FLASS LANE, BARROW-IN-FURNESS,
Cumbria

Archaeological Desk-based Assessment and Evaluation

Oxford Archaeology North

December 2006

Datum Designs Company

Issue No: 2006-07/611
OA North Job No: L9762
NGR: SD 2170 7010

Planning Application No: 6/06/0314

Document Title: **FLASS LANE, BARROW-IN-FURNESS, CUMBRIA**

Document Type: **Archaeological Desk-based Assessment and Evaluation**

Client Name: **DATUM DESIGNS COMPANY**

Issue Number: **2006-07/611**
OA Job Number: L9762

National Grid Reference: **SD 2170 7010**

Prepared by:	Kelly Clapperton	
Position:	Supervisor	
Date:	December 2006	
Checked by:	Emily Mercer	Signed…….
Position:	Project Manager	
Date:	December 2006	
Approved by:	Alan Lupton	Signed…….
Position:	Operations Manager	
Date:	December 2006	

Oxford Archaeology North
Storey Institute
Meeting House Lane
Lancaster
LA1 1TF
t: (0044) 01524 848666
f: (0044) 01524 848606

w: www.oxfordarch.co.uk
e: info@oxfordarch.co.uk

Janus House
Osney Mead
Oxford
OX2 0EA
t: (0044) 01865 263800
f: (0044) 01865 793496

CONTENTS

SUMMARY

During October 2006 Oxford Archaeology North (OA North) carried out a desk-based assessment and evaluation trenching at Flass Lane, Barrow-in-Furness, Cumbria (NGR SD 2170 7010), as requested by Datum Design Company as part of a planning application for a nursing home (planning ref. 6/06/0314). Documentary and cartographic evidence, the earliest mapping dating from the eighteenth century, indicated that little or no significant activity had taken place on the site, and that it had been laid down to farmland. However, it was known to be part of a grange belonging to Furness Abbey from the fifteenth century. Evidence from the local Historic Environment Records (HER) in Kendal suggests a prehistoric presence in the area, with two stone axes (HER 2304 and 5600) found within 500m of the proposed development.

During the evaluation, eleven trenches were excavated within the identified areas of development impact, three of which contained features of possible archaeological significance. Two ditches, ***112*** and ***113***, were observed in Trenches 6 and 11. No finds or dating evidence were recovered from any of the fills, ***110, 111, 114*** and ***121***, and they do not appear on any edition of the Ordnance Survey (OS), so may predate the mid nineteenth century. In Trench 2, two small pits were identified, ***105*** and ***107***, the former containing a small fragment of late Roman pottery, probably dating to the fourth or fifth centuries AD. These had been heavily truncated by root action, and are probably isolated features, and therefore, their significance could not be ascertained. More recent features were identified as two fence postholes, ***109*** and ***120***, in Trenches 6 and 10 respectively, which probably relate to the fence identified on the 1957 OS map, and two shallow modern linears, ***116*** and ***118***, in Trenches 8 and 10. Due to the close proximity and modern material within linear ***118***, it may relate to the construction of the houses to the south during the first half of the twentieth century.

The results of the desk-based assessment and evaluation trenching would suggest that the site has very little archaeological potential. The features identified during the evaluation have little or negligible archaeological significance, being either ephemeral or isolated in nature. It is considered that the proposed development will have a minimal impact on any remaining archaeological deposits.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Mike Newby of Datum Designs Company for commissioning the project. Thanks are also due to Cumbria County Council Historic Environment Records in Kendal, especially to Jo Mackintosh for all her help, and to all the staff of the County Record Office in Barrow for their assistance with this project.

The desk-based assessment and evaluation was undertaken by Kelly Clapperton, with assistance from Kathryn Levey and Tom Mace. The finds were assessed by Chris Howard-Davis and the environmental assessment was undertaken by Elizabeth Huckerby and Sandra Bonsall. The drawings were produced by Marie Rowland. The project was managed by Emily Mercer, who also edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 A planning application was submitted to Barrow Borough Council (ref. 6/06/0314) for the development of a nursing home on pasture land at Flass Lane, Barrow-in-Furness, Cumbria (NGR SD 2170 7010; Fig 1). Cumbria County Council's Historic Environment Service (CCCHES) advised Barrow Borough Council that a programme of archaeological works should be carried out to assess for any below ground remains that may be affected by the development. To this effect CCCHES issued a brief forming the requirements of a desk-based assessment and evaluation trenching. Datum Design Company commissioned Oxford Archaeology North (OA North) to undertake the archaeological works, which were carried out in October 2006.

1.1.2 The desk-based assessment comprised a search of both published and unpublished records held by the Historic Environment Records (HER) in Kendal, the Cumbria County Record Office in Barrow-in-Furness (CRO (B)), and the archives and library held at OA North. In addition to this, a rapid walkover survey was carried out on the site of the proposed development, in order to relate the landscape and surroundings to the results of the desk-based assessment. Evaluation trenching equivalent to 5% of the total area of 8000m², which equated to 400m² of linear trenching, was then carried out across the site to assess for any sub-surface remains. This report sets out the results of the desk-based assessment and evaluation trenching in the form of a short document, outlining the findings, followed by a statement of the archaeological potential and significance, and an assessment of the impact of the proposed development. The significance criteria detailed in PPG 16 (DoE 1990) was employed during the assessment.

1.2 LOCATION, TOPOGRAPHY AND GEOLOGY

1.2.1 Barrow-in-Furness is located on the south-western tip of the Furness Peninsula in southern Cumbria. To the south it is bounded by Morecambe Bay, to the north by Duddon Sands, to the east the high Cumbrian fells and to the west by the Irish Sea (Fig 1). The area of Newbarns, and within it Flass Lane, is located on undulating ground to the east of Barrow town. The proposed development site is situated on a rise to the south-east of Newbarns, and the west of the Furness Railway line and Mill Beck.

1.2.2 The solid geology of the Barrow area is made up from Permo-Triassic red sandstone with overlying mudstones (Countryside Commission 1998). Glaciation has also had an effect with resulting widespread boulder clay, sands and gravels (*ibid*). The immediate topography of the area is generally made up of low-lying undulating or flat pasture, which rise to the fells to the east. To the west is an open coastline of mudflats or shingle beaches (*ibid*).

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 A project design (*Appendix 2*) was submitted by OA North in response to a request by the client, and in accordance with a formal brief produced by CCCHES (*Appendix 1*). The project design was adhered to in full, and the work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice.

2.2 DESK-BASED ASSESSMENT

2.2.1 The aim of the desk-based assessment is not only to give consideration to the potential for archaeological remains on the development site, but also to put the site into its archaeological and historical context. All statutory and non-statutory sites within a 500m radius of the development site were identified and collated into a gazetteer (*Section 4*) and their location plotted on Figure 2. Various published and unpublished documentary sources from the HER and CRO(B), were consulted, as well as cartographic sources and aerial photographs. A rapid walkover survey of the site was also carried out, to identify any possible features that have not been documented. The results were analysed using the set of criteria used to assess the national importance of an ancient monument (*Section 5*).

2.2.2 ***Historic Environment Records (HER), Kendal:*** the Cumbria County Council Historic Environment Records (HER) in Kendal has an extensive database of all known archaeological sites in the county. It also holds a library of published and unpublished documentation for consultation.

2.2.3 ***County Record Office (CRO(B)), Barrow-in-Furness:*** the office in Barrow is the main source for primary information, including maps, plans, documents and aerial photographs, for the site and the surrounding area.

2.2.4 ***Oxford Archaeology North:*** OA North has an extensive archive of secondary sources relevant to the study area, as well as numerous unpublished client reports on work carried out both as OA North and in its former guise of Lancaster University Archaeological Unit (LUAU). These were consulted where necessary.

2.2.5 The Barrow Borough Council website (www.barrowbc.gov.uk) was also consulted, as it holds relevant map and aerial photographs.

2.3 WALKOVER

2.3.1 A rapid walkover survey was undertaken on the site at Flass Lane, to investigate the possibility of archaeological remains not yet identified, to put the site into its surrounding topographic and landscape context, and to identify any unknown constraints on fieldwork.

2.4 FIELDWORK

2.4.1 Eleven trenches were excavated, focusing on areas where the development would adversely impact any archaeological remains, the remainder of the site will remain undeveloped or undergo non-intrusive landscaping works (Fig 8). Each trench was excavated down to the first archaeological horizon or natural geology using a JCB mechanical excavator fitted with a 1.6m toothless ditching bucket, and under constant archaeological observation. The trenches were subsequently cleaned by hand and recorded. Spoil from the excavation was deposited beside each trench and used to backfill upon the completion of archaeological works.

2.4.2 All archaeological features identified were investigated manually and recorded, to identify their nature, extent and, where possible, date. All excavation was undertaken with a view to avoiding damage to any archaeological features which appear worthy of preservation *in situ*.

2.4.3 All information identified in the course of the site works was recorded stratigraphically, using a system adapted from that used by the Centre for Archaeology Services of English Heritage, with sufficient pictorial record to identify and illustrate individual features.

2.4.4 Results of the evaluation were recorded on *pro-forma* context sheets. The site archive included both a photographic record and accurate large-scale plans and sections at the appropriate scale (1:10). All artefacts and ecofacts were recorded using the same system, and were handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.

