

Capitol Centre, Walton-le-Dale, Lancashire

Archaeological Desk- Based Assessment



Oxford Archaeology North

November 2007

The Royal London Mutual Insurance Society

Issue No: 2007/8-707
OA North Job No: L9900
NGR: SD 55431 28396

Document Title: CAPITOL CENTRE, WALTON-LE-DALE, LANCASHIRE

Document Type: Archaeological Desk-Based Assessment

Client Name: The Royal London Mutual Insurance Society Ltd

Issue Number: 2007/8-707

OA Job Number: L9900

National Grid Reference: SD 55431 28396

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SUMMARY

In July 2007, Oxford Archaeology North (OA North) was commissioned by The Royal London Mutual Insurance Society Ltd to carry out an archaeological desk-based assessment of a brown field site to the south of Winery Lane in Walton-le-Dale, which is situated approximately 1.5km south-east of Preston, Lancashire (centred at SD 55431 28396). The study was required to inform and support a planning application for the proposed redevelopment of the site.

The site occupies part of former flood plain known locally as The Flats, which is an area of considerable archaeological potential. A Scheduled Ancient Monument (SAM 27849; Site 01) lies in close proximity to the site, and comprises the buried remains of a large Roman industrial settlement, situated either side of the main north/south-aligned Roman road. Substantial remains of large timber buildings, kilns, furnaces, wells and other industrial features, along with the main road itself, have been the subject of several archaeological excavations, which have revealed an average depth of Roman stratigraphy of some 2m. These excavations have allowed an appreciation of the scale and national importance of the Roman site at Walton-le-Dale, as well as its fragility. Late nineteenth-century development of land surrounding the Scheme Area, however, has had a major impact on the setting of the Monument, and the archaeological impact of the proposed scheme is thus considered to be neutral. Other sites of archaeological importance lie within 0.5km of the Scheme Area, including a Grade II Listed Building, although again the archaeological impact of the proposed scheme on these sites is considered to be neutral.

Notwithstanding the presence of known Roman remains in the vicinity, the Scheme Area is likely to lie beyond the edge of Roman activity. Moreover, from the early nineteenth century, the Scheme Area was occupied entirely by a large textile mill (Site 05), the construction of which is likely to have largely destroyed any buried archaeological remains. This mill, however, is of some archaeological interest, and any buried remains that survive *in-situ* may be considered to be of Local/Borough Importance, and would require preservation by record should they be directly affected by future development proposals. Any buried remains of the mill's steam-power plant would be of particular interest, and would form the focus of archaeological investigation.

The scope and specification of any archaeological recording required in advance of redevelopment would be devised in consultation with the Historic Environment Planning Officer for Lancashire. However, in general terms, it is anticipated that, in the first instance, a programme of targeted archaeological evaluation may be required. The primary objectives of any such evaluation would be to establish to presence, character, date and extent of any buried archaeological remains.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Mr N Priestley of Rider Levett Bucknall, acting on behalf of The Royal London Mutual Insurance Society Ltd, for commissioning and supporting the project. In addition, OA North is grateful to the Doug Moir of Lancashire County Archaeology Service for his support and advice, and to Ken Davies of the Lancashire Historic Environment Record Office for his assistance. Thanks are also expressed to the staff of the Lancashire County Record Office, and the Harris Museum Art Gallery and Library in Preston for their assistance with the documentary research,

The desk-based assessment was undertaken by Vicky Bullock, and the drawings were produced by Marie Rowland. The report was edited by Ian Miller, who was also responsible for project management.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 In July 2007, The Royal London Mutual Insurance Society Ltd commissioned OA North to undertake an archaeological desk-based assessment of an area to the south of Winery Lane, Walton-le-Dale, Lancashire (SD 55431 28396). The principle aim of the assessment was to identify, as far as possible, the nature and significance of the sub-surface archaeological resource within the study area, and to establish the impact of the proposed development upon this resource.
- 1.1.2 The desk-based assessment comprised a search of both published and unpublished records held by the Lancashire Historic Environment Record (HER) and the Lancashire County Record Office in Preston, the Harris Museum, Art Gallery and Library, and the archives and library held at OA North in Lancaster. In addition, a rapid site inspection 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. This report sets out the results of the desk-based assessment along with a gazetteer of sites.
- 1.1.3 The report also includes a statement of the archaeological potential and significance (defined by the criteria detailed in PPG 16 (DoE 1990)), in which an assessment of the impact of the proposed development on the historic environment is taken into account. This has been carried out in accordance with government advice in the form of Planning Policy Guidance notes 15 Planning and the Historic Environment (DoE 1994) and 16 Archaeology and Planning (DoE 1990). That advice is supported by policies relating to archaeology, historic buildings and development within the Lancashire Structure Plan and Local Plans (<http://www.lancashire.gov.uk/environment/archaeologyandheritage>).

