern edge of the proposed development area before crossing below the road to the west and running to the mill.



Plate 2 (left): Extract from *A Plan of the Township of Kendal with Part of Nethergraveship*, nd (CAC(K) WQ/R/C/8 nd)

Plate 3 (right): Extract from the *Plan of the Township of Natland in the Parish of Kendal and County of Westmorland*, 1836 (CAC(K) WQ/R/C/12 1836)

3.3.6 *A Plan of Helm Lodge Estates, 1838* (CAC(K) WD/Cr/4/201 1838): this map includes only south end of the proposed development site, which is named 'Mill Close', as on the earlier map (see Section 3.3.5 above); the area to the north is owned by John Wilson (Plate 4). Again, the mill leat is marked along the southern edge of the field, before running to the mill to the west.



Plate 4: Extract from the *Plan of Helm Lodge Estates Belonging to WD Crewdson Esquire*, 1838 (CAC(K) WD/Cr/4/201 1838)

3.3.7 *Section of a Drain and Natland Mill Beck, 1862* (CAC(K) WDB 35/2/1044, 1862): although impossible to locate on the ground this drawing appears to show a section through the southern part of the site as it shows the position of the mill leat and the beck. Although otherwise not particularly useful, it does suggest that there is some form of drain in the southern field, although it is not clear if this plan depicts an extant drain or a proposed one that was never constructed.

3.3.8 *Ordnance Survey, 1863*: this map, at a scale of 1: 1,560, shows the same arrangement of field boundaries as those shown on the earlier *Plan of the Township of Kendal* (Plate 5; cf. Plate 2) but otherwise shows little change. However, while the mill leat is still shown as running along the southern boundary of the southern part of the proposed development area a spur is also included running to the north where it meets the lane to the west, which presumably formed a bypass of some form.

3.3.9 **Ordnance Survey, c1863:** this map, at a scale of 1: 2,500, shows essentially the same information as the previous one (Plate 6; cf. Plate 5) only in more detail. The same arrangement of the mill leat is still shown.

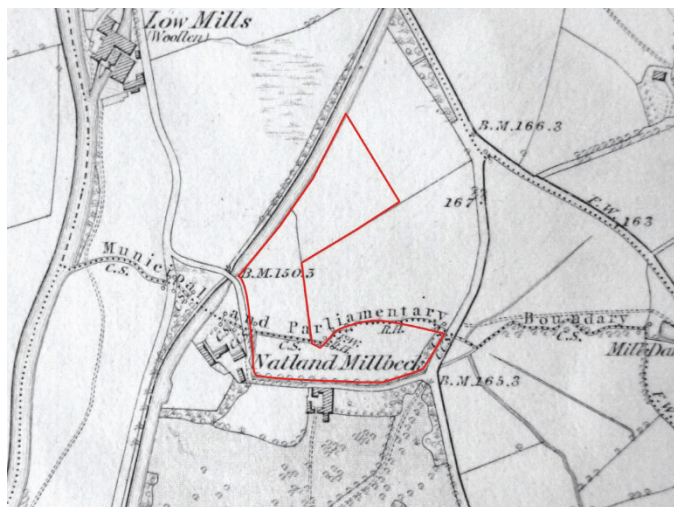


Plate 5 (left): Extract from the Ordnance Survey map of 1863



Plate 6 (right): Extract from the Ordnance Survey map of c1863

3.3.10 **Ordnance Survey, 1898:** this map, also at a scale of 1: 2,500, shows a small structure is marked at the junction of the two fields comprising the north part of the site, while the field to the north-east of the site has been subdivided and buildings have been constructed within it (Plate 7). A dashed line has been added later, sub-dividing the field forming the southern part of the site, although it is not clear what this denotes. It is conceivable that it relates to the drain shown in the section drawing of 1862 (see Section 3.3.7 above).

3.3.11 **Ordnance Survey, 1914:** this map, also at a scale of 1: 2,500, shows a footbridge crossing the Natland Beck at its west end and a well is shown at the east end (towards the centre on the north side of the lower section of the area) (Plate 8). The small structure shown on the 1898 edition is no longer present (Plate 8; cf. Plate 7). The site otherwise remains unchanged, although it not clear if the spur from the leat to the north forming a bypass still exists.

