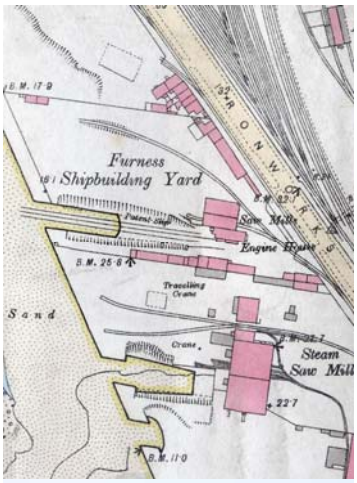
FORMER STRAND ENGINEERING NORTH WEST SITE, IRONWORKS ROAD, BARROW-IN-FURNESS, CUMBRIA

Archaeological Desk-Based Assessment and Building Recording



Client:
The Neil Martin Group Ltd

NGR: 318939 469528

Planning Application ref:
B07/2008/0957/JH/TP.11

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Greenlane ARCHAEOLOGY

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Non-Technical Summary

Following submission of a planning application for the construction of a residential development on the former Strand Engineering North West site, Ironworks Road, Barrow-in-Furness, Greenlane Archaeology was commissioned to carry out an archaeological desk-based assessment of the site. The known and unknown archaeological potential of the area has been assessed using various sources, including the Cumbria Historic Environment Record and early maps and a site visit was carried out in order to make a brief assessment of the site. The work was undertaken in January and February 2015.

The west end of the site overlies an area of reclaimed land and the east end of the site was open fields before a shipyard was constructed on it *c*1865. Plans of the area indicated that buildings dating to this period, or parts of them at least, were likely to have been incorporated into later buildings on site and the survival of 19th century structural remains was confirmed by the site visit. It was recommended that these structural remains were recorded in more detail, to better understand the phasing and use of the building. Otherwise the archaeological potential of the site was considered to be generally low, with any remains pre-dating the construction of the shipyard, should they be present on site, likely to have been destroyed by subsequent activity.

As a result of this an archaeological building recording was carried out by Greenlane Archaeology immediately after the desk-based assessment and, on agreement with the Cumbria Historic Environment Service, the results incorporated into a single report with the desk-based assessment. The building recording demonstrated that five phases of development can be identified, several of which appear to correspond with the construction and growth of the shipyard, which was in operation between *c*1865 and 1900. Later phases relate to subsequent uses, including 20th century modernisation brought about by the use of the site by Strand Engineering North West Ltd.

Acknowledgements

Greenlane Archaeology would like to thank The Neil Martin Group Ltd for commissioning the project, in particular Neil Martin for his assistance and additional background information. Additional thanks are due to the staff of Cumbria Archive Centre in Barrow-in-Furness (CAC(B)) for help with accessing their archives, Mark Brennand and Jeremy Parsons at the Historic Environment Service at Cumbria County Council, for enabling access to the Historic Environment Record, and the staff of The Neil Martin Group Ltd for their help on site.

The project was carried out by Tom Mace and Dan Elsworth who also wrote the report. The illustrations were produced by Tom Mace, the project was managed by Dan Elsworth, and the report was edited by Jo Dawson.

1. Introduction

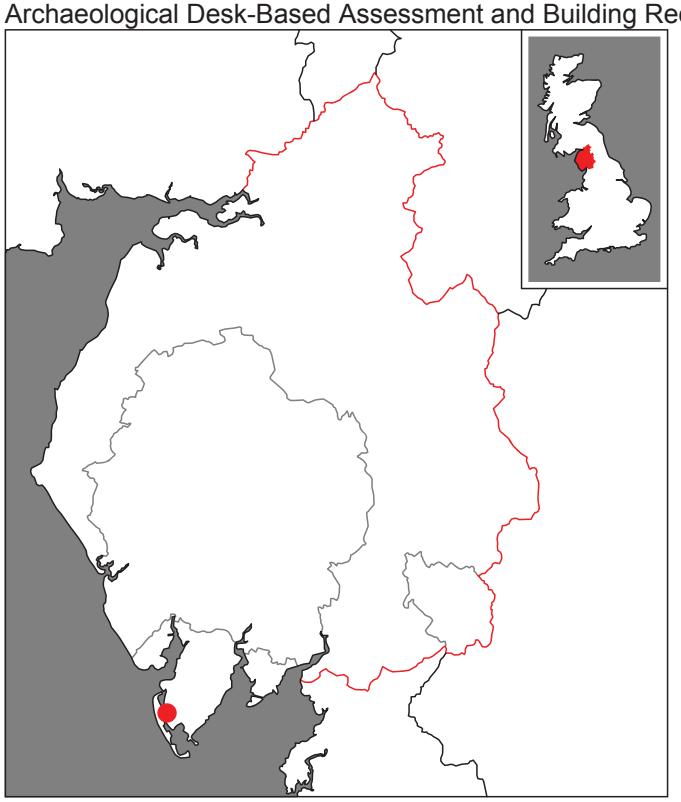
1.1 Circumstances of the Project

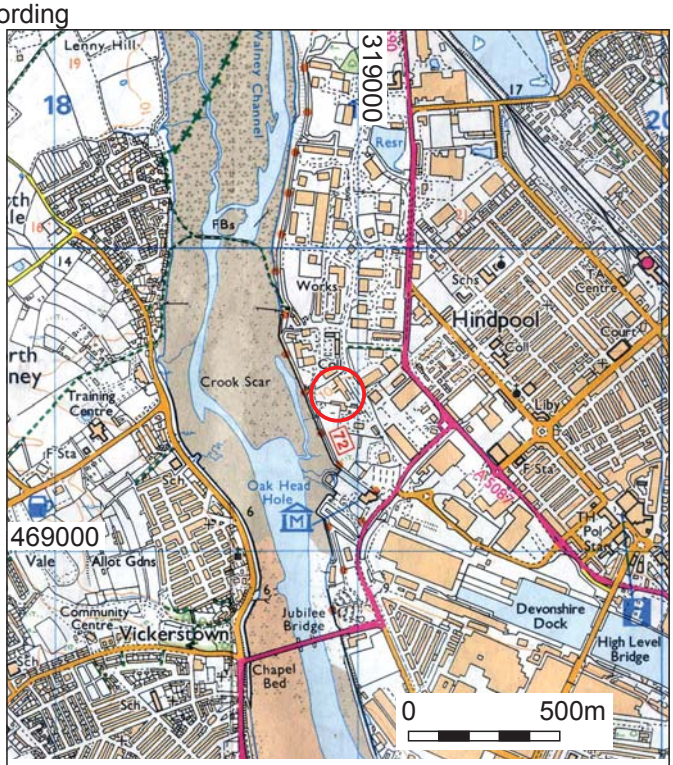
1.1.1 Following the submission of a planning application (Ref. B07/2008/0957/JH/TP.11) for the construction of a residential development on the former Strand Engineering North West site, Ironworks Road, Barrow-in-Furness, Cumbria (NGR 318939 469528), a condition (No. 8) requiring a programme of archaeological work was placed on the decision notice. Following discussion with the Historic Environment Service at Cumbria County Council (HESCCC) it was agreed that the first phase of this should be an archaeological desk-based assessment, in order to determine the archaeological potential of the site and the need for any further archaeological work. A project design was produced by Greenlane Archaeology and after its acceptance it was commissioned by The Neil Martin Group Ltd (hereafter 'the client') to carry out the work, which was undertaken in January and February 2015. During the site visit carried out as part of this project it was revealed that some of the buildings surviving on the site related to the original ship building yard and so, following further discussions with the HESCCC, it was agreed that an archaeological building recording of these should be carried out, and the results compiled into a single report with the desk-based assessment. The building recording was carried out on the 11th and 12th March 2015.

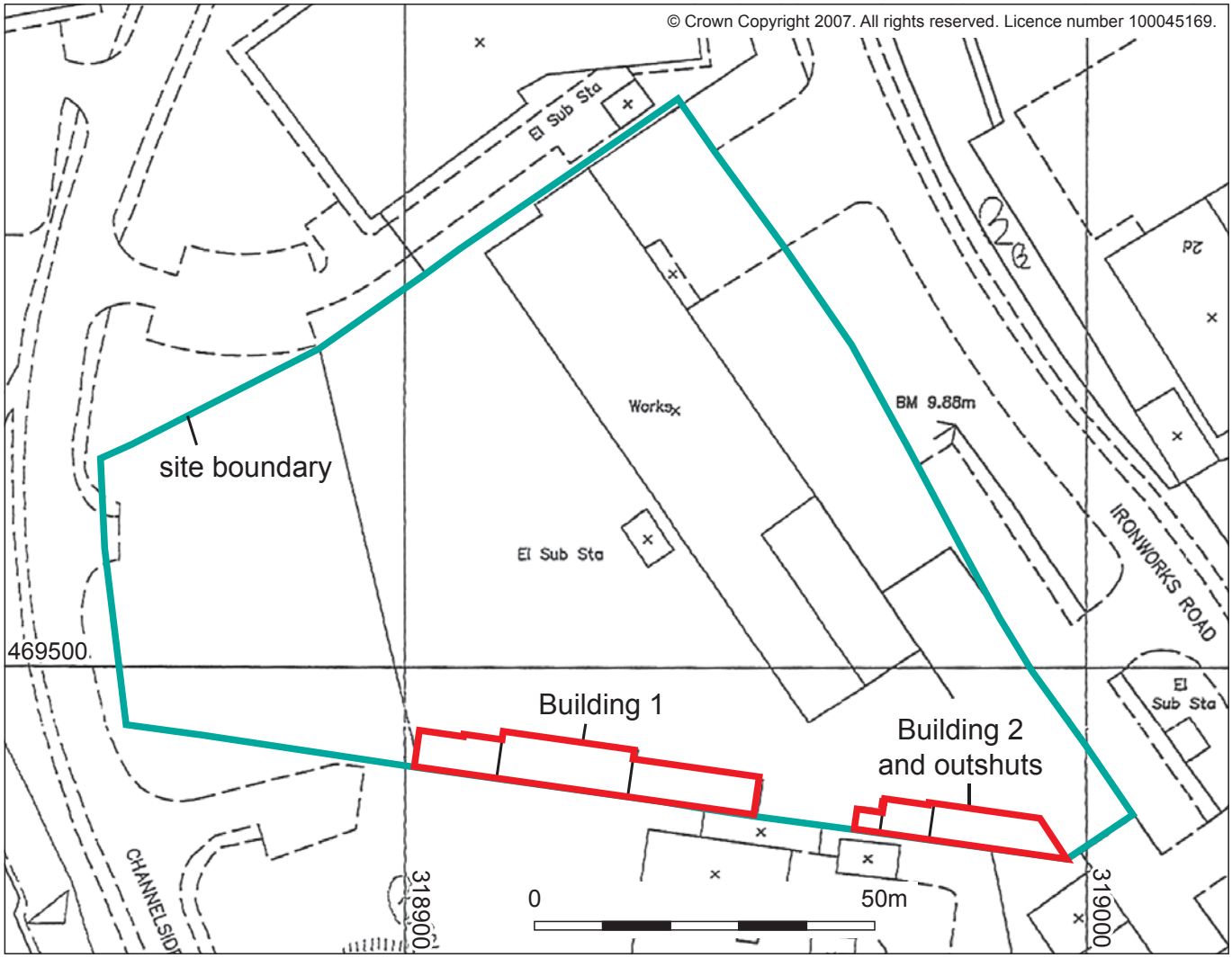
1.2 Location, Geology, and Topography

1.2.1 The site is situated on the north-east edge of Barrow-in-Furness's industrial area and docklands (Figure 1). It is north-west of the Devonshire Dock *c.*10m above sea level (Ordnance Survey 2005). The landscape has been extensively altered since at least the mid-19th century and part of the proposed development area is land that was reclaimed during the construction of the docks (Latham 1991, 26). It is now an area dominated by a mixture of industrial, business, and other commercial uses.

