



# LAND AT SPITAL ROAD, BROMBOROUGH, MERSEYSIDE

## Desk-Based Assessment and Evaluation



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## SUMMARY

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United Utilities are preparing for the disposal of land at Spital Road, Bromborough, Merseyside (NGR SJ 344 831), and as part of outline planning permission for residential development a programme of archaeological work was requested by the Merseyside Archaeological Service (MAS), of which the first stage comprised a desk-based assessment. Oxford Archaeology North (OA North) carried out the initial assessment and site visit in August 2006. The second stage of archaeological work comprised a programme of evaluation trenching, which was executed in March 2007. The area of the proposed development had been previously occupied by the Bromborough Mill complex (Site **10**), parts of which may have been medieval in origin.

The desk-based assessment examined a large number of primary and secondary sources, concentrating particularly on early maps of the area held in the relevant record offices. The Merseyside Historic Environment Record (HER) was also visited and a list of the known sites of archaeological interest in the area was provided. All of this information was listed in a gazetteer and plotted onto a plan of the proposed development area.

A site visit to the proposed development area was undertaken as part of the desk-based assessment, which covered an area of approximately 300m<sup>2</sup>. The site visit identified no new archaeological sites, but served to confirm the potential to expose below-ground archaeological remains relating to Sites **10** and **13**, the Bromborough watermill and bridge sites respectively.

The evaluation was undertaken in March 2007 and consisted of three trial trenches that were positioned in order to target any remains of archaeological interest associated with the Bromborough watermill and Bridge (Sites **10** and **13**). The results of the fieldwork suggested that the demolition of the mill complex in 1949 had been extremely thorough and a lack of substantial quantities of ceramic or stone building materials, within the targeted areas, may indicate that much of the fabric of the buildings had been removed from the site for reuse in construction or as rubble hardcore.

The trenches also targeted areas of potential features relating to water management, such as the mill dam or any associated water channels. Although some waterlogged deposits were observed in Trench 3 that appeared to correspond to the edge of the mill pond, these appear to have formed following a demolition phase at the mill and there was no evidence of a retaining wall relating to the pond. Trench 1 was also positioned in order to encounter remains associated with the east/west road or track that was shown on the estate plan of 1755 and that crossed the River Dibben by Bromborough Bridge (Site **13**). No evidence of this routeway was observed.

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The desk-based assessment was undertaken by Chris Healey and the evaluation was carried out by Alastair Vannan assisted by Alex Beben and Kieron Power. The report was compiled by Chris Healy and Alastair Vannan. Mark Tidmarsh produced the drawings and the finds analysis was undertaken by Christine Howard-Davis. The project was managed by Alison Plummer, who also edited the report.

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## 1. INTRODUCTION

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### 1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 United Utilities have obtained outline planning permission (OUT/2005/7416) for the redevelopment of disused land adjacent to Spital Road, Bromborough (centred at NGR SJ 3440 8331; Fig 1). The proposed development area lies within a part of the County Constituency of Wirral South that is of known archaeological significance.
- 1.1.2 The development area is known to be the site of the water-powered Bromborough Mill complex (Site **10**) with possible origins as early as the fourteenth century. In order to secure archaeological interests, Merseyside Archaeological Service (MAS) recommended that a programme of archaeological works be undertaken prior to the development works taking place. This comprised a desk-based assessment to be followed by evaluation trial trenching. In response to this recommendation OA North produced a project design (*Appendix 1*) and, following its acceptance a desk-based assessment was undertaken in August 2006, followed by evaluation trenching in March 2007. This report sets out the results of both the desk-based assessment and evaluation.

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## 2. METHODOLOGY

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### 2.1 PROJECT DESIGN

2.1.1 A Project Design (*Appendix 1*) was produced by OA North in response to a request by United Utilities for an archaeological desk-based assessment and evaluation of a proposed new development on land adjacent to Spital Road, Bromborough. The project design was adhered to in full, and is consistent with the relevant standards and procedures of the Institute of Field Archaeologists and generally accepted best practice.

### 2.2 DESK-BASED ASSESSMENT AND SITE VISIT

2.2.1 The assessment comprised a desk-based study and a site visit. Several sources of information were consulted as part of the assessment, which have provided a good understanding of the developmental history of the study area. Archive sources that were consulted include:

- ***Merseyside Historic Environment Record (HER)***: the HER for Merseyside was consulted. The HER is a list of all known sites of archaeological interest within Merseyside, and is the primary source of information for a study of this kind. In addition, the HER holds copies of a number of original maps and documents relating to the general area. Ordnance Survey and Tithe maps were also consulted, the latter in association with the accompanying written tithe documents.
- ***Environmental Advisory Service, Maghull***: aerial photographs held by the Environmental Advisory Service, part of the services for the Metropolitan Boroughs of Knowsley, St Helens and Sefton, were consulted. These can reveal sites of archaeological interest in the form of earthworks and cropmarks. The photography from 1945, a little before the demolition of the mills, was unfortunately not available.
- ***OA North Library***: OA North has undertaken numerous projects in the Merseyside area, as well as large number of projects across the North West. As a result it has a large library of secondary sources, as well as unpublished client reports, in its offices in Lancaster.

2.2.2 The aim of the site visit was to relate the findings of the desk-based study to the existing site, and to identify any previously unrecorded evidence. The visit involved a rapid inspection of the development site and the surrounding area in order to provide a context within which to place the archaeological findings.

### 2.3 EVALUATION

2.3.1 Following the desk-based assessment and site visit, historic cartographic sources that depicted the Bromborough to Neston road, which utilised Bromborough Bridge, and the structures associated with the former mill were used to inform the siting of three evaluation trenches within the proposed



development boundary. The location of the trenches was further refined in order to avoid areas that were occupied by the extant mill pond, the disused railway embankment, and dense tree growth. The trenches were excavated, under the supervision of an OA North archaeologist, by a 13 ton 360° mechanical excavator fitted with a 1.9m wide toothless ditching bucket. The trenches were reduced to the depth of the first deposits of archaeological interest or natural geological derivation, unless this was precluded by the maximum safe working depth of 1.2m. The bases and sides of the trenches were hand-cleaned with hoes and trowels and any features of potential archaeological interest were investigated using mattocks and trowels. Following excavation, the spoil was stored at a safe distance before being used to backfill the trenches.

- 2.3.2 All aspects of the work were executed in accordance with current English Heritage guidelines (1991; 2002). This consisted of descriptions and preliminary classifications of each revealed feature or deposit on *pro-forma* sheets, a plan of the location of each trench, and plans and sections of each trench drawn at scales of 1:50 and 1:20 respectively. A photographic record was maintained using black and white print and colour slide formats.
- 2.3.3 All finds were bagged and recorded by context number and have been processed and stored according to standard practice, following the guidelines set out by the Institute of Field Archaeologists.

## 2.4 ARCHIVE

- 2.4.1 A full archive of the project has been produced to a professional standard in accordance with current English Heritage guidelines (English Heritage 1991). The archive consists of all of the information gathered during the course of the project, and will be deposited at the Liverpool Museum, National Museums and Galleries on Merseyside on completion of the project. The National Museums Liverpool (NML) '*Guidelines on the Deposition of Archaeological Archives*' will be consulted. A copy of the report will be sent to the Merseyside HER.

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## 3. BACKGROUND

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### 3.1 INTRODUCTION

- 3.1.1 The following section provides an outline of the natural setting of the study area (Fig 1). A chronological account is also provided of the development of the site, in terms of its occupants and uses, and of any buildings occupying the site based on cartographic regression analysis.
- 3.1.2 This background to the study area is principally compiled from secondary sources and is intended to provide a local context in which to view the results of the assessment. As such, it occasionally makes use of information from the wider area, as well as referencing particular sites identified during the assessment where they are relevant.

### 3.2 LOCATION

- 3.2.1 The development site is situated at the northern edge of Bromborough, to the south of Port Sunlight, and to the east of Bebington, centred at NGR SJ 3440 8331. Bromborough is approximately 9km to the north-west of Ellesmere Port on the Wirral Peninsula, to the south of the River Mersey (Fig 1).

### 3.3 GEOLOGY AND TOPOGRAPHY

- 3.3.1 The solid geology of the area tends to consist of Triassic sandstone ridges laid down 200-250 million years ago along the western and eastern coasts of the peninsula, overlain by layers of boulder clay (Cowell and Innes 1994, 3-5). The topography away from these ridges is generally low-lying, and is characterised by glacial till deposits (*ibid*, 5), with typical stagnogley soils of the Clifton Association covering most of the area apart from isolated patches of typical brown earth of the Eardiston Association (Soil Survey of England and Wales 1987). Layers of post-glacial (*c* 8000 BC onwards) Flandrian deposits cover some areas of the boulder clay, these mostly comprising peat and marine alluvium, with less well-represented sediments of wind-blown sand (Cowell and Innes 1994, 6-8). The influence of sea-level change, and its associated flooding and burial of former land surfaces, has had a notable impact on the area (*ibid*, 8), and the formation of raised peat-bog landscapes capable of supporting specialised flora such as the bog-myrtle appears in part to have bestowed the name 'Wirral' upon the peninsula (*Section 3.4.13*).
- 3.3.2 The resulting topography is typically low-lying and gently rolling, with numerous sandstone outcrops (Countryside Commission 1998, 138). It is largely used for mixed agriculture, with fields divided by hedges and ponds and copses a common feature (*ibid*, 139). The landscape also shows the remnants of a number of former parks and gardens, which tend to have a more formalising impact (*ibid*, 137). The suburban landscape of Bromborough is now predominantly residential housing built during the 1930s, clustering around the medieval village with its market cross (*ibid*). The southern bank of

the River Mersey, to the north and east of the development site, is characterised more by industrial units and factories (*ibid*).

### 3.4 HISTORY AND ARCHAEOLOGY

3.4.1 The following section presents a summary historical and archaeological background of the general area. This is presented by historical period, and has been compiled in order to place the study area into a wider archaeological context.

Period	Date Range
Upper Palaeolithic	30,000 – 9,500 BC
Mesolithic	9,500 – 4,000 BC
Neolithic	4,000 – 2,200 BC
Bronze Age	2,200 – 700 BC
Iron Age	700 BC – AD 43
Romano-British	AD 43 – AD 410
Early Medieval	AD 410 – AD 1066
Late Medieval	AD 1066 – AD 1540
Post-medieval	AD 1540 – c1750
Industrial Period	cAD1750 – 1914
Modern	Post-1914

Table 1: Summary of British archaeological periods and date ranges

3.4.2 **Prehistory:** although evidence for immediate post-glacial settlement in the Merseyside area is relatively scarce (Cowell and Innes 1994, 34) it is clear that by the late Mesolithic activity around the Mersey estuary had become quite widespread (Cowell and Philpott 2000, 167). Evidence tends to be limited to occasional finds, however, although recent excavations at Thursaston Dungeon and Greasby Copse, both to the north-west of the study area and both on the Wirral peninsula, have identified features which may be associated with Mesolithic activity (*ibid*, 13). During this period there was also a dramatic rise in sea levels and associated wetland conditions, and it is likely that hunter-gatherers inhabiting the area would have had to adapt to this (Cowell and Innes 1994, 35). There is a notable concentration of sites dating to this period at the north-western tip of the Wirral Peninsula (Cowell and Innes 1994, 36).

3.4.3 Pollen analysis suggests that cereal cultivation probably began during the early Neolithic period, but is likely to have co-existed with a hunter-gatherer economy for some time (Cowell and Innes 1994, 39). A rare example of a Neolithic faunal assemblage from Leasowe Bay on the North Wirral appears to indicate continued exploitation of a forest now north and west of the extant Wirral peninsula (Hodgson and Brennand 2004, 7). Palynological evidence for the ‘elm decline’, a phenomena linked by some archaeologists with woodland clearances for agricultural use, is recorded at Bidston Moss towards the north-western tip of the Wirral (Cowell and Innes 1994, 39). Opinion is divided, however, as to whether this is evidence of anthropogenic clearance or a pathological development. In either case, the evidence indicates ‘*major periods of disturbance*’ (*ibid*) which are unparalleled in Cheshire.

3.4.4 Settlement evidence is almost non-existent for the Mesolithic and Neolithic periods on the Wirral, a trend which continues into the Bronze Age (*ibid*, 430),

although some Bronze Age burial remains have been found on the Newton Carr area at the north-west of the peninsula and on the island of Middle Eye immediately opposite West Kirby and Hoylake (*ibid*, 44). Recent work at Irby on the western side of the Wirral appears to have revealed a Middle Bronze Age settlement dating to *c* 1620-1130 BC (Hodgson and Brennand 2004, 11).