2.4.5 A full and detailed photographic record of individual contexts was maintained and, similarly, general views from standard viewpoints of the overall site at all stages of the evaluation were generated. Photography was undertaken using 35mm cameras on archivable monochrome print film and colour slides, and all frames will include a visible, graduated metric scale. Extensive use of digital photography was made throughout the course of the fieldwork for presentation purposes. Photograph records were maintained on *pro-forma* sheets.

2.4.6 ***Finds Policy:*** all finds were exposed, lifted, cleaned and bagged in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition). All identified finds and artefacts were retained from all material classes; these were hand collected from stratified deposits for processing and assessment.

2.5 ENVIRONMENTAL ASSESSMENT

2.5.1 All samples were hand-floated. The flots were collected on 250 micron mesh and air dried, and then scanned with a Leica MZ6 stereo microscope. The plant material was recorded and provisionally identified. The data is shown in Table 2 in *Section 7.14*). Botanical nomenclature follows Stace (1991). Plant remains were scored on a scale of abundance of 1-4, where 1 is rare (less than

5 items) and 4 is abundant (more than 100 items). The components of the matrix were also noted.

2.6 ARCHIVE

2.6.1 A full professional archive has been compiled in accordance with the project design (*Appendix 2*), and in accordance with current IFA and English Heritage guidelines (English Heritage 1991). The archive will be deposited in the County Record Office in Barrow, and a copy of the report will be sent to the CCCHER in Kendal on completion of the project.

3. DESK-BASED ASSESSMENT RESULTS

3.1 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

3.1.1 ***Prehistoric Period:*** evidence of post-glacial activity is scarce in most of Cumbria, although caves excavated near Ulverston to the north of the site, and Grange-over-Sands to the east, have revealed Palaeolithic remains (Young 2002). Deer remains discovered in peat layers at Barrow Docks may also date to this period (Kendall 1900). More evidence exists for a Mesolithic presence in the Barrow vicinity, consisting of surface finds, much of which has been discovered on Walney Island off the south-west coast (Cherry and Cherry 2002).

3.1.2 During the Neolithic and Bronze Age settlements became more established across the Furness Peninsula, and numerous stray finds have been made (Barnes 1978), including two stone axes identified in the gazetteer (Sites **1** and **4;** HER 2304 and 5600 respectively). Large enclosures, for example at Stainton to the north-east of the site, may have originated during these periods, and continued in use until the Roman period (*ibid*, Powell *et al* 1963). To the east of the development site at Holbeck Park, a tree throw was found to have been reused during the Neolithic, and contained fragments of pottery and flints (OA North 2006). In the Roose area, at 'Dove Cot', a Bronze Age cremation burial and pygmy vessels were excavated in the early 1800s (HER 2622, CCC and EH 2006).

3.1.3 Settlement sites dating to the Iron Age have been identified to the north-east of Barrow, near Urswick, comprising two large enclosures at Stone Walls where hut platforms are still clearly visible, and there is evidence for early surface mining for iron rich deposits (Rollinson 1967; CCC and EH 2006). There may even have been some form of settlement at Back Castle, now Barrow public park (Barnes 1978).

3.1.4 ***Roman Period:*** although a definite Roman presence cannot be identified, the numerous Roman coins that have been found in the Furness Peninsula have been taken to indicate a level of interaction with the local population (Shotter 1995). It was claimed during the later eighteenth and earlier nineteenth centuries that a section of Roman road was discovered near Ulverston, and a fortification at Dalton (West 1774), although these are still to be substantiated.

3.1.5 ***Early Medieval Period:*** evidence for early medieval activity on the Furness Peninsula is confined largely to place names and the remains of a cross fragment. Barrow-in-Furness is relatively modern, with the original village being Barrowhead. The name Barrow is a native British-Norse fusion, 'barr' being native British for top or summit, and 'ai' being Norse for island. Furness also has Scandinavian roots, stemming from 'fu' or 'fud' meaning small island, and 'ness', translated as headland (Ekwall 1922). Anglo-Scandinavian finds from this period include the remains of a sword found in the churchyard at Rampside near Roa Island (Parsons 2002). The name Flass Lane may also

have Scandinavian or Anglian origins; it comes from the Old English '*flasshe*' meaning 'brook in marshy ground' (Kelly 1937).

3.1.6 ***Medieval Period:*** the history of Furness is very much synonymous with the Abbey, established in 1127, from land gifted by the then later King Stephen to monks of the order of Savigny. The Abbey dominated the area and established granges that eventually grew into villages in the area around modern day Barrow. A Papal Bull in 1190 mentions the granges of *Roos* (Roose), *Barrai* (Barrow) and Walney Island (Leach 1981). By 1247 Salthouse also had a grange with a much later mention of a grange at Newbarns in 1535 (Kelly 1937, CCC and EH 2006). Newbarns was originally allocated approximately 420 acres and was divided into 12 tenements (Kelly 1946)

3.1.7 It is noted by Kelly (1937) that Flass Lane was an ancient highway, and may even have predated the monastery. A plan of *Newbarns Town Fields in 1750*, shows Flass as a named field, within the general vicinity of the proposed development site (Evening Mail 1970). From the thirteenth century onwards little changed in Barrow and Salthouse, and although the Great Raid by the Scots in 1302 caused much devastation, the true scale is unknown (Barnes 1978). Furness Abbey was obliged to take care of the sea defences, which they did until the Dissolution (Kendall 1948). During the sixteenth and seventeenth centuries the coastline was inundated, destroying property in several local villages (Phillips and Rollinson 1971).

3.1.8 ***Post-Medieval Period:*** until the end of the eighteenth century, Barrow was a small village consisting of five farms and their associated buildings, although it was originally built with eight farmsteads by the abbey (Kendall 1909). Newbarns was also a small hamlet, with substantial expansion only occurring in the later 1800s.

3.1.9 Although Barrow and the Furness Peninsula were not initially affected by the industrial revolution occurring elsewhere, the increasing exploitation of iron ore in the area during the later eighteenth and nineteenth centuries began to dominate the town's development (Fell 1908). Road links across the area were poor and even dangerous, resulting in the sea becoming the main transport hub (Marshall 1958). Ulverston had been the main port for iron ore transportation, but by the mid eighteenth century the Blackbarrow Iron Company began to ship out of Barrow (Kendall 1909), and by the late eighteenth century, the Newland Company bought up land for dumping grounds and to build a jetty for low tide shipments (Marshall 1958). By the mid nineteenth century four jetties had been established in Barrow, though the village had hardly expanded in size (*ibid*).

3.1.10 The construction of the Furness Railway (Site **6**) in 1846, however, transformed the settlement, allowing massive quantities of ore to be transported (www.furnessrailwaytrust.org.uk/frco.htm; Banks 1984). During this period several smelting furnaces were constructed by HW Schneider, who actively encouraged iron extraction, and the improvement of the railway links by James Ramsden increased the prosperity of the town (*ibid*; Kellett 1990). By 1867 the town had expanded so much that it received a Charter of Incorporation as a Borough (Trescatheric 1987).

3.1.11 The iron industry was short lived, however, and by the late 1880s it was in serious decline (Stark 1972). The town reverted to shipbuilding, with the establishment of the Barrow Iron Shipbuilding Company in 1886, bought over by Vickers of Sheffield in 1896 (*ibid*). They produced armaments during the First World War, although the industry has been far from economically stable since.

3.2 MAP REGRESSION ANALYSIS

3.2.1 ***William Yates' 'Map of Lancashire', 1786*** (Fig 3)*:* this is the earliest map available for the Barrow-in-Furness area. Although there is no detail on this map, it is clear that the villages of Barrowhead (later Barrow-in-Furness) and Newbarns, are very small. No structures can be identified in the general location of the Flass Lane site.

3.2.2 ***Rampside, Newton and Yarlside Tithe Map, 1842:*** this is the earliest detailed map available for area around Newbarns and Flass Lane. The proposed development site is noted as 'field f291', but there was no tithe apportionment available for inspection with the map to provide any detail for it. The site can be seen to have the general shape and boundaries of the present day. No features are noted on or near the site.

3.2.3 ***Ordnance Survey 1st edition map, 6":1 mile, 1857*** (Fig 4): the proposed development site contains no features, and is surrounded by fields, similar to the previous tithe map. The nearest settlement is the farm of Bridge Gate to the south, while the hamlet of Newbarns is located to the north-west. Sauterhouse Bridge (Site **3**) is located to the north-east near Beacons Gill. The Furness Railway line (Site **6**) can be located to the east of the proposed development site.

3.2.4 ***Newbarns to Salthouse to Roose Mill route map, 6":1 mile, 1872:*** this map charts the route from Newbarns to Salthouse and shows that little has changed in the area since the OS 1st edition map of 1857, or the 1842 Tithe map, and the site still remains in a rural position.

3.2.5 ***Ordnance Survey 2nd edition map, 25":1 mile, 1873:*** the site and its immediate environs are identical to their depiction on the OS 1st edition, although the hamlet of Newbarns has expanded, with houses being built along Abbey Road to the west of the centre of Newbarns, and to the north-west of Flass Lane.