1.2.2 The solid geology of the area is likely to comprise a mix of Mercia mudstones and red sandstones of the Triassic period (Moseley 1978, plate 1). This is likely to be covered by a thick glacially-derived till (Countryside Commission 1998, 27), which will have been affected by alluvial activity and in places layers of peat and marine clay have been recorded at a significant depth below the surface (Kendall 1900). The later industrial development of the area will, however, have significantly affected these deposits.







Client: The Neil Martin Group

Figure 1: Site location

2. Methodology

2.1 Desk-Based Assessment

2.1.1 A desk-based assessment was carried out in accordance with the guidelines of the 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 desk-based assessment:

- ***Cumbria Historic Environment Record (HER)***: this is a list of all the known sites of archaeological interest within the county, which is maintained by Cumbria County Council and is the primary source of information for an investigation of this kind. All of the known sites of archaeological interest within approximately 300m of the site perimeter were examined; each identified site comes with a grid reference, description and source and any additional information which was referenced was also examined as necessary. In addition, unpublished reports of archaeological investigations in the vicinity of the site were examined;
- ***Cumbria Archive Centre, Barrow-in-Furness (CAC(B))***: primary sources, in particular early maps of the site, were consulted here, as well as secondary sources such as local histories;
- ***Greenlane Archaeology library***: additional original maps held by Greenlane Archaeology and secondary sources, used to provide information for the site background, were also examined.

2.2 Site Visit

2.2.1 A site visit was carried out on 30th January 2015, primarily with the intention of better understanding the development of the site, but also to inform documentary evidence revealed during the desk-based assessment. In addition, the presence of any features, finds, or deposits of possible archaeological interest were noted. Digital photographs of areas of interest were also taken, primarily for use as illustrations in this report.

2.3 Building Recording

2.3.1 The building recording was carried out to English Heritage Level-2 type standards (English Heritage 2006), which provides a relatively detailed record of the building without discussing in detail the documentary history of the site when considering its development. The recording comprised the following elements:

- ***Written record***: descriptive records of all parts of the building were made using Greenlane Archaeology *pro forma* record sheets;
- ***Photographs***: photographs in both 35mm colour print and colour digital format were taken of the main features of the building, its general surroundings, and any features of architectural or archaeological interest. A selection of the colour digital photographs is included in this report, and the remaining photographs are in the project archive;
- ***Drawings***: drawings of the buildings were produced from scratch by hand. The drawings produced ultimately comprised:
    i. a plan of each floor at a scale of 1:50;
    ii. cross-sections through each accessible truss at a scale of 1:50.

2.4 Archive

2.4.1 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 Barrow-in-Furness after the completion of the project. Within one month of the completion of the fieldwork/data collection a copy of this report will be provided for the client and a copy will be retained by

Greenlane Archaeology. In addition a digital copy will be provided to the Historic Environment Record at Cumbria County Council, and a record of the project will be made on the OASIS scheme.

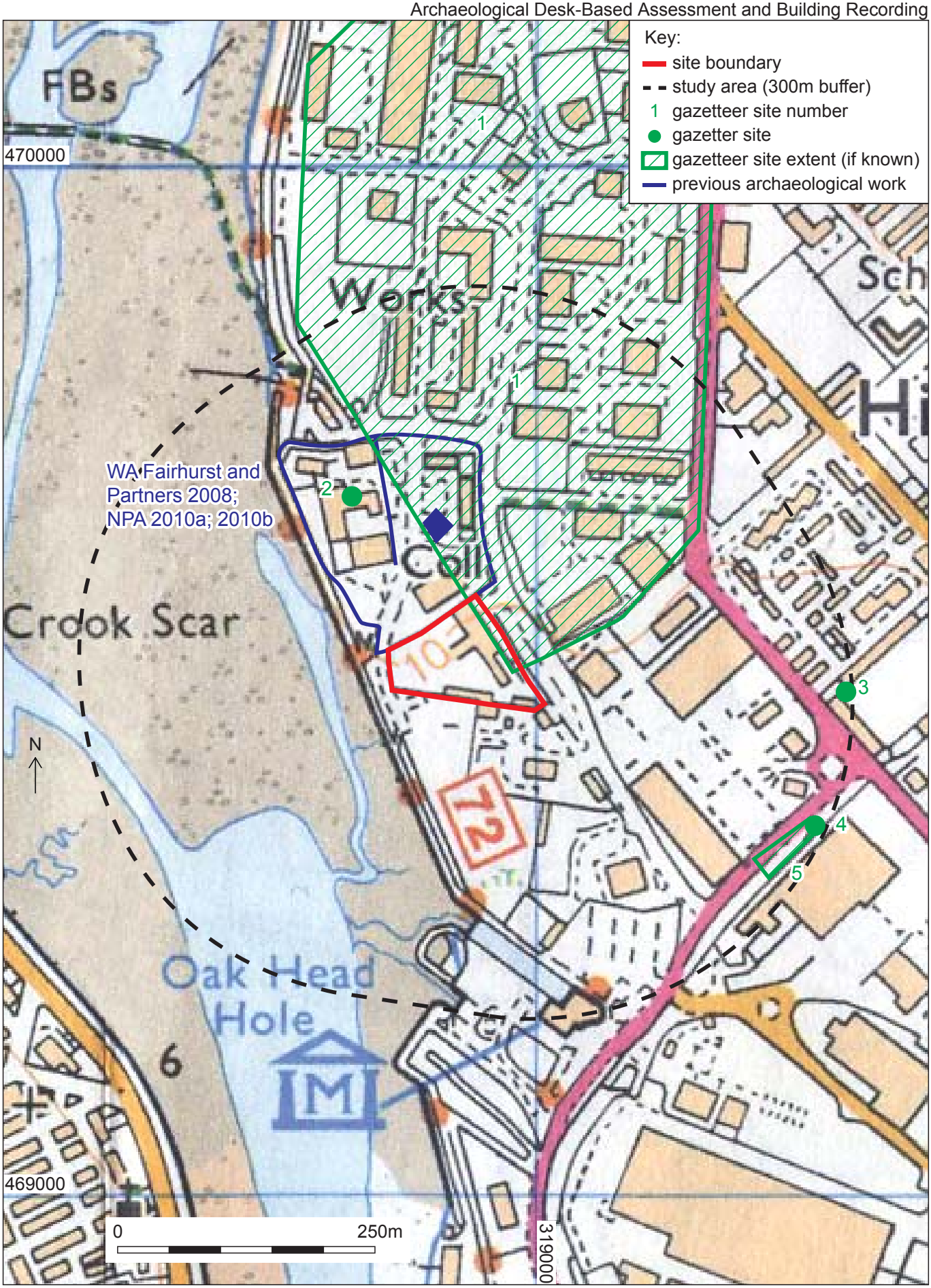


Figure 2: Site gazetteer

Client: The Neil Martin Group Ltd

3. Results

3.1 Introduction

3.1.1 The initial phase of work comprised the compilation of a desk-based assessment looking at all aspects of the site and its environs, and included a site visit. During the site visit it became apparent that some of the buildings still on site were those shown on the early maps and so therefore probably relate to the original ship building yard. Following discussion with the Historic Environment Officer at Cumbria County Council it was agreed that these should be subject to archaeological building recording and the results compiled into a single report. However, to keep these two elements of the project separate the results of the building recording are included in *Section 6* below.

3.2 Desk-Based Assessment

3.2.1 A total of five sites of archaeological interest are recorded within the study area on the HER (Figure 2; summarised in Table 1 below). These all date from the post-medieval period. All of the sites have been partially or completely demolished and/or redeveloped: there are no above ground remains associated with the former Furness Boiler Works (**Site 2**) or the former Hindpool Mission Room (**Site 3**), no trace remains of the former steam sawmill (**Site 4**) or Hindpool Brass Foundry (**Site 5**), and the Barrow Haematite Steel Works have been demolished except for the offices and a store (**Site 1**). Sites included in the gazetteer that relate to periods of the study area's history are individually mentioned in the site history (see *Section 4* below).

Site No.	Type	Period	Site No.	Type	Period
1	steel works	post-medieval	**4**	steam sawmill	post-medieval
2	boiler works	post-medieval	**5**	brass foundry	post-medieval
3	Hindpool mission room	post-medieval			

Table 1: Summary of sites of archaeological interest within the study area

3.2.2 The results of the desk-based 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* and shown in Figure 2). 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 recommendations for further work are produced.

3.2.3 The second purpose of the desk-based 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*).

3.3 Map and Image Regression

3.3.1 ***Introduction***: although there are early, typically county-wide, maps that include the area, they are generally very small scale and so the first useful maps of the area do not appear until the early 19th century. As a result, it is only maps from that date onwards that are discussed below.

3.3.2 ***Tithe map, 1842***: the tithe map for *Hawcoat in the Parish of Dalton and County of Lancaster* (CAC(B) BPR/1/I3/2 1842), apart from being an early detailed map produced at parish level, gives details of all the land owners, occupiers, field names, and uses. The proposed development area, to the south of Hindpool Point, was clearly undeveloped open fields with the field boundaries shown as those on the Ordnance Survey map of 1851 (see Plate 1)). More detailed information about the plots is recorded in the accompanying apportionment (CAC(B) BPR/1/I3/1/1 1844) and summarised in Table 2.

Plot	Name
E463	Eight Acre
E464	Whin Pot
E465	Little Pot

Table 2: Information about the plots recorded in the tithe apportionment (CAC(B) BPR/1/I3/1/1 1844)

3.3.3 ***Ordnance Survey 1851***: the site is still undeveloped and the field boundaries shown on the earlier tithe map remain the same (note that the tithe apportionment plot numbers have been added to the extract of the Ordnance Survey map of 1851 reproduced here, Plate 1). The west end of the area overlies the high water mark to the east of Crook Scar.

3.3.4 ***Plan of the Barrow Docks 1867 (CAC(B) Z567 1867)***: the west end of the area had been reclaimed from the sea by this date and the site has been developed as part of an area marked shipbuilding yards (Plate 2). The patent slip is to the west, towards the shore (cf. Plate 3). There are buildings along the south side, east side, and centre of the site and railway tracks cut across the site.