2. METHODOLOGY

2.1 DESK-BASED ASSESSMENT

2.1.1 The assessment has focused on the site of the proposed development, referred to hereafter as the Scheme Area, although information for the immediate environs has been considered in order to provide an essential contextual background. The assessment was carried out in accordance with the guidelines provided by the Institute of Field Archaeologists (IFA 1999). The principal sources of information consulted were historical and modern maps, although published and unpublished secondary sources were also reviewed. The following repositories were visited during the data-gathering process:

- **Lancashire Historic Environment Record (HER):** the Lancashire HER holds data on the historic environment for the entire county, including Listed Buildings, all known archaeological sites, along with the location and results of previous archaeological interventions in a linked GIS and database format. The HER was consulted to establish the extent of sites of archaeological and historic interest within the Scheme Area and its immediate environs;
- **National Monument Record (NMR):** the NMR is a national resource that holds data on the historic environment from a variety of sources. Baseline data on sites and excavations can be accessed via their internet portal. The resource is complementary to the Lancashire HER and although the two databases may hold the same information for the most part, the NMR may sometimes contain additional sites, particularly those recognised from aerial photograph interpretation;
- **Lancashire County Record Office (CRO), Preston:** holds an extensive series of mapping for Lancashire, as well as a collection of secondary sources about Preston and surrounding area. All available Ordnance Survey maps for the study area were examined, covering the period from 1849 onwards, enabling the development of the Scheme Area to be traced over the past 150 years;
- **Harris Museum, Art Gallery and Library:** the library was visited in order to study any secondary sources available for the Scheme Area, including sources referenced in the HER records;
- **Oxford Archaeology North:** OA North has an extensive archive of secondary sources relevant to the Scheme Area, incorporating both published work and unpublished client reports.

2.1.2 All archaeological sites within the proposed development area have been included in the Site Gazetteer (*Section 4*). The results were analysed using the Secretary of State's criteria for the scheduling of ancient monuments, outlined in Annex 4 of *Planning Policy Guidance 16: Archaeology and Planning* (DoE 1990).

2.2 ASSESSMENT METHODOLOGY

2.2.1 The results of the assessment have identified the significance of the archaeological resource of the proposed development area and the potential impact of any future development. Consideration has been afforded to:

- assessing in detail any impact and the significance of the effects arising from any future development of the proposed Scheme Area;
- reviewing the evidence for past impacts that may have affected the archaeological sites of interest identified during the desk-based assessment;
- outlining suitable mitigation measures, where possible at this stage, to avoid, reduce, or remedy adverse impacts.

2.2.2 Such impacts on the identified archaeological sites may be:

- positive or negative;
- short, medium or long term;
- direct or indirect;
- reversible or irreversible.

2.2.3 Key impacts have been identified as those that would potentially lead to a change to the archaeological resource. Each potential impact has been determined as the predicted deviation from the baseline conditions.

2.2.4 Table 1 shows the sensitivity of the site scaled in accordance with its relative importance using the following terms for the cultural heritage and archaeology issues, with guideline recommendations for a mitigation strategy.

| Importance | Examples of Site Type | Mitigation |
|-----------------|--|-------------------------|
| National | Scheduled Monuments (SMs), Grade I and II* Listed Buildings | To be avoided |
| Regional/County | Conservation Areas, Registered Parks and Gardens (Statutory Designated Sites), Grade II Listed Buildings | Avoidance recommended |
| Local/Borough | Sites with a local or borough archaeological value or interest Sites that are so badly damaged that too little remains to justify inclusion into a higher grade | Avoidance not envisaged |
| Low Local | Sites with a low local archaeological value Sites that are so badly damaged that too little remains to justify inclusion into a higher grade | Avoidance not envisaged |
| Negligible | Sites or features with no significant archaeological value or interest | Avoidance unnecessary |

Table 1: Criteria used to determine Importance of Sites

2.2.5 The impact is assessed in terms of the sensitivity or importance of the site to the magnitude of change or potential scale of impact during any future redevelopment scheme. The magnitude, or scale of an impact is often difficult to define, but will be termed as substantial, moderate, slight, or negligible, as shown in Table 2.

| Scale of Impact | Description |
|-----------------|--|
| Substantial | Significant change in environmental factors; Complete destruction of the site or feature; Change to the site or feature resulting in a fundamental change in ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting. |
| Moderate | Significant change in environmental factors; Change to the site or feature resulting in an appreciable change in ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting. |
| Slight | Change to the site or feature resulting in a small change in our ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting. |
| Negligible | Negligible change or no material changes to the site or feature. No real change in our ability to understand and appreciate the resource and its cultural heritage or archaeological value/historical context and setting. |

Table 2: Criteria used to determine Scale of Impact

2.2.6 The interaction of the scale of impact (Table 2) and the importance of the archaeological site (Table 1) produce the impact significance. This may be calculated by using the matrix shown in Table 3:

| Resource Value (Importance) | Scale of Impact Upon Archaeological Site | | | |
|-----------------------------|--|--------------------|--------------------|------------|
| | Substantial | Moderate | Slight | Negligible |
| National | Major | Major | Intermediate/Minor | Neutral |
| Regional/County | Major | Major/Intermediate | Minor | Neutral |
| Local/Borough | Intermediate | Intermediate | Minor | Neutral |
| Local (low) | Intermediate / Minor | Minor | Minor/Neutral | Neutral |
| Negligible | Neutral | Neutral | Neutral | Neutral |

Table 3: Impact Significance Matrix

2.2.7 The impact significance category for each identified archaeological site of interest will also be qualified, and recommended mitigation measures will be provided, where possible at this stage, to impacts that are of moderate significance or above; any measures to reduce any impact will be promoted in the report. It is also normal practice to state that impacts above moderate significance are regarded as significant impacts. It is important that the residual impact assessment takes into consideration the ability of the mitigation to reduce the impact, and its likely success.