3.2.6 ***Ordnance Survey rev. 2nd edition map, 25":1 mile, 1891*** (Fig 5): as with the previous maps, the site and its vicinity have barely altered. Nevertheless, there has been rapid development to the west of the area, around Newbarns and towards Barrow. To the south of the site, and immediately to the north of the hamlet of Roose, Croft House has been constructed. The Sauterhouse Bridge (Site **3**), although located on the map, may have gone out of use, as the paths leading to it are no longer marked.

3.2.7 ***Ordnance Survey, 25":1 mile, 1913:*** although no development has taken place on the site or in the fields immediately to the north and south since the OS 1891 map, there has been a large expansion of housing to the west. On the west side of Flass Lane, four houses have been built, and further north six houses have been established along Flass Lane.

3.2.8 ***Ordnance Survey, 25":1 mile, 1933*** (Fig 6): several buildings have been established in the south-east of the proposed development site, and a small orchard. The majority of the structures appear to be outbuildings accompanying the two houses that have been established. The surrounding fields have also had several buildings constructed on them, with allotments to the north. To the west there has been an expansion of houses along Flass Lane, and Newbarns has extended along Harrrel Lane. This probably relates to the rapid expansion of Barrow in the later nineteenth century as the iron and shipbuilding industries began to dominate the economy (*Section 3.1*). To the south-east, near Croft House, a football ground has been established showing increasing urbanisation.

3.2.9 ***Ordnance Survey, 25":1 mile, 1957*** (Fig 7): the farmstead to the south-east of the site has been enclosed, the orchard expanded and proposed development site divided into four fields. This is the last obvious development of the site, and the majority of the field has been left unscathed. Elsewhere, since the previous OS map of 1933, there has been massive development and urbanisation; Newbarns has been subsumed into Barrow. To the north and west are large housing estates, though the east has been left relatively untouched.

3.2.10 ***Ordnance Survey, 1:10,000 1990*** (Figs 1 and 2): compared to the OS map of 1957 little has changed to the north and west of Flass Lane, probably due to the unsuitable marshy area around Mill Beck. To the south-east, however, a substantial factory has been established, and a second smaller one to the south. Little has changed within the actual development site itself, except that it is now three fields instead of four.

3.3 AERIAL PHOTOGRAPHIC ANALYSIS

3.3.1 From the 1940s to the early twenty first century (Barrow Borough Council 1940 and 2000) there are no obvious developments in the field, except for the erection of a hedge line between 1964 (CRO(B)1964) and 2000 (Barrow Borough Council 2000) running approximately north/south across the western end of the site. The site was also divided into four fields and now comprises two. No cropmarks or other features of significance can be identified on the proposed development site.

3.4 ARCHAEOLOGICAL INTERVENTIONS

3.4.1 Only one archaeological intervention is known from within the study area; that of a desk-based assessment carried out by AOC in May 2006 along the Dalton to Roose Greenway (AOC 2006). The only feature of significance noted was

Sauterhouse Bridge (Site **3**). OA North (2006) carried out an excavation at Holbeck Park just to the east of the study area, following the discovery of Neolithic pottery and flints in a tree throw during an evaluation in (OA North 2002). Excavations did not reveal any further prehistoric remains on the site, and it was concluded that "inhabitants may have wandered through these woods and possibly made use of the tree throw, for some minor activity." No archaeological interventions have taken place on the proposed development site.

3.5 WALKOVER

3.5.1 The site was observed gently ascending from Flass Lane to the west, reaching a plateau to the east (Fig 8). The south-east corner the field was encroached by a yard containing several outbuildings and a spinney of trees. This area has also been used as a dumping ground for various forms of modern materials, including brick and sandstone. Towards the west of the field, at the base of the slope, the ground is quite marshy, as is a small area to the south. The undulations identified to the west probably represent the relict fence lines that can be identified on the OS map of 1957 (Fig 7); the current field is divided into two by a temporary fence to the eastern end. A portion of hedge still follows one of the low banks. No additional features of archaeological significance were identified during the walkover.

4. GAZETTEER OF SITES

Site number **01**
Site name **Stone axe, Beacon Hill, Newbarns**
NGR SD 2143 7043
Site type Stone axe find
Period Neolithic
HER No **2304**
Sources HER
Description Stray stone axe find
Assessment The site lies outside the development area and will not be affected.

Site number **02**
Site name **Flass Pit, Newbarns**
NGR SD 2150 7043
Site type Flass pit
Period Unknown
HER No **16216**
Sources HER; OS 1857
Description Flass pit, of unknown function. It was first identified on the OS 1st edition map of 1857.
Assessment The site lies outside the development area and will not be affected.

Site number **03**
Site name **Sauterhouse Bridge, Newbarns**
NGR SD 2211 7033
Site type Bridge
Period Medieval, plantagenet
HER No **2276**
Sources HER; AOC 2006
Description The site is a bridge that is located on an important route from Furness Abbey to Barrow-in-Furness. It has been heavily disturbed by development and tipping.
Assessment The site lies outside the development area and will not be affected.

Site number **04**
Site name **Stone axe, Newbarns**
NGR SD 2160 7010
Site type Stone axe
Period Neolithic
HER No **5600**
Sources HER
Description Stray stone axe find.
Assessment The site lies outside the development area and will not be affected.

Site number **05**
Site name **Roose Quarry, Barrow-in-Furness**
NGR SD 2215 6996
Site type Quarry
Period Unknown
HER No **16322**
Sources HER; OS 1857
Description Limestone quarry identified on the OS 1st edition map of 1857, but not observed on later maps.
Assessment The site lies outside the development area and will not be affected.

Site number	**06**
Site name	**Furness Railway Line**
NGR	SD 2210 7010
Site type	Railway line
Period	Nineteenth century
HER No	**-**
Sources	OS 1857 through to the current edition; Rollinson 1967
Description	The main Furness Railway line from Carnforth to Barrow, opened in 1846.
Assessment	The site lies outside the development area and will not be affected.

5. SIGNIFICANCE OF THE REMAINS

5.1 INTRODUCTION

5.1.1 Five sites were identified from the HER (Sites **1**-**5**), and one during cartographic regression (Site **6**), as listed in the table below. No other sites were observed during the study of aerial photographs or the walkover survey. None of these are statutory designated sites.

Period	No of sites	Sites
Neolithic	2	Stone axe, Beacon Hill, Newbarns (Site **1**); Stone axe, Newbarns (Site **4**)
Bronze Age	0	
Iron Age/ Romano-British	0	
Roman	0	
Medieval	1	Sauterhouse Bridge (Site **3**)
Post-medieval	1	Furness Railway Line (Site **6**)
Unknown	2	Flass Pit (Site **2**); Roose Quarry (Site **5**)

Table 1: Number of sites by period

5.2 CRITERIA

5.2.1 There are a number of different methodologies used to assess the archaeological significance of sites; that to be used here is the 'Secretary of State's criteria for scheduling ancient monuments' which is included as Annex 4 of PPG 16 (DoE 1990). The sites listed in the gazetteer above (*Section 4*) were each considered using the criteria, with the results below.

5.2.2 ***Period***: none of the prehistoric sites are significant to their period as they do not form a constant in the landscape, being stray finds. Flass pit (Site **2**) and Roose Quarry (Site **5**) are of unknown date and origin. Sauterhouse Bridge (Site **3**) may be significant to its period as it lies along a major highway from Furness Abbey to Barrow, when the Abbey dominated the area until its dissolution.

5.2.3 ***Rarity:*** none of the Neolithic sites (Sites **1** and **4**) are considered significant through rarity. Stone axe finds are fairly common in the north-west of England, particularly in Cumbria due to the close proximity of the Langdale axe quarries. Roose Quarry (Site **5**) is not considered rare as several limestone and sandstone quarries are documented in the local area. The Flass pit (Site **2**) maybe considered significant at a local level, as their usage is unknown and they may relate to the granges owned by Furness Abbey (CCC and EH 2006).

Sauterhouse Bridge (Site **3**) is also considered significant at a local level, as it forms part of an important ancient route.

5.2.4 ***Documentation:*** Sites **2**, **3** and **5** are all located on the OS maps from the 1857 1st edition through to 1933. By the 1933 edition the Flass pit (Site **2**) and the quarry (Site **5**) are no longer mapped, although Sauterhouse Bridge has been depicted to the present day.

5.2.5 ***Group Value:*** there is no evidence for group value between any of the sites identified.

5.2.6 ***Survival/Condition:*** Sauterhouse Bridge (Site **3**) survives as sandstone foundations on either side of the Mill Beck (AOC 2006), which have been damaged through development and tipping. The bridge seems to have gone out of use during the mid to late nineteenth century.

5.2.7 ***Fragility/Vulnerability:*** the only site that remains upstanding is Sauterhouse Bridge (Site **3**). The bridge is highly fragile, as it is in a severe state of disrepair and is still subject to destructive activities such as tipping. The remaining sites have all been subject to modern development.

5.2.8 ***Diversity:*** none of the sites in the study area can be described as diverse, and they do not show any levels of complexity.

5.2.9 ***Potential:*** the presence of Neolithic stone axe findspots (Sites **1** and **4**) suggest a potential for prehistoric activity within the study area.

5.3 SIGNIFICANCE

5.3.1 There is substantial evidence for prehistoric activity on the Furness Peninsula, and the proximity of two Neolithic find sites to the proposed development suggests a potential for prehistoric remains, albeit of local significance.