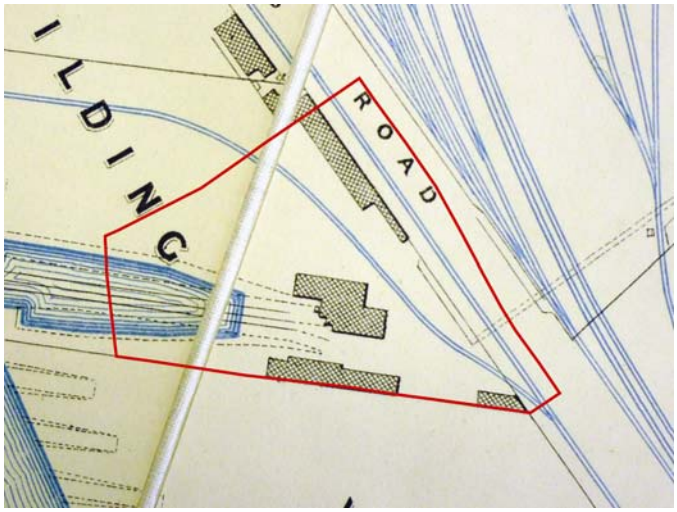
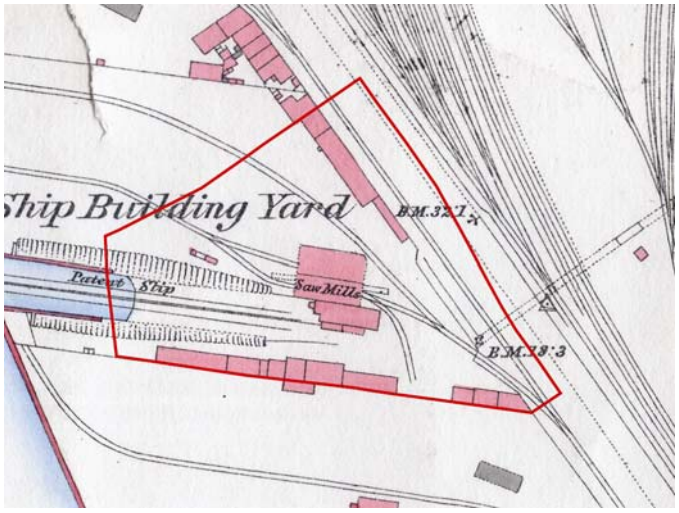


Plate 1 (left): Extract from the Ordnance Survey map, 1851, showing tithe numbers

Plate 2 (right): Extract from the Plan of the Barrow Docks, 1867 (CAC(B) Z567 1867)

3.3.5 ***Ordnance Survey 1873***: the area is still labelled 'Ship Building Yard' and buildings along the south edge of the area have been added to and some divisions within them are shown (Plate 3). The patent slip is labelled and the centre of the site is occupied by a saw mill.

3.3.6 ***Ordnance Survey 1891***: this map shows similar detail to the 1873 edition (Plate 3; cf. Plate 4). Some of the smaller structures, possibly porches, attached to the outside of the larger buildings are not shown or have been removed, and some sections of track and small buildings to the north side of the patent slip are no longer present. The saw mill is still present and labelled as is the associated engine house.



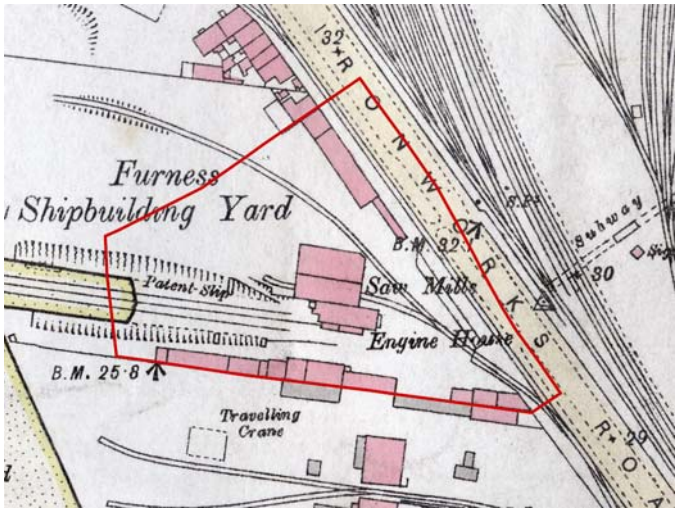
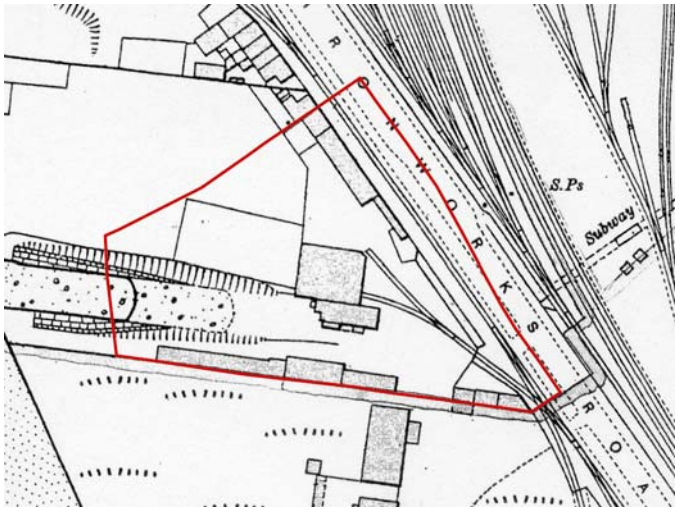


Plate 3 (left): Extract from the Ordnance Survey map, 1873

Plate 4 (right): Extract from the Ordnance Survey map, 1891

3.3.7 ***Ordnance Survey 1913***: this map shows the same arrangement of buildings as the earlier editions but fewer of the internal divisions of the buildings are shown (Plate 5; cf. Plate 4). More pieces of rail track have also been removed.

3.3.8 ***Ordnance Survey 1933***: the saw mills and engine house, at the centre of the area, and various sections of the rows of buildings along the east and south sides have been demolished (Plate 6). The centre of the area has railway track across where the saw mill and engine house formerly stood.



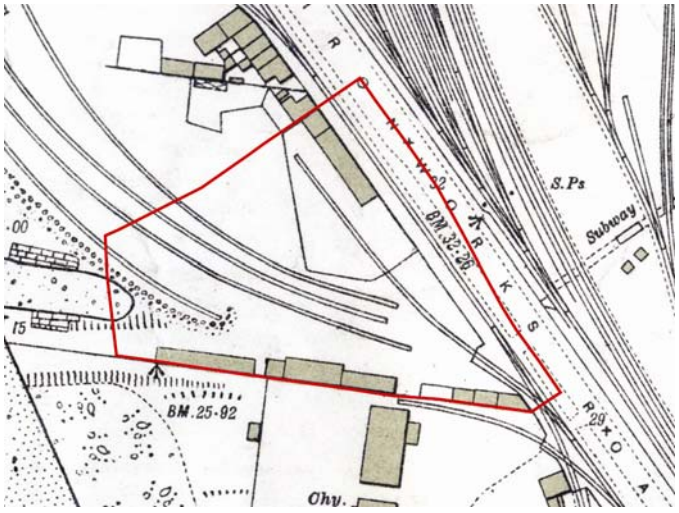


Plate 5 (left): Extract from the Ordnance Survey map, 1913

Plate 6 (right): Extract from the Ordnance Survey map, 1933

3.4 Previous Archaeological Work

3.4.1 A number of previous pieces of archaeological work have been carried out within the study area, all of which have focussed on The Barrow Iron Works (**Site 1**) and the site of the former Furness Boiler Works (**Site 2**). A desk-based assessment was carried out on Furness College, Channelside, in 2008 (WA Fairhurst and Partners 2008) and a watching brief was carried out by North Pennines Archaeology (NPA) in 2010 on a trench in car parks belonging to the college, but found no evidence relating to the Barrow Iron Works (**Site 1**) (NPA 2010a). Further watching briefs in 2009-10 in the college car park found three brick-built walls beneath a layer of rubble backfill and modern made-ground deposits to a depth of c2.5m (NPA 2010b). These could not be dated but probably related to the former Iron and Steel

Works (**Site 1**) (*ibid*). Concrete lined pits that '*measured 6m by 4m and in excess of 2m deep*' are said to have been discovered at the site of the former Furness Boiler Works (**Site 2**), during construction works at Furness College in 2010 (*ibid*). No date of foundation could be assigned but they may have been associated with the railway or boiler yard (*ibid*).

3.5 Site Visit

3.5.1 ***Site Arrangement and Character***: the proposed development area comprises much of the area of the former shipyard to the west of Ironworks Road and is situated between newly rebuilt Furness College buildings to the north-west and an area of industrial buildings to the south-east (Figure 1). The area is relatively flat and at the time of the visit the open areas were largely covered by rubbish and debris. All of the standing buildings also contained a large amount of debris and were in a generally poor condition. These buildings comprised a large steel frame and concrete workshop on the north side of the site (Plate 7 and Plate 8), with a detached single storey brick building against the south-west side (Plate 9) and a further detached concrete and timber building to the west of the north end of the large workshop (Plate 10). Along the south boundary were two earlier brick buildings; Building 1 to the west single storey (Plate 11) and Building 2 to the east two storeys (Plate 12). It is evident that these two buildings correspond to those shown on the early maps of the site (see *Section 3.3* above).

Plate 7 (left): Large workshop in centre of site at the time of the site visit, viewed from south-west

Plate 8 (right): Large workshop in centre of site at the time of the site visit, viewed from south

Plate 9 (left): Brick building against the south-west side of the large workshop at the time of the site visit, viewed from the south-west

Plate 10 (right): Detached concrete and timber building at the time of the site visit, viewed from the north-west

Plate 11 (left): Building 1 at the time of the site visit, viewed from the north

Plate 12 (right): Building 2 at the time of the site visit, viewed from the north-east

3.5.2 ***Constraints***: the site has clearly seen considerable disturbance since at least the late 19th century, some of which is of archaeological and historical interest – the construction and use of the ship yard. However, there has also been extensive 20th century building and demolition on the site, which is likely to have adversely affected elements of the ship yard buildings shown on the early maps and now not extant. There is also some potential risk of contamination on the site due to the use of materials such as asbestos and perhaps also some of the dumped rubbish.

4. Site History

4.1 Introduction

4.1.1 In order to place the proposed development site in its historical and archaeological context a brief discussion of the earlier history of its environs is necessary. Information relating to specific sites recorded during the desk-based assessment (see *Section 3* above) is included where relevant.

4.2 Prehistoric Period (*c*11,000 BC – 1st century AD)

4.2.1 While there is limited evidence for human 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. Excavation of a small number of cave sites has 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).

4.2.2 The county was clearly more densely inhabited during the following period, the Mesolithic (*c*8,000 – 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 (Cherry and Cherry 2002). Coastal areas and river valleys are notably places where such material is frequently found in the wider region (Middleton *et al* 1995, 202; Hodgkinson *et al* 2000, 151-152; Hodgson and Brennand 2006, 26). Several 'conceivably Mesolithic' worked flints have been found at North Walney (Cross 1938, 163) and in the area around Morecambe Bay there is generally quite plentiful evidence for activity in this period (Elsworth 1998).

4.2.3 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 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 in the central Lake District (Hodgson and Brennand 2006, 45). Walney Island has long been recognised as having particularly dense collections of Neolithic or possibly early Bronze Age objects (summarised in Greenlane Archaeology 2015, 21).

4.2.4 During the Bronze Age (*c*2,500 – 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 the site, although an enclosure on Hoad hill near Ulverston perhaps has its origins in this period (Elsworth 2014), as might another one at Skelmore Heads near Urswick, although evidence for activity in the Neolithic was also associated with this (Powell *et al* 1963). Stray finds of Bronze Age date are found throughout the county; although none are known with any certainty within the study area.

4.2.5 It is likely that settlement sites thought to belong to the Iron Age have their origins in this period, although few have been studied in enough detail to ascertain this with any certainty. Sites of this type are recorded typically as crop marks revealed in aerial photographs but they are typically undated and little understood. There is also 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).

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

4.3.1 There have been occasional finds of Roman coins from the general area (e.g. Shotter 1989), but evidence has yet to be confirmed of settlement in the area from the period. There has been discussion about the likelihood of Roman military occupation in the Cartmel and Furness Peninsulas for some time, but the evidence for it is limited and still subject to much discussion (Elsworth 2007).