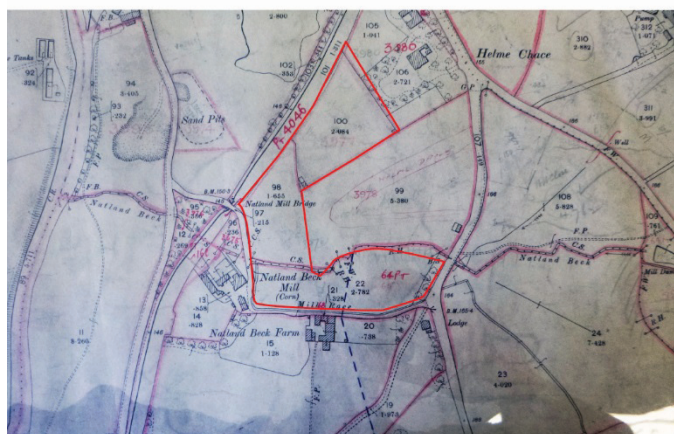


Plate 7 (left): Extract from the Ordnance Survey map of 1898



Plate 8 (right): Extract from the Ordnance Survey map of 1914

3.4 Site Visit

3.4.1 **Site Arrangement and Character:** the site now comprises two fields of pasture/meadow separated by Natland Beck, which runs east/west between them. The southern field rises up to the south but also south-east away from the beck and comprises a long thin strip of land, bounded by hedges, walls and with the occasional tree (Plate 9). The northern field is almost L-shaped and comprises relatively level ground but drops away to the north-west, towards the former line of the canal, and south towards the beck (Plate 10). The beck has an irregular course with lots of exposed pebbles and cobbles, but also some later rubble in the form of lumps of concrete and bricks (Plate 11). The bridge at the west end underneath Natland Mill Beck Lane is very plain and probably 20th century as it has two square arches with concrete lintels (Plate 12).



Plate 9 (left): General view of the southern field, viewed from the east

Plate 10 (right): General view of the northern field, viewed from the north-west



Plate 11 (left): General view along Natland Beck, viewed from the west

Plate 12 (right): The bridge over Natland Beck, viewed from the east

3.4.2 **Constraints:** the site visit revealed few constraints to any further archaeological work, with the exception of an iron inspection cover set in concrete and raised above the ground level on the west side of the north field, underneath which was evidently running water. This clearly represents a feature that would have damaged any archaeological remains that might be present in the area, depending on which direction the associated pipe runs.

3.4.3 **Remains:** the site visit was able to enhance the details relating to the line of the former mill leat (**Site 10**). It also identified a new site, a marker stone of unknown purpose (**Site 3**). The additional information collected during the site visit is included in *Appendix 1*.

4. Site History

4.1 Introduction

4.1.1 The history of the local landscape is dominated by two significant elements: the Roman fort at Watercrock to the west, located within a tight bend in the River Kent, and Natland Mill, which has medieval origins. Evidence for activity from earlier and later periods is present in the wider area, including some locally significant monuments. In order to place the proposed development site in its historical background and archaeological context a brief discussion of the earlier history of its environs is necessary. Information relating to specific sites recorded during the heritage assessment and site visit (see *Section 3* above) is included where relevant.

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

4.2.1 While there is some limited evidence for activity in the county in the period immediately following the last Ice Age, this is typically found in the southernmost part on the north side of Morecambe Bay. Excavations of a small number of cave sites have found the remains of animal species common at the time but now extinct in this country and artefacts of Late Upper Palaeolithic type (Young 2002). Closer to the site, similar remains may have been discovered at Hellsfell Cave, on the north side of Kendal, which was excavated in the late 19th century, although evidence for human activity is limited and the remains difficult to interpret on account of having been dispersed after discovery (Wilkinson *et al* 2006). Again, the county was also clearly inhabited during the following period, the Mesolithic (c8,000 – 4,000 BC), as large numbers of artefacts of this date have been discovered during field walking and eroding from sand dunes along the coast, but these are typically concentrated in the west coast area and on the uplands around the Eden Valley (Cherry and Cherry 2002). A small number of microliths belonging to this period were however, found during excavations at the Roman fort (Turner 1979, 234-235); its position alongside the River Kent is one where such artefacts are often found (Middleton *et al* 1995, 202; Hodgkinson *et al* 2000, 151-152). In addition, one of the cave sites on Morecambe Bay has recently had human remains recovered from it dated to the beginning of this period, placing them as early as any known from the rest of the country (Smith *et al* 2013).