- 3.4.5 Finds continue to be the main source of information into the Iron Age, although these tend to consist of occasional metal objects, many of which were discovered in the nineteenth century (Cowell and Innes 1994, 44-5). Settlement sites with demonstrable Iron Age activity are rare in the lowland north-west of England, and the ditched enclosure excavated at Irby on the Wirral cannot be considered typical due to its apparent longevity (Hodgson and Brennand 2004, 24).
- 3.4.6 **Roman:** evidence for Roman settlement is found in only a few places in the Wirral, principally on the north-western tip of the peninsula at Meols, although Roman coins have been found across the peninsular (Cowell and Innes 1994, 45). The nature of settlement in this rural area is not even partially understood, and is '*mainly known along the sand stone ridges*' (*ibid*). A road connecting Chester and the probable market at Meols is thought to have existed, and it is likely that much of the contact with the Mediterranean world was non-military in nature (Cowell and Philpott 2000, 176).
- 3.4.7 The attribution by Ptolemy of names to tribal groupings occupying the political landscape of Britain in his second century *Geography* (based on work by the geographer Marinus in *c* AD 100), and their subsequent identification by scholars is beset with difficulty, although it is generally considered that the River Mersey, Ptolemy's *Seteia*, may have formed a political division even at the Roman invasion. The Setantii appear to have occupied the north side of the river, where they are thought to form part of the loose Brigantian confederacy, with the Cornovii occupying the areas to the south of the Mersey (Higham 1993, 31). The natives of the Wirral may have formed part of this latter group, at least willing to do business with the Romans, by contrast to the rebel Ordovices on their western border, their rebelliousness worthy of remark by Tacitus (*ibid*, 33).
- 3.4.8 **Early medieval:** Chester is referred to by Bede as a *civitas*, and some settlements, notably Chester and Meols, appear to have outlived the collapse of Roman administration proper, although there is little or no evidence from elsewhere. Archaeological evidence from sites in Moreton and Irby, further north and west of the study area respectively, presents a varied picture with evidence for settlement continuity on the better agricultural land contrasting with the suggestion of abandonment elsewhere, as the settlement pattern adjusted to the economics of post-imperial Britain (Newman R 2004, 7).
- 3.4.9 Finds from the fifth and sixth centuries at the trading site of Meols include North African pottery, which suggests a continuation of robust economic activity in the centuries following Roman government (Newman R 2004, 17). Eighth century coin finds from the same site suggest rather poorer trading activity later on, probably based on more local traffic circulating throughout the Irish Sea (Higham 1993, 102). Trading at Meols continued into the

eleventh century, by which time it seems to have become eclipsed by the newly royal *burh* of Chester (*ibid* 122), with the walls of the latter rebuilt in 907 to protect against the Viking scourge.

- 3.4.10 By the tenth and eleventh centuries a large Viking population appears to have established itself in the Wirral (Dodgson 2000). One of the periodic diaspora of Norse populations from Dublin by the native Irish, in or around the year 901, cast refugees across the Irish sea to North Wales and Northumbria (Higham 1993, 107), the latter region at this time stretching from the Mersey to northern Cumbria. Ingmund, the leader of one of the outcast groups, is thought to have harried Anglesey on his arrival on the eastern seaboard of the Irish Sea, before coming to some kind of accommodative arrangement with the rulers of Mercia (*ibid*). Harassment by Hiberno-Norse refugees on the coasts from North Wales to Lancashire, coupled with the perennial spectre of the Danish kingdom in York, may have encouraged the Mercian king Ethelred to grant Ingmund and his folk the land on the Wirral which they appear to have accepted (Crosby 1996, 29). Subsequent to this, it appears as though the name Thingwall, found to the immediate west of Bromborough, may stem from the Scandinavian word 'Thing', or moot, which suggests a degree of autonomy afforded the Vikings by Ethelred and his consort Aethelflaed (*ibid*). The evidence from Chester, that a sizeable proportion of the moneymen at its tenth century mint were either Scandinavian or Hiberno-Norse, strongly suggests not only that the area around Chester continued to be an important player in traffic between mainland Britain and the Irish Sea littoral (Higham 1993, 122), but that interaction between the populations on either side of the water was far more complex than robbery with menaces. The enduring position of Meols as an entrepot into the tenth and eleventh centuries assumes much greater importance than it had previously (*Section 3.4.9*) in light of the alien settlement (A Lupton *pers comm*).
- 3.4.11 Place-name evidence implies that the Viking enclave might have been concentrated at the north-western end of the peninsula, spreading down the west coast. Helsby near Frodsham, approximately 15km to the south-east of the study area, is the only local Viking place-name outside this concentration (Harding 2000). Raby, meaning farmstead on the boundary, may possibly mark the edge of Viking settlement (Cavill 2000; Harding 2000), approximately three kilometres to the west-south-west of the study area. A number of Old English settlement names are found within the study area, such as Thornton and Poulton (Cavill 2000, 132-3; 140; 142), and Bromborough possessed a Saxon cross and church (Bromborough Society 1983). Bromborough itself is considered to have been the site of the battle of Brumanburh, or Brunanburh, fought in AD 937, which saw a combined force of Norse, Scots and Strathclyde British defeated by a West Saxon army under Athelstan, possibly bolstered by a mercenary complement (Wikipedia 2006a). This battle temporarily made Wessex *de facto* the principal English kingdom, following Athelstan's annexation of Northumbria on the death of King Sihtric, Viking ruler of York, in 927 (Higham 1993, 124-5).
- 3.4.12 The Viking occupation of the peninsula obscures attempts to fathom its earlier political and ecclesiastical organisation in any detail (Higham 1993, 132). It

would appear from architectural evidence that the church at Bromborough dates from at least the tenth century, and that the area was very much an extension of the polity of Chester (*ibid*).

- 3.4.13 **Late Medieval:** in the Domesday Book the settlements at Eastham (Pol), Meols (Melas), Poulton (Pontone), Thingwall (Tuigvelle) and Wallasey (Walea) all make an appearance (Hume 1863). Bromborough is not mentioned, which is surprising given the pre-Conquest masonry evident on St Barnabas's church. Its status as the centre of a parish had stretched over a number of townships, possibly as far as the Dee prior to the arrival of Ingmund in the 900s (Higham 1993, 132), and its documentation in the tenth century (*op cit*, 133) makes its Domesday omission more unusual. At the time of the Norman Conquest the peninsula became a singular administrative unit, the Hundred of Willaston, which included the lands stretching towards Chester and those west of the Gowy valley (Higham 1993, 131). The district-name Wirral is recorded in the last decade of the ninth century in the Anglo-Saxon Chronicle as the location of Chester, meaning 'nook where bog-myrtle grows' (*op cit*, 131-2), bog-myrtle being a species distinct to wetland environments (Cowell and Innes 1994, 39). The confines of the region may even correspond to a pre-Mercian regional unit given its possible Old Welsh etymology (Higham 1993, 131). The parish of Bromborough was probably controlled by the monastic brethren of St Werburgh based in Chester during the tenth and eleventh century, and this parish contained Eastham Manor, belonging to the Earl of Chester, Hugo d'Avranches, the nephew of William I called alternately Hugh Lupus or, less cordially, 'Hugh the Fat' (Crosby 1996, 34). The Norse Thegn Arni appeared, however, to have continued control of the western side of the Wirral at the time of Domesday in 1086 (Higham 1993, 131-2).
- 3.4.14 In the subsequent two centuries the land had been transformed into arable farmland across much of the peninsula, the rising Cheshire population prompting 1000 acres of newly arable land listed in 1303 in the Wirral alone (Crosby 1996, 44). This was achieved despite what appears to have been a relatively higher sea level, as high tide at the time is said to have reached a point near Poulton (Mortimer 1847, 190). The landscape appears to have been dominated by small-scale agriculture (Chitty 1980), although excavations at Bromborough Court House in 1979 concluded that prior to the eighteenth century no farming regime other than pasturage could be demonstrated (Freke 1979, 47). The Wirral was made a Royal Forest, later so than the other three Cheshire forests, apparently to chastise its inhabitants (Robinson and Whitbread 1998, 4-5).
- 3.4.15 Bromborough Old Hall, whose exact whereabouts is currently unknown, appears to have been built by AD 1100 (Jones 1978, 35). Reference is made to Bromborough Court House being located at the Old Hall in a document of 1284 (*ibid*). A mill at Bromborough is mentioned in a Charter dated between AD 1270-1323, which allowed Thomas, Abbot of Chester, to dig channels and quarry as necessary stone for his mill on the lands of William Lancelyn (Connah 1954,4-5). Whilst Bromborough Mill (Site **10**) was certainly in existence by AD 1323, reference to a mill at Eastham in the Domesday Book may refer incorrectly to that in the study area (*ibid*). Ownership of the mill is

later recorded as having been disputed between the Abbot of St Werburghs and William Lancelyn of Poulton in 1535 (*ibid*, 5).

- 3.4.16 **Post-medieval:** the parish of Bromborough was to become home to at least two new-build manor houses in the sixteenth and seventeenth century (Jones 1978, 35), and legal documents shed light on more than struggles over property in this turbulent period. Following the Dissolution of the Monasteries the Bromborough possessions of the St Werburgh's brethren seem to have been ultimately awarded to the Hardware family in 1594 by charter, the list of properties being inclusive of mills (Connah 1954, 5). Bromborough New Hall, also known as the Upper Hall or Manor, is recorded as having been constructed between 1619 and 1645 by a Dr John Bridgeman, Bishop of Chester (Jones 1978, 35-6), and the 'Old Hall' is reported to have been sold in 1594 by Sir Hugh Cholmondeley (*ibid*). This may have been demolished a little before 1676, with its salvageable components reused in the New Hall (*ibid*).
- 3.4.17 The earliest surviving fabric of the flour mill at Bromborough (Site **10**), the brick building or 'Old Sack House', appeared to be late seventeenth century at the time of demolition in 1949 (HER 3483-004; Connah 1954, 1). It seems as though the Mill House and barn were built at this time, as was the red sandstone structure forming the central portion of the Bromborough Mills (Connah 1954, 1-2).
- 3.4.18 **Industrial:** the latter half of the eighteenth century saw agriculture revolutionised in England, and some of the wastelands and mosslands of the eastern and northern Wirral peninsula were altered by the exploitation of hydrological power, especially towards Wallasey (Cowell and Innes 1994, 48). At Bromborough the water-powered flour mill seems to have undergone several improvements. The firm of Fawcett, Preston and Co Ltd, based at the time across the water in Liverpool, added a steam engine to provide additional power (Connah 1954, 1-2) in 1835 (Anderson 1964, 52), although it was still a flour-grinding mill. This conversion was achieved under the Ellis family who took full ownership of the Mill in 1777 (Connah 1954, 3; *Section 3.5.5*), the same year as the construction of the brick tower housing the adjacent windmill (Site **11**) (Connah 1954, 3). The Mainwaring Estate Plan of *c* 1755 shows a road, bridge (Site **13**) and ford arrangement (described in *Section 3.5.2*) crossing the River Dibbin. These may not have survived until the construction of the turnpike road in 1787, as the Bromborough Bridge (Site **14**) had already been built in the interim (Connah 1954, 4).
- 3.4.19 In 1801 most of the nearby settlements had small populations, typically less than 200 (Mortimer 1847) and many of the settlements were too small even to warrant a mention in the contemporary directories (Pigot and Co 1834). In the medieval period a ferry across the Mersey had been operated by the monks of Birkenhead priory (Crosby 1996, 41). By the nineteenth century this was one of three ferries running (*ibid*). Combined with the improved system of turnpike roads (*Section 3.5.2*), this meant that the relative calm of the Wirral was readily accessible for Liverpool-based entrepreneurs (*ibid*). During this time a number of large houses were built as country retreats for the wealthy merchants and traders of the neighbouring industrial cities (Mortimer 1847,

410). It is also probable that the terrace of cottages, clearly shown on the 1840 tithe plan, was constructed very soon after the conversion of Bromborough mill to steam-and-water power, contrary to Connah's assertion that they were erected in 1878.

- 3.4.20 By the middle of the nineteenth century other significant changes began to take place on the Wirral, relating to the growing chemical industries either side of the Mersey (Crosby 1996, 111). Price's Patent Candle Factory opened its Bromborough Pool premises in 1854, approximately one kilometre to the north of the study area. Price constructed a model village there for employees, similar to other examples built by other philanthropic employers (*ibid*), such social housing being one of the first substantive effects of nineteenth-century industrialisation.
- 3.4.21 It was, however, Lord Leverhulme the famous soap producer who was to have the greatest impact on the area, particularly, the subsequent creation of the new town of Port Sunlight, Leverhulme's utopian vision for his workforce (Crosby 1996, 111). An unmitigated success of Britain's manufacturing industry, the factory produced 60% of the soap made in the UK by 1914 (*ibid*).
- 3.4.22 The Wirral Railway Company began trading in 1883 at the same time as the Lever Brothers' Soap Factory was opened (Crosby 1996, 120). The success of this operation, boosted by both electrified trains and the Mersey tunnel, seems to have fed the urbanisation of the Wirral (*ibid*). The sandstone Bromborough Mill House building (Site **10**) was converted into two workers cottage-dwellings by 1900 (Connah 1954, 1).
- 3.4.23 The Lever Railway Embankment, on which construction was started in 1910, dramatically changed the size and overall appearance of Bromborough Mills (Site **10**) by the time of the 1936 Ordnance Survey (Plates 8-9; Connah 1954, 1). It followed the northern side of Spital Road, and traversed the study area across the northern part of the mill complex, before turning west-north-west again and passing under the New Chester Road. The requisite railway earthwork reduced the area occupied by the mill buildings by approximately half, and altered the course of the River Dibbin.
- 3.4.24 **Modern:** after the First World War Bromborough itself became subject to the 'Bebington and Bromborough (Extension of Urban District) Order 1930' Cheshire Council Order, to facilitate expansion of housing provision. The removal of inconveniently placed buildings such as Bromborough New Hall, demolished in 1930 (Jones 1978, 35), followed this order. The fate of the remains of the Bromborough Windmill (Site **11**), and of the Bromborough Mill complex itself (Site **10**), 'razed to the ground' in 1949 (Connah 1954, 2), are testament to the priorities of the day. With reference to the 1936 Ordnance Survey these extensions to the residential area are unmistakable on the immediate eastern fringes of the study area (Plate 9).
- 3.4.25 The name Ellis, first mentioned in the lease of 1787 (Bromborough Society Scrapbook 2, item 10), continued until the closure of the Bromborough Mill (Site **10**) - the last miller was Mr Eric Ellis (McMillan 1961, 37). Since the demolition of the Mill the area was slowly reclaimed by vegetation (Plate 11)



resulting in the pleasant light woodland visible currently (Plate 12). The site of the former mill complex (Site 10) has been closed to public access since its acquisition by United Utilities for the sewerage works of 1959-60 (*ibid*, 37; Plate 13). The Spital Dam, previously known as Bromborough Bridge (Site 14) is now a busy thoroughfare despite the proximity of the A41.