6. FIELDWORK RESULTS

6.1 INTRODUCTION

6.1.1 Eleven trenches were excavated across the proposed development site, focusing on the areas of highest impact (Figs 8 and 11). Trenches 1, 4, 6-11 were approximately 20m in length, and Trenches 2, 3 and 5 were approximately 30m in length. All the trenches were 1.6m in width, and ranged from 0.22m to 0.8m in depth. A list of the contexts and finds mentioned can be found in *Appendices 3* and *4*.

6.1.2 The topsoil, ***101***, was a mid brown-grey friable sandy-silt. Underlying this was a light to mid brown-grey silty-sand subsoil, ***102***, observed overlying the natural geology, ***103***, which consisted of an orange-brown silty-clay with 40% gravel inclusions.

6.2 TRENCHING RESULTS

6.2.1 ***Trench 1:*** was aligned east/west and had a maximum depth of 0.8m. It consisted of ***101***, with a maximum thickness of 0.2m. Underlying this was subsoil, ***102***, with a thickness of 0.15m, under which was the natural geology, ***103***. A sondage was excavated to a depth of 0.8m in the eastern end of the trench to verify the natural geology. No features of archaeological significance were observed and no finds recovered.

6.2.2 ***Trench 2:*** was aligned north-east/south-west, and had a maximum depth of 0.55m. It contained topsoil, ***101***, to a depth of 0.2m; subsoil, ***102***, to a depth of 0.35m, and thereafter natural geology, ***103***.

6.2.3 Two features of archaeological significance were observed. The first was possible pit or posthole, ***105*** (Plate 2), which measured 0.25m x 0.24m and was V-shaped in profile. It contained a brown-black charcoal rich silty-sand, ***104***, 0.18m thick. Unfortunately, there was not a sufficient amount to sample for environmental assessment. One fragment of pottery was recovered from the feature, thought to be of Romano-British date (*Appendix 4*). Immediately to the west, pit or posthole ***105*** was observed cutting an elongated pit, ***107***, which was U-shaped in profile. This measured 0.75m x 0.27m, and was aligned north-west/south-east. It contained a brown silty-sand, ***106***, which was 0.22m thick. Both the features had been heavily disturbed by root action, and their edges were very ephemeral.

6.2.4 ***Trench 3:*** was aligned north-east/south-west and had a maximum depth of 0.44m. It contained topsoil, ***101***, to a depth of 0.21m, overlying subsoil, ***102***, to a depth of 0.35m, underneath which was the natural geology, ***103***. No archaeological features were observed and no finds recovered.

6.2.5 ***Trench 4:*** was aligned east/west and measured 21m in length and 0.38m in depth. It. It contained topsoil, ***101***, to a depth of 0.24m, which overlay subsoil,

102, to a depth of 0.34m and natural geology, ***103***. No features of archaeological significance were identified and no finds were recovered.

6.2.6 ***Trench 5:*** ran north/south and had a maximum depth of 0.71m. It contained topsoil, ***101***, to a depth of 0.28m, beneath which was subsoil, ***102***, to a depth of 0.41m, and the underlying natural geology, ***103*** (Plate 3). No features of archaeological significance were observed and no finds were recovered.

6.2.7 ***Trench 6:*** was aligned north/south, and measured 19.8m in length, and had a maximum depth of 0.51m. It contained topsoil, ***101***, to a depth of 0.32m, overlying subsoil, ***102***, to 0.48m depth, and then the underlying natural geology, ***103*** (Plate 4). Two features were recorded. The first was a posthole, ***109***, which was sub-oval in plan with near vertical sides and a U-shaped base, likely to be a fence posthole. It measured 0.31m x 0.26m and was filled with a loose dark grey-brown silty-sand, ***108***, with the occasional smear of charcoal and containing fragments of modern pottery and glass (see *6.3*, below). The true extent of the feature could not be ascertained as it extended under the eastern limit of the trench. The second feature, ditch ***112*** (Fig 9, Plate 5), was aligned north-west/south-east, seen traversing the trench at the northern end and sealed by subsoil ***102***. Its profile was a wide U-shape, being 1.43m wide and 0.22m in depth. It contained two fills; the lower fill, ***111***, was a light pink-brown silty-sand with 40% gravel inclusions and 0.15m thick, and the upper fill, ***110***, was a mid-brown silty-sand with less than 1% coarse component, 0.1m thick. No finds were recovered from the feature, although it was sampled for environmental analysis (see *Section 6.4*).

6.2.8 ***Trench 7:*** was aligned north/south and measured 0.62m in depth. It contained topsoil, ***101***, to a depth of 0.2m, beneath which was subsoil, ***102***, to a depth of 0.35m, and the underlying natural geology, ***103***. No features of archaeological significance were observed and no finds were recovered.

6.2.9 ***Trench 8:*** was aligned east/west and measured 0.68m in depth. It contained topsoil, ***101***, to a depth of 0.15m. This overlay subsoil, ***102***, to a depth of 0.27m, which overlay natural geology, ***103***. An ephemeral shallow U-shaped linear feature, ***116***, was observed traversing the eastern end of the trench, and running north/south. It contained a mid grey-brown silt with less then 2% coarse component, ***115***. It measured 0.15m in width and 0.03m in depth, and appeared to be a field drain. No finds were recovered from the feature to date it. A sondage was excavated to a depth of 0.68m towards the eastern end of the trench to verify natural.

6.2.10 ***Trench 9:*** was aligned east/west and measured and 0.54m in depth. It contained topsoil, ***101***, to a depth of 0.2m, beneath which was subsoil, ***102***, to a depth of 0.35m, overlying the natural geology, ***103***. No features of archaeological significance were identified and no finds were recovered.

6.2.11 ***Trench 10:*** was aligned east/west, and measured 19.6m in length and 0.7m in depth (Plate 6). It contained topsoil, ***101***, to a depth of 0.15m, overlying subsoil, ***102***, to 0.33m, which overlay the natural geology, ***103***. A fence posthole, ***120***, was observed as square in plan and profile, 0.34m x 0.27m, with near vertical sides and a flat base. It was filled by ***119***, a very fine dark

grey-brown clayey-silt. No finds were recovered, but the loose and fresh nature of the matrix indicated that it was relatively modern. A linear feature, ***118***, was also recorded for approximately 17m against the southern limit of the trench, and was 0.8m at its widest point. It had shallow but sharp near vertical sides and a wide flat base, 0.08m deep, and contained ***117***, a mixed grey-brown and orange clayey-silt, possibly redeposited natural. A small fragment of white earthenware was recovered from the feature, dating it to the mid nineteenth century or later (see *Appendix 4*).

6.2.12 ***Trench 11:*** was aligned north/south, and had a maximum depth of 0.36m. It contained topsoil, ***101***, to a depth of 0.15m, underneath which was subsoil, ***102***, to 0.3m and natural geology, ***103*** (Plate 7). A ditch, ***113***, was observed north-west/south-east across the trench. It had a wide V-shape profile and measured 1.15m in width and 0.29m in depth (Fig 10, Plates 8 and 9). The ditch contained an upper fill, ***114***, consisting of mid-brown soft silt with approximately 15% sand content, and a lower fill, ***121***, of mid dark brown sandy-silt with 25% gravel inclusions. No finds were recovered from the feature from which it could be dated. A sample was removed for environmental assessment (see *Section 6.4*).

6.3 FINDS

6.3.1 Only seven fragments of artefacts were recovered, from pit fill ***104***, fence posthole ***108***, and fill ***117***, of modern linear ***118***, as well as unstratified material. Four of the finds were ceramic and three were glass, all but one of later nineteenth century or later date. A full description of each can be found in *Appendix 4*.

6.3.2 Only the small fragment from pit fill ***104***, is of potential archaeological interest. This is a very small body fragment from a thin-walled, relatively hard-fired reduced fabric with numerous large calcite inclusions. Although the fragment is too small for complete confidence, it seems most likely to be a late Roman calcite-gritted fabric, probably from the well-known East Yorkshire production site at Huntcliff. As the size of the sherd precludes identification of the vessel form, it can only be given a broad fourth to early fifth century AD date.

6.4 ENVIRONMENTAL ASSESSMENT

6.4.1 ***Introduction:*** two environmental samples were taken from the fills of ditches ***112*** and ***113***, in Trenches 6 and 11 respectively. The samples were taken from secure contexts for the assessment of charred and waterlogged plant remains. It was hoped that the samples would yield information about the environment and economy of the site. The sample from fill ***110*** of ditch ***112***, was 20 litres in volume and that from fill ***114*** of ditch ***113***, was 10 litres.

6.4.2 ***Assessment of plant remains:*** the results of the assessment are shown in Table 2 below. The sample from ***110*** contained one charred *Triticum* sp cereal grain. All the other plant remains were modern contamination and included roots and

seeds. The sample from ***113*** only contained modern contamination. Both samples contained charcoal in low quantities.

6.4.3 ***Potential for further analysis:*** there is no potential for any further analysis of the plant remains. The charred cereal grain from context ***110*** could, however, be used potentially for radiocarbon dating.