4.3.2 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. The local area as a whole has a complex mixture of place-names of Celtic British, Anglian (Old English), and Norse type suggesting that the early

medieval period was a time of dynamic and rapid population change (Edmonds 2013). However, physical evidence for settlement of this date is very limited.

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

4.4.1 The earliest written reference to Barrow is in fact probably to Barrow Island ('*Barrai*'), which is named in 1190 as a grange of Furness Abbey (Barnes 1968, 30). The site where the modern town of Barrow first developed was originally known as Barrow-Head ('*Barrayhead*'), and does not appear to be recorded until the beginning of the 16th century; in *c.*1509 'Barrayhead', 'Barraie' and 'Old Barraie' are all mentioned (Beck 1844, 304), perhaps suggesting the original grange had been supplemented by additional holdings by this time (Thompson 2005, 17-18). Much of the study area was actually within an area later known as the Hindpool estate (see *Section 4.5.1* below), but '*it would appear that the land between Barrow and Cocken was uncultivated waste until at least 1350, but at some time between 1336 and 1509 this land was reclaimed under the supervision of the Abbot of Furness and was divided into the eight farms or four whole burgages of Barrowhead*' (Melville 1956, 5).

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

4.5.1 The earliest reference to Hindpool is only 1537, and it would appear that following the dissolution of Furness Abbey two new farmhouses were built at Hindpool as an off-shoot from the original burgages at Barrow (Melville 1956, 5). Both Barrow and Hindpool remained small and rural in character for some time; a lease of the Hindpool estate from 1770 demonstrates the rural character of the landscape even at this time and is concerned principally with land, barns and threshing corn (CAC(B) Z163 1770).

4.5.2 During the 18th century Barrow's importance as a port for the shipping of iron grew (Barnes 1968, 87) and as a consequence the town grew rapidly in size, eventually consuming Hindpool within it. In 1854 the Hindpool Estate was sold and plans drawn up at the time show that it was intended to become building land for the rapidly growing town of Barrow (Trescatheric 1985, 11; Fig 5). The plans never quite came to fruition, however, and the intended gridiron arrangement of streets was transferred closer to the original village of Barrow (Greenlane Archaeology 2006, 9).

4.5.3 The proposed development area is at least partially on land that was reclaimed during the development of Barrow-in-Furness during the later part of the 19th century. After the failure of the proposed residential development of Hindpool it was developed for largely industrial purposes, with an iron foundry, the gasworks and steam corn mill further south of the study area (Greenlane Archaeology 2006, 9-10) and the Barrow Haematite Steel Works to the north (**Site 1**), with other smaller industries nearby (see *Section 4.5.5* below). The proposed development area itself formed part of an area of shipyards and associated industries, the site initially being the home of Ashburner's shipyard, which had originally been established on the shoreline further south, who opened their new yard in September 1865, although the slip was only ready for use by the following May (Latham 1991, 30). From their Hindpool shipyard Ashburners they constructed and repaired a number of ships, the enterprise being served by two building slips and a railway line that provided timber to the saw mill (*op cit*, 31). A number of contemporary accounts describe the shipyard, which was known as the Hindpool Shipbuilding Yard by at least 1872, in some detail:

'*These works which are about four acres in extent, and are worked by Messrs William Ashburner and Son… are fitted up for the building of vessels of every description, and also for repairs. There is a patent slip on which vessels of 500 tons can be brought into the yard. A steam engine of 25 horse power works this slip, and also the machinery in the other departments. There is a commodious blacksmiths' shop, saw mill, and machine shop, in which there is are steam morticing machines, steam moulding machines, hand frame saw for sawing logs, large saw pits, lathes, and other machines for doing various descriptions of the work in connection with shipbuilding… Arrangements are being made for the transfer of the cabinet-making business from Mr W Ashburner's shop in Duke Street to a large room containing 4,000 ft of surface in the building at this yard. Several other alterations are about to be made in the yard for the purpose of affording increased facilities for the shipbuilding trade. An apparatus for galvanising the iron used in shipbuilding is on the premises, and in connection with the works there is an extensive*

sail making business, which is conducted in a large room in Fisher-Street, specially built for the purpose, and under the management of Mr WE Hurford' (Leach 1872, 81-82).

'*The new works were laid out on a much more extensive scale and were fitted up with all modern appliances for building and repairing. A schooner, the "Nanny Latham" was the first launched from the new yard, in May 1866; the "R & M J Charnley" a three-masted schooner, was also launched in the early part of 1868.*

In 1872, Mr Ashburner added to his other occupations that of cabinet making and upholstering, the population then having wonderfully increased. A steam engine of twenty-five horse power works the slip-way and also the machinery in the cabinet shops, where there are morticing and moulding machines, vertical and circular saws, which various other appliances for the efficient performance of the work. In ordinary times about 100 men are employed here' (Richardson 1880, 245-246).

4.5.4 Latham interprets the available sources as suggesting that '*On the South side of the yard was a row of buildings housing the pitch boiler, the blacksmiths' shop and another sawpit. Above the sawpit was the carpenters' shop where items such as hatch covers, blocks and skylights were crafted. At the corner of the yard, adjacent to Ironworks Road, were paint stores and the site office*' (Latham 1991, 31-32; Plate 13). William Ashburner continued to use the yard into the 1870s, with William Ashburner's sons taking a greater role in running the business, and by the late 1860s they were the first shipbuilder in the area to produce three-mast schooners (*op cit*, 32). It is not clear when the Ashburners vacated their yard on Ironworks Road, although they were still operating there in 1880 (*op cit*, 31). The site was subsequently occupied by the Furness Shipbuilding Company, who had previously been based at a smaller yard a short distance to the north (Plate 14), although they finally closed in 1900 (*op cit*, 39). An auction catalogue for their business (CAC(B) BDB 17/SP 3/66 1900) is useful in listing the various buildings comprising the Furness Shipbuilding Company's operation – rivet shop, yard, block shop, blacksmith's shop, iron store, rope shed, engine house, saw mill, joiner's shop, long shed, block room, office, and stores, although there is no accompanying plan to locate them. The later history of the site is less clear. Documents held by the client demonstrate that the site was the property of the Barrow Haematite Steel Co Ltd by at least 1919, at which time the site was supplied with electrical cables. Documents seen on site state that Strand Engineering North West Ltd was formed in 1956, although it is not clear whether they were at the current site from that date.

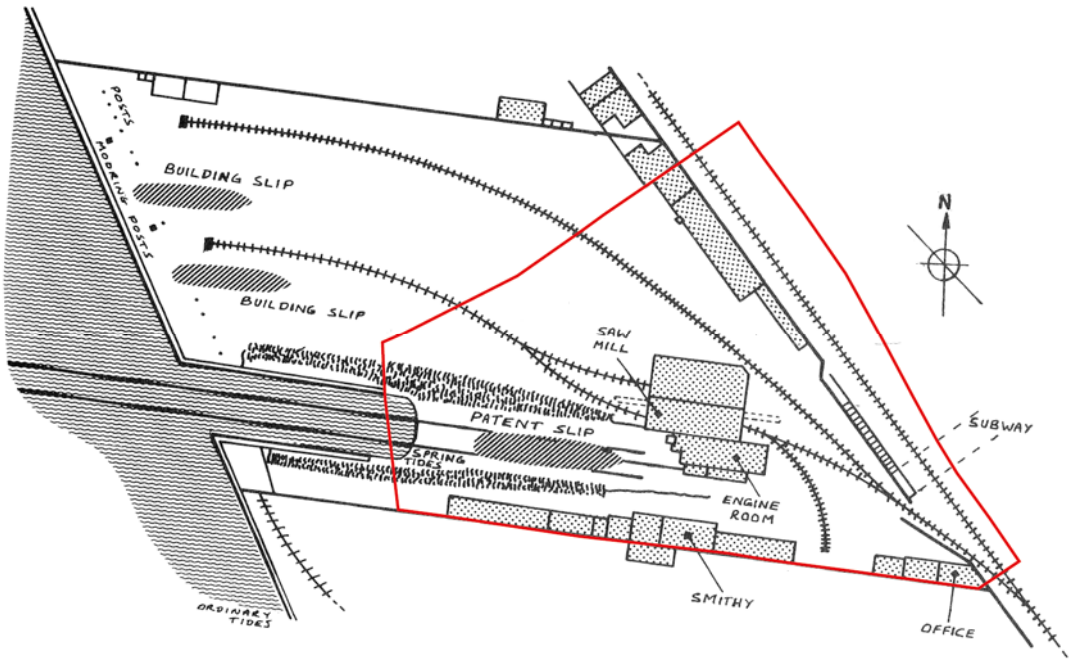


Plate 13: 'William Ashburner's Hindpool shipyard, as it would have been in November 1877, with the *William Ashburner* on the patent slip and the *Mary Ashburner* and *Isabella* on the building slip' (after Latham 1991, 33)

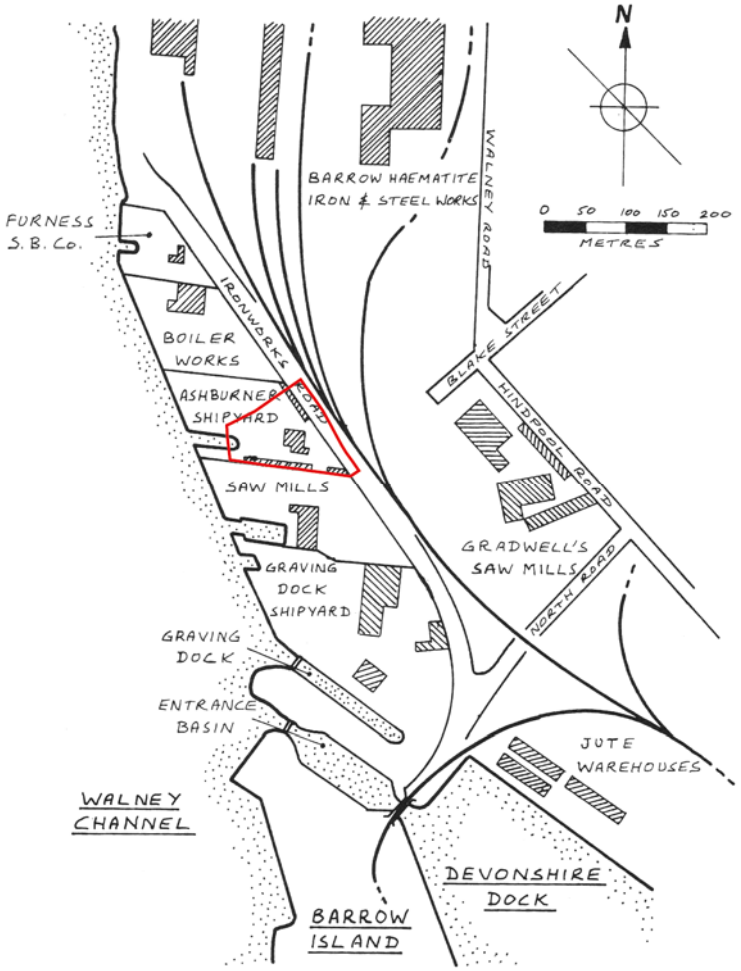


Plate 14: 'Hindpool and its industries, 1885' (after Latham 1991, 38; based on a plan from Roberts' *Barrow and District Directory*, 1886)

4.5.5 All of the sites within the area recorded on the HER date to this period, comprising the sites of the former Barrow Haematite Steel Works (**Site 1**), Boiler Works (**Site 2**), Hindpool Mission Room (**Site 3**), steam sawmill (**Site 4**), and Hindpool Brass Foundry (**Site 5**). The selection of these sites is somewhat arbitrary as much of the area would have been occupied by similar Industrial Age sites, including the area of the current site, which related to the shipbuilding industry. Other nearby sites of this period include the Barrow Engine House (HER 16282) and the flax and jute works (HER 16267), both of which are outside the area, to the south and south-east respectively.