### 3.5 MAP REGRESSION ANALYSIS

- 3.5.1 **Early Maps:** the development of the study area may be traced reasonably well from the sequence of available historic mapping. There are several early county maps produced during the sixteenth and seventeenth centuries that cover the area, but the scale is too great to furnish any details of the use of the site. Bromborough is, for example, depicted in the atlas of Northern Europe compiled by the Dutch East India Cartographer, Joan Blaeu, the *Atlas Maior* of AD 1664 (Rootsweb.com 2006a; Wikipedia 2006c), but all that is visible is the church and the woodland area to the south-east. The earliest detailed cartographic sources for the study area date to the mid-eighteenth century.
- 3.5.2 **The Mainwaring Estate Plan:** produced in the years approaching 1755, the section of this map pertaining to Bromborough (Plate 1) differs significantly from later maps in a number of ways. The site of the Bromborough Windmill (Site 11; HER 3483-05) is here marked by a square which would seem to intimate a structure, although it does not elaborate as to its nature. The windmill itself does not make a proper cartographic entrance until the county map of Swire and Hutchings of 1830 (Plate 3). At the northern corner of the field which later houses the windmill a small square enclosure is shown, perhaps a paddock. The Bromborough Mill (Site 10) itself is a little indistinct, a rectangular structure appearing to straddle the race to the east of the 'Island'. The two buildings to the south and the south-east would seem to be Mill House and an associated barn respectively. The roads to Bebington and Neston are shown as coming into the Mill from the south, on the eastern side of the River Dibbin, before turning 90 degrees westwards over the race, at which point they diverge into two roads on Wharf Island. These two roads then cross the Brook, the Neston road by bridge (Site 14) and the Bebington road by ford.
- 3.5.3 **Burdett's Map of Cheshire:** the first useable large-scale survey of the study area is provided by Peter Burdett in 1777, at a scale of one inch to one mile (Plate 2). The map displays a water-wheel icon at the junction of the Spital Road and the Dibbinsdale Brook, at the point where Bromborough Mill (Site 10) is attested on later cartography. 'Bromborow' is shown as a sizeable settlement of three roads in a triangular arrangement, presumably around the market cross, with numerous buildings both around this centre and the exit road to the north. The church is also visible on the western side of the triangular layout. The direction of the road north from Bromborough is markedly different to that of the Mainwaring Estate Plan of 1755, and it seems to reflect both the newer Spital Bridge (Site 15) and the turnpike road which crossed it, although neither are annotated on this map.
- 3.5.4 **Swire and Hutchings' Map of Cheshire:** compiled by Swire and Hutchings in 1830, this map shows a similar, if not identical, arrangement to that shown in

the map of Burdett sixty years previous (Plate 3). A water-wheel icon is annotated, and the Bromborough windmill (Site 11) is also depicted as an icon, on the far south-eastern side of a previously unseen track or road from Bromborough Mill (Site 10) heading towards Bromborough Court Hall which is shown as very close to the coastline.

- 3.5.5 ***A Bryant's 'Map of Cheshire'***: published in 1831 (Plate 4), this map again shows the two separate icons for a water-mill and a windmill, although now they are entitled 'Bromborough Mills' which implies that both were jointly owned. The track to the Court Hall is still visible although no other information can be gleaned from such a relatively large scale plan. Of cursory interest is that the track on this map is shown as more sinuous, and the windmill (Site 11) is to the east of Bromborough Mill (Site 10) rather than to the south-east as it is shown on the 1830 Swire and Hutchings' Map (Plate 3).
- 3.5.6 ***Map of the Township of Bromborow***: this Tithe Plan produced in 1840 was drawn with the hawkish accuracy of the exchequer, at a larger scale than the previous efforts. The structures comprising the mill complex are clearly shown as identifiable units within distinct plots of land (Plate 5). When analysed with the accompanying written record of landowners and their concomitant land values, it becomes very clear that the land immediately to the south and east of the Mill Pool was under the ownership of Messrs Robert Williams and Charles Ellis. This was possibly the same Charles Ellis as was buried in the graveyard of St Barnabas in Bromborough in 1861 aged 53 (Rootsweb.com 2006b). In the same churchyard an inscription refers to a Joseph Ellis 'of Bromborough Mills', buried in 1865 aged 33 (Rootsweb.com 2006b), and although the relationship is not clear it may be that this was the son of the Charles mentioned in the tithe documents. The valuation notes that the windmill in land plot 54 is associated with a cottage and garden, and that the group of four buildings in plot 59 comprises a 'House, Water Mill, Steam Mill Building and Garden'. Beyond that, logic dictates that the mills should occupy the building next to the millpond. The wide pathway or road linking Bromborough Mill to the New Chester Road (Plate 5) appears to correspond more to the 1830 road arrangement recorded by Swire and Hutchings (Plate 3) but not by the 1831 Map of A Bryant (Plate 4). This might suggest some shortcomings in the accuracy of Bryant's cartography.
- 3.5.7 ***Ordnance Survey 1882***: the map surveyed in 1872-4 shows the site far more clearly than previously, at a scale of 25 inches to 1 mile (Plate 6). The windmill is shown with one small square building and a terrace of three and a half structures to the north-west, with a single outbuilding also appearing in the north-eastern corner of the plot. The part of the Bromborough Mills complex next to the millpond and the weir is now shown in far greater detail, and the entire area is now named as 'Bromborough Mills' and annotated as being flour producing. The watermill is portrayed as a large central building flanked by two smaller appendages. To the immediate north-east of the long row of cottages a square structure is depicted, and there is a building of similar size to the immediate north of this. Neither of these are annotated, and the two small square buildings shown to the immediate north of the water-mill are unidentifiable from the map or other contemporary documents. Access to the

complex is shown as a gate adjoining the Spital Road. There is a previously unseen quarry to the south-east of Bromborough Mills (Site **10**), on the land previously occupied by gardens (plot 61) and the field (plot 60) as shown on the Tithe map of 1840 (Plate 5). This quarry also seems to have removed a road from Bromborough Mills which was recorded by the Tithe map (Plate 5) and Swire and Hutchings in 1830 (Plate 3), heading north-eastwards to the line later occupied by the New Chester Road.

**3.5.8 Ordnance Survey 1899:** this map portrays the site at the same scale as that of 1882, with similar detail (Plate 7). A footpath now links the eastern side of the complex to New Chester Road to the east, and the terrace of buildings to the north of the windmill is shown as two buildings, presumably cottages of some description. The third, half-sized, structure on the 1882 version is now more clearly in the corner of a roughly triangular paddock, and it may be an animal shelter or lean-to. Although the HER (3483-05) records the windmill (Site **11**) as having been ‘blown up’ in 1878, the position is still marked as a triangle with a central point. Bromborough mill (Site **10**) is shown in the same detail as before, as are the buildings to the north, although the mill pond is now annotated as ‘Mill Dam’. The terrace of cottages is now shown as six distinct properties, and the area to the immediate south-west of these is now entirely enclosed, perhaps as a garden. The weir to the west of the water-mill, adjacent to the Spital Road is shown as having four sections to it, whereas previously there were only three shown, suggesting that it had been altered in the interim. The large square building to the south-east of the water-mill is now split into four sections, and there appear at first to have been alterations to its eastern elevation since the previous survey. The buildings are now annotated with hatching to distinguish buildings from linear boundaries. A very small outbuilding is shown to the south-east of the cottages, although it is unclear what this might be.

**3.5.9 Ordnance Survey 1912:** this map (Plate 8), dated *c* 1912, at the same scale as previous Ordnance Survey (OS) productions, shows the cottages and the two adjacent buildings much the same as on the previous map of 1899. The water-mill is identical to that shown on the OS 1899 map, except that there is a sluice marked clearly on this edition, and the northernmost of the two structures to the north of the water-mill appears to have been superseded by a three-sided yard, open to the south. Since the OS 1899 map the island of mud in-between the mill race, the Mill Dam and the Dibbinsdale brook, or ‘Wharf Island’ (Connah 1954, 1) had had two structures erected in its centre, the easternmost of which, a rectangular-shaped structure, occupied a very approximate east/west alignment, whilst the westernmost building appears to have been a small L-shaped affair. Neither of these two structures occupying ‘Wharf Island’ are annotated on this map. The buildings associated with the former windmill (Site **11**) appear as they were on the 1899 map. The weir is depicted as having two sections to it by this time, suggesting that further work had been undertaken in this area. The bridge over the Dibbinsdale Brook (Site **14**) is called the ‘Bromborough Mill Bridge’ for the first time on the Ordnance Survey, and is clearly portrayed by a surviving black-and-white photograph from three years later (Plate 10).

3.5.10 **Ordnance Survey 1936:** this map (Plate 9) shows a markedly different situation to all of the previous cartography. The Lever Railway Embankment now dominates the study area, and the Dibbinsdale Brook has been realigned towards the west to follow a much more practical north/south course beneath the railway line before heading towards the Bromborough Pool. Wharf Island had been subsumed by the railway embankment in the period since the map produced in 1912, as had its associated buildings, the windmill (Site **11**), the buildings associated with the windmill, and the last remaining detached structure to the immediate north of the water-mill. The water-mill itself (Site **10**) seems to have been slightly reduced in size in that the southernmost part of it now appears as a yard rather than a structure. The cottages to the south are still divided into six sections, although on this version the north-easternmost section is significantly larger than the others, L-shaped, and possesses what may be a yard in its southern corner.

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## 4. SITE GAZETTEER

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**Site name** Spital Hall  
**Site number** **01**  
**NGR** SJ 3379 8310  
**HER No** 3383/31  
**Site type** House  
**Period** Industrial  
**Source** HER; OS 1882

**Description**

House marked on the OS Map of 1882.

**Assessment**

The site lies outside of the proposed development area and is unlikely to be affected.

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**Site name** Dovecot  
**Site number** **02**  
**NGR** SJ 3385 8309  
**HER No** 3383/32  
**Site type** Dovecote  
**Period** Industrial  
**Source** HER; OS 1882

**Description**

'Dovecot' marked and named on the OS Map of 1882.

**Assessment**

The site lies outside of the proposed development area and is unlikely to be affected.

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**Site name** Spital Railway Station  
**Site number** **03**  
**NGR** SJ 3391 8302  
**HER No** 3383/44  
**Site type** Transport Building  
**Period** Industrial  
**Source** HER, OS 1882

**Description**

A building described as a red brick structure with half-timbered gables, comprising a rebuild of 1893. The original presumably dates from the construction of the Chester and Birkenhead railway opened in 1838 (Wikipedia d).

**Assessment**

The site lies outside of the proposed development area and is unlikely to be affected.

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**Site name** St Patrick's Well  
**Site number** **04**  
**NGR** SJ 3453 8295  
**HER No** 3382/09  
**Site type** Well  
**Period** Unknown  
**Source** HER; OS 1882

**Description**

Alleged in local tradition to have been consecrated by St Patrick in AD 432, the site was confusingly referred to by other local residents as St David's Well. No written record of it exists prior to 1855 (Marrat 1855), and it appears to have been named St Patrick's Well - on the authority of the Rev. E. Dyer Green, James Scott of Woodslee (Site **06**) and J. Drummond of Poulton - as late as 1872.

**Assessment**

The site lies outside of the proposed development area and is unlikely to be affected.

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**Site name** Woodslee Lodge  
**Site number** 05  
**NGR** SJ 3465 8279  
**HER No** 3482/10  
**Site type** Lodge  
**Period** Industrial  
**Source** HER; OS 1882

**Description**

Lodge marked on the OS Map of 1882.

**Assessment**

The site lies outside of the proposed development area and is unlikely to be affected.

**Site name** Woodslee House  
**Site number** 06  
**NGR** SJ 3451 8274  
**HER No** 3483/11  
**Site type** House  
**Period** Industrial  
**Source** HER; OS 1882

**Description**

House marked on the OS Map of 1882, although the HER records its existence prior to 1869.

**Assessment**

The site lies outside of the proposed development area and is unlikely to be affected.