4.2.2 In the following period, the Neolithic (c4,000 – 2,500 BC), large scale monuments such as burial mounds and stone circles begin to appear in the region and one of the most recognisable tool types of this period, the polished stone axe, is found in large numbers across the county, having been manufactured at Langdale to the north-west of Kendal (Hodgson and Brennand 2006, 45), although other artefacts of the period include those made in flint. Examples considered to date to the Neolithic have been found nearby, also on the edge of the River Kent (Fell 1974, 4). During the Bronze Age (c2,500 – 600 BC) monuments, particularly those thought to be ceremonial in nature, become more common still, and it is likely that settlement sites thought to belong to the Iron Age have their origins in this period. These are not well represented in the area around Kendal, although an enclosure on The Helme near Oxenholme perhaps has its origins in this period (Collingwood 1908), as might another one that formerly existed on what is now Kendal Fell golf course (Ferguson and Cowper 1893, 525). Stray finds of Bronze Age date have been found in the Kendal area, however, although none are recorded within the study area. Sites that can be specifically dated to the Iron Age (c600 BC – 1st century AD) are very rare; the remains on The Helme may represent a hillfort, a typical site of this period, but they have never been dated (Greenlane Archaeology 2011; Elsworth 2014). There is, however, likely to have been a considerable overlap between the end of the Iron Age and the beginning of the Romano-British period; 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).

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

4.3.1 While the general area around Kendal has relatively little evidence for activity of this date, the study area is relatively close to the Roman fort at Watercrock. The fort was earlier thought to have been known to the Romans as *Concangium*, but more recently it has been stated that it is difficult to be certain

what its original name was (Shotter 1979, 319), the name *Mediobogdum*, which refers to a bend in a river, is perhaps a more likely candidate (Smith 1997). The fort has been known to antiquarians since the 17th century, with a detailed account by Horsley in 1732 stating that the earthworks of the fort were clearly visible, and that remains thought to relate to the civilian settlement were frequently turned up on its west side (Potter 1979, 143). This latter observation is significant, since it is the only account that mentions activity to the west of the fort (although as the fort is orientated with its corners to the four cardinal points it is difficult to be certain which direction was considered west). An earlier account by Machell mentioned a probable bath house, thought to be under the present Watercrock Farm, and a further building to the north (Collingwood 1908). The only other detailed description of the site, prior to the 20th century, apart from occasional discoveries of stray finds, was Nicholson's account of a possible pottery or tile kiln found on the west side of the river close to Mill Lane (now Scroggs Lane), which was apparently associated with the hasty burial of human remains (Nicholson 1861, 13). Nicholson also records an urn, presumably related to a cremation burial in a field on the east side of the river, an area in which other urns had been recorded before and which is known as 'Pots Land' (Gibbons 1988, 78).

4.3.2 Considerations of the fort at Watercrock were published by both William and Robin Collingwood in the early 20th century (Collingwood 1908; 1930), including a plan based on parch marks visible in the warm summer of 1887 by the former, but it was not until after 1930 that more detailed investigation and excavation was carried out. These began with excavations by North carried out in the 1930s, which determined the outline of its walls (North 1932). Further excavations in the 1940s examined further elements of the defences, and found evidence that the fort was established in the first century by Agricola during the Flavian period (North and Hildyard 1945). Further excavation in the 1970s of the fort and areas around it along the river in advance of flood alleviation work dated its establishment, on the basis of more comprehensive evidence, to the very end of the 1st century AD, perhaps AD 90-100 and therefore post-Agricola (Potter 1979, 176-177). A later stone fort was subsequently constructed in the mid 2nd century, followed by a period of reduced usage in the early 3rd century (*op cit*, 178-179). There is evidence that it was reoccupied in the 4th century, although the extent of this is uncertain (*op cit*, 180). Subsequent investigation in the 1980s, in advance of the installation of a water pipe, identified further evidence for the civilian settlement to the south-east of the fort and evidence for further burials in the general area of those found previously (Gibbons 1988). A consideration of Watercrock's position in the local road network was presented in 1979 (Potter 1979, 139), although the details were not clear; an earthwork connecting directly to the fort was identified heading north-west towards Ambleside (*op cit*, 140), which presumably connects to that later identified by Thornton (1989).

4.3.3 Despite the relative proximity of the site to the Roman fort at Watercrock no known sites or finds of Roman date are recorded within the study area.