Sample No.	Context	Feature	Flot vol. (ml)	Flot description	Plant remains
1	***110***	Ditch	100	Charcoal >2mm (2), clinker (2), coal (1), Modern roots and seeds (4)	CPR *Triticum* sp. cereal grain (1)
2	***114***	Ditch	125	Charcoal >2mm (2), clinker (1), coal (1), modern roots and seeds (4)	

Table 2: Assessment of charred and waterlogged plant remains

7. CONCLUSION

7.1 DISCUSSION

7.1.1 The results of the desk-based assessment showed the site to have had little or no development since at least the earliest available detailed cartographic evidence being the Tithe map dating to 1842, with the main peripheral boundaries remaining the same. Some development was confined to the south-east corner during the early twentieth century with the construction of two houses and associated outbuildings and orchard (OS 1933). There were also some minor changes to internal boundaries during the twentieth century (OS 1957 and 1990). Documentary evidence suggested that this area belonged originally to Furness Abbey, with the nearby settlement and now suburb of Newbarns originating as a grange for the Abbey (Kelly 1946). It is likely that the site has been used for farming since at least the sixteenth century (Kelly 1937).

7.1.2 Due to the lack of any development on the site and consultation of the HER, wherein stray axe finds of probable Neolithic origin are recorded (HER2304 and 5600) within the study area, the site was shown to have potential for the preservation of prehistoric remains. No features of archaeological significance were revealed during the desk-based assessment, however, with which to target with evaluation trenching. Therefore, a representative sample of the areas of impact was excavated to assess any sub-surface archaeological remains.

7.1.3 Three main features were identified as being of some archaeological significance, from Trenches 2, 6 and 11. In Trench 2 a pit or posthole, ***105***, contained a fragment of late Roman pottery, probably dating to the fourth or fifth centuries AD, and may indicate possible early activity on or near to the site. This feature was observed cutting another elongated pit to the east, ***107***, but this did not contain any datable evidence. Unfortunately, these features had been severely disturbed by root action, preventing their purpose from being fully understood.

7.1.4 Ditches ***112*** and ***113***, identified in Trenches 6 and 11 respectively, were very similar in form and contain nearly identical fills (***110*** and ***111*** in ditch ***112***, and ***115*** and ***121*** in ditch ***113***). Again, the lack of any dating evidence from either ditch inhibited interpretation of their age and function. Environmental samples taken from the ditches contributed little additional information, the majority of the root and seed remains being the result of modern contamination. One charred cereal grain recovered from ***110*** could be used for radiocarbon dating, although any information gathered would be very limited. Although their function cannot be fully ascertained, the similarity of the ditches, their general north-west/south-east alignment, suggests that they may be contemporary and have an interrelated function.

7.1.5 The remaining features observed included fence postholes ***109*** and ***120***, a possible land drain ***116*** and a large linear feature ***118***, all appear to be modern in date and function and are not of any archaeological significance.

7.2 IMPACT

7.2.1 In broad terms, the archaeological impact of any development of the study area can be assessed as being either direct or indirect and be viewed as either positive or negative. A direct impact would involve the alteration to the physical condition of the site, whilst an indirect impact would involve an alteration to the setting of a site.

7.2.2 The desk-based assessment showed many of the sites of archaeological interest existing within the study area would not be affected by the proposed development, either directly or indirectly.

7.2.3 All groundworks on the proposed development site would have a direct negative impact on any unknown sub-surface remains that may survive, including partial or wholesale destruction. The areas affected, and consequently investigated, include proposed parking to the north-east; buildings and parking in the central area; the access road to the north; and landscaping to the west of the site (Fig 11). The only areas unaffected are the east and south-east where there was no requirement for intrusive assessment of impact. Therefore, the potential archaeological resource remains unknown in these areas.

7.2.4 The potential impact of the development on archaeological remains will be very limited. Pit ***105*** is most likely to be an isolated feature, and the heavy modern root and seed contamination of ditches ***112/113*** suggests that they may be relatively recent in origin. The remaining features identified are modern in date and any impact will be negligible.

8. BIBLIOGRAPHY

8.1 CARTOGRAPHIC SOURCES

Newbarns Town Fields in 1750, 3": 1 mile

Newbarns to Salthouse to Roose Mill, 1872, 6": 1 mile

Ordnance Survey, 1st edition, 1857 *Cumbria Sheet* 21, 6": 1 mile

Ordnance Survey 2nd edition, 1873 *Cumbria Sheet* 21.8, 25": 1 mile

Ordnance Survey 2nd edition, rev. 1891 *Cumbria Sheet* 21.8, 25": 1 mile

Ordnance Survey, rev. 1913 *Cumbria Sheet* 21.8, 25": 1 mile

Ordnance Survey, rev. 1933 *Cumbria Sheet* 21.8, 25": 1 mile

Ordnance Survey, rev. 1957 *Sheet* SD 2170, 25": 1 mile

Rampside, Newton and Yarlside Tithe Map, 1842

Yates, W *Map of Lancashire*, 1786

8.2 AERIAL PHOTOGRAPHS

Barrow Borough Council, 1940 Ministry of Defence Aerial Photograph of Barrow

Barrow Borough Council, 2000 Aerial Photograph of Barrow Borough

CRO(B), 1964 *Grammar Schools towards Flass Lane and Beacon Hill,* Ref. 250 CX/NEW

8.3 SECONDARY SOURCES

AOC Archaeology Group, 2006 *Dalton to Roose Greenway, Cumbria, Desk-based Assessment*, unpub report

Banks, AG 1984 *HW Schneider of Barrow and Bowness*, Kendal

Barnes, F 1978 *Barrow and District,* 3rd ed. Barrow-in-Furness

Cherry, PJ and Cherry J, 2002 'Coastline and Upland in Cumbrian Prehistory - A Retrospective', *Trans Cumberland Westmorland Antiq Arch Soc,* 3rd ser, **2**

Countryside Commission, 1998 *Countryside Character Vol. 2: North West,* Cheltenham

DoE, 1990 *Planning Policy Guideline 16: Archaeology and Planning*, London

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

English Heritage, 1991 *Management of Archaeological Projects,* 2nd ed, London

Cumbria County Council and English Heritage (CCC and EH), 2006 *Extensive Urban Survey, Archaeological Assessment Report: Barrow*, unpubl report

Evening Mail, June 21st 1970, article on the history of Barrow

Fell, A, 1908 *The Early Iron Industry of Furness and District,* London

Furness Railway Trust (FRT) 2006,

Kellett, J, 1990 *James Ramsden, Barrow's Man of Vision,* Ulverston

Kelly, P, 1937 *Newbarns - The Story of a Furness Village*, Barrow

Kelly, PV, 1946 'The story of a Furness Village', *Procedures of the Barrow Naturalist Field Club*, n ser, **12**

Kendall, WB, 1900 'Submerged Peat mosses, Forest Remains, and Post-Glascial Deposits in Barrow Harbour', *Furness Lore: Trans Barrow Nat Field Club* **3**

Kendall, WB, 1909 'The Village of Barrow in the Parish of Dalton-in-Furness', *Barrow Nat Field Club Annual Rep Proc 1903-4* **17**

Kendall, WB, 1948 'The History of the Hamlet of Salthouse', *Proc Barrow Nat Field Club,* n ser, **6**

Leach, A, 1981 *Our Barrow, Part **4**, Barrow Island,* Ulverston

Marshall, JD, 1958 *Furness and the Industrial Revolution,* Barrow-in-Furness

Oxford Archaeology North, 2002 *Holbeck Avenue, Barrow-in-Furness, Cumbris: Archaeological Evaluation,* unpubl report

Oxford Archaeology North, 2006 *Holbeck Avenue, Barrow-in-Furness: Archaeological Excavation,* unpubl report

Parsons, A, 2002 *The Anglo-Scandinavian Weaponry of Cumbria, an illustrated corpus and contextual discussion,* unpubl dissertation

Phillips, AW and Rollinson, W, 1971 *Coastal Change on Walney Island,* Ellesmere Port

Powell, TGE, Fell CI, Corcoran, XWP and Barnes, F, 1963 'Excavations at Skelmore Heads near ulverston, 1957 and 1959', *Trans Cumberland Westmorland Antiq Arch Soc,* n ser, **63**

Rollinson, W, 1967 *A History of Man in the Lake District*, London

Shotter, DCA, 1995 'Romans in south Cumbria', *Trans Cumberland Westmorland Antiq Arch Soc,* n ser, **95**

Stace, C, 1991 *New Flora of the British Isles*, Cambridge

Stark, D, 1972 *The Origins of a Single Industry Town - Barrow-in-Furness 1890-1910,* unpub dissertation

Trescatheric, B, 1987 *Barrow Town Hall 1887-1987,* Kendal

UKIC, 1998 *First Aid for Finds*, London (new edition)

West, T, 1774 *The Antiquities of Furness*, Beckermet

Young, R, 2002 'The Palaeolithic and Mesolithic Periods in Northern England: An Overview', in Brooks, Daniels and Harding, eds, *Past Present and Future, The Archaeology of Northern England,* Architect Arch Soc Durham Northumberland, res rep **5**, Durham

www.barrowbc.gov.uk/Default.aspx?page=1650

www.furnessrailwaytrust.org.uk/frco.htm

www.**getmapping**.com

9. ILLUSTRATIONS

9.1 FIGURES

Figure 1: Site Location

Figure 2: Plan of Gazetteer Sites

Figure 3: Extract from Yate's 1786 *Map of Lancashire*

Figure 4: Extract from Ordnance Survey First Edition, 1857

Figure 5: Extract from Ordnance Survey Second Edition, 1891

Figure 6: Extract from Ordnance Survey, revised, 1933

Figure 7: Extract from Ordnance Survey, revised, 1957

Figure 8: Features identified during walkover survey and trench location plan

Figure 9: Plan of Trench 6 with section of ditch ***112***

Figure 10: Plan of Trench 11 with section of ditch ***113***

Figure 11: Plan showing proposed development and areas of impact, with overlying archaeological features