**Site name** Woodheys  
**Site number** 07  
**NGR** SJ 3403 8313  
**HER No** 3483/01  
**Site type** House  
**Period** Modern  
**Source** HER

**Description**

House recorded in HER records, with only a digital reference surviving.

**Assessment**

The site lies outside of the proposed development area and is unlikely to be affected.

**Site name** Arkwood House  
**Site number** 08  
**NGR** SJ 3429 8314  
**HER No** 3483/02  
**Site type** House  
**Period** Modern  
**Source** HER

**Description**

House recorded in HER records, with only a digital reference surviving.

**Assessment**

The site lies outside of the proposed development area and is unlikely to be affected.

**Site name** Lodge  
**Site number** 09  
**NGR** SJ 3411 8303  
**HER No** 3483/03  
**Site type** Hunting Lodge  
**Period** Modern  
**Source** HER

**Description**

Hunting Lodge recorded in HER records, with only a digital reference surviving.

**Assessment**

The site lies outside of the proposed development area and is unlikely to be affected.

<b>Site name</b>	Bromborough Water Mill
<b>Site number</b>	<b>10</b>
<b>NGR</b>	SJ 3445 8317
<b>HER No</b>	3483/04
<b>Site type</b>	Water Mill, Steam Mill, Mill Pond, Mill Dam, Barn, Houses and Cottages
<b>Period</b>	Medieval – Industrial
<b>Source</b>	HER; Mainwaring Estate Plan 1755; Swire and Hutchings Map of Cheshire 1830; Bryant's Map of Cheshire 1831; Bromborough Tithe Map 1840; OS 1882, 1899, 1912, 1936

**Description**

A medieval water-mill, pond and dam, later rebuilt in the post-medieval period with associated house and barn, which later grew into a mill complex containing workers cottages. The mill was converted to include steam power via a new engine house in 1835. It was eventually demolished in 1949.

**Assessment**

The site is within the proposed development area and will be affected.

<b>Site name</b>	Bromborough Windmill
<b>Site number</b>	<b>11</b>
<b>NGR</b>	SJ 3452 8320
<b>HER No</b>	3483/05
<b>Site type</b>	Mill Building
<b>Period</b>	Industrial
<b>Source</b>	HER; Swire and Hutchings Map of Cheshire 1830; Bryant's Map of Cheshire 1831; Bromborough Tithe Map 1840; OS 1882, 1899, 1912

**Description**

The windmill, referred to in a lease of Messrs Charles and Joseph Ellis in 1787 (Bromborough Society Scrapbook 2, Item 90), is first shown on the 1830 Map of Cheshire by Swire and Hutchings. The Merseyside HER records it as having been constructed in 1777 and demolished by explosion in 1878.

**Assessment**

The site lies outside of the proposed development area and is unlikely to be affected.

<b>Site name</b>	Mill Field
<b>Site number</b>	<b>12</b>
<b>NGR</b>	SJ 344 831
<b>HER No</b>	3483/06
<b>Site type</b>	Field
<b>Period</b>	Post-medieval
<b>Source</b>	HER

**Description**

The 'Bromborough Foreshore Papers' record a field adjacent to the Bromborough Water Mill (Site **10**) as being transferred from Richard Barand and William Baxter alias Hey to Henry Hardware in 1581.

**Assessment**

The site lies within the proposed development area and is likely to be affected, although it is not clear to what extent.

<b>Site name</b>	Bromborough Bridge
<b>Site number</b>	<b>13</b>
<b>NGR</b>	SJ 3447 8321
<b>HER No</b>	3483/08
<b>Site type</b>	Bridge
<b>Period</b>	Post-medieval
<b>Source</b>	HER; Mainwaring Estate Plan 1755

**Description**

A bridge crossing the Dibbin on the road from Bromborough to Neston, first shown on the Mainwaring Estate Plan of c 1755. This bridge does not appear on any later cartography.

**Assessment**

The site lies within the proposed development area, although the extent to which it is likely to be affected is not clear.

<b>Site name</b>	Bromborough Bridge
<b>Site number</b>	<b>14</b>
<b>NGR</b>	SJ 3447 8321
<b>HER No</b>	3483/09
<b>Site type</b>	Bridge
<b>Period</b>	Industrial
<b>Source</b>	HER

**Description**

This is a successor to the earlier crossing at Site **13**, and it took a new course over the Dibbin on a north/south alignment, bypassing the mill, Site **10**. This new route was used by the turnpike road, the 1786/7 Parliamentary Act for which makes mention of the bridge.

**Assessment**

The site lies close to the proposed development area although it is unlikely to be affected.

<b>Site name</b>	Tileyard Cottage
<b>Site number</b>	<b>15</b>
<b>NGR</b>	SJ 3438 8352
<b>HER No</b>	3483/10
<b>Site type</b>	Cottage
<b>Period</b>	Industrial
<b>Source</b>	HER; OS 1882

**Description**

A cottage is shown on the OS edition of 1882.

**Assessment**

The site lies outside the proposed development area and is unlikely to be affected.

<b>Site name</b>	Old Tileyard
<b>Site number</b>	<b>16</b>
<b>NGR</b>	SJ 343 835
<b>HER No</b>	3483/11
<b>Site type</b>	Ceramic Industry
<b>Period</b>	Industrial
<b>Source</b>	HER

**Description**

The site of an industrial tileyard is marked on the OS edition of 1882, although this was surveyed in 1872-4.

**Assessment**

The site lies outside of the proposed development area and is unlikely to be affected.



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## 5. EVALUATION RESULTS

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### 5.1 INTRODUCTION

5.1.1 Three evaluation trenches (Fig 3) were excavated in accordance with the methodology set out in *Section 2* of this report and in compliance with the project design (*Appendix 1*). An overview of the results from each trench is described below. The total surface area of the trenches was 195<sup>2</sup>m.

### 5.2 TRENCH 1

5.2.1 Trench 1 measured 15m by 2m and was orientated north-west/south-east (Plate 15). This trench was situated in the north-western corner of the proposed development area and was positioned in order to investigate the potential remains of the Bromborough to Neston road that ran via the earlier Bromborough Bridge (Site **13**; Plate 1).

5.2.2 Trench 1 was positioned along the southern edge of a modern tarmac access road and all of the deposits encountered appeared to relate to the construction of this road, or to be deposits of demolition debris. Beneath the road tarmac was a layer of gravel hardcore (**111**) that overlay a deposit of demolition debris (**115**) that was at least 0.6m deep and that filled a 0.55m deep pit (**117**) at the south-eastern end of the trench. The full extent of this cut was not recorded due to the limits of the excavation but it was seen for the full width of the trench. No finds were retrieved from the fill of the pit (**115**). A thin (*c* 40mm thick) layer of sandy-silt, **114**, lay between the demolition debris and natural sandy-silt. No trace of an earlier road surface was observed and all of the deposits appeared to be the result of modern works.

### 5.3 TRENCH 2

5.3.1 Trench 2 measured 25m by 2m and was orientated east/west (Plate 15; Figs 3 and 4). This trench was situated in the north-eastern corner of the proposed development area and was positioned in order to target the buildings associated with Bromborough Mill that were depicted on historic cartographic sources. Trenches 2 and 3 were both restricted in their overall surface area by the presence of varying densities of tree growth. Although this did not impact upon the agreed siting of the evaluation trenches, the expansion of the trenches to allow for safe, stepped excavation to depths beyond 1.2m was severely restricted. A layer of root-heavy topsoil with a maximum thickness of 0.25m was removed to reveal an underlying deposit of demolition debris (**108**). Beneath **108** a concrete base or platform (**102**) was revealed in the eastern end of the trench that was bedded on a layer of sand (**103**). The full extent of the concrete was not observed but it measured at least 1.20m in width. Sandstone bedrock, **101**, was encountered in places, at a minimum depth of 0.8m, and this irregular natural deposit was overlain by several layered dumps of demolition debris that contained fragmentary ceramic bricks (0.22m x 0.10m x 0.05m) and sandstone masonry (**105**, **106**, **107**, **108**, **109**). Although the sandstone in these deposits was mainly fragmentary, and indistinguishable from the loose natural sandstone occurring in this area, occasional blocks of

squared sandstone measured up to 0.30m x 0.50m x 0.80m. A mixed orange sand and brown sandy silt (**104**) was dispersed within the various dumps of demolition debris. The demolition debris in this trench exceeded the safe working depth of 1.2m and could not, therefore, be fully excavated.

- 5.3.2 A sondage was added at the western end of this trench in order to safely excavate a further 1.2m of the demolition deposit (**107**) in this area (Fig 4). This revealed natural orange sand lying at a depth of 1.7m below ground level and demonstrated that a cut (**118**), that had been visible within the confines of the trench as a rectilinear feature, was vertical and extended beyond the 1.2m depth reached by the sondage. This feature cut the natural sand (**119**) and an overlying dark brown demolition deposit (**108**). It appeared, therefore, to be a product of the works associated with the demolition process carried out in 1949, although it is possible that an earlier feature, such as a cellar, could have been represented by the cut (**118**), with any related building materials subsequently removed as part of a demolition and reclamation process. It should be stressed, however, that no masonry was observed in association with this putative 'robber trench' and, as the lowest extent of the cut was not examined due to the necessities of safe excavation, the presence of a basal foundation cut can not be confirmed.

#### 5.4 TRENCH 3

- 5.4.1 Trench 3 consisted of an L-shaped trench that ran north-north-east/south-south-west for 24m with a width of 4m before turning to the east-north-east and running for 9m (Plates 16, 17; Fig 5). The trench had been positioned in order to target remains relating to buildings and water management associated with Bromborough Mill.
- 5.4.2 The topsoil was stripped to reveal layers of demolition debris (**121, 126, 127, 128**), that contained varying quantities of ceramic brick and sandstone rubble. Although there were some large pieces of concrete-mortared masonry present in the demolition debris, such as **125**, there was no evidence of any *in situ* structural elements. The curvilinear edge of a feature (**120**) was revealed running north-east/south-west along the western edge of the trench. A sondage at the southern end of the trench allowed the demolition deposit (**121**) to be further reduced whilst enabling a partial cross-section of feature (**120**) to be observed (Fig 5).
- 5.4.3 Feature **120** was visible as a 45° cut or slope that had become overlain by a c 0.16m layer of clay-rich silt (**116**) which was then overlain by a dark grey silted deposit with a high organic component (**124**; Plate 19). This deposit was clearly the product of a waterlogged environment and the edge of the feature corresponded with the location of the edge of the mill pond as shown on the Ordnance Survey mapping of 1936. However, as the waterlogged deposit stratigraphically overlay a demolition deposit (**121**) it seems unlikely that this relates to the original, mill pond and dam. There was no structural component associated with this feature and it seems likely that it represented the waterlogged environment in the locale of the mill pond following the demolition of the mill in 1949.

## 5.5 FINDS

- 5.5.1 A very small group of finds, four fragments in all, was recovered from the site. All were in good condition, and can probably be placed in the first half of the twentieth century. Demolition deposit **108** in Trench 2 produced two fragments of a single mould-blown and embossed glass mineral water bottle. The loss of the neck and rim precludes close dating, but it can be dated to a period between the late nineteenth century and the 1930s. A small fragment of brown-glazed tile, probably from a fire surround, from the same context perhaps points to a slightly later date, towards the middle of the twentieth century. Finally, a small fragment of clay tobacco pipe was recovered unstratified. It comprised part of a plain bowl and narrow spur, and can be dated broadly to the mid-late nineteenth century. The lack of finds from the site may reinforce the supposition of a deconstruction and reclamation process associated with the demolition of the buildings.

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## 6. DISCUSSION

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### 6.1 THE DESK-BASED ASSESSMENT

- 6.1.1 In total, 16 sites were identified during the desk-based assessment. All of these had been previously recorded in the Merseyside HER. No additional sites were identified through the examination of either aerial photography or the site inspection. It was envisaged that the proposed development would potentially affect three sites identified within the study area; Bromborough Mill (Site **10**), Bromborough Field (Site **12**), and Bromborough Bridge (Site **13**). The earliest phase of Bromborough Mill is reputedly eleventh century in origin, although the site was in use until the mid-twentieth century. Bromborough Field and Bridge are both post-medieval in origin.
- 6.2.1 Works within the north-eastern part of the study area have the potential to impact upon remains of the mill, including the putative waterwheel and associated underground mill races, and evidence for early power transmission features. The reduction of ground levels elsewhere has some potential to affect remains of medieval and post-medieval date. As surviving physical evidence for water-powered mills is extremely rare in the North West as a whole, any such remains within the study area would be of high local significance. Similarly, any physical evidence for power transmission systems associated with an early nineteenth century steam engine would be of high local significance. The potential survival of a pre-turnpike era road surface, associated with the bridge, is of some local significance, though to a lesser degree than the mill site.