4.5.6 Later nearby sites include a WWII pillbox (HER 16885) just beyond the south end of the study area, south-west of the Dock Museum.

5. Discussion

5.1 Introduction

5.1.1 The desk-based assessment is in part intended to determine the archaeological significance and potential of any known remains and the potential for any as yet unidentified remains being present (above or below ground). The system used to judge the significance of the remains identified within the site limits, or those thought to have the potential to be present within the area, is based on the criteria used to define Scheduled Monuments (DoE 1990, Annex 4; *Appendix 2*). Of the five known individual sites of archaeological interest identified within the study area, only the far end of the area identified as being part of the former Barrow Haematite Steel Company (**Site 1**) lies within the site boundary. No structures relating to this lie within the area, only sections of railway passed through this part of the site at that time, so any physical remains relating to the Barrow Haematite Steel Company (**Site 1**) will therefore be unaffected by the proposed development. The fact that the site occupies the area of a 19th century shipyard is of interest, however, and the site visit confirmed that elements of structures relating to this have been incorporated into later buildings still standing on site.

5.2 Significance of Known Resource

5.2.1 No previously recorded sites of archaeological interest will be affected by the proposed development.

5.3 Potential for Unknown Archaeological Remains

5.3.1 Details of the archaeological remains present within the study area around the proposed development area are presented in the results of the desk-based assessment (*Section 3*; Figure 2; *Appendix 1*). 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 (L), medium (M), or high (H):

Period	Present in study area?	Potential
Late Upper Palaeolithic	No	L
Mesolithic	No	M
Neolithic	No	L
Bronze Age	No	L
Iron Age	No	L
Roman	No	L
Early Medieval	No	L
Medieval	No	L
Post-medieval	Yes	H

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 could perhaps be assessed as medium because they are often associated with sites close to watercourses and coastal areas (Middleton *et al* 1995, 202; Hodgkinson *et al* 2000, 151-152).

5.3.3 The majority of the site was formerly occupied by a 19th century shipyard and elements of buildings relating to this have been incorporated into buildings which are still extant. Sites of post-medieval date, especially Victorian era sites, are also particularly significant within the wider area. Bronze Age and Neolithic occupation has been attested on Walney Island, across the channel, but these periods are on the whole less well represented in Barrow.

5.4 Disturbance

5.4.1 The area has clearly seen some disturbance as a result of the various phases of building work that have taken place on it since the end of the 19th century (although some of this is of archaeological interest in its own right; see *Section 6* below) and associated land improvements. As such the site is likely to have been heavily disturbed in some places.

5.5 Impact

5.5.1 Given the scale of the proposed development and the need to modify existing ground levels, any deposits, features, or structures of archaeological interest that might be present on site might be adversely affected. However, any below ground deposits or features of archaeological interest are likely to have been impacted upon already by 19th and 20th century industrial and commercial development of the site and it also proposed to raise the ground level as part of the development (Neil Martin pers comm), rather than lower it, which will significantly reduce the impact. Structural remains of buildings relating to the 19th century shipyard, which are still present on the site, will, however, need to be demolished ahead of construction of the new residential development.

5.6 Conclusion

5.6.1 No sites predating the post-medieval period are recorded within the study area. The west side of the site overlies land reclaimed along the shoreline and the east side was open fields before the 19th century; however, later industrial and commercial development of the area probably will have detrimentally affected any below ground deposits of potential archaeological interest earlier than the late 19th century. The site itself occupies the area of a late 19th century shipyard and the site visit confirmed that buildings relating to this survive on the site. It is therefore recommended that these structures be recorded in accordance with a Level 2-type survey as described by English Heritage's document *Understanding Historic Buildings - a Guide to Good Recording Practice*, 2006. Further archaeological work on the site, specifically aimed at examining the other elements of the former shipyard, of which no above ground structures remain, is only recommended if these are likely to be affected by the proposed development, and it is understood that in general the ground levels across the site are going to be raised rather than lowered.

6. Archaeological Building Recording

6.1 Arrangement and Fabric

6.1.1 The buildings comprise two separate structures, connected by a boundary wall. Both buildings are orientated approximately east/west, the western (Building 1) all essentially single storey, the eastern (Building 2), two storeys.

6.1.2 Building 1 is a mixture of original red brick and later alterations in concrete blocks, although the north and west external elevations are largely covered with roughcast concrete render, hiding the underlying material. The west end has a corrugated concrete asbestos roof while the east is finished with grey slate in regular courses, topped with ceramic bonnet ridge tiles. Where the brick is exposed it is either a bright reddish orange (at the west end) or a dark purplish red (at the east end), laid in English garden bond at a ratio of three rows of stretchers to a single row of headers. The bricks are un-frogged and typically 23.5cm long, 11.5cm wide, and 8cm thick. The main part of Building 2 is entirely covered externally in concrete render, typically painted roughcast, although it is clearly brick beneath, again laid in English garden bond at a ratio of three rows of stretchers to one row of headers. The roof is finished with concrete tiles on the north side and grey slate on the south, with some ceramic bonnet ridge tiles at the west end of the ridge. Building 2 is extended at the west end by two outshuts, the larger of which is also finished with concrete roughcast render externally and has a grey slate roof. The smaller is brick, of a later machine made type but apparently without frogs, and has a monopitch corrugated concrete asbestos roof with a large iron water tank projecting through it.

6.2 External Detail

6.2.1 ***Building 1***: the west elevation is the gable end and is finished with roughcast render and therefore generally plain apart from a large iron I-beam projecting through it in the centre, which is clearly a later addition and has been patched around with concrete (Plate 15). The north elevation is slightly set back at either end relative to the central part, and is finished with concrete render apart from the east end, with attached barge boards and plastic rainwater goods (Plate 16). The west end has two large doorways, the western one with a metal door, both of which have iron lintels and are presumably inserted (Plate 17). The central section is the widest, and the west part it also taller than the rest, essentially extending a full storey above the rest, albeit without an internal floor. Again the central part has two wide doorways with iron lintels, around the eastern of which the wall has been substantially rebuilt in concrete blocks (Plate 18). There is also a window on the east side of this section with a low arched top and concrete(?) sill. The east end of the north elevation is brick and has a row of four windows, one blocked with brick, with voussoir brick arched tops and concrete(?) sills (Plate 19). In the centre is a doorway with a similar arch, plain timber surround and iron door. The east external elevation is the opposing gable end (Plate 20). It has evidently had some fire damage as the wall plate is scorched, and there is a line for a possible lean to, which was presumably destroyed by fire. There appears to have been a central wide opening now partially blocked and leaving a recess, with a window covered by an iron shutter. The east external elevation of the taller central section, where it projects above the rest has a projecting chimney or flue in the centre extending to the ridge of the roof. The south elevation is largely obscured by vegetation and difficult to access (Plate 21) but it is apparent that the east end is earlier and built in a slightly different type of brick and there is an evident, albeit rough, butt joint between the different sections. The east end is also sat on the remnants of a red sandstone wall, which corresponds with the sandstone plinth visible internally (see *Section 6.3.4* below). The elevation is otherwise fairly plain, although the taller central section has a concrete scar for an attached building (now gone) and a projecting brick corbel, perhaps a flue or for supporting the attached building, as well as three square iron tie rod plates. The west end is clearly also a later addition as it butts the building to the east and has a small alcove on the east side and straight joints in the brickwork seemingly denoting a wide but low opening across much of the elevation (Plate 22). The south-west corner returns as a short stub wall.


Plate 15 (left): Building 1, west external elevation, viewed from the north-west

Plate 16 (right): Building 1, north external elevation, viewed from the north-west


Plate 17 (left): Building 1, west end of north external elevation, viewed from the north

Plate 18 (right): Building 1, centre of north external elevation, viewed from the north


Plate 19 (left): Building 1, east end of north external elevation, viewed from the north-east

Plate 20 (right): Building 1, east external elevation

Plate 21 (left): Building 1, south external elevation, viewed from the south

Plate 22 (right): Building 1, east end of south external elevation, viewed from the south

6.2.2 ***Building 2***: the east elevation is mostly finished with painted roughcast render (Plate 23) although the brick beneath is exposed on the south side and is laid in English garden bond at a ratio of three rows of stretchers to one row of headers (Plate 24). This wall is set at an oddly sharp angle relative to the rest of the buildings and the centre is open and filled with timber stud covered with corrugated fibreglass sheets. There are two windows at first floor level within this infill with single-light hinged casements, between which is an attached sign that reads:

'Strand Engineering North West Limited Telephone (0229) 821991 Quality Machining, Sheet Metal Work, Structural Fabrication, Specialist Welding, Assembly and Plant Maintenance/Repair, In-House Design & Draughting Facitilies'

The remains of a sandstone boundary wall are present on the south side. The north elevation (Plate 25) has a doorway on the east side of the ground floor with a modern timber door and surround. To the west are two windows with two-light hinged timber casements and iron mesh over and painted stone(?) sills. In the centre is a large open area largely filled with modern timber incorporating a long three-light window covered by mesh and a doorway. Above this section is an attached sign reading 'Strand Engineering North West Limited' and to the west is another wide window with a four light hinged timber casement, again covered by mesh. On the first floor there is a row of three tall windows on the east side with two-light timber casements and stone(?) sills. To the west is a long narrow window with a four-light casement with mesh over. The elevation is extended at the west end by the two outshuts (Plate 26), which are stepped back from the main elevation, although at the return there is an attached chimney stack. The larger of the two outshuts has a plain north elevation with a doorway on the east side with a beaded plank door and an iron gate over (Plate 27). There is a further small chimney or flue projecting from the return to the south at the west end. The smaller outshut is evidently a later addition and has a doorway on the east side of the north elevation with a concrete lintel and iron gate. To the west there is a small window with a concrete lintel, the sill of which has been removed and it has been blocked with brick. The west external elevation of the main building has two small windows at first floor level with two-light UPVC casements and thin stone(?) sills, plus a larger window to the south with a concrete(?) and no sill (Plate 28). The west elevation of the larger outshut just has the projecting chimney on the north side while the smaller outshut has a small window with what is effectively a large yellow brick for a lintel and projecting edge-set bricks forming the sill. The south elevation is finished with roughcast concrete render (unpainted), with a plain concrete band at first floor level, although an area of the original concrete render scored to give the appearance of ashlar blocks is exposed on the east side where the roughcast has come away. There are two wide windows at ground floor level with four-light timber casements covered by mesh and concrete sills, and three on the first floor that are slightly narrower but

also three-light, covered by mesh and with concrete sills. The outshuts at the west end are plain but clearly built onto the boundary wall as the pillars project from the wall line.

Plate 23 (left): Building 2, east external elevation, viewed from the east

Plate 24 (right): Building 2, detail of east external elevation showing exposed brickwork, viewed from the east

Plate 25 (left): Building 2, north external elevation of main part, viewed from the north-west

Plate 26 (right): Building 2, north external elevation, viewed from the north

Plate 27 (left): Building 2, detail of north elevation of outshuts, viewed from the north

Plate 28 (right): Building 2, west external elevations, viewed from the north-west

6.2.3 Between the two buildings is a boundary wall, which the smaller outshut of Building 2 is evidently built onto as is the east end of Building 1. It is of brick construction, apart from part of the east end that has been rebuilt in concrete blocks, largely laid in stretcher bond with a single row of headers and rows of alternating header/stretchers after every three rows of stretchers. There are four pillars projecting on both sides.