2.2.8 It is also considered important to attribute a level of confidence by which the predicted impact has been assessed. For the purpose of this assessment, the criteria for these definitions are set out in the table below.

| Confidence in Predictions | |
|----------------------------------|---|
| Confidence Level | Description |
| High/Certain | The predicted impact is either certain, <i>ie</i> a direct impact, or believed to be very likely to occur, based on reliable information or previous experience, and may be estimated at 95% chance or higher. |
| Medium/Probable | The probability can be estimated to be above 50%, but below 95%. |
| Low/Unlikely | The predicted impact and its levels are best estimates, generally derived from the experience of the assessor. More information may be needed to improve the level of confidence, which can be estimated using the present information at above 5% but less than 50%. |
| Extremely Unlikely | The probability can be estimated at less than 5%. |

Table 4: Impact Prediction Confidence

3. BACKGROUND

3.1 LOCATION, TOPOGRAPHY AND GEOLOGY

- 3.1.1 The site lies approximately 1.5km south-east of Preston city centre, and 0.5km west of Walton-le-Dale village (NGR SD 55431 28396). Bounded by the river Ribble to the north and the river Darwen to the west and south, the site is situated upstream of the river confluence on a small alluvial plain known as The Flats. The moderately steep-sided Ribble valley is, at this point, relatively constricted, averaging less than 1km wide.
- 3.1.2 Separating the Ribble valley from that of the Darwen is a narrow ridge of millstone grit, upon which the village of Walton-le-Dale is situated. The edge of this ridge protrudes out into the south side of the Ribble valley, terminating approximately 500m to the east of the site at a height of 10m OD. From Walton-le-Dale church, which at 27m OD occupies the highest point of the ridge, the land falls away very steeply to the Ribble on the north side. On the south side, the surface falls away to the 20m OD contour and the river Darwen. Beyond the river Darwen a steep rise to over 30m OD leads to the edge of the central belt of the Lancashire and Amounderness Plain, which is characteristically a flat and gently rolling landscape (Countryside Commission 1998, 86). The Scheme Area, however, occupy a low-lying area (7-8m OD), referred to locally as The Flats, which formed part of extensive former water meadows that ran westwards along the Ribble valley towards Penwortham.
- 3.1.3 The underlying geology is that of the West Lancashire Plain, comprising Permian and Triassic New Red Sandstone, including Bunter and Keuper sandstones, overlain by a thick deposit of clays and gravels. The glacial drift, eroded by both rivers, is itself covered by largely freshwater alluvium (Crompton 1966).
- 3.1.4 Modern land-use of the area is varied. Land to the north of the Ribble has been absorbed by the modern expansion of Preston. Similarly, to the south of the Darwen, Bamber Bridge dominates this part of the previously heavily wooded Lancashire Plain. The mosslands to the west have been steadily drained and reclaimed since the early medieval period, and by the middle of the sixteenth century enclosure of the mosses was well under way. The Flats, however, has rarely been exploited for anything more intensive than seasonal pasture and water meadow until recent years; an early nineteenth-century tithe map shows the area as heath or rough grazing. Whilst it was used subsequently for market gardening, the area is now largely developed for commercial, retail, and leisure facilities. The proposed Scheme Area was occupied until recently by a nineteenth-century industrial complex, although this has now been demolished and the site comprises cleared waste-ground (Plate 1).

3.2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.2.1 The following section presents a summary historical background of the general area, and is presented by historical period (Table 5).

| Period | Epoch | Date Range |
|-------------------|--------------|--------------------|
| Prehistoric | Palaeolithic | 30,000 – 10,000 BC |
| | Mesolithic | 10,000 – 3,500 BC |
| | Neolithic | 3,500 – 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 – 1901 |
| Modern | | Post-1901 |

Table 5: Summary of British archaeological periods and date ranges

3.2.2 **Prehistoric period:** from 6000 BC Mesolithic hunter-gatherer activity in the North West region is increasingly evidenced from the pollen record. Direct evidence from Preston includes a mattock, fashioned from red deer antler, found on the bank of the Ribble and dated to c 5400 BC (Hunt 2003, 15). The enigmatic nineteenth-century Preston Dock finds also evidence prehistoric activity, with recent radiocarbon dates ranging between c 3820 BC to AD 890. The finds were made 20ft (6.1m) below the modern ground surface, and include a Neolithic greenstone axe and Bronze Age spearhead, together with finds of human skulls, and the bones of deer, cattle, horse and sheep. Two log-boats were also recovered from the vicinity (Fishwick 1900, 3ff; Hunt 2003, 16-7).

3.2.3 The only archaeologically excavated evidence of prehistoric settlement in Preston, however, is derived from Walton-le-Dale (LCC 2006, 17). Excavations carried out at Winery Lane in the 1980s and 1990s recovered Mesolithic and Neolithic flint tools and Bronze Age pottery (Gibbons *et al* forthcoming). Olivier (1988) described features consistent with spade cultivation, sealed by Roman levels, associated with large rectilinear ditched enclosures. It was concluded, however, that these features could belong to this period, or to the earliest phase of Roman activity.

3.2.4 **Romano-British period:** there have been several archaeological excavations of the Roman settlement on The Flats at Walton-le-Dale, although it remains difficult to estimate the full extent of the site due to post-Roman river action, which has probably caused some severe truncation of buried deposits; excavations would seem to suggest the Roman site has been eroded extensively by both the rivers Darwen and Ribble and that it may have been located on 'islands' above a height of 7.5m (OD 25" contour). Nevertheless, excavations have revealed the remains of a complex and significant Roman site, which survives over a considerable part of The Flats.