4.3.4 The early medieval period is not well represented in the area in terms of physical archaeological remains, which is a common situation throughout the county. A piece of Anglian cross-shaft found at the church in Kendal (Collingwood 1904) and its place-name indicates that the town existed in some form prior to the Norman Conquest (Smith 1967, 115). The site is on the edge of Kendal, however, and close to the ancient settlements of Natland to the south and Helsington, across the River Kent to the west. Helsington is a settlement of similar antiquity to Kendal, which is also recorded in the Domesday book (*op cit*, 108). The place-name is, however, earlier, although its meaning is uncertain; it may mean 'farmstead of those dwelling on the *hals*', perhaps referring to the ridge of land on which it is located, although a term relating to hazel copse is also possible (*ibid*). Natland, by contrast is Norse, meaning 'Nati's wood' or sacred grove (*op cit*, 112); 'The Lound' to the north of the study area has similar origins (*op cit*, 120).

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

4.4.1 As is evident from the preceding sections the study area, being on the edge of the townships of both Kendal and Natland, was somewhat peripheral to the development of both settlements in the medieval period. Kendal grew considerably during the 12th to 14th centuries, although the 14th century saw a marked decline in prosperity brought about as a result of the Black Death, animal disease and warfare with Scotland (Winchester 1979, 6). How smaller settlements such as Natland or Helsington

fares during this period is less certain, but the same type of growth and decline is likely. The manors of both Natland and Helsington were owned by the Strickland family throughout most of the medieval period, and in the case of Natland they held it until the 17th century (Nicholson and Burn 1777, 104). The study area did, however, contain a number of important features. The gallows for Kendal were apparently located immediately to the west of the proposed development area (**Site 4**), deliberately on the edge of the township. On the Natland side of the boundary the mill (**Site 8**) was seemingly established in the late 12th century (Somervell 1930, 66). To the north an important crossing of the River Kent existed seemingly from at least the medieval period (**Site 1**), which indicates that the area was perhaps on an important route from the south-east.

4.5 Post-Medieval Period (16th century AD – Present)

4.5.1 The map evidence (see *Section 3.3*) demonstrates that the site had essentially reached its present state of development by the beginning of the 19th century, with all the fields enclosed, and it is likely that relatively little changed in the area following the end of the medieval period. However, the effects of the Industrial Revolution began to have a demonstrable effect on the area by the later 18th century. A bloomforge (**Site 7**) was established close to the mill (**Site 8**) in c1750 by John Wilkinson (Davies-Shiel 1998, 49; see also WDMDS/PC/8/207 1865), a prominent iron master based at Wilson House near Lindale but with interests in pioneering iron working across the UK and Europe (Dawson 2012). This establishment was seemingly short-lived however and it was apparently closed by 1787 (Davies-Shiel 1998, 49). Shortly after that, in 1792, an Act of Parliament authorising the construction of a canal linking Lancaster and Kendal was passed (**Site 11**), with work beginning in the next year to the designs of John Rennie, although it was not until 1819 that the northernmost section was completed (White 2013, 141). The canal was intended to bring coal to Kendal, something that was in short supply in the area but of crucial importance for not only homes but also a variety of industries (*ibid*). The canal was eventually linked to the sea at Glasson Dock near Lancaster in 1826 while at the same time a regular passenger service was established between Kendal and Preston (*op cit*, 142). Despite this the area around the site still retained some sense of the gentile, with a large private house known as Helme Lodge being built in 1824 (**Site 13**). Nevertheless, the area became gradually more developed during the 20th century as shown by the new roads and housing constructed by 1914 (Plate 8) and even the excavation of a new sand quarry around the same time (**Site 2**).

4.6 Previous Archaeological Work

4.6.1 Very few previous pieces of archaeological work have been carried out within the study area, as shown in Figure 2. These can be summarised as follows:

- 2013-2014: a cultural heritage assessment, including geophysical survey, and archaeological evaluation was undertaken in advance the construction of a residential development to the south of Natland Mill Beck Lane. While the assessment revealed a few sites of potential archaeological interest within the development area, including a very pronounced linear anomaly in the geophysical survey, the subsequent evaluation did not reveal anything of archaeological significance and it was suggested that the anomaly was caused by variations in the local geology (CFA Archaeology 2013; 2014).

5. Discussion

5.1 Introduction

5.1.1 The discussion of the results of the heritage assessment and site visit is intended to determine the archaeological significance and potential of any known remains (above or below ground) and the potential for any as yet unidentified remains being present. The system used to judge the significance of the remains identified within the development area, or those thought to have the potential to be present within the development area, is based on the criteria used to define Scheduled Monuments (DoE 1990, Annex 4; *Appendix 2*). Of the 13 sites identified within the study area during the heritage assessment, including the site visit, **Sites 3** and **10** are situated within or close to the proposed development area and may therefore be affected by subsequent groundworks. In addition, the small structure to the north and the well within the southern field shown on the Ordnance Survey maps of 1898 and 1914 respectively (see *Section 3.3.11*) are also within the proposed development area but are considered of such low significance they have not been included in the gazetteer. The impact of the proposed development on the three Listed Buildings within the study area will also be considered due to the potential impact on their setting.