6.3 Internal Detail

6.3.1 ***Building 1***: this comprises four rooms (Figure 3). Room 1, at the west end has a concrete floor and modern plywood covering the underside of the roof, which is supported by three trusses. These are constructed from machine-cut timber and each has a plain king post bolted to the tie beam and pair of angled braces running between the tie beam and principal rafters (Plate 29). Beneath the level of the trusses a later steel I-beam frame has been added. The walls are brick finished with paint, although the south side is mostly covered with timber sheeting. The north elevation has pillar projecting from the brickwork supporting the western truss and there are two wide doorways with iron lintels, the smaller of which was originally taller but has had its top bricked in and has a thin iron lintel above this. At the west end there is a blocked window, now surviving as an alcove, with an iron lintel and timber sill, which extends to the east. There is a slight return in the wall line before the wider doorway to the east. The east elevation is plain but with the scar for a possible internal wall on the south side. The south elevation has pillars supporting the trusses projecting from the line of the wall but is otherwise covered with timber sheeting and modern electrical fittings. At the west end there is a projecting brick plinth along the base of the wall. The west elevation has a large opening in the centre blocked with brick and with an iron lintel, and there is a small aperture on the south side, also with an iron lintel (Plate 30).

Plate 29 (left): Truss and additional steel beams in Room 1, Building 1, viewed from the east

Plate 30 (right): West end of Room 1, Building 1, viewed from the east

6.3.2 Room 2 has an apparently earth floor although it is obscured by other material dumped on top. It is taller than the rest of the building, being effectively two storeys, but is open to the roof, which comprises corrugated concrete asbestos sheets supported by a single truss and single purlin per pitch (Plate 31). This is constructed from machine cut timber and has a king post, with angled braces, bolted to the tie beam below attached to which is also a iron fitting. Beneath the truss a later steel beam structure has been inserted. The walls are all exposed brick, laid in English garden wall bond at a ratio of three rows of stretchers to one of headers, with remnants of paint or whitewash remaining. The north elevation is filled by a large doorway extending almost to the roofline, with a pair of steel I-beams forming the lintel. The jambs are rebuilt in concrete block, demonstrating that it is a later insertion but the wall is otherwise brick. The lower part of the east elevation is constructed from concrete blocks, with a doorway on the south side. The blocks extend to a large timber beam running the length of the wall, above which it is constructed from brick and incorporates a projecting flue in the centre, the base of which sits on the beam (Plate 32). The south elevation is plain brick, with the end of the truss supported on a timber pad built into it. The west elevation is also brick, with some modern fittings attached and filled holes. There is also a small low opening on the north side with a timber surround filled with brick.

Plate 31 (left): Truss in Room 2, Building 1, viewed from the south-east

Plate 32 (right): Flue at top of east elevation in Room 2, Building 2, viewed from the west

6.3.3 Room 3 has a concrete floor and is also open to the roof, which comprises corrugated asbestos concrete sheets with four skylights (in corrugated opaque fibreglass or plastic) in each pitch supported

by three trusses. The trusses are constructed from machine cut timber and comprise a king post with angled braces, bolted to the tie beam, with an additional iron beam running between the central and eastern truss. The eastern truss also has a large timber block attached to its east face with scars on its underside suggesting it supported some form of structure or machinery (Plate 33). The walls are exposed brick, laid in English garden bond at a ratio of three rows of stretchers to one row of headers, and finished with the remnants of whitewash. The north elevation has a large doorway with and iron I-beam lintel and concrete block rebuild in the jambs showing that it is inserted. The north end of the east elevation butts the remainder, and is otherwise dominated by a large central doorway with concrete over the jambs indicating that it is inserted and an iron I-beam lintel (Plate 34). Above the door, in the centre of the elevation, is the line of a possible flue. The south elevation is largely plain, with modern pipes and other fittings attached and single skin concrete block walls added in the south-west corner to form a small vestibule between this room and Room 2m, with two modern timber doors providing access (Plate 35). The lower part of the west elevation is constructed from concrete blocks, as in Room 2, below a heavy timber beam spanning the width of the room (Plate 35), above which it is constructed from brick and incorporates a projecting flue, the base of which sits on the beam (Plate 36).

Plate 33 (left): Trusses in Room 3, Building 1, viewed from the east

Plate 34 (right): General view of the east end of Room 3, Building 1, viewed from the west

Plate 35 (left): General view of west end of Room 3, Building 1, viewed from the east

Plate 36 (right): Flue at the top of the west elevation, Room 3, Building 1, viewed from the east

6.3.4 Room 4 has a concrete floor, evidently laid in four sections and is open to the slate roof. This is supported by four trusses constructed from machine cut timbers and comprising a simple king post with

collar, although these are both only lap-jointed and nailed on and so are perhaps later additions rather than integral parts of the truss (Plate 37). The principal rafters also form an overlapping joint, north on south. At the east end there is a small raised 'loft' constructed from slatted timber and there is an additional iron girder supporting the south end of the east truss. The walls are all exposed brick, laid in English garden bond at a ratio of three rows of stretchers to one row of headers. The north elevation has a row of four windows, with rounded jambs constructed from bull-nosed bricks. The west has the remains of what may be the original timber casement, with three lights and iron bars over the top light (Plate 38). The rest are either open, filled with modern timber, or blocked with brick. In the centre there is a doorway in a similar style, with a concrete step and all have timber lintels (Plate 34). The east elevation has a recent hole knocked in the north side and a recessed area in the centre, again with bull-nosed bricks forming the jambs, within which is a large window (although not filing the recessed area). This has an iron girder for a lintel, is covered by an iron shutter in an iron frame, and has later bricks set end on forming the sill. The south elevation has a red sandstone plinth along its base (Plate 34) but is otherwise plain brick. The west elevation has a large inserted doorway with an iron lintel.

Plate 37 (left): Truss in Room 4, Building 1, viewed from the east

Plate 38 (right): Surviving window casement in the north elevation, Room 4, Building 1, viewed from the south-east

Plate 39 (left): North elevation, Room 4, Building 1, viewed from the south-west

Plate 40 (right): East elevation, Room 4, Building 1, viewed from the west

6.3.5 ***Internal Detail – Building 2, Ground Floor***: Room 1 originally comprised an office and is at the west end of the building (Figure 4) has a concrete floor, finished with carpet and plasterboard ceiling. The joists supporting this have been exposed in a small area in the south-west corner, and appear to be original, orientated north/south, and finished with whitewash, but are supporting more recent tongue and groove floorboards for the floor above (Plate 41). The ceiling and walls are finished with painted flock wallpaper, all of the walls are lined with *c*0.1m of stud walling, and there is a plain skirting board throughout. The north elevation has a large window with square jambs and a four-light hinged timber casement. The east elevation is probably brick but very thin and has a doorway south of the centre with a modern plain surround and plain single panel door (Plate 42). It projects in the south-east corner to form a cupboard under the stairs, which has a doorway on the south side with a modern plain surround and single panel door and two timber shelves inside. The south elevation has the same cupboard over its east side and a window in the centre. This has square jambs and is boarded up but has a steel frame for the casement. The west elevation is plain.

Plate 41 (left): Original joists exposed in the ceiling of ground floor Room 1, Building 2, viewed from the east

Plate 42 (right): General view of ground floor Room 1, Building 2, viewed from the west

6.3.6 Room 2 comprises an entrance hall connecting to the central stairs. It has a concrete floor finished with linoleum and the timber stairs are on the south side and formed by a timber stud partition wall and with a timber hand rail. The ceiling is flat plasterboard, with the line of a possible beam running

east/west across the centre, and ceiling and walls are finished with painted flock wallpaper and there is a plain skirting board throughout. As with Room 1, the walls are all evidently clad with a layer of timber stud walling *c*0.1m thick. The north elevation has a doorway on the east side with a narrow three-light window along the top. The rest of what was evidently originally a much larger opening is infilled with timber stud and there are the remains of a coat rack attached to the west. The door is a modern plain single panel type. The east elevation has a hatch on the north side with a stained timber surround labelled 'Reception & Enquries', which evidently originally had sliding glass doors (Plate 43). To the south of this is a doorway with modern plain surrounds and single panel door. The south elevation is essentially plain apart from having the stairs set against it (Plate 44), and the wall becomes noticeably thinner where it reaches first floor level, presumably because the stud lining stops at this point. The west elevation has presumably had to be cut through to allow access for the stairs on the south side and there is a doorway in the centre as per the description for Room 1.

Plate 43 (left): East elevation, ground floor Room 2, Building 2, viewed from the south-west

Plate 44 (right): Stairs on the south side of ground floor Room 2, Building 2, viewed from the north-east

6.3.7 Room 3 comprised another office to the east of the reception hall (Room 2) and has a concrete floor finished with carpet. The ceiling is lath and plaster and both it and the walls are finished with painted flock wallpaper above which are the joists supporting tongue and groove floorboards. The walls are again covered by timber stud walling *c*0.1m thick. The north elevation has two windows with square jambs and two-light modern hinged timber casements and timber sills (Plate 45). The east elevation is a plain wall with a doorway on the north side with a plain surround and single panel door (Plate 46). The south elevation has a plain wide window with square jambs and a three-light hinged timber casement. The west elevation is plain apart from a central doorway with plain surrounds and door and reception hatch to the north, which also has a plain timber surround.

Plate 45 (left): North elevation of ground floor Room 3, Building 2, viewed from the south-west

Plate 46 (right): East elevation of ground floor Room 3, Building 2, viewed from the west

6.3.8 Room 4 comprises a small corridor linking the rooms at the east end and a second staircase. It presumably has a concrete floor, although this is obscured by rubbish, and has a plaster ceiling. The north elevation essentially comprises just a doorway with a modern fire door, although a recess above this suggests it was originally taller or had some form of overlight (Plate 47). The east elevation is a plain stud wall with a doorway on the south side with a plain surround and panel door and at the south end the stairs dog-leg through the wall. The south elevation is plain and essentially just an opening for the staircase (Plate 48). The west elevation has a doorway on the north side with a plain surround and plain single panel door. To the north of this at least part of the wall is possibly just stud walling or infilling an earlier opening, with early planks apparently used.

Plate 47 (left): Doorway in north elevation, ground floor Room 4, Building 2, viewed from the south

Plate 48 (right): Stairs on the south side of ground floor Room 4, Building 2, viewed from the north

6.3.9 Room 5 comprises a small store at the east end of the ground floor. It ha a concrete floor finished with vinyl tiles and flat plaster ceiling with the underside of the stairs in the south-west corner. The walls are finished with plaster and paint and largely covered by shelving (Plate 49). Because of the angle of the east wall there is no north elevation as such. The east elevation comprises two short sections of actual walling with the gap between infilled with timber stud. The south elevation is plain and the west elevation a stud partition with a doorway off centre to the south with a plain surround and single panel door.