- 3.2.5 Modern excavations were undertaken initially by the late Ernest Pickering between 1947-57, and were sited to explore an area of disparate mid-nineteenth century antiquarian activity (Pickering 1957). The excavations exposed extensive Romano-British remains, interpreted by Pickering as a settlement dating from the late first to the third or fourth centuries AD. The results of these excavations suggest that the old channel of the river Darwen runs up to Flats Mill, returning more or less along the line of Winery Lane.
- 3.2.6 Further excavations were carried out in 1981-3 by the Cumbria and Lancashire Archaeological Unit (CLAU) in advance of the initial development of the Capitol Centre. These excavations were targeted on a parcel of land known as 'The Plump', formerly an orchard, to the immediate north of Winery Lane and within the Scheduled Area. Large areas were stripped, exposing mainly negative features, cut by, and bounded to the south and west, by deep erosion channels. Although this established the extensive survival of Roman remains, they were, on occasion, badly truncated by the subsequent erosion, suggesting that during the immediate post-Roman period, the local riverine environment had been somewhat dynamic (Olivier 1988). Archaeomagnetic dates on the silts, whilst not conclusive, suggest early medieval and later dates for this highly destructive activity.
- 3.2.7 A further programme of excavation was initiated in 1996, and focused on the area to the south of Winery Lane, adjacent to the east bank of the river Darwen. The site was less truncated than that excavated in 1981-3, with stratified third-century remains surviving intact. A prehistoric presence was also noted, with several flint tools of Mesolithic/Neolithic date and a few fragments of probable Bronze Age pottery. The earliest Roman feature on the site was the north/south road, of rammed gravel. Remains below the road suggest the area was scrub or wood before its construction. The first phase of occupation consisted of a series of large enclosures defined by ditches, of late first century date. One enclosure contained a circular structure, probably a shelter for the ovens or furnaces within it. They were succeeded in the early second century by an arrangement of pairs of large post-in-trench workshop buildings. These went through multiple alterations, with remains of five or six buildings identifiable on any one site (Gibbons *et al* forthcoming).
- 3.2.8 The combined results from these excavations have allowed an understanding of the chronology of the Roman occupation of the site. Activity seems to have begun in the late first century with the construction of a well-surfaced road (possibly King Street) which crossed the site diagonally, perhaps running north-eastwards towards the postulated site of the Roman river crossing, a little downstream of the present bridging point at Walton-le-Dale. Certain elements of the finds assemblage seem to hint at Neronian activity, but no structures of that date were recognised (Gibbons *et al* forthcoming). The main period of activity began in the late first century, continuing into the second, when a series of rectangular land parcels were laid out, following the orientation of the road. Many of these were occupied by substantial timber buildings of sill-beam construction, typical of military structures of the time. The buildings were probably open-fronted, built with the gable-end opening onto the road. All were closely associated with high temperature processes

(represented by numerous hearths), and perhaps as a result of the density of this industrial activity, the site appears to have been severely damaged by fire on at least one occasion. Subsequent phases of activity saw these buildings remodelled and then razed, and replaced in the third century by massive post-hole structures. These, from their layout and continuing association with high-temperature processes, are likely to have been of similar appearance and served the same purpose as their predecessors. As the original buildings appear to have fallen into disrepair, with only piecemeal modification, it has been suggested that the site fell into a relatively severe decline in the late second century, and the third-century rebuilding perhaps represents some renewed impetus, and can possibly be linked with the abandonment of the fort at Kirkham to the west (Howard-Davis and Buxton 2000) and a reorientation/rebuild of the fort at Ribchester to the east (Buxton and Howard-Davis 2000).

- 3.2.9 By the late third century the site was again in decline, and evidence from the 1996 excavations suggests a piecemeal abandonment of the buildings, with settlement perhaps contracting to its nucleus close to the river. It is unlikely that it retained its original industrial function by this point, but the remaining evidence is inconclusive. Severe post-Roman erosion seems to have removed any stratigraphic evidence for late Roman activity, although a small number of finds demonstrate that activity continued into the fourth century.
- 3.2.10 Since the publication of the interim results in 1982, 1983, and 1984 (Frere 1982, 352; 1983, 296-7; 1984, 284-6) the site has been interpreted as an industrial depot, under military supervision, but probably using 'civilian' labour. Like its closest counterpart, Wilderspool, to the south near Warrington, it was presumably integrated into the military supply network for the Roman North, perhaps both producing and redistributing a range of goods, including metalwork and pottery, by land and sea.
- 3.2.11 Rich finds and environmental assemblages recovered from the site again point to military or military-controlled activity, and there is a marked contrast between high status artefacts, for instance the strong representation of decorated samian wares and fine glass tablewares, and the evidence for the animal bone assemblage, described as providing meat of no more than 'soup kitchen' quality (SM Stallibrass pers comm.). This contrast has raised the possibility of a production site, perhaps manned by slaves, but overseen by the military administration.
- 3.2.12 There is little doubt that the original site was very large, and its full extent remains unknown, although it seems the 1981-3 excavations explored part of its nucleus (growth to the north and west being restricted by the rivers Ribble and Darwen respectively), whilst those of 1996 explored its approximate southern extent, as 'dirty' industries such as potting, were normally sited towards the periphery of a settlement.
- 3.2.13 Archaeological work carried out elsewhere in the vicinity has demonstrated an absence of Roman remains. A watching brief undertaken in 1983 during the construction of the Walton-le-Dale by-pass to the immediate south of the site produced little evidence of Roman activity. Similarly, in 1988, 15 trenches