### 6.2 THE EVALUATION TRENCHING

- 6.2.1 Although the study area included areas of potential archaeological interest, specifically the site of Bromborough Mill and the Bromborough to Neston road, as identified by the desk-based assessment, no structural features relating to these sites were encountered during the subsequent evaluation. Evidence of the previously standing brick and sandstone buildings within the proposed development boundary was visible in the form of layers of demolition rubble that were present in all three trenches but no standing structural remains were encountered. A deep, vertical-sided, feature (**118**), that was revealed in Trench 2, may have represented a sunken feature that had predated the demolition process and been subject to reclamation of structural fabric, although this could not be stated with certainty. The waterlogged remains (**124**) that corresponded to the position of the mill pond edge on the 1936 Ordnance Survey mapping overlay demolition debris and, therefore, probably relate to post-demolition inundation following 1949, although the possibility of an earlier phase of demolition can not be dismissed. Except for the extant area of mill pond, which has become reduced in size due to demolition workings, silting, and accumulated leaf-litter, no evidence of features relating to water management were revealed. No traces of cobbled surfaces or other fabrics suggestive of early road surfaces or foundation layers were found.

### 6.3 CONCLUSION

- 6.3.1 The results of the fieldwork suggest that the demolition of the mill buildings in 1949 was an extremely thorough process that probably included the reclamation of most of the structural fabric of the buildings for reuse in construction or as rubble hardcore. Although the extent of these buildings, as depicted on the 1912 and 1936 Ordnance Survey mapping, exceeded the study area and remains might survive elsewhere, the trenches targeted substantial areas corresponding to the former buildings and encountered only demolition debris. Although the depth of these demolition deposits often exceeded the safe working depth of 1.2m, as described in the project design (*Appendix 1*), additional stepped sondages were excavated up to a total depth of 2.4m below ground level without revealing any structural remains. Unless the lowest wall foundation courses or floors of sunken structures, such as cellars or wheel-pits, survive beneath these deep demolition deposits, although no evidence of such cut features other than *II8* in Trench 2 was observed, it seems unlikely that any standing remains exist *in situ*. No trace of the Bromborough to Neston road was encountered though this may have run just to the north of the study area.
- 6.3.2 Most of the land within the proposed development boundary occupies the site of the former mill pond and is unlikely to yield structural remains. The north-eastern corner of the area (Figure 3) retains the potential to preserve limited structural remains relating to the mill buildings at a deeper depth than was accessible during the evaluation. However, ground disturbance as a result of the proposed development within this area will be minimal. It is intended that the ground level will be raised for the purposes of the development rather than the undertaking of deep excavations. In addition, the development works will be restricted by the presence of an easement protecting the underground sewers within this corner of the site. Therefore, no further archaeological work is recommended.

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Plate 19: South-south-west-facing section of waterlogged feature **120**

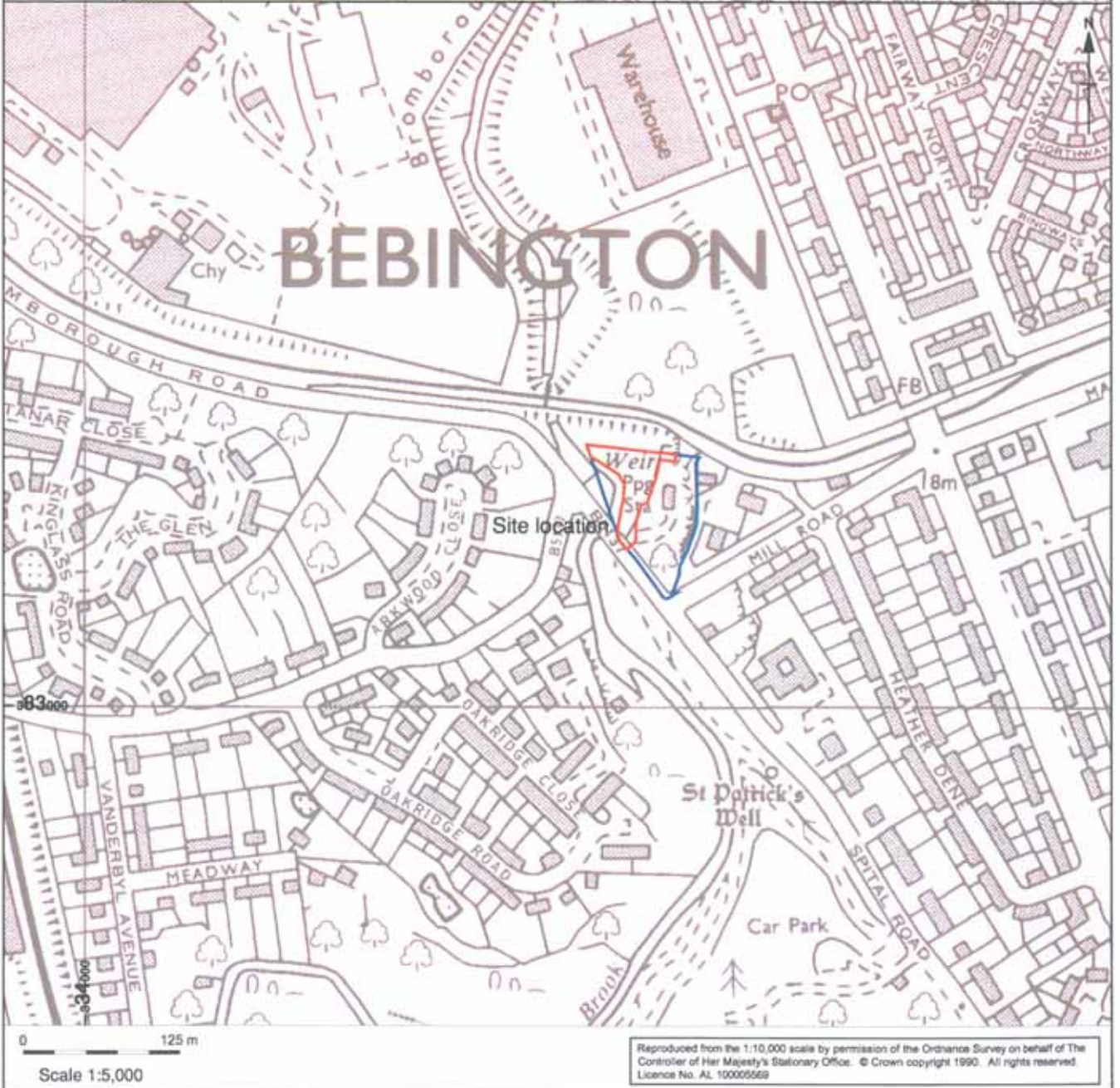
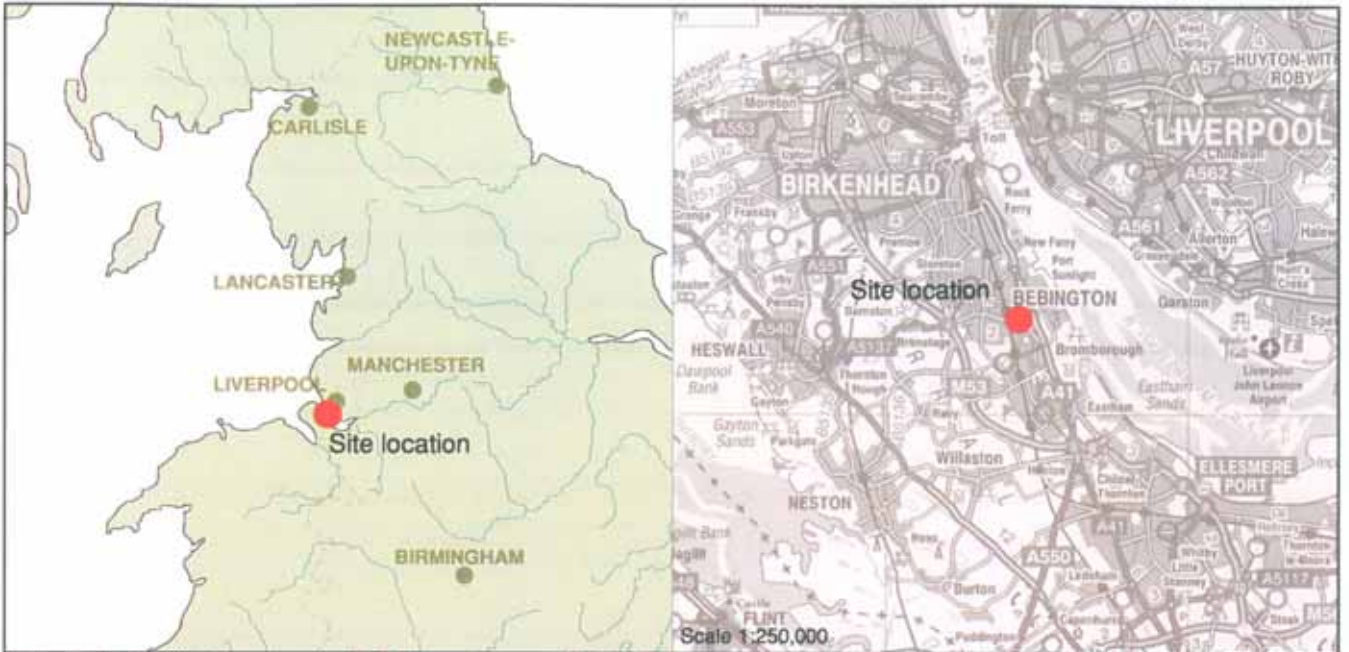
## APPENDIX 1: PROJECT DESIGN

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## APPENDIX 2: CONTEXT LIST

<b>Context number</b>	<b>Trench number</b>	<b>Description</b>
<b>101</b>	2	Natural: sandstone bedrock
<b>102</b>	2	Surface: concrete base
<b>103</b>	2	Layer: orange and greyish-brown sand bedding layer for concrete base <b>102</b>
<b>104</b>	2	Deposit: loose red sandy silt with gravel inclusions
<b>105</b>	2	Deposit: demolition rubble, including CBM fragments, and greyish-brown sandy silt
<b>106</b>	2	Deposit: demolition rubble, including CBM fragments, and dark brown sandy silt
<b>107</b>	2	Deposit: demolition rubble, including CBM fragments, and orangey-brown sandy silt
<b>108</b>	2	Deposit: demolition rubble, including CBM fragments, and dark brown sandy silt
<b>110</b>	1	Road surface: tarmac layer 0.10m thick
<b>111</b>	1	Layer: gravel hardcore for road surface <b>110</b>
<b>112</b>	1	Deposit: demolition rubble, including CBM fragments, and brownish-grey sandy silt
<b>113</b>	1	Deposit: dark greyish-black sandy silt
<b>114</b>	1	Natural: reddish-orange sandy silt
<b>115</b>	1	Deposit: demolition rubble, including CBM fragments, and greyish-brown sandy silt
<b>116</b>	3	Fill: brownish-grey clayey silt
<b>117</b>	1	?Pit: cut of feature that was filled with demolition rubble ( <b>115</b> ) and was probably associated with demolition works
<b>118</b>	2	Cut: probable result of demolition works. Vertically-sided cut filled by <b>107</b> .
<b>119</b>	2	Natural: orange sand with occasional small stones <i>c</i> 5–40mm

		diameter
<b>120</b>	3	Cut: waterlogged feature probably corresponding spatially to the former mill pond
<b>121</b>	3	Deposit: demolition rubble, including CBM and sandstone fragments, and reddish-brown sandy silt
<b>122</b>	3	Deposit: demolition rubble, including CBM and sandstone fragments, and greyish-black sandy silt
<b>123</b>	3	Deposit: demolition rubble, including CBM and sandstone fragments, and greyish-brown sandy silt
<b>124</b>	3	Deposit: dark grey tenacious clayey silt with a high organic component
<b>125</b>	3	Deposit: large piece of partially demolished bonded brick walling. Concrete-based mortar and render present in association with ceramic bricks (0.21m x 0.08m x 0.11m).
<b>126</b>	3	Deposit: greyish-brown sandy silt
<b>127</b>	3	Deposit: pinkish-orange sand with a <i>c</i> 60% component of sandstone fragment inclusions
<b>128</b>	3	Deposit: pinkish-orange sand with a <i>c</i> 60% component of sandstone fragment inclusions