5.2 Significance

5.2.1 None of the two sites within the proposed development site are statutorily protected. The three Listed Buildings are considered to be of national significance and are statutorily protected but are under no direct physical threat from the proposed development.

5.2.2 The level of significance of the non-designated features within the proposed development area is categorised, according to each criterion, as high, medium, or low, and an average of these has been used to produce an overall level of significance for each site (see Table 2 below: H=high, M=medium, L=low). As can be seen in Table 3 all of these features are considered to be of medium or low significance.

| Site | 3 | 10 |
|--------------------------------|------------|----------|
| <i>Period</i> | L | M |
| <i>Rarity</i> | L | M |
| <i>Documentation</i> | L | M |
| <i>Group value</i> | M | H |
| <i>Survival/condition</i> | H | H |
| <i>Fragility/Vulnerability</i> | H | H |
| <i>Diversity</i> | L | M |
| <i>Potential</i> | L | M |
| Significance | M-L | M |

Table 2: Significance by site

5.2.3 In consideration of Table 2 it is noteworthy that where the significance is high this is primarily because of the fragility of these standing remains and ease with which they could be destroyed, but in the case of the mill leat (**Site 10**) where it also forms part of a much larger set of remains connected to the mill and the bloomforge.

5.3 Potential for Unknown Archaeological Remains

5.3.1 The details of those archaeological remains present within the proposed development area are presented in the results of the heritage assessment (*Section 3*; *Figure 2*; *Appendix 1*) and the importance of these sites is discussed above (*Section 5.2*). The potential for as yet unidentified archaeological remains to be present, however, is based on the known occurrence of such remains elsewhere in the study area and local environs (see *Section 4*). Where there are no remains known within the study area the potential is based on the known occurrence within the wider local area. The

degree of potential is examined by period and the results are presented in Table 3 below; in each case the level of potential is expressed as low, medium, or high:

| Period | Present in study area? | Potential |
|-------------------------|------------------------|-----------|
| Late Upper Palaeolithic | No | Low |
| Mesolithic | No | Med |
| Neolithic | No | Low |
| Bronze Age | No | Low |
| Iron Age | No | Low |
| Roman | No | Med |
| Early Medieval | No | Low |
| Medieval | Yes | High |
| Post-medieval | Yes | High |

Table 3: Degree of potential for unknown archaeological remains by period

5.3.2 In consideration of Table 3 it is worth noting that the possibility of finding Mesolithic remains is considered medium as although none are recorded in the study area they have been found nearby along the edges of the River Kent and areas alongside river valleys are generally places where there is a high potential (Hodgson and Brennand 2006, 26). Similarly, although no remains of Roman date are recorded within the study area the relative proximity to the fort and location near at least one early crossing of the River Kent (**Site 1**) means that there is some possibility of finds of this date being found. There are a number of sites of at least medieval origin and several of post-medieval origin and so the likelihood of further remains of these dates, even if they just relate to those that are already known, such as the mill leat (**Site 10**), is high.

5.4 Disturbance

5.4.1 The area is likely to have seen some disturbance, if only as a result of the agricultural improvement. There is also at least one drain present on the site that is still extant and active as well as the possible one recorded in 1862. It is possible, assuming that the dashed line added to the Ordnance Survey map of 1898 represents the line of the drain recorded in 1862, that the line of the mill leat has at some point been utilised to direct water into this drain, hence the stone slab blocking its line at about this point. If this is the case, and even if it isn't, then the ditch must have been cleared of debris on a number of occasions in order to keep it clear, a process which is likely to have caused some damage to any surviving historic fabric.

5.5 Impact

5.5.1 Although detailed proposals are at present not available it is clear that the boundary stone (**Site 3**) and mill leat (**Site 10**), as well as the small structure and well shown in 1898 and 1914 respectively, would have the potential to be affected. In the case of the boundary stone it would be preferable to simply leave it *in situ* and incorporate it into the construction scheme if possible. The mill leat too, which runs along the southern boundary of the site apart from a short section that apparently runs through the west end of the south field, would ideally be left *in situ* as it is close to the boundary anyway. Nevertheless, there is some potential for this to become filled in as part of the development, which would be an unfortunate loss of an archaeological site.