9.2 PLATES

Plate 1: Aerial Photograph, *c* 2000 (www.getmapping.com)

Plate 2: Section through posthole ***105*** and linear ***107*** in Trench 2, looking south

Plate 3: View of Trench 5, looking north

Plate 4: View of Trench 6, looking north

Plate 5: Section through ditch ***112***, Trench 6, looking east

Plate 6: View of Trench 10, looking west, showing modern linear ***118*** along southern baulk of trench

Plate 7: View of Trench 11, looking north

Plate 8: View of ditch ***113***, Trench 11, looking north

Plate 9: Section through ditch ***113***, Trench 11, looking north-west

APPENDIX 1: PROJECT BRIEF

APPENDIX 2: PROJECT DESIGN

1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Datum Design Company (hereafter the 'client') has requested that Oxford Archaeology North (OA North) submit proposals to undertake an archaeological evaluation of land at Flass Lane, Barrow-in-Furness, Cumbria (NGR SD 2170 7010). A planning application has been submitted to Barrow Borough Council (ref: 6/06/0314) for the development of pasture land for a nursing home. Cumbria County Council's Historic Environment Service (CCCHES) have advised Barrow Borough Council that a programme of archaeological evaluation is required to assess the potential and significance of any below ground remains that may be affected. This information will be used to inform the planning process. The site is located within an area of considerable prehistoric activity and is therefore of high archaeological potential. However, only the area of groundworks for the proposed development, i.e. the access road, car parking and buildings, will be intrusively investigated leaving any remains elsewhere on site to be preserved *in situ*. To this effect, CCCHES have issued a formal brief outlining the requirements of the evaluation. The following proposals have been prepared in accordance with the brief.

1.2 OXFORD ARCHAEOLOGY NORTH

1.2.1 OA North has considerable experience of Barrow-in-Furness, having recently undertaken the work at Holbeck Park amongst others. Further afield, OA North has undertaken a great number of small and large scale projects throughout Northern England during the past 24 years, including work in Carlisle, Appleby, Kendal, Penrith, and other towns in Cumbria. Evaluations, assessments, watching briefs and excavations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables.

1.2.2 OA North has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. OA North is an **Institute of Field Archaeologists (IFA) registered organisation, registration number 17**, and all its members of staff operate subject to the IFA Code of Conduct (1994).

2 OBJECTIVES

2.1 The assessment aims to evaluate the archaeological resource and potential for further archaeological deposits, in order to determine their extent and nature of the remains that may be threatened by the proposed development. This information will be used by CCCHES to inform the planning decision. The required stages to achieve these ends are as follows:

2.2 ***Desk-based assessment:*** to provide a desk-based assessment of the site to identify the archaeological potential and provide a context for any remains that may be located during the trenching (in accordance with the IFA standards (1999a)).

2.3 ***Archaeological Trenching:*** to undertake evaluation trenching of *c* 400m² of the areas of impact, including new buildings, access roads and car parking, to determine the quality, extent and importance of any archaeological remains on the site (in accordance with the IFA standards (1999b)).

2.4 ***Report and Archive:*** a report will be produced for the client within eight weeks, unless a report submission deadline is agreed with the client at the time of commission. An archive will be produced to English Heritage guidelines (MAP 2 (1991)).

3 METHOD STATEMENT

3.1 DESK-BASED ASSESSMENT

3.1.2 ***Introduction:*** a desk-based assessment is usually undertaken as the first stage of a programme of archaeological recording, prior to further intrusive investigation in the form of trenching. It is not intended to reduce the requirement for evaluation, excavation or

preservation of known or presumed archaeological deposits, but it will provide an appraisal of archaeological constraints and a guide to any requirement for further archaeological work.

3.1.3 The following will be undertaken as appropriate, depending on the availability of source material. The level of such work will be dictated by the time scale of the project. The results will be analysed using the set of criteria used to assess the national importance of an ancient monument (DoE 1990). This aids in the presentation of the significance or otherwise of the site, and assessment during the planning process.

3.1.4 ***Documentary and Cartographic Material:*** this work will include consultation of the Cumbria County Historic Environment Record (CHER, formerly the Sites and Monuments Record (SMR)) in Kendal, as well as the County Records Office in Barrow. A review of all known and available resources of information relating to the site of the proposed development, and the study area consisting of 0.5km radius centred on the site. The aim of this is to give consideration not only to the application site, but also its setting in terms of historical and archaeological contexts. These include;

- published and unpublished documentary sources
- data held in local and national archaeological databases
- printed and manuscript maps
- place and field-name evidence
- evidence for township, ecclesiastical and other ancient boundaries
- other photographic/illustrative evidence

3.1.5 ***Cumbria HER:*** the CHER is a database of known archaeological sites within the County. It also holds an extensive library of published materials for consultation.

3.1.6 ***County Record Office, Barrow:*** the office in Barrow holds the main source of primary documentation, both maps and documents, for the site and its surrounding area.

3.1.7 ***Map regression analysis:*** a cartographic analysis will be undertaken to:

- aid investigation of the post-medieval occupation and land-use of the area and its development through to its modern-day or most recent use. This provides one method of highlighting areas of potential archaeological interest,
- locate areas where any recent developments on site, of which there is no longer any evidence, may have impeded or disturbed below-ground archaeological remains.

3.1.8 Particular emphasis will be on the early cartographic evidence and will include estate maps, tithe maps, and Ordnance Survey maps through to present mapping where possible.

3.1.9 ***Site visit:*** during the desk-based assessment, the site will be visited in order to relate the existing topography and land use to research findings. Any surface features of potential archaeological interest will be noted. It will also provide an understanding for areas of impact by the proposed redevelopment or areas of disturbance, and access to site.

3.2 ARCHAEOLOGICAL TRENCHING

3.2.1 The programme of trial trenching will establish the presence or absence of any previously unsuspected archaeological deposits and, if established, will then test their date, nature, depth and quality of preservation. In this way, it will adequately sample the threatened available area.

3.2.2 ***Trenches:*** the evaluation is required to examine a minimum sample of 5% of the area to be impacted (8000m²). This equates to 400m², the exact configuration and location of which will be determined by the desk-based assessment and site visit. However, the trenches are likely to be 20m-30m in length and 1.6m wide (the typical width of an excavator bucket). The location of the trenches will need to be approved by CCCHES prior to excavation.

3.2.3 ***Methodology:*** topsoil and modern overburden will be removed by machine (fitted with a toothless ditching bucket) under archaeological supervision to the surface of the first

significant archaeological deposit. This deposit will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and inspected for archaeological features. All features of archaeological interest must be investigated and recorded unless otherwise agreed by CCCHES.

3.2.4 The trenches will not be excavated deeper than 1.2m to accommodate health and safety constraints, without shoring or stepping out of the trench sides. Should this be required, this may be costed as a variation should an additional day on site be necessary.

3.2.5 All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. Trenches will be located by use of a total station, altitude information will be established with respect to Ordnance Survey Datum.

3.2.6 Any investigation of intact archaeological deposits will be exclusively manual. Selected pits and postholes will normally only be half-sectioned, linear features will be subject to no more than a 10% sample, and extensive layers will, where possible, be sampled by partial rather than complete removal. It is hoped that in terms of the vertical stratigraphy, maximum information retrieval will be achieved through the examination of sections of cut features. All excavation, whether by machine or by hand, will be undertaken with a view to avoiding damage to any archaeological features, which appear worthy of preservation *in situ*.

3.2.7 All information identified in the course of the site works will be recorded stratigraphically, using a system, adapted from that used by Centre for Archaeology Service of English Heritage, with sufficient pictorial record (plans, sections, colour slides and monochrome contacts) to identify and illustrate individual features. Primary records will be available for inspection at all times.

3.2.8 Results of all field investigations will be recorded on *pro forma* context sheets. The site archive will include both a photographic record and accurate large scale plans and sections at an appropriate scale (1:50, 1:20 and 1:10). All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.

3.2.9 ***Environmental Sampling:*** environmental samples (bulk samples of 40 litres volume, to be sub-sampled at a later stage) will be collected from stratified undisturbed deposits and will particularly target negative features (gullies, pits and ditches). An assessment of the environmental potential of the site will be undertaken through the examination of suitable deposits by the in-house palaeoecological specialist, who will examine the potential for further analysis. The assessment would include soil pollen analysis and the retrieval of charred plant macrofossils and land molluscs from former dry-land palaeosols and cut features. In addition, the samples would be assessed for plant macrofossils, insect, molluscs and pollen from waterlogged deposits. The costs for the palaeoecological assessment are defined as a contingency and will only be called into effect if good deposits are identified and will be subject to the agreement of CCCHES and the client.