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Figure 1: Site Location



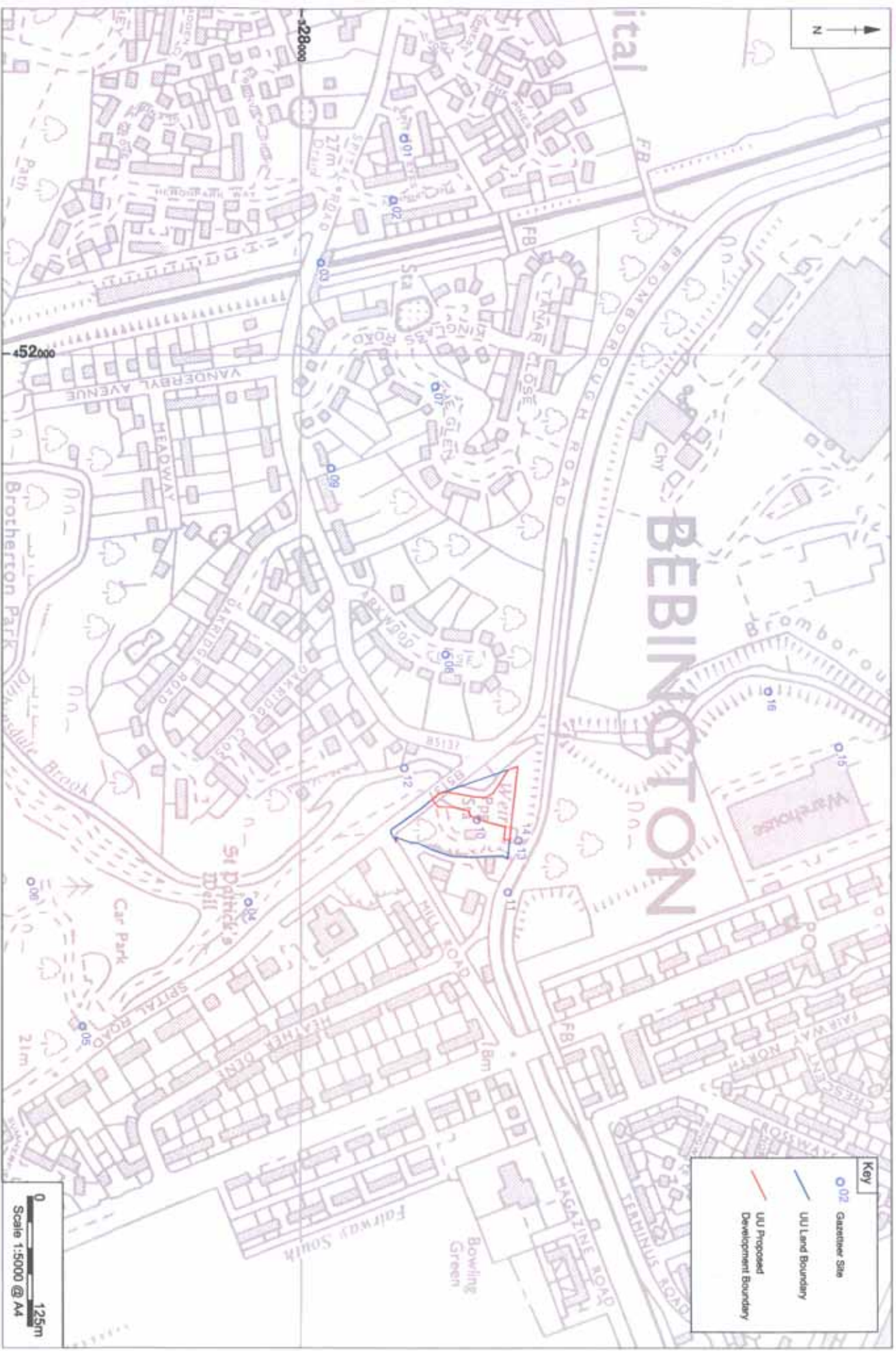


Figure 2: Gazetteer sites plan



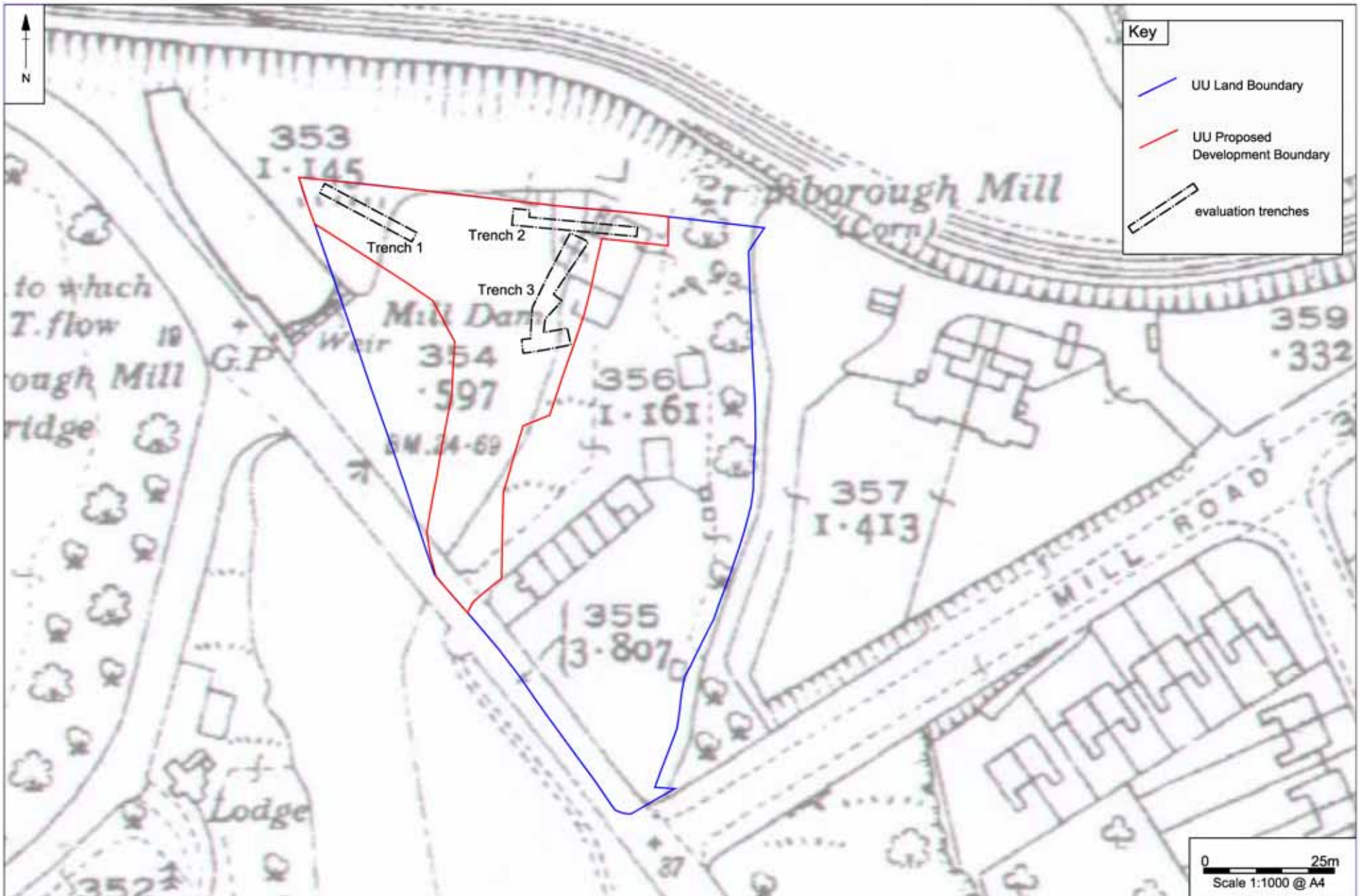


Figure 3: Trench location plan

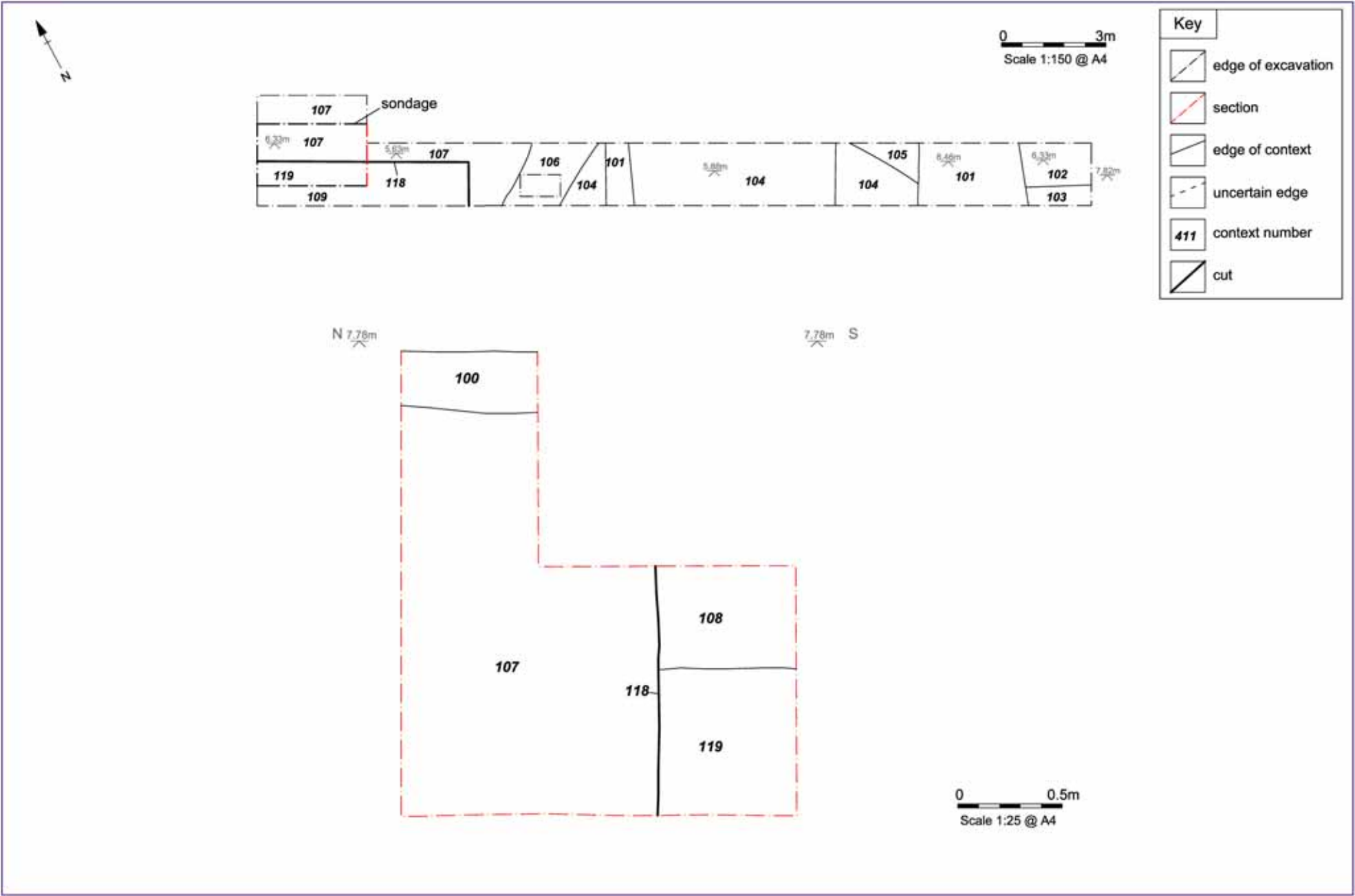


Figure 4: Plan of Trench 2, with west-facing section of the sondage

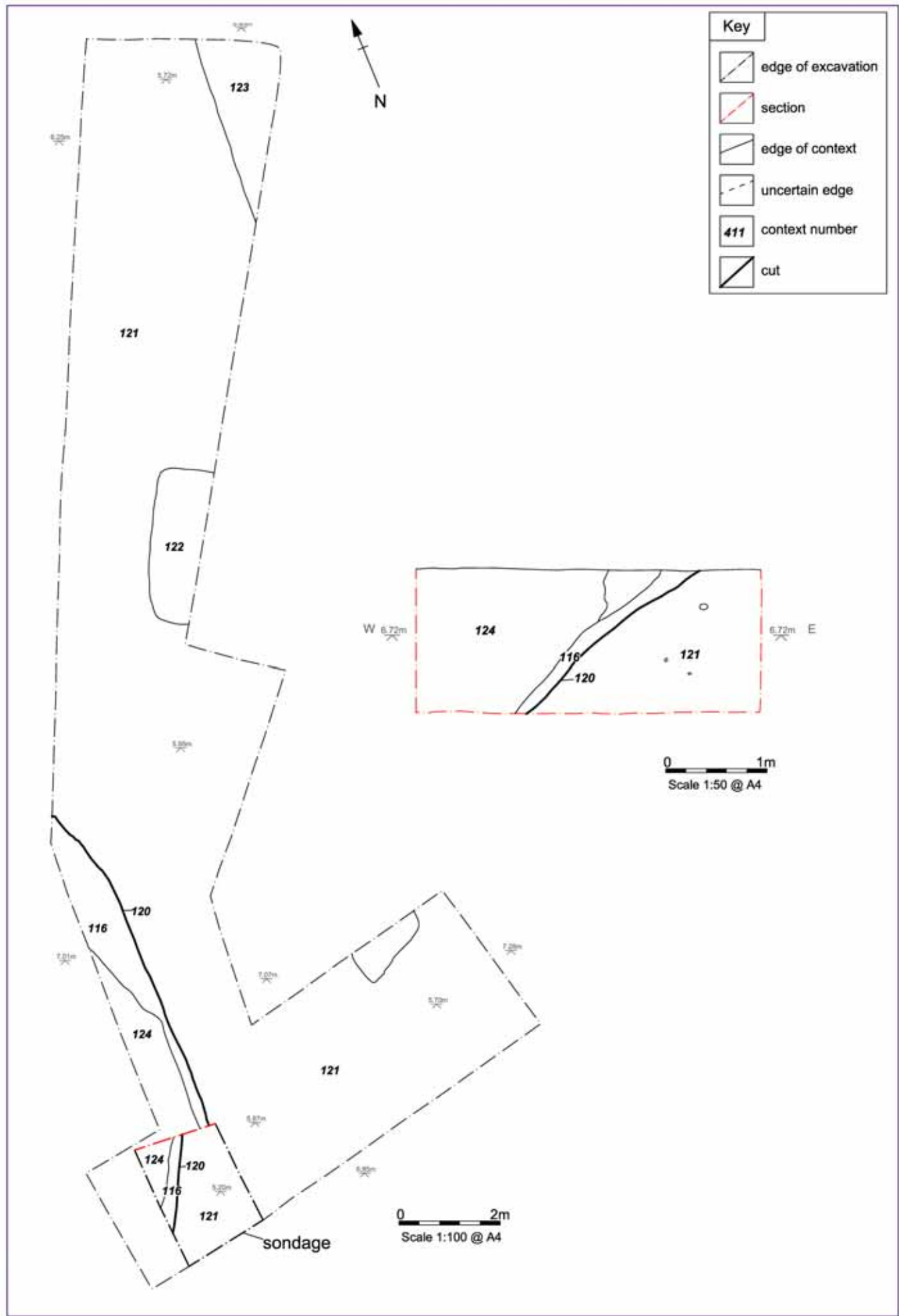


Figure 5: Plan of Trench 3, with south-facing section of the sondage, showing waterlogged feature 120