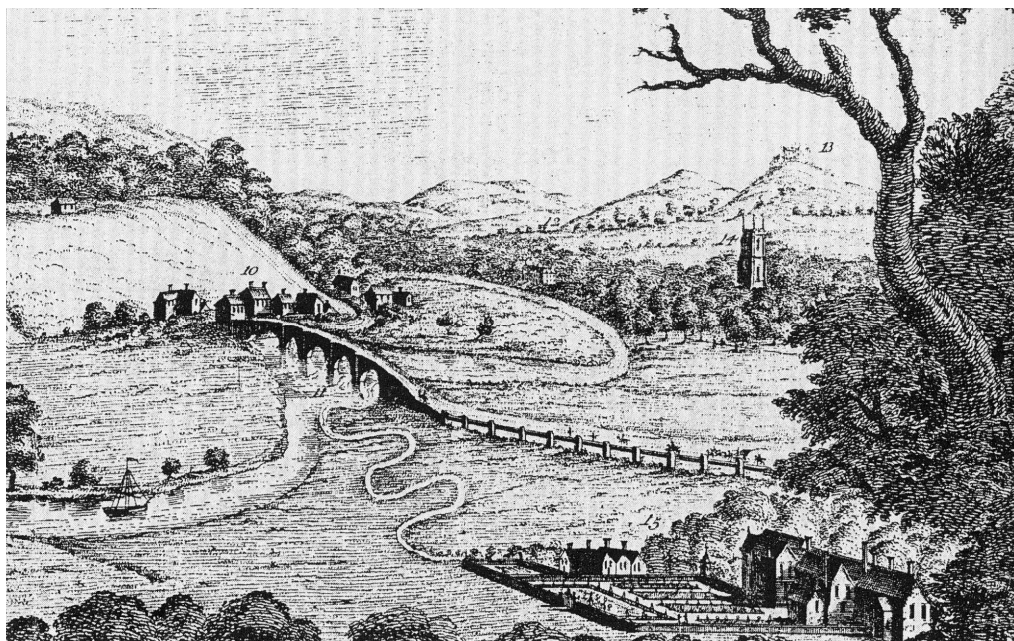
were excavated on land to the south of Winery Lane. These were sited to examine the interface of known archaeological deposits, as identified by Pickering, and the areas of alluvial silts. The results obtained from this work demonstrated that the extent of archaeological remains was rather less extensive than the area scheduled as an Ancient Monument. Consequently, additional trenches were excavated outside the site as defined by trenching, but within the Scheduled Area, to ensure that there was little or no possibility of additional discrete areas of archaeological strata surviving outside the identified area of Roman activity. These trenches revealed uniform and deep deposits of alluvial silt, excavated by machine to a depth of up to 2.5m.

- 3.2.14 In 1990, the then Lancaster University Archaeological Unit (LUAU) was commissioned to undertake an archaeological evaluation in advance of a proposed development on enclosed land to the north of Winery Lane. In total, seven trenches were mechanically excavated, all partially or wholly located within the area designated as a Scheduled Ancient Monument. Trenches 1 and 2, located in the north of the site, revealed modern landfill deposits cutting into the uppermost horizons. Below these, deep alluvial silt deposits were identified extending along the entire 60m length of the trenches, implying that any stratified Roman archaeological deposits in this area had been completely removed by post-Roman river action. The remaining trenches were excavated in the south of the site, across the 7.5m contour. Each of these trenches revealed the anticipated river erosion slope. The stratigraphy to the north of the erosion slope consisted of topsoil sealing alluvial silt of no archaeological value. South of the erosion slope however, Roman horizons were encountered along the length of the trenches. The mapping of these deposits demonstrated that the extent of archaeological survival on the site closely echoed the existing Scheduled Area.
- 3.2.15 The evaluation demonstrated that Roman stratigraphy survived in this area, although the proximity to the surface of the upper horizons meant that they were extremely fragile. Archaeological preservation appeared to be at its greatest in the west of the site, with the Roman levels becoming successively more truncated towards the east. This confirmed the findings of the 1981-3 excavations, which demonstrated that the Roman stratigraphy was more extensive west of the evaluation area, generally decreasing to the east.
- 3.2.16 A further programme of archaeological evaluation was carried out on land to the north of Winery Lane by LUAU in 1996. Two trenches were located to the immediate north of the Scheduled Area, designed to determine the presence of any archaeological deposits and, in particular, whether the north/south-aligned Roman road existed within the development area. The other two trenches were located to the north-west of the Scheduled Area on a slightly higher area of land where it was considered that archaeological deposits may have survived *in-situ* unaffected by the fluvial erosion.
- 3.2.17 The profiles of all the evaluation trenches revealed naturally deposited alluvial silts and sands sealed by topsoil. The alluvial silts extended to a depth of at least 1.2m below the present ground surface. The only archaeological deposits revealed were located in the upper disturbed horizons of silt and topsoil, and dated to the later nineteenth and twentieth centuries. The complete absence of

Roman features and artefacts clearly demonstrated the level of post-Roman fluvial erosion in the area.