5.5.2 The impact of the proposed development on the four Listed Buildings within the study area will be mixed. Helme Lodge (**Site 13**) is neither visible from the site nor can have any visibility to the site because of intervening buildings in between, although its entrance drive and lodge are immediately across Natland Mill Beck Lane from the southern part of the development site and so there would be some impact on these elements of the designed landscape associated with Helme Lodge. The icehouse (**Site 5**) is completely invisible above ground and so cannot be seen from the site and nor does it have any views to the site, although because of its purpose and manner of construction this is not an issue. The closest Listed Buildings to the site are the canal bridge (**Site 6**) and Natland Mill Beck Farmhouse (**Site 9**). These will have their settings most prominently affected, although the extent to which this will happen in the case of the bridge is somewhat debatable given that the associated canal is now no longer

extant. A greater concern in that case would be the creation of access from the proposed development through the gateway that currently exists directly opposite the canal bridge, which could lead to increased traffic in this area and physical damage to the bridge. This would be particularly severe if the bridge was ever opened to traffic again; at present it is not. The setting and views to and from the farmhouse (**Site 9**) will be particularly adversely affected, although this has already been impacted by 20th century development to the north and more recent development to the south-west, and some consideration should be made for ways in which to mitigate this through appropriate screening for example.

5.6 Conclusion

5.6.1 It is apparent from the results of this assessment that while the general area contains archaeological remains from a variety of periods, within the proposed development area itself this is more limited. However, it does contain a significant structure in the form of the former mill leat (**Site 10**), which is of medieval origin, some of which survives as a substantial earthwork. While most of this is situated against the southern boundary and so is arguably unlikely to be affected, part crosses through the west side of the southern field and is now not visible on the surface, although structural remains connected to it are present in the west wall and against the lane beyond that. In addition, a boundary stone (**Site 3**) of unknown purpose is also present within the proposed development area and there are two Listed Buildings in close proximity, the setting of which will be impacted upon.

5.6.2 It is important therefore that suitable mitigation is carried out to deal with these impacts. Ideally this should be in the form of preservation of as much of the extant earthwork remains of the former mill leat and associated elements and the boundary stone as possible, and appropriate screening and design to minimise the effect on the nearby Listed Buildings.

5.6.3 Based on the indicative drawings that are currently available it is clear that there is some potential risk to the line of the former leat as it runs along the south side of the site where passing places, road widening, and a footpath are proposed. In these areas, where the leat survives as an earthwork, mitigation would ideally include recording of the structure where it would be likely to be lost or damaged. Ideally the extant ditch representing the line of the mill leat would be left intact to remain as a feature but if any sections were to be filled to facilitate these changes further archaeological investigation of the below-ground remains might be necessary, depending on the manner in which this was done. In the area to the west of this, where the line of the leat is no longer visible on the ground against the north side of Natland Mill Beck Lane and in the area of the bypass section of the leat, further archaeological investigation would be necessary in order to establish the degree of survival of any below-ground remains in order to therefore establish the most suitable form of mitigation. In addition further recording of the structure against the wall where Natland Mill Beck Lane turns to the north including the holes in the wall might also be necessary if these are to be affected, although again ideally these could be simply left untouched, especially as the former is outside of the proposed development site boundary.

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Appendix 1: Site Gazetteer

Site Number: 1**NGR:** 351760 491270**HER No:** 2467**Sources:** HER; Curwen 1900, 195-196**Designation:** none**Description:** According to Curwen this was an 'ancient ford', and formed the principal approach for travellers from the south before Nether Bridge was built. He also observed that the name of the nearby 'Watch Field' derived from 'wath' meaning ford, as it was originally named, and describes references to the ford in the 12th century.**Period:** medieval?

Site Number: 2**NGR:** 351885 490980**HER No:** 17598**Sources:** HER; Ordnance Survey 1898; 1914**Designation:** none**Description:** a large area of sand pits are shown on the Ordnance Survey maps of 1898 and 1914, extending over both sides of the road.**Period:** post-medieval

Site Number: 3**NGR:** 352029 490995**HER No:** -**Sources:** site visit**Designation:** none**Description:** a small roughly dressed block of limestone with a rounded top, marked on the north side 'CC' (Plate 13 and Plate 14). Presumably a boundary marker of some form or something relating to the canal, but not apparently corresponding to anything shown on the early or current mapping.