3.2.10 Advice will also be sought as to whether a soil micromorphological study or any other analytical techniques will enhance the understanding of the site formation processes, including the amount of truncation to buried deposits and the preservation of deposits within negative features. Should this be required the costs for analysis have been provided as a contingency.

3.2.11 ***Faunal remains:*** if there is found to be the potential for discovery of bones of fish and small mammals a sieving programme will be carried out. These will be assessed as appropriate by OA North's specialist in faunal remains, and subject to the results, there may be a requirement for more detailed analysis. A contingency has been included for the assessment of such faunal remains for analysis.

3.2.12 ***Human Remains****:* any human remains uncovered will be left *in situ*, covered and protected. No further investigation will continue beyond that required to establish the date and character of the burial. CCCHES and the local Coroner will be informed immediately. If removal is

essential the exhumation of any funerary remains will require the provision of a Home Office license, under section 25 of the Burial Act of 1857. An application will be made by OA North for the study area on discovery of any such remains and the removal will be carried out with due care and sensitivity under the environmental health regulations. Any delays caused by unforeseen and complex excavation of inhumations may be subject to a variation to the cost of the contract and will be agreed with the client.

3.2.13 ***Treatment of finds:*** all finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition) and the recipient museum's guidelines.

3.2.14 ***Treasure:*** any gold and silver artefacts recovered during the course of the excavation will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996. Where removal cannot take place on the same working day as discovery, suitable security will be employed to protect the finds from theft.

3.2.15 All identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained on advice from the recipient museum's archive curator.

3.2.16 ***Contingency plan:*** a contingency costing may also be employed for unseen delays caused by prolonged periods of bad weather, vandalism, discovery of unforeseen complex deposits and/or artefacts which require specialist removal, use of shoring to excavate important features close to the excavation sections etc. This has been included in the Costings document and would be in agreement with the client.

3.2.17 The evaluation will provide a predictive model of surviving archaeological remains detailing zones of relative importance against known development proposals. In this way, an impact assessment will also be provided.

3.3 REPORT

3.3.1 One bound and one unbound copy of a written synthetic report will be submitted to the client, and three copies to the Cumbria HER within eight weeks of completion of the completion of the survey fieldwork, unless an alternative deadline is agreed with the client beforehand. It will present, summarise, and interpret the results of the programme detailed above in order to come to as full an understanding as possible of the archaeology of the development area. The report will include;

- a site location plan related to the national grid
- a front cover to include the planning application number and the NGR
- a concise, non-technical summary of the results
- the circumstances of the project and the dates on which the fieldwork was undertaken
- description of the methodology, including the sources consulted
- a summary of the historical background of the study area
- an interpretation of the results and their significance, using the 'Secretary of State's criteria for scheduling ancient monuments' included as Annex 4 of PPG 16 (DoE 1990)
- appropriate plans showing the location and position of features or sites located
- a statement, where appropriate, of the archaeological implications of the proposed development
- monochrome and colour photographs as appropriate
- a copy of this project design, and indications of any agreed departure from that design
- the report will also include a complete bibliography of sources from which data has been derived, and a list of any further sources identified but not consulted

- plans and sections showing the positions of deposits and finds
- an index to the project archive

3.3.2 ***Confidentiality:*** all internal reports to the client are designed as documents for the specific use of the client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.

3.4 ARCHIVE

3.4.1 The results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with Appendix 3 of the current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991) and UKIC (1990). This archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the HER (the index to the archive and a copy of the report). OA North practice is to deposit the original record archive of projects (paper, magnetic and plastic media) with the County Record Office in Barrow.

4. HEALTH AND SAFETY

4.1 OA North provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1997). A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.

4.2 Full regard will, of course, be given to all constraints (services etc) during the evaluation as well as to all Health and Safety considerations. OA North provides a Health and Safety Statement for all projects and maintains a Company Safety policy. As a matter of course the field team will use a Cable Avoidance Tool (CAT) prior to any excavation to test for services. However, this is only an approximate location tool. Any **information regarding services**, i.e. drawings or knowledge of live cables or services, within the study area and held with the client should be made known to the OA North project manager prior to the commencement of the evaluation.

4.3 A portable toilet with hand washing facilities will be provided and located on or adjacent to the site unless the client would prefer to arrange alternative facilities. This has been costed as a contingency.

4.4 Any known contamination issues or any specific health and safety requirements on site should be made known to OA North by the client or main contractor on site to ensure all procedures can be met, and that the risk is dealt with appropriately.

4.5 Should areas of previously unknown contamination be encountered on site the works will be halted and a revision of the risk assessment carried out. Should it be necessary to supply additional PPE or other contamination avoidance equipment this will be costed as a variation.

5. OTHER MATTERS

5.1 ACCESS

5.1.1 Liaison for basic site access will be undertaken through the client and it is understood from advice from the client that there is access for both pedestrian and plant traffic to the site.

5.2 REINSTATEMENT

5.2.1 It is understood that there will be no requirement for reinstatement of the ground beyond backfilling. The ground will be backfilled so that the topsoil is laid on the top, and the ground will be roughly graded with the machine. Where no significant remains are encountered the trenches will be backfilled the same day for reasons of public health and safety.

5.3 FENCING/HOARDING REQUIREMENTS

5.3.1 The client has advised that the site is private land, but could still be accessed by the public should they wish to do so over the fence. Therefore, where trenches are to remain open overnight, these will require protection using secure heras fencing or similar.

5.4 PROJECT MONITORING

5.4.1 Whilst the work is undertaken for the client, CCCHES will be kept fully informed of the work and its results and will be notified a week in advance of the commencement of the fieldwork. Any proposed changes to the project design will be agreed with CCCHES in consultation with the client

5.5 INSURANCE

5.5.1 OA North has a professional indemnity cover to a value of £2,000,000; proof of which can be supplied as required.

5.6 WORK TIMETABLE

5.6.1 ***Desk-based assessment:*** approximately five days will be required for this element.

5.6.2 ***Archaeological Trenching:*** it is anticipated that this element would require seven days.

5.6.3 ***Report:*** the final report will be submitted to the client within eight weeks, unless an earlier deadline is agreed beforehand.

5.6.4 ***Archive:*** the archive will be deposited within six months.

5.7 STAFFING

5.7.1 The project will be under the direct management of **Emily Mercer BA (Hons) MSc AIFA** (OA North Senior Project Manager) to whom all correspondence should be addressed.

5.7.2 The desk-based assessment will be undertaken by **Kathryn Levey** (OA North project assistant).

5.7.3 The evaluation will be supervised by either an OA North project officer or supervisor experienced in this type of project. Due to scheduling requirements it is not possible to provide these details at the present time. All OA North project officers and supervisors are experienced field archaeologists capable of carrying out projects of all sizes.

5.7.4 Assessment of the finds from the evaluation will be undertaken under the auspices of OA North's in-house finds specialist **Christine Howard-Davis** (OA North finds manager). Christine has extensive knowledge of finds from many periods, but particularly from the local area, being involved with the Carlisle Millennium Project.

5.7.6 Assessment of any palaeoenvironmental samples will be undertaken by or under the auspices of **Elizabeth Huckerby MSc** (OA North project officer). Elizabeth has extensive knowledge of the palaeoecology of the North West through her work on the English Heritage-funded North West Wetlands Survey.

BIBLIOGRAPHY

Department of the Environment (DoE), 1990 *Planning Policy Guidance Note 16: archaeology and the environment (PPG16)*, London

English Heritage, 1991 Management of Archaeological Projects, 2nd edn, London

English Heritage, 2001 Environmental Archaeology: a guide to the theory and practice of environmental methods from sampling and recovery to post-excavation, London

Institute of Field Archaeologists, 1994 Code of conduct (revised edition)

Institute of Field Archaeologists, 1999a *Standard and guidance for archaeological Desk-Based Assessments*

Institute of Field Archaeologists, 1999b *Standard and guidance for archaeological field Evaluations*

SCAUM (Standing Conference of Archaeological Unit Managers), 1997 *Health and Safety Manual*, Poole

United Kingdom Institute for Conservation (UKIC), 1990 *Guidelines for the preparation of archives for long-term storage*, London

United Kingdom Institute for Conservation (UKIC), 1998 *First Aid For Finds*, London (new edition)

APPENDIX 3: CONTEXT REGISTER

Context no.	Depths	Description	Trench
101	0m-0.20m	Topsoil	1-11
102	0.2m-0.35m	Subsoil	1-11
103	0.35m-0.5m	Natural	1-11
104	0.18m	Fill of ***105***	2
105	0.18m	Cut for small pit/posthole	2
106	0.22m	Fill of ***107***	2
107	0.22m	Cut for small elongated pit	2
108	0.18m	Fill of ***109***	6
109	0.18m	Cut of modern fence posthole	6
110	0.10m	Upper fill of ditch ***112***	6
111	0.15m	Lower fill of ditch ***112***	6
112	0.22m	Cut of shallow ditch	6
113	0.29m	Cut of shallow ditch	11
114	0.12m	Upper fill of ditch ***113***	11
115	0.03m	Fill of ***116***	8
116	0.03m	Cut of field drain	8
117	0.10m	Fill of linear ***118***	10
118	0.10m	Cut for linear	10
119	0.07m	Fill of ***120***.	10
120	0.07m	Cut for fence post	10
121	0.17m	Lower fill of ditch ***113***	11