- 3.2.18 **Early medieval:** the post-Roman period is not well-evidenced in Lancashire. The etymology of waterways in the region, including the Savick Brook and river Ribble, suggest an initial occupation by indigenous British populations. Subsequent Anglo-Saxon cultural influence in the early medieval period (sixth to ninth centuries), if not actual population displacement, is suggested by place-names, including Preston, ‘the town of the priest’ and Fishwick, ‘fish market’ (Hunt 2003, 31). ‘Walton’ is also derived from the Old English ‘wahl’ and ‘tun’, meaning the farmstead of the Britons (Ekwall 1922, 68). In AD 670, grants of ‘the lands by the Ribble’ were made to Wilfrid’s abbey at Ripon, which may have included the Preston region, by this time part of the Anglo-Saxon Kingdom of Northumbria (Fishwick 1900, 8; Farrer and Brownbill 1912, 72).
- 3.2.19 There is some documentary evidence to suggest that the river Ribble formed an important communication route inland for the tenth-century Scandinavian communities in Dublin and York (LCC 2006, 1). Physical evidence for a Scandinavian presence in the area has been provided by the Cuerdale Hoard, thought to represent the treasury of a war band, which was discovered close to Walton-le-Dale. However, there is no evidence for archaeological remains of this period in the vicinity of the present study area, although it is possible that the Roman site on The Flats continued in use into the fifth and sixth centuries AD (Gibbons *et al* forthcoming).
- 3.2.20 Preston’s regional significance by the time of the Norman Conquest is attested by its position as the head of the Amounderness Hundred (Farrer and Brownbill 1912, 99ff). The Hundred (the territorial delimitation that preceded the borough) is first recorded in King Aethelstan’s gift of land to St Peter’s church, York, dated *c* 930 (Fishwick 1900, 10). At the time of the Domesday survey in 1086, the Hundred was registered as part of Yorkshire, a legacy of its Northumbrian heritage, being held prior to the Conquest by the ill-fated Earl Tosti (*op cit*, 11).
- 3.2.21 **Medieval period:** Preston was granted Royal Borough status in a charter of the early twelfth century, issued by Roger de Poitou (Knight 1986). Following Roger’s part in the rebellion against Henry I, the borough, part of the Honour of Lancaster, was forfeited to the Crown. The Honour remained under royal control until its alienation during the fifteenth-century Wars of the Roses.
- 3.2.22 Evidence for medieval settlement in Walton-le-Dale is provided by a reference to the chapel that was granted to the church of Blackburn in 1166 (Coupe 1954, 70). There was also a small chapel by the bridge across the Ribble, which was in existence by 1365 (Farrer and Brownbill 1912, 299). There are records pertaining to the construction of a timber bridge over the river Ribble: in 1302 a right to levy tolls was granted, and in 1403, an order was placed for the construction of a stone bridge alongside the timber bridge (*ibid*).

- 3.2.23 **Post-medieval period:** in the seventeenth and eighteenth centuries, Preston emerged as a prosperous legal and administrative centre, attracting the residences of local aristocracy and professionals (Morgan 1990, 27). It was also a focus for conflict; during the English Civil War, battles were fought in and around the town. During the First Civil War, Preston was taken by the Parliamentarians in February 1643, to be recaptured by the Cavaliers in June (Hunt 2003, 35-6). A second confrontation took place during the Second Civil War, when the Battle of Preston was fought on 17th August 1648. This large battle with a heavy toll of casualties ended with a 'push of pike' on the Ribble Bridge, followed by securing the Darwen Bridge. Ribble Bridge (Site 03) was the site of another battle, against the Jacobites in 1715, which proved to be the turning point in their rebellion (Farrer and Brownbill 1912, 290).
- 3.2.24 Walton-le-Dale remained a rural settlement throughout the post-medieval period, providing a central focus for settlement in the surrounding villages and hamlets in the township, although the production of textiles, particularly woollens and linen, became increasingly important to the local economy during the seventeenth century, and the village developed as a nucleated settlement. By 1684, the settlement occupied both sides of the river Darwen, whilst a widening of the road on the north bank of the river suggests a market place (LCC 2006, 25). The importance of the Ribble as a transport route during this period is reflected in the erection of two warehouses on the south bank of the river by 1785 (LRO DDH 11).



An extract from S and N Buck's Prospect of Preston of 1728, showing Walton-le-Dale

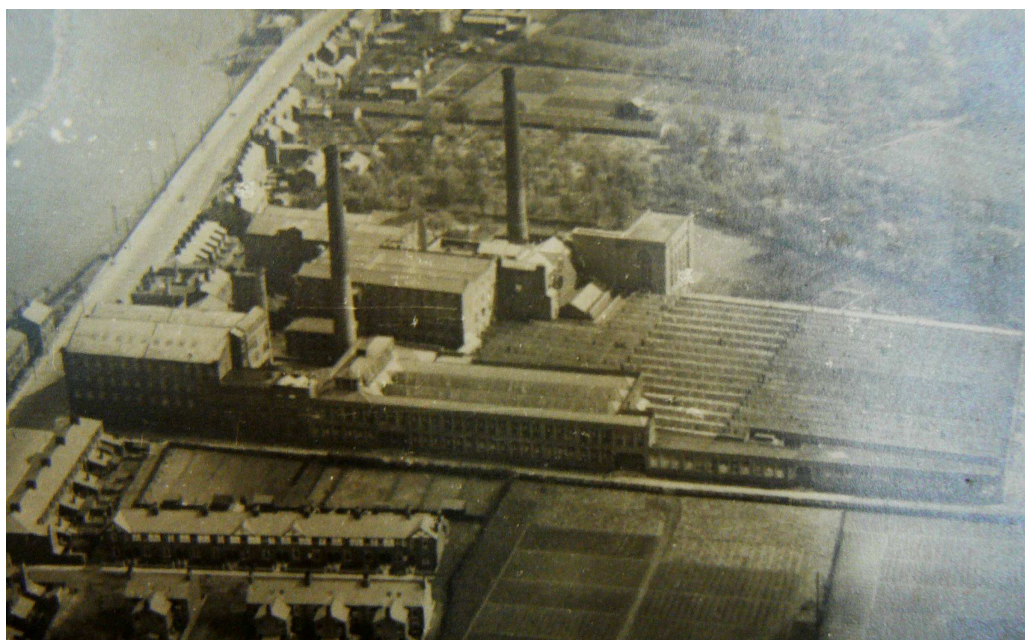
- 3.2.25 During the nineteenth century, Walton-le-Dale expanded as ribbon development along the main roads. The historic core of the settlement was developed with densely packed houses, reflecting the growth of handloom weaving in domestic workshops; the houses along Victoria Road developed from the late eighteenth century, and incorporated loomshops or weaving cellars (Hunt 1997, 73).