Plate 13 (left): Boundary marker, showing carved letters

Plate 14 (right): Boundary marker

Period: post-medieval

Site Number: 4

NGR: 351823 490879 (centre)

HER No: -

Sources: CAC(K) WD/Cr/11/104 1824; CAC(K) WQ/R/C/8 nd; Ordnance Survey 1914; Somervell 1930

Designation: none

Description: a field named 'Gallowbarrow' is shown on an estate map of 1824 (CAC(K) WD/Cr/11/104 1824), the, probably early 19th century, corn rent map (CAC(K) WQ/R/C/8 nd) and still remembered on the Ordnance Survey map of 1914 with the name 'Galabarrow'. The name suggests that it was the site of a gallows, and Somervell suggests that it was where the town gallows were located, on the boundary of the borough and that there may be burials associated with it (Somervell 1930, 66). A document of 1170-1180 referring to land in Natland mentions '*the brook of the gallows*', which is presumably a reference to Natland Beck and suggests that the gallows were in existence from at least this period (*ibid*). A later reference of 1190-1200 also mentions '*the water course by the gallows*' (*ibid*).

Period: medieval

Site Number: 5

NGR: 351913 490873

HER No: -

Sources: HER; Listed Building

Designation: Listed Grade II

Description: Icehouse, probably mid to late 19th century and belonging to Helm Lodge but not shown on an estate plan of 1838 (CAC(K) WD/Cr/4/201 1838) or on any Ordnance Survey maps. Said to have been in use by 1905. Vaulted stone chamber with flat floor. Circular in plan, built into west bank of Lancaster-Kendal canal from which the ice was originally taken (now filled in). Entered by a circular manhole in apex of cantilevered stone vault.

Client: Oakmere Homes

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Period: post-medieval

Site Number: 6

NGR: 351935 490877

HER No: 17605

Sources: HER; Listed Building

Designation: Listed Grade II

Description: Canal bridge, built 1818 by John Fletcher, engineer from original designs by John Rennie, whose route for the canal was authorised in 1792. Coursed squared rubble with battered plinth and square end-stops; band and flat copings to parapets. Single elliptical arch, spanning c20 ft has projecting keystones. Roadway c12 ft wide; later steps lead to towpath from gap in wall at west end of bridge on south side. Bench mark on north side of plinth.

Period: post-medieval

Site Number: 7

NGR: 351900 490820

HER No: 17733

Sources: HER; Davies-Shiel 1998, 49

Designation: none

Description: Site of a bloomforge dating from c1750-1787 recorded by Mike Davies-Shiel (1998, 49). An article in the *Kendal Mercury* from the 21st January 1865 describes how it was established by John Wilkinson of Wilson House and was apparently the first iron foundry established in the county (WDMDS/PC/8/207 1865). It is not clear how this location was identified for the bloomforge

Period: post-medieval

Site Number: 8

NGR: 351940490800

HER No: 17599

Sources: HER; Somervell 1930, 66-67

Designation: none

Description: Location of Natland Beck Mill, which lies on Natland Beck beside Natland Mill Beck. A licence to create a mill in what is almost certainly this location is referred to in a document of 1190-1200 but it is first recorded as 'Natlandmyln' in 1526 (Somervell 1930, 66).

Period: medieval - post-medieval

Site Number: 9

NGR: 352036 490754

HER No: -

Sources: HER; Listed Building

Designation: Listed Building

Description: House, now a house and cottage. 17th century with later alterations and additions. Limewashed stone rubble; graduated green slate roof; three chimneys with round shafts. Two storeys plus attics. Entrance in garden front at right-angles to road; three windows, irregular, 19th and 20th century casements; 20th century board door. Gabled dormer. Interior has exposed oak beam including fire beam, 17th century panelled doors and spice cupboard with carved oak door and initials W 1677 SA. Living room (originally two rooms) has fireplace with carved stone surround and later infill, 17th century

panelling and moulded cornice. Upper floor has beef loft, remains of plaster cornice and later 18th century panelled door. Attached outbuilding to south converted into flats in 20th century and attached outbuilding to west not of interest.