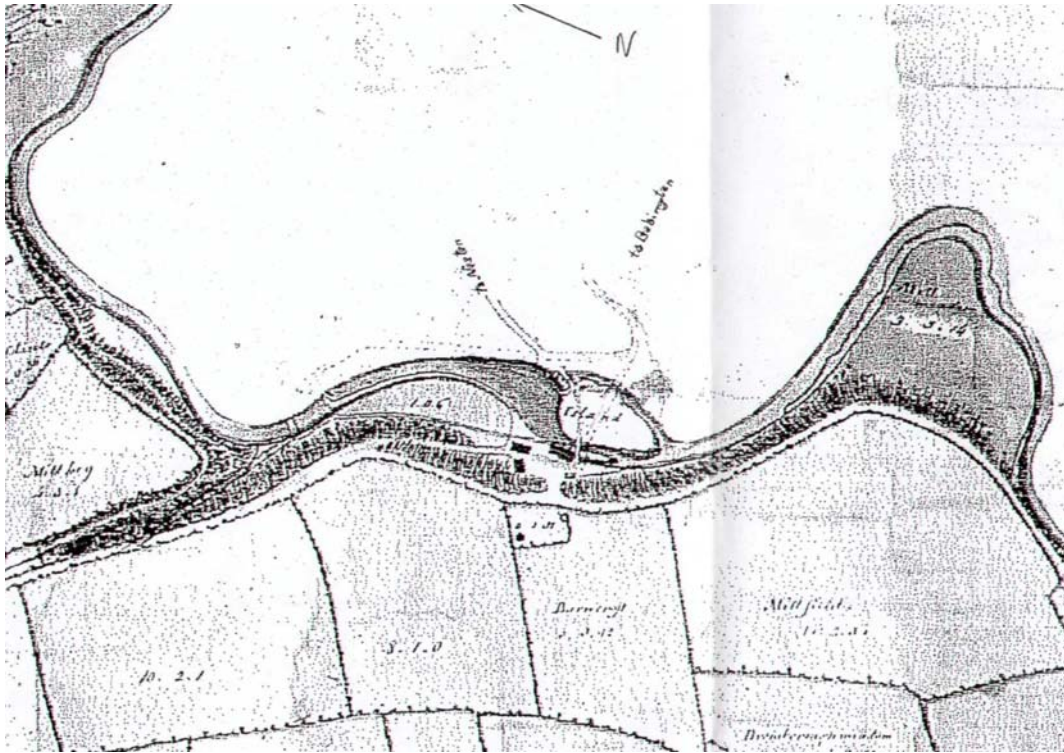


Plate 1: Part of the eighteenth century Mainwaring Estate Plan of c 1755 showing Bromborough Mill and the road crossings over the Dibbin



Plate 2: Burdett's 1777 Map of Cheshire



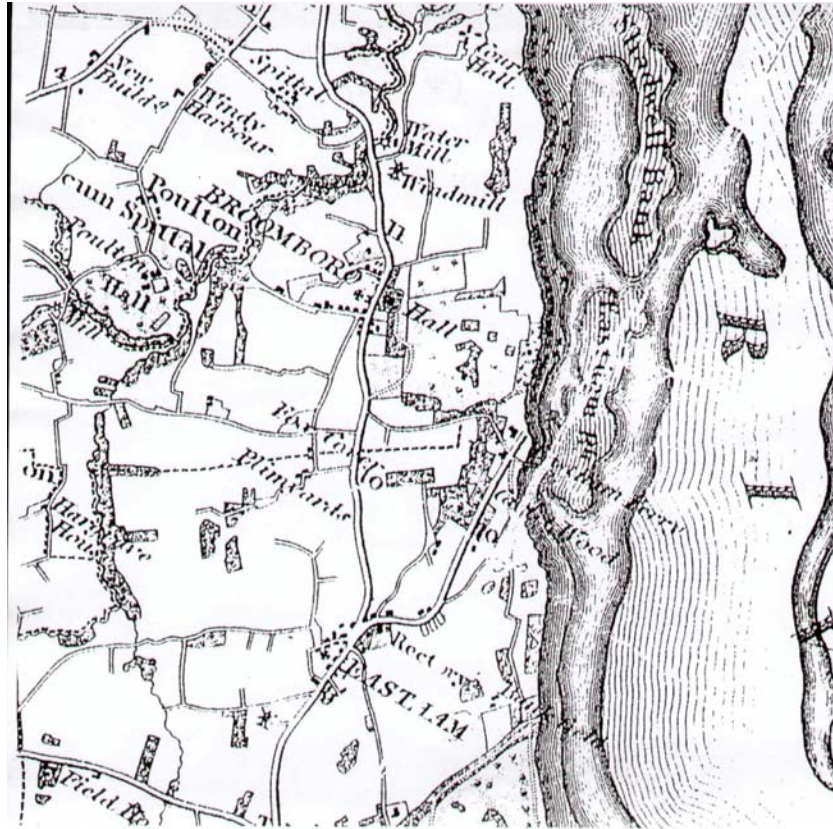


Plate 3: Detail of Swire and Hutchings's 1830 Map of Cheshire showing Bromborough

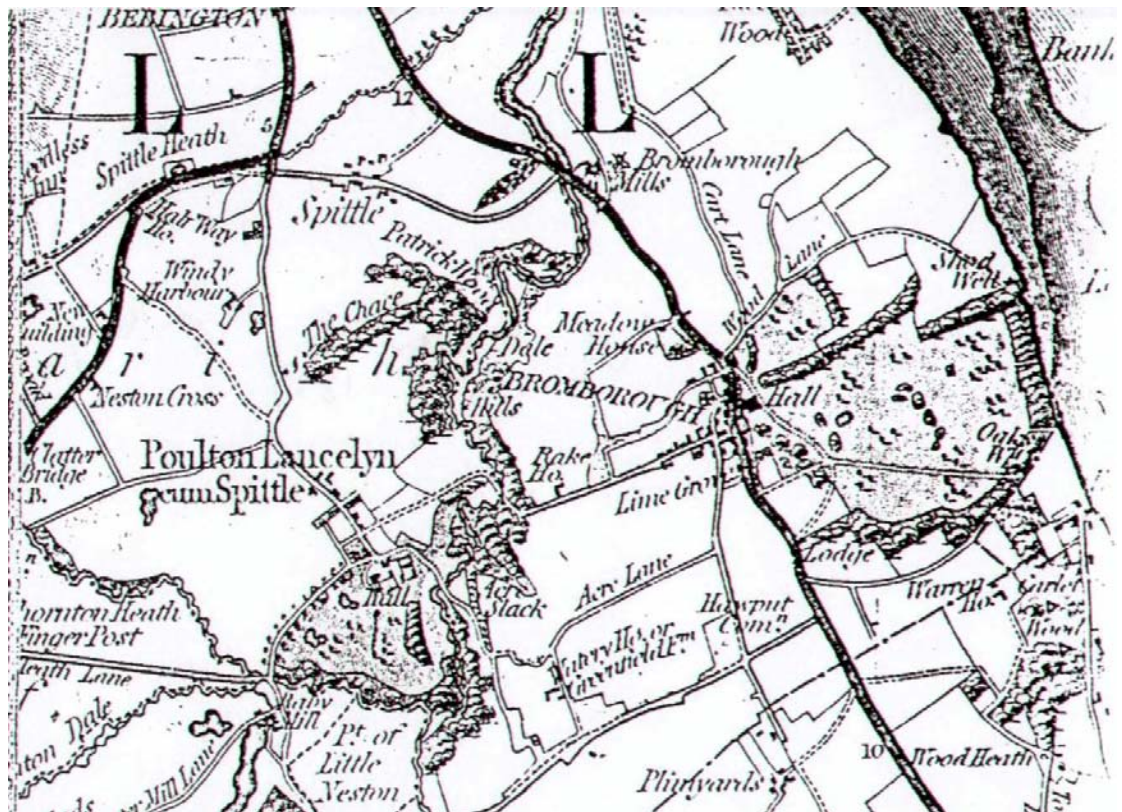


Plate 4: Detail of A Bryant's 1831 Map of Cheshire showing Bromborough Mills

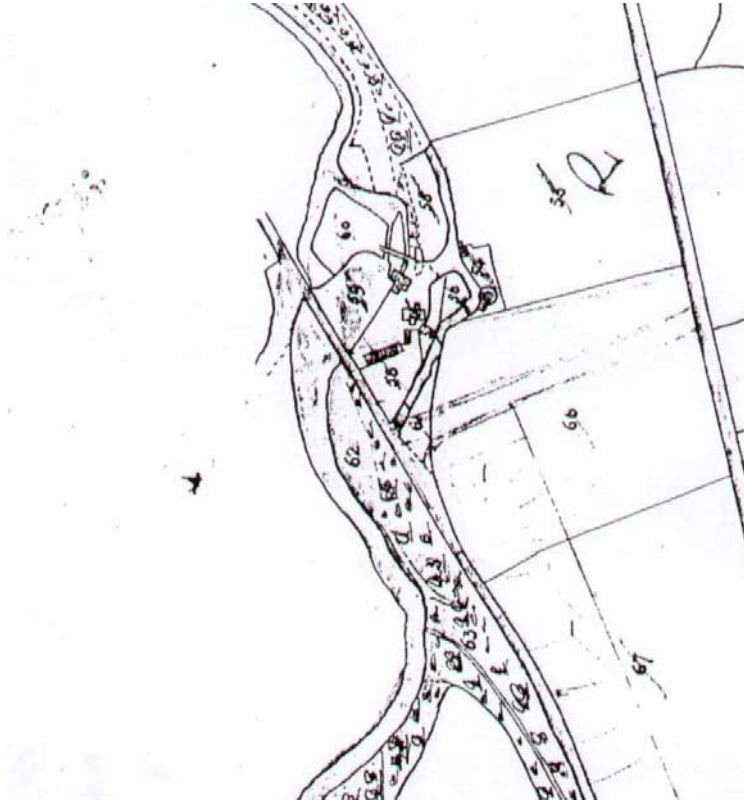


Plate 5: Part of the Tithe Map of 1840 showing the Mill complex and the new road over the Dibbin

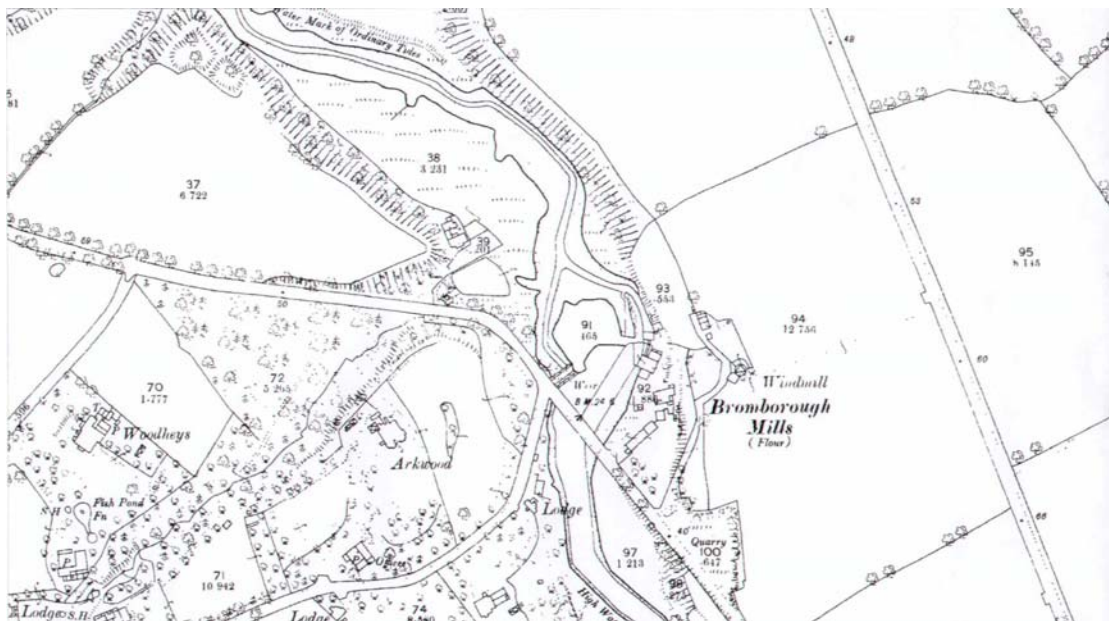


Plate 6: Detail of the 1876 OS Map, surveyed 1872-4, showing Bromborough Mill and the surrounding area