- 3.2.26 **Flats Mill:** this textile factory (Site 05) was established in the 1820s by William Calvert, and expanded progressively to become the largest cotton manufacturing complex in the district by the middle of the century (Hunt 1997, 128). The original mill was relatively small, occupying a site at the edge of development along Victoria Road, and only extending a short distance onto The Flats; whilst the mill complex was to expand and occupy the proposed Scheme Area entirely by the 1890s, much of the earliest elements of the site lay to the east.
- 3.2.27 It is unclear precisely when the mill was built, although William Calvert is listed in a trade directory for 1825 as a ‘cotton manufacturer’. Most of the mill was of wooden-beam construction, but the ground-floor ceiling was of the fireproof type, leading Dickinson (1981, 5) to suggest that it may have been the first example of a mill in Preston to incorporate fireproof-construction techniques. It seems that the mill was equipped with hand-powered machinery, as the first engine, a single-cylinder beam engine, was not installed until 1838 (Dickinson 2002, 128). The Census Returns for 1841 list William Calvert as a ‘master cotton spinner’, as gives his residential address as Walton House, which lay next to Flats Mill.
- 3.2.28 By the early 1880s, a second mill had been built on the site, and a large single tandem compound steam engine built by Musgraves of Bolton was installed in 1882 (*ibid*). By this date, Flats Mill had the highest mule spindleage on a single site in the Preston district, with 151,146 spindles, together with 2544 looms (Hewitson 1883). The site features in a nineteenth-century engraving of Walton-le-Dale, which clearly shows the mill complex to have dominated the village. The engraving shows two multi-storey blocks, probably representing the preparatory and spinning floors, each with a dedicated steam-power plant, and associated single-storey buildings, which were presumably the weaving sheds. The earliest mill is shown to the rear, and is seemingly of four storeys with a multi-ridge roof, which became more common as the width of spinning mills increased in the second half of the nineteenth century (Williams with Farnie 1992, 82). The spinning department produced medium counts (30s and 40s) twist and weft (Worrall 1891, 169).



Nineteenth-century engraving of Walton-le-Dale, showing Flats Mill

- 3.2.29 The power transmission to the mills from each of the engines was via geared drives (Dickinson 2002, 130), rather than adopting the newer and more efficient system of rope drive, which became increasingly popular in textile mills from the 1870s (Williams with Farnie 1992, 118). The steam for the four engines was generated in a total of nine boilers, four of which were built by Stevensons in 1872, and the other five manufactured by Adamson in 1885 (Dickinson 2002, 130).
- 3.2.30 The mill's weaving capacity was increased dramatically in the later 1890s, when a new weaving shed housing some 2000 looms was added to the site. This was powered by a single crank vertical compound engine, built by Musgraves and put into steam in 1899 (*ibid*). The mill complex closed in 1931, when William Calvert & Sons Ltd collapsed, having experienced financial difficulties since the late 1920s (Harrison 1992, 28-30). The mill buildings were let for multiple occupancy, although an aerial photograph taken in 1937 depicts an intact textile-manufacturing complex.



Aerial view of Flats Mill taken in 1937

- 3.2.31 In July 1938, shortly after the aerial photograph was taken, the second mill block, occupying the northern corner of the site, was devastated by fire; this part of the site was rebuilt by the Ribble Paper Mills Ltd.

3.3 MAP REGRESSION ANALYSIS

- 3.3.1 The earliest map to show the Scheme Area in detail is that produced by Robert Porter in 1738 (Fig 3). This shows the original course of the river Darwen prior to its canalisation, taking a tight meander across The Flats. The study area is shown to be undeveloped, occupying land subject to flooding. The next available map to show the study area is that produced by William Yates in 1786 (Fig 4). This similarly depicts the study area as undeveloped, although a large building is shown to have been erected on The Flats immediately to the north-west. Significantly, Yates' map shows the river Darwen to have been

canalised, removing the meander across the Flats. Subsequent mapping, including Hennet's *Map of the County Palatine of Lancashire*, produced in 1828-9 (Fig 5), shows some low-level development of the study area, although the scale is too small to furnish any detail. A tithe map produced in 1839 (Fig 6), however, clearly shows the plot that was to be developed by William Calvert to have been laid out, and the earliest elements of his mill complex to have been built adjacent to the Victoria Road frontage.