APPENDIX 4: FINDS REGISTER

Context	OR	Material	Category	Qty	Description	Date
104	1000	Ceramic	Vessel	1	Very small body fragment of hard-fired thin-walled, calcite-rich reduced fabric	Probably late Roman (fourth to early fifth century)
108	1002	Glass	Vessel	3	Colourless body fragments, machine-moulded bottles.	Twentieth century or later
108	1003	Ceramic	Vessel	1	Teacup handle. White porcelain.	Twentieth century or later
117	1001	Ceramic	Vessel	1	White earthenware	Mid-nineteenth century or later
Unstrat?	1004	Ceramic	Vessel	1	Flatware base fragment. White earthenware.	Mid-nineteenth century or later

Figure 1: Site Location

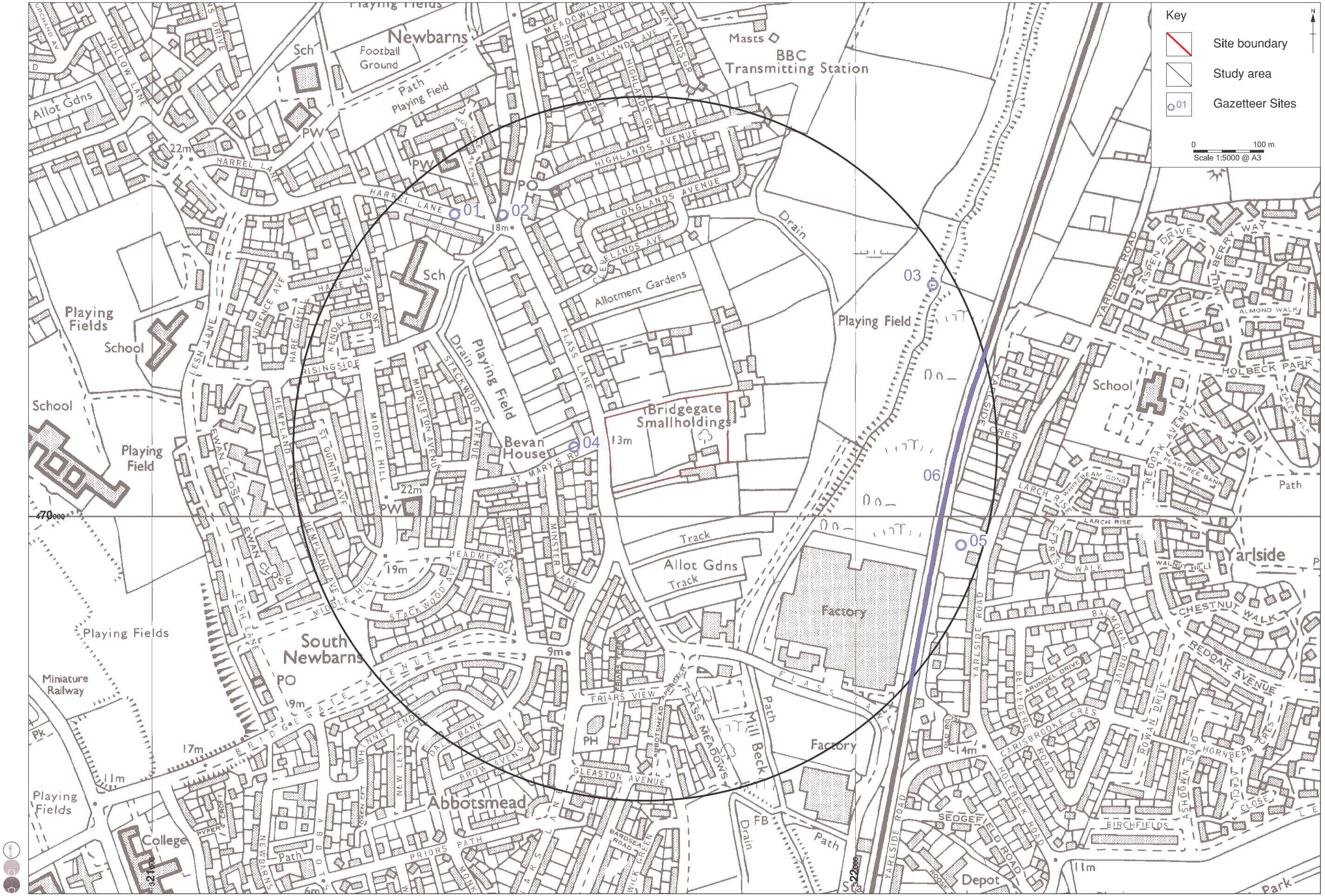

Figure 2: Plan of Gazetteer Sites

Figure 7: Extract from Ordnance Survey, revised, 1957

Figure 8: Features identified during walkover survey and trench location plan

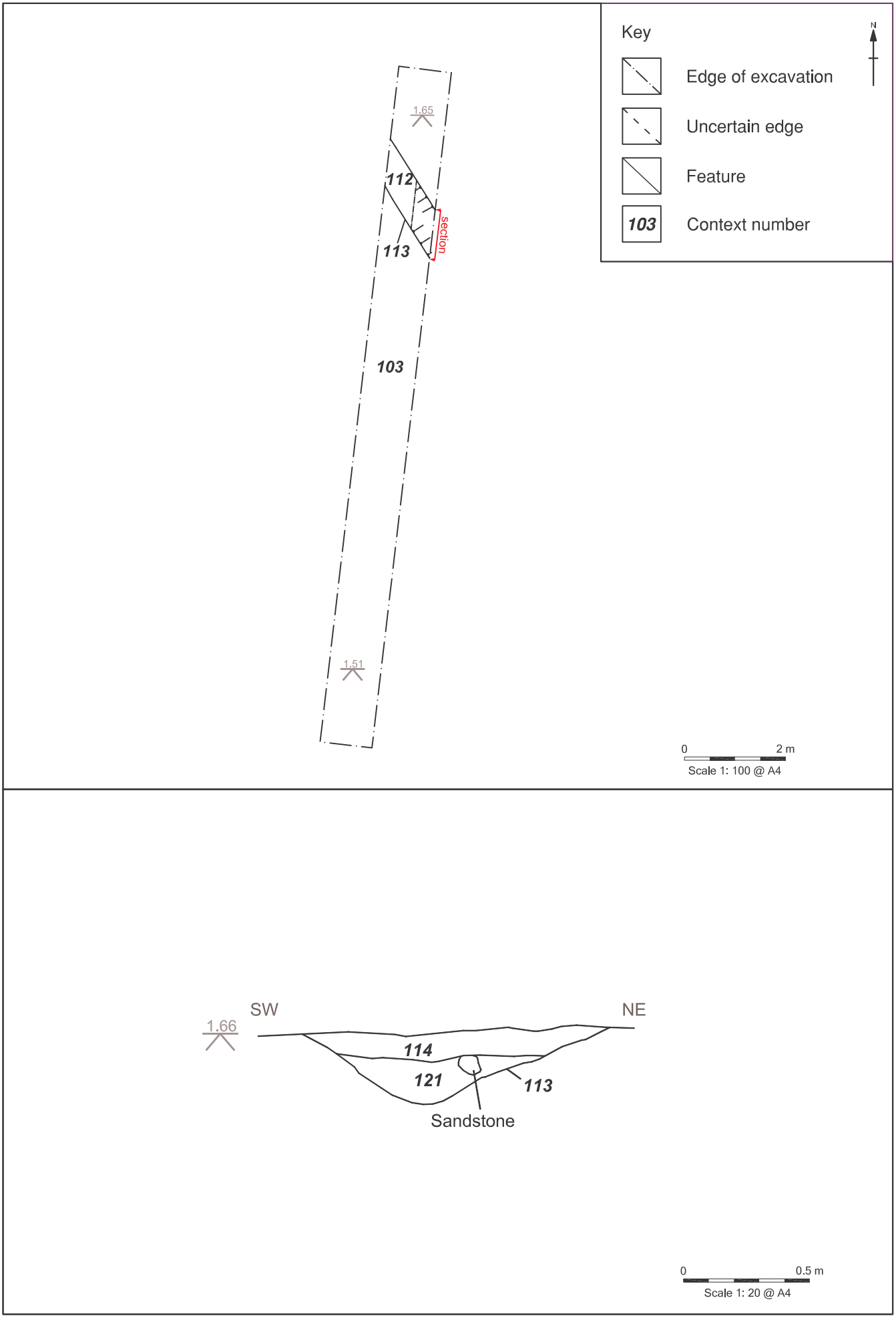

Figure 10: Plan of Trench 11 with section of ditch ***113***

Figure11: Plan showing proposed development and areas of impact, with overlying archaeological features

Plate 1: Aerial photograph, *c* 2000 (www.getmapping.com)

Plate 2: Section through posthole ***105*** and linear ***107*** in Trench 2, looking south

Plate 3: View of Trench 5, looking north

Plate 4: View of Trench 6, looking north

Plate 5: Section through ditch ***112***, Trench 6, looking east

Plate 6: View of Trench 10, looking west, showing modern linear ***118*** along southern baulk of trench

Plate 7: View of Trench 11, looking north

Plate 8: View of ditch ***113*** in Trench 11, looking north

Plate 9: Section through ditch ***113***, Trench 11, looking north-west