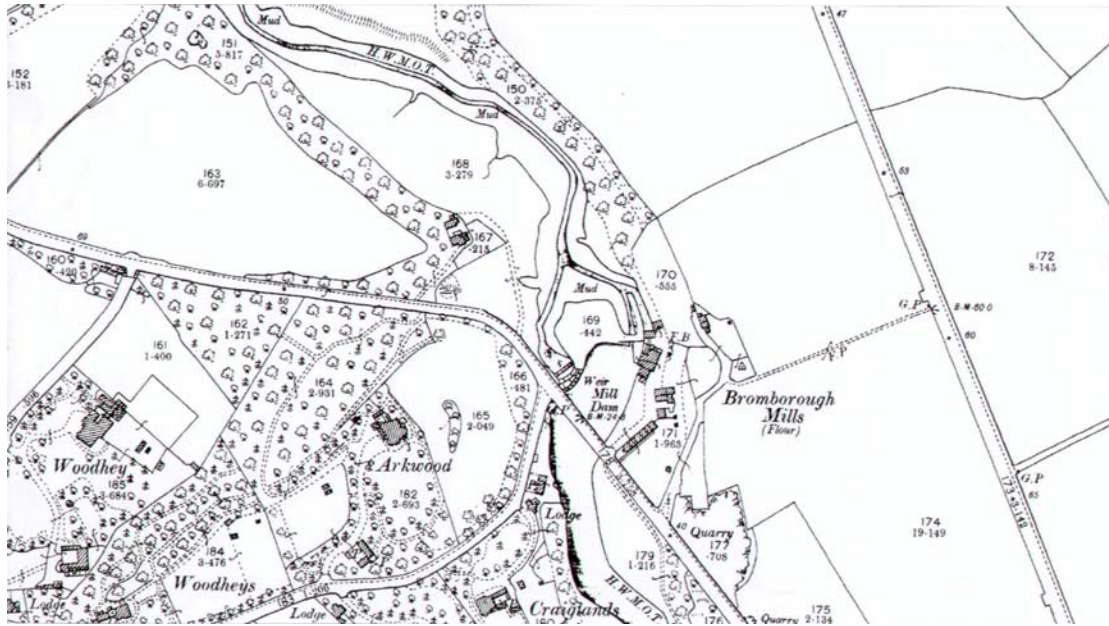


Plate 7: Detail of the 1899 OS Map showing Bromborough Mill and the surrounding area

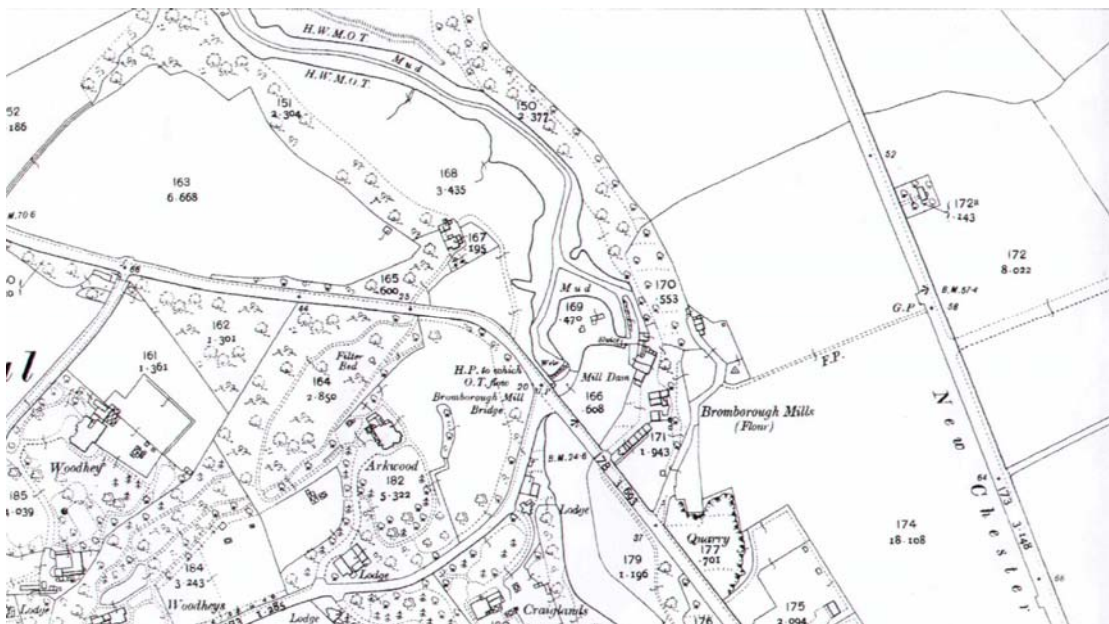


Plate 8: Detail of the 1912 OS Map, showing Bromborough Mill and the surrounding area

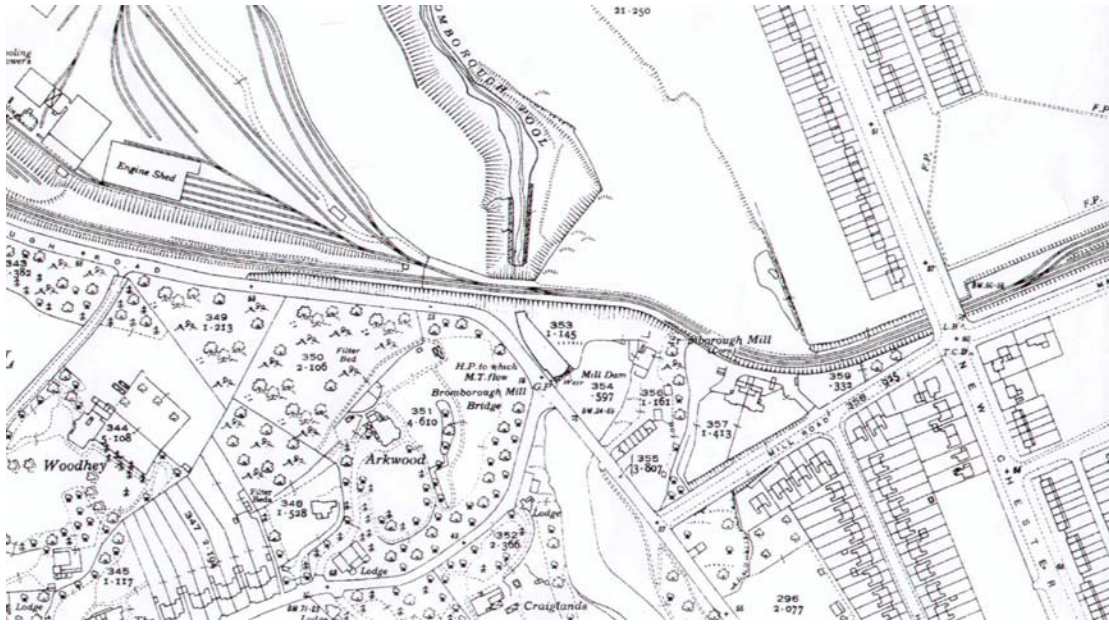


Plate 9: Detail of the 1936 OS Map, showing Bromborough Mill and the surrounding area

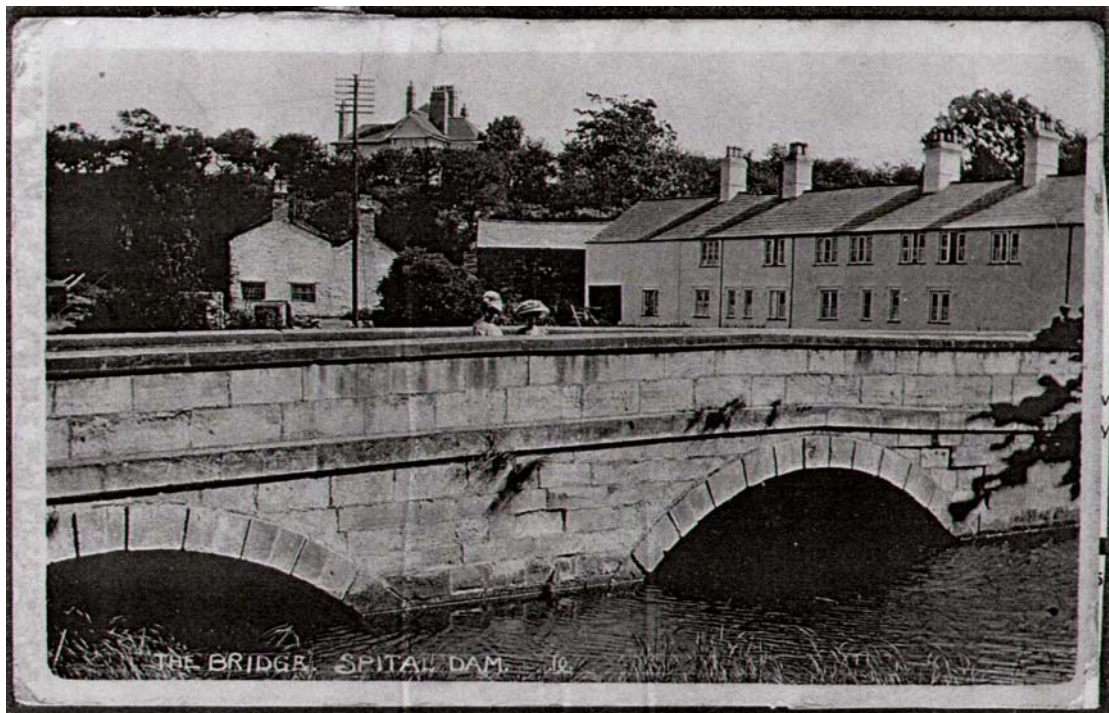


Plate 10: Photograph of Spital Dam c 1915



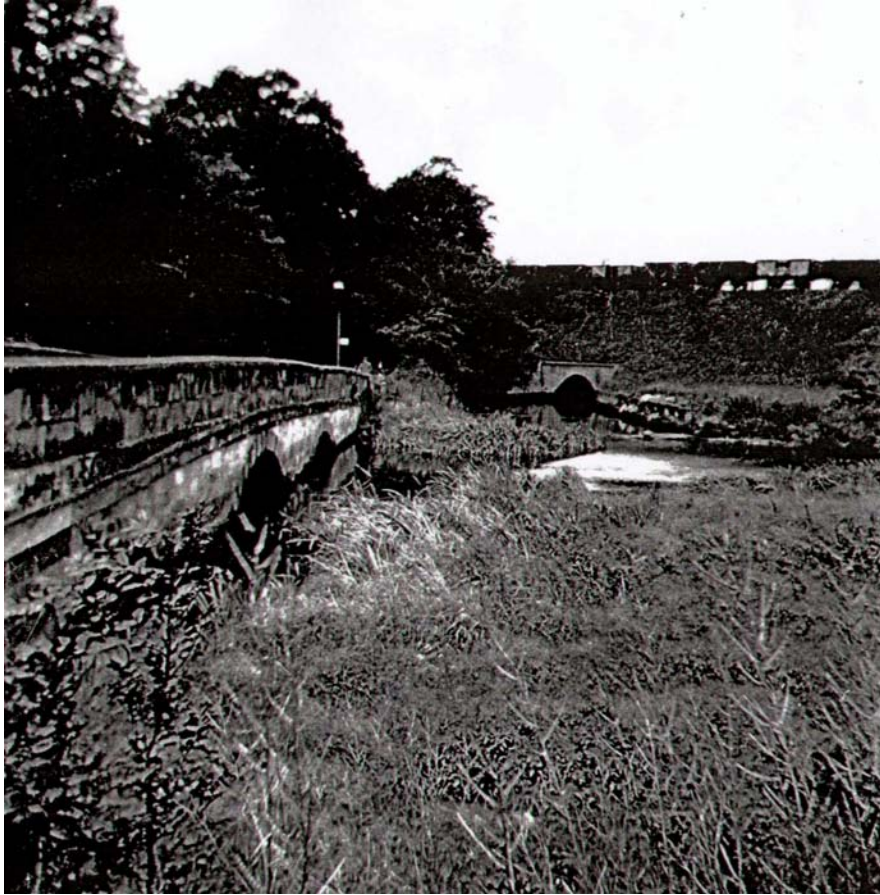


Plate 11: Photograph of Spital Dam c 1957, facing north-north-east



Plate 12: View north-north-east from Spital Dam, 22/08/2006





Plate 13: Spital Dam Sewage Pumping Station, 22/08/2006



Plate 14: “The Water Mill’ (Bromborough Pool) Henry Melling”, c 1844



Plate 14: :“The Water Mill’ (Bromborough Pool), Henry Melling”, c 1844, copied from an earlier original?





Plate 15: Trench 1 from the south-east



Plate 16: Trench 2 from the north-west



Plate 17: Trench 3 from the north-north-east





Plate 18: Trench 3 from the east-north-east



Plate 19: south-south-west-facing section of waterlogged feature *120*