Period: post-medieval

Site Number: 10

NGR: 352043 490766 (centre)

HER No: 17599

Sources: HER; Ordnance Survey c1863; 1863; 1898; 1914; Somervell 1930, 66-67; site visit

Designation: none

Description: Mill leat supplying Natland Beck Mill, which is referred to from as early as the late 12th century. Survives as a very evident ditch alongside the north side of Natland Mill Beck Lane at its east end, c2m wide and 1m deep (Plate 15 and Plate 16), partially edged by large rusticated blocks of limestone at least some with holes in the top for fencing but presumably re-used from elsewhere as the holes do not line up in any logical fashion, although some are now fallen and others could have been moved out of place (Plate 17). Part way along the open section is blocked by a stone slab laid across it and at this point it appears to turn into the field where it is no longer visible as an earthwork, although the early maps show it continuing against the road. At the west end a structure comprising a low stone edging wall incorporating a large iron pipe(?) meets with two small low holes in the wall (Plate 18 and Plate 19). These are presumably connected to the mill leat and seem to represent the point where it re-enters the field as depicted on the Ordnance Survey (c1863; 1863; 1898; 1914), presumably as a means of by-passing the mill, as on the earlier maps the leat is shown crossing beneath the road at this point and only heading directly to the mill (CAC(K) WD/Cr/4/201 1838; CA(K) WQ/R/C/8 nd).



Plate 15 (left): General view of the mill leat surviving as a ditch, viewed from the east



Plate 16 (right): General view of the mill leat surviving as a ditch, viewed from the west



Plate 17 (left): Stone blocks edging part of the mill leat

Plate 18 (right): Structure against the south end of the western boundary, presumed to be part of the leat



Plate 19: Structure against the south end of the western boundary, presumed to be part of the leat, showing the iron 'pipe' and leat

Period: medieval to post-medieval

Site Number: 11

NGR: various

HER No: 5332

Sources: HER

Designation: none

Description: The line of the Lancaster – Kendal Canal, which was opened in 1797. Originally it was planned to connect Kendal with Wigan, but the section between Preston and Wigan was never completed. At the north end it reach Kendal in 1819. Completion of the railway led to a decline in the canal's use and some parts of it were subsequently filled in.

Period: post-medieval

Site Number: 12

NGR: 351700 490600

HER No: 4104

Sources: HER

Designation: none

Description: an arch or arches were apparently located in this location but there is no other information available relating to them.

Period: unknown

Site Number: 13

NGR: 351967 490505

HER No: 21744

Sources: HER; Listed Building; Ordnance Survey 1863

Designation: Listed Grade II

Description: Helme Lodge was built in 1824 by the architects Francis and George Webster. The verandas on the south side were added c1914 and the west elevation was remodelled in 1916 following a fire. Alterations were made to the service wing in the 20th century. The house is of two storeys and built of limestone ashlar with sandstone dressings in Greek Revival style. It has a hipped green slate roof with limestone chimneys and an overhanging modillioned cornice. The front elevation has three bays and recessed central bay flanked by Tuscan pilasters. The house is now divided into flats. The Ordnance Survey map of 1863 shows an associated landscape park around the house.

Period: post-medieval

Appendix 2: Significance Criteria

After DoE 1990, Annex 4: 'Secretary of State's Criteria for Scheduling Ancient Monuments'

- i) *Period*: all types of monuments that characterise a category or period should be considered for preservation;
- ii) *Rarity*: there are some monument categories which in certain periods are so scarce that all surviving examples which retain some archaeological potential should be preserved. In general, however, a selection must be made which portrays the typical and commonplace as well as the rare. This process should take account of all aspects of the distribution of a particular class of monument, both in a national and regional context;
- iii) *Documentation*: the significance of a monument may be enhanced by the existence of record of previous investigation or, in the case of more recent monuments, by the supporting evidence of contemporary written records;
- iv) *Group Value*: the value of a single monument (such as a field system) may be greatly enhanced by its association with related contemporary monuments (such as a settlement and cemetery) or with monuments of different periods. In some cases, it is preferable to protect the complete group of monuments, including associated and adjacent land, rather than to protect isolated monuments within the group;
- v) *Survival/Condition*: the survival of a monument's archaeological potential both above and below ground is a particularly important consideration and should be assessed in relation to its present condition and surviving features;
- vi) *Fragility/Vulnerability*: highly important archaeological evidence from some field monuments can be destroyed by a single ploughing or unsympathetic treatment; vulnerable monuments of this nature would particularly benefit from the statutory protection which scheduling confers. There are also existing standing structures of particular form or complexity whose value can again be severely reduced by neglect or careless treatment and which are similarly well suited by scheduled monument protection, even if these structures are already listed historic buildings;
- vii) *Diversity*: some monuments may be selected for scheduling because they possess a combination of high quality features, others because of a single important attribute;
- viii) *Potential*: on occasion, the nature of the evidence cannot be specified precisely but it may still be possible to document reasons anticipating its existence and importance and so to demonstrate the justification for scheduling. This is usually confined to sites rather than upstanding monuments.