Plate 49: General view of ground floor Room 5, Building 2, viewed from north-west

6.3.10 ***Internal Detail – Building 2, First Floor***: Room 1, at the west end, comprises a collection of smaller rooms forming toilets, a kitchen (Plate 50), a small vestibule, and a small hall connecting them to the stairs. The floors are timber boards finished with vinyl with stairs leading down in the south-east corner, and the ceiling is painted plaster, sloping on the south side to follow the roofline with a small attic hatch east of the centre. In several areas the lower part of the wall is finished with tiles, the upper part painted plaster. The internal divisions are timber stud walls finished with plaster board. The north elevation has a two-light window in a toilet cubicle on the west side and one in the kitchen to the east, originally part of a single large window split by a stud wall. The east elevation is plain apart from a doorway to Room 2 in the centre, with a plain modern surround and single panel, although the stairs cut a hole through it on the south side leaving a recessed area (Plate 51). The south elevation has a wide window with a two-light timber casement and sill, while the west has a window in the vestibule filled with timber board and positioned above a sink with two smaller windows with two-light UPVC casements in each of the two toilets to the north.

Plate 50 (left): General view of the north side of first floor Room 1, Building 2, viewed from the south

Plate 51 (right): Stairs in the south-east corner of first floor Room 1, Building 2, viewed from the west

6.3.11 Room 2 comprised an office and has a timber floor finished with carpet and plaster ceiling finished with flock wallpaper and sloping down to follow the roofline on the north and south sides. The north elevation has two tall windows with square jambs and modern two-light timber casements and sills. The east elevation is a stud wall with a central doorway, which has a plain surround and plain single panel door (Plate 52). The south elevation has a wide window with a two-light timber casement and timber sill, which returns at the west end as a timber stud wall over the stairs (Plate 53). The west elevation is plain, with a doorway in the south side with a modern plain surround and single panel door (Plate 53).

Plate 52 (left): East elevation, first floor Room 2, Building 2, viewed from the west

Plate 53 (right): West elevation, first floor Room 2, Building 2, viewed from the east

6.3.12 Room 3 also originally comprised an office and has a timber floor finished with carpet. The original ceiling is hidden by suspended polystyrene tiles and the walls are clad with stained plywood sheeting, although the upper part is finished with the same tiles used on the ceiling. The north elevation

has a single tall window with a two-light hinged timber casement and square jambs. The east elevation, which is only a stud wall, has a doorway on the north side with a single panel door, matching the plywood panelling of the walls, and with a brass handle (Plate 54). A Bakelite light switch is attached to the wall to the south (Plate 55). The south elevation is plain, apart from a long narrow window on the west side, with a two-light hinged timber casement. The west elevation is plain but has the same panelled finish and a Bakelite switch to the south of the doorway, which has a plain surround and door, matching the panelling, and a brass door handle.

Plate 54 (left): East elevation, first floor Room 3, Building 2, viewed from the west

Plate 55 (right): Detail of door handle and light switch, east elevation, first floor Room 3, Building 2, viewed from the west

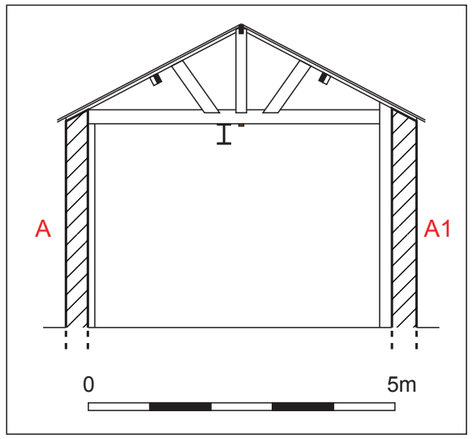
6.3.13 Room 4 comprises just a hall connecting to the stairs at the east end. The floor is timber boards finished with vinyl and the ceiling is plaster finished with flock wallpaper, as are the walls where this has survived. Because of its odd shape in plan it has no north elevation as such. The east elevation has short stubs of masonry at either end, the area between infilled with timber stud and incorporating a small window at either end with a single-light timber casement (Plate 56). However, a row of similarly-sizes spaces across the centre suggests that there may have been more windows of a similar size originally. The south elevation is plain, although the stairs are attached to it, with an early 20th century handrail on square iron balusters on the north side of them and a thinner timber handrail attached to the wall to the south (Plate 57). The wall steps back at first floor level probably because of the added stud walling on the ground floor. The west elevation is a plain stud wall with a doorway on the north side with a plain surround and single panel door.

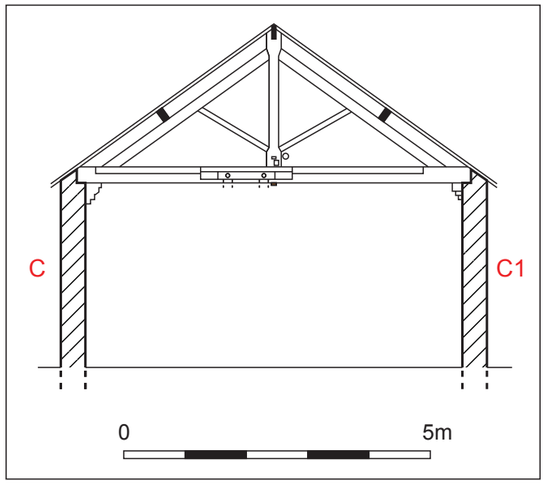
Plate 56 (left): Windows and stud walling in east elevation, first floor Room 4, Building 2

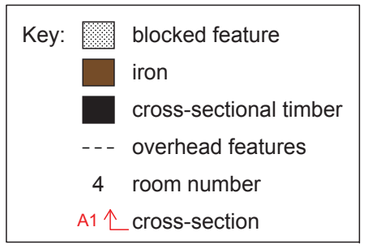
Plate 57 (right): Stairs in south-west corner, first floor Room 4, Building 2

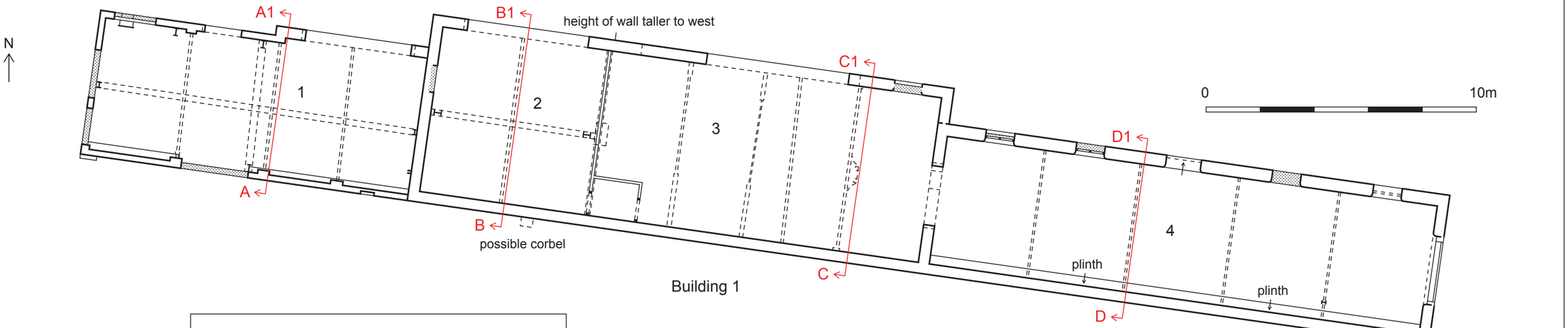
6.3.14 The roof space, which could only be partially accessed via the hatch in first floor Room 1, showed that the roof is supported by three king post trusses with angled braces coming off the tie beam (Plate 58).

Plate 58: Roofspace, Building 2

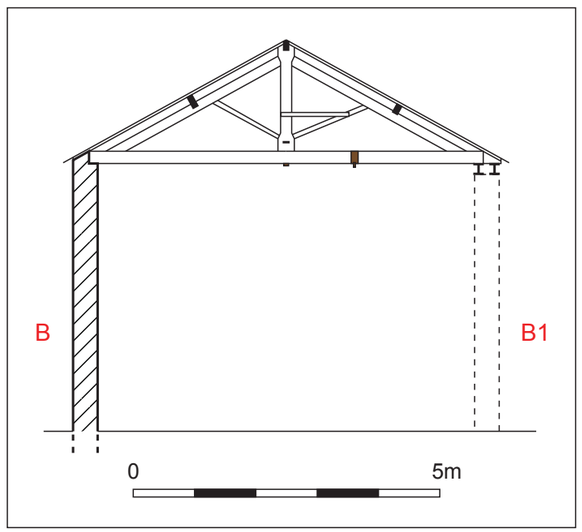








Building 1



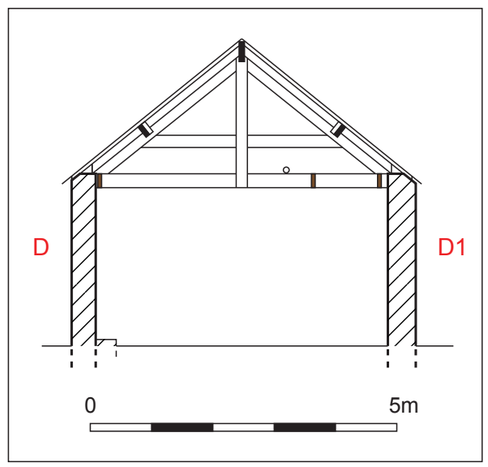
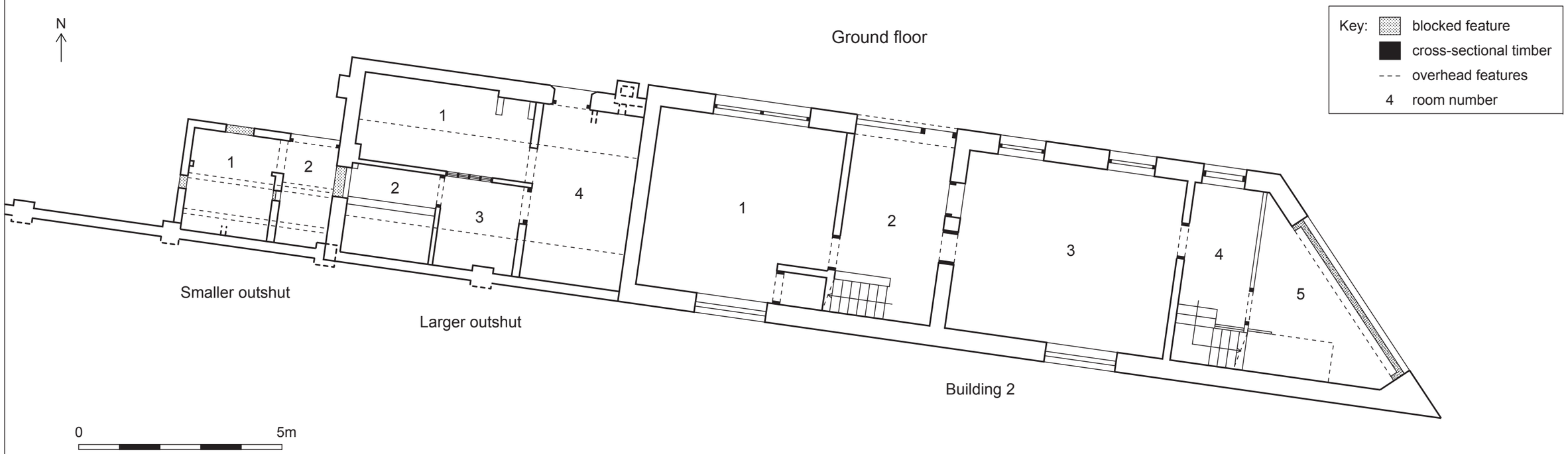


Figure 3: Floor plan of Building 1 and cross-sections A-A1, B-B1, C-C1, and D-D1



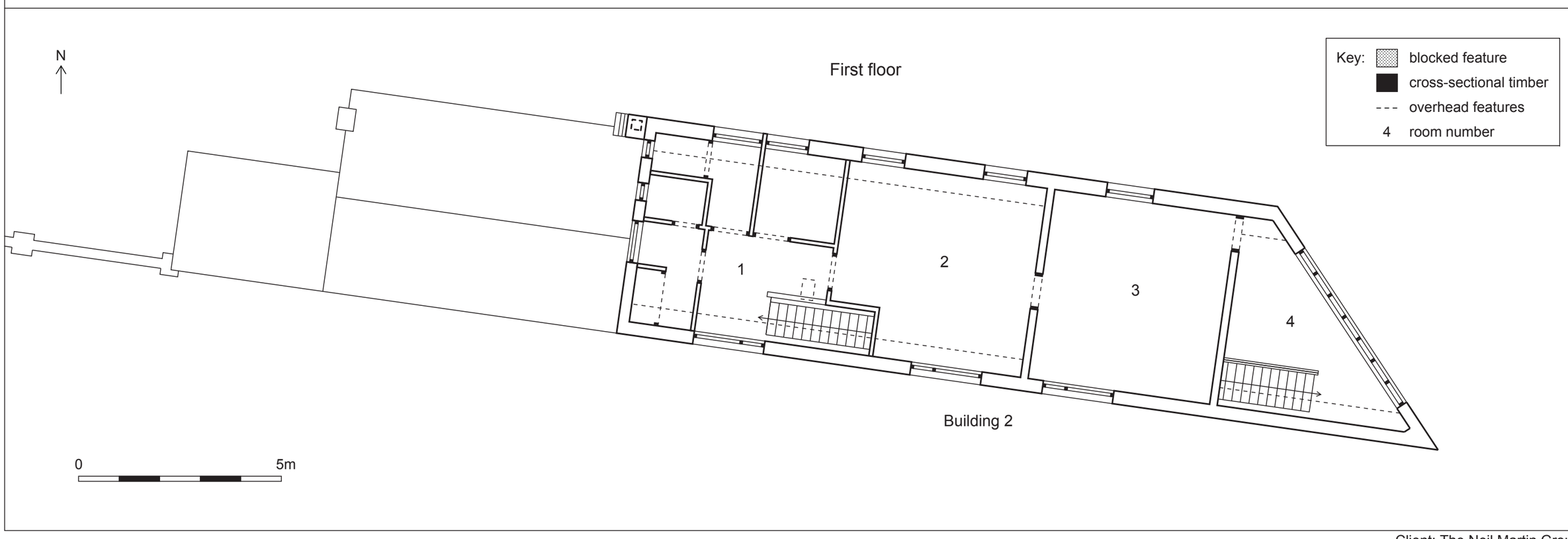


Figure 4: Floor plans of outshuts and Building 2

Client: The Neil Martin Group Ltd

6.4 Discussion

6.4.1 Despite the relatively late date of the buildings and their primary period of use only apparently stretching from *c*1865 to 1900 it is apparent that they have seen several phases of development, and it is possible to approximately establish the uses the different elements of the buildings were put to, based on the available documentary sources. Five phases of development can be identified.

6.4.2 ***Phase 1 – c1865***: in Building1 it is apparent that the east end (corresponding to Room 4) is the earliest element as everything else appears to extend from this to the west. It presumably dates to the initial establishment of William Ashburner's shipyard on the site in *c*1865, although its south wall appears to be sat on an earlier stone wall, which perhaps forms part of a pre-existing boundary or belongs to an even earlier phase of building of which little other trace now remains. It is difficult to determine what purpose this building might have been put to. It had no obvious hearths or flues suggesting it was not the blacksmiths' workshop and the style of architecture is more 'polite' than elsewhere in Building 1, perhaps indicating that it served as an office. However, Building 2 is far more likely to have served as the office from the outset of Phase 1, with the east end, with its curious angled form facing onto Ironworks Road and large warehouse-like doors, perhaps acting as the paint store.

6.4.3 ***Phase 2 c1865-c1872***: in Building 1 the area corresponding to Rooms 2 and 3 was evidently originally a single build, with a flue in the centre indicating that it was the blacksmith's workshop but that it was added to the Phase 1 building some time before 1867 (see Plate 2). The tall section at the west end may have housed the saw pit with carpenter's shop above: it is the only area tall enough for this, although Latham gives no source for this arrangement. Why such presumably essential elements of the site were added after the Phase 1 building is unclear. It is possible that the Phase 1 building actually pre-dates the shipyard and relates to an unrecorded activity on the site prior to 1865 but post-dating the sale of the Hindpool estate in 1854, but this seems unlikely and there is no evidence to support such as suggestion. Shortly after this addition, but before the surveying of the map of 1867, the area corresponding to east half of Room 1 had also been added. The purpose of this small space is not clear.

6.4.4 ***Phase 3 - c1872***: as already mentioned, William Ashburner added his cabinet-making business to the site in about 1872, and this probably explains the large extension of Building 1 to the west, that can be seen in plans of this date (compare Plate 2 and Plate 3). Of this only a small part now remains, corresponding with the west of Room 1. This, originally much larger range of buildings, no doubt contained the cabinet workshops described by Richardson in 1880 (see *Section 4.5.3* above) that were powered by the steam engine that also drove the windlass on the slip way. This phase also seems to have included the addition of the larger of the two outshuts on Building 2, the original purpose of which is unclear, although it is apparent that it was also added onto the existing brick boundary wall.

6.4.5 ***Phase 4 – early 20th century***: later additions appear to have been less extensive, although the Ordnance Survey map of 1933 seems to show that the west end of Building 1 had become detached from the rest by this time, and also that the smaller outshut on Building 2 may have been added by this date. These changes seem to correspond to a gradual decline in the site's use during its ownership by the Barrow Haematite Steel Company or, at least, a change in emphasis as shown by the demolition of the saw mill with its associated engine house and creation of new railway sidings across the central part of the site (Plate 6). The smaller outshut on Building 2 at some stage also included the extant water tank, another feature perhaps also associated with the nearby railway lines. It is likely that at least some of the large doorways added into Building 1 also relate to this phase, suggesting that it was being used primarily for storage.

6.4.6 ***Phase 5 – late 20th century***: the occupation of the site by Strand Engineering, sometime after 1956, brought new life to it, in particular Building 2, which seems to have retained its role as offices. Some of the construction of the new workshops (not subject to recording) in the central part of the site probably largely belongs to this phase but the style suggests other parts pre-date it and may have been created by the Steel Company. Within Building 1 there was relatively minimal alteration apart from superficial changes such as external rendering, the insertion of more wide doorways and associated rebuilding, and addition of internal concrete block walls. The offices (Building 2) were modernised

throughout, however, evidently in more than one phase, with new stair cases added (it is not clear where the original stairs were), the large opening in the east end was filled, and the windows and doors were subject to various alterations. A small flue was also added between the main part of Building 2 and the larger outshut, presumably for a stove in one of the workshops and stores that were now housed in this part of the building.

7. Conclusion

7.1 Desk-Based Assessment

7.1.1 While there is evidence for archaeological remains of various periods from the surrounding area and from within the study area, the site is dominated by post-medieval structures relating to the former shipyard established in *c*1865. While some of these survived as extant buildings and have now been recorded, the saw mill, engine house and slipways were lost some time ago and would now remain, at best, as below-ground remains. However, due to the nature of the proposed development, which is likely to see the ground level raised rather than lowered, it is thought unlikely that these will be affected.

7.2 Building Recording

7.2.1 The building recording revealed that the extant early range of buildings positioned along the southern boundary relate to the former Ashburner shipyard, their second in the town, and so are of some historical and archaeological importance to Barrow. The available documentary and cartographic sources allow a reasonably detailed understanding of their chronological development to be established, but also some identification of the use to which each building was put to be attempted, although further documentary research might further elucidate this.

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Appendix 1: Site Gazetteer

Site Number: 1
NGR: 319000 470000
HER No: 1499
Sources: HER; Leach 1872; OA North 2006; NPA 2010a; 2010b; WA Fairhurst and Partners 2008
Designation: none
Description: the Barrow Haematite Steel Company, Hindpool; the Barrow Haematite Steel Company's works from 1863 have all been demolished except for the offices and a store. The sheds, built a few years later, have been demolished. The nearby ironworks (from 1859) suffered the same fate. The earliest converter is in the Science Museum. According to an article in 1867 the Barrow Steel Works were then the largest Bessemer steel works in the country at that time.
Two large slag heaps associated with the works (SMR 41771) are still very prominent on the skyline. One of them has been landscaped. Most of the area of the works has now been re-developed as a business park, but a plaque commemorates the site of the works.
The Barrow Iron Works was established on reclaimed marsh land in 1859 by Henry Schneider and Robert Hannay. By 1862 the number of furnaces had increased to six. In 1861 the South Durham and Lancashire Union railway was opened, thereby giving access to high quality coke from South Durham. A steel works using the Bessemer conversion process was built adjacent to the ironworks in 1864, and in 1866 the iron and steel works were amalgamated to form the Barrow Haematite Iron and Steel Company. The amalgamation caused a further spate of furnace building and by the early 1870s there were 14. By 1870-72 more than 250,000 tons of pig iron was being produced each year and the plant was the largest in the world. The combined company continued in production into the middle of the 20th century but a combination of factors including outdated plant, a lack of capital for investment and the general national economic situation then led to a downturn. Despite nationalisation in 1951 and being controlled through the Iron and Steel Holding and Realisation Agency until 1963 the economic situation did not improve, the plant was sold to the Millom Haematite Ore and Iron Company Limited and finally closed in March 1963, and by May 1965 some part of the site had been cleared. The adjacent steelworks continued in production and was finally closed in 1983. A large part of the Works was demolished soon after and in 1987 Cumbria County Council took the decision to reclaim and redevelop the whole site for commercial and industrial development (OA North 2006, 7-8).
No evidence relating to the Works were found during a watching brief in 2010 on a trench in car parks belonging to Furness College, Channelside (NPA 2010a).
Further watching briefs in 2009-10 in the college car park found three brick-built walls beneath a layer of rubble backfill and modern made-ground deposits to a depth of c2.5m. The walls could not be dated but probably related to the former Iron and Steel Works (NPA 2010b).
Period: post-medieval

Site Number: 2
NGR: 318820 469680
HER No: 43630
Sources: HER; NPA 2010b
Designation: none
Description: site of the former Furness Boiler Works; site of a boiler making yard shown on the first edition Ordnance Survey map of 1867. It is marked as disused on the second edition map of 1899. The concrete lined pits were discovered during construction works at Furness College in 2010. The pits measured 6m by 4m and in excess of 2m deep. No date of foundation could be assigned but it was thought that they may have been associated with the railway or possibly the boiler yard.
Period: post-medieval

Site Number: 3
NGR: 319300 469490
HER No: 16269
Sources: HER
Designation: none
Description: site of the former Hindpool Mission Room; now under the Craven Park rugby ground
Period: post-medieval

Site Number: 4
NGR: 319270 469360
HER No: 16283
Sources: HER
Designation: none
Description: site of a former steam sawmill; the site as shown on the Ordnance Survey map of 1851 now lies under the Tesco store and car park. No trace of the sawmill remained in May 2001.
Period: post-medieval

Site Number: 5
NGR: 319237 469339
HER No: 16288
Sources: HER; Ordnance Survey 1851
Designation: none
Description: site of the former Hindpool Brass Foundry; the foundry site shown on the Ordnance Survey map of 1851 now lies under the modern railway. No trace of the foundry remained in May 2001.
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.