- 3.3.2 In 1849, the Ordnance Survey published their First Edition 6": 1 mile map, which shows the study area in detail (Fig 7). This shows William Calvert's Flats Mill, representing the only industrial activity in the area, with the remainder of The Flats being used largely for market gardening and horticulture. The detail of the map does not provide any information relating to the internal layout of the mill. Entries in trade directories list William Calvert as a 'cotton manufacturer (3.2.27 above), implying that his business comprised the spinning and weaving of cotton, which will have required preparatory and spinning blocks, and weaving sheds. The L-shaped range immediately to the east of the present study area is likely to have been the preparatory and spinning blocks, implied by their size and rectangular shapes, with the irregularly shaped building to the west representing the weaving shed. The small, detached building to the south-east, and lying within the proposed Scheme Area, may represent the steam-power plant, as its position would enable it to power the spinning and weaving blocks. The small circular features immediately to the east may be firmly identified as the mill chimney.
- 3.3.3 By 1893, the mill complex had expanded considerably, as shown on the Ordnance Survey First Edition 25": 1 mile map of that year (Fig 8). The detail provided by this map implies that the steam-power plant was sited to the south-east of the main mill block, as a chimney is shown in that area. The subsequent edition of Ordnance Survey mapping, published in 1912 (Fig 9), shows the mill complex to have been expanded further, with a large addition to the weaving sheds at the south-western end. An additional building also appears to have been added to the steam-power plant, presumably representing the installation of a new engine; the footprint of this new building lies beyond the boundary of the study area.
- 3.3.4 The next edition of Ordnance Survey mapping, published in 1932, shows no change to the layout of the mill (Fig 10), whilst the edition published in 1938 (Fig 11) no longer marks it as a cotton mill, indicating that it had ceased to be used for textile manufacturing.

4. GAZETTEER OF SITES

| | |
|--------------------------|---|
| Site Number | 01 |
| Site Name | PRN11 Winery Lane, Walton-le-Dale |
| HER Number | SM 28069 |
| Stat. Designation | Scheduled Ancient Monument |
| Site Type | Roman military industrial site |
| Period | Roman |
| NGR | SD55143 28248 |
| Description | In 1855 workmen digging for stones in a mound called the Plump (SD 55132826) uncovered first and second century Roman coins, pottery and a foundation wall. More coins and pottery were found at SD 55132812 in 1858. Excavations by Pickering on both sites between 1947 and 1957 revealed two phases of timber buildings (dated from pottery and coins found). Excavation of the site by the Cumbria and Lancashire Archaeological Unit in 1981-3 showed the site to have been a major military industrial establishment and settlement, founded in the first century and continuing in use, probably as a supply base for Roman garrisons in the North West, until the third century. The site seems to have comprised a north/south-aligned road, bounded by substantial rectangular timber buildings containing wells and furnaces. These buildings were later replaced by another layout of rectangular timber buildings. The excavations established that there are extensive areas of surviving archaeological deposits. A prehistoric presence was also noted, with a number of flint tools of Mesolithic/Neolithic date and a few fragments of probable Bronze Age pottery. |
| Assessment | The site is considered to be of National Importance, reflected in the designation of parts of the site to the north of Winery Lane as a Scheduled Ancient Monument. The proposed Scheme Area lies beyond the Scheduled Area, and whilst any negative archaeological impact on the site should be avoided, the proposed scheme is unlikely to have an impact. |

| | |
|--------------------------|---|
| Site Number | 02 |
| Site Name | Walton Bridge, Walton-le-Dale |
| HER Number | PRN1429 |
| Stat. Designation | None |
| Site Type | Monument Chapel (Site of) |
| Period | Chapel (LCC Date1: 1365, Medieval - 1365 AD) |
| NGR | SD 55280 28640 |
| Description | In 1365 John, the Hermit of Singleton was licensed to have divine service in the chapel at the foot of Ribble Bridge on the Walton side, for three years. Thomas de Clayton, chaplain, occurs in 1383, and in 1387 received license to celebrate in the chapel at the end of Ribble Bridge 'beyond the bank of the Ribble'. There are no traces to be seen of the chapel on the south |

Assessment bank, or the bridge.
The site is considered to be of Local/Borough Importance, but does not have any legal designation. It lies beyond the boundary of the proposed Scheme Area, and development is unlikely to have an archaeological impact.

Site Number 03
Site Name Old Bridge, Walton-le-Dale
HER Number PRN3671
Stat. Designation None
Site Type Site of Road Bridge (Site of), 1625
Period Post-medieval
NGR SD 55250 28680
Description The bridge stood some 80m below the present one, and was the only bridge over the river Ribble near Preston until 1755. It was probably built in 1625 (a stone inscribed PB 1625 is near the end of the wall which runs alongside the river). This bridge was preceded by an earlier one described by Leland as having five great arches. The former line of the bridge is shown on the OS first edition 1:10,560 map, sheet 61, published in 1849.
Assessment The site is considered to be of Local/Borough Importance, but does not have any legal designation. It lies beyond the boundary of the proposed Scheme Area, and development is unlikely to have an archaeological impact.

Site Number 04
Site Name The Flats, Walton-le-Dale
HER Number PRN3905
Stat. Designation None
Site Type Aerial Photograph Site
Period Roman
NGR SD 55185 28207
Description The aerial photographs show the site of the excavations (Olivier 1981-83). Curvilinear bank is visible and traces of a pale cropmark in the adjacent field.
Assessment The site is considered to be of Local/Borough Importance, but does not have any legal designation. It lies beyond the boundary of the proposed Scheme Area, and development is unlikely to have an archaeological impact.

Site Number 05
Site Name Flats Mill, Higher Walton
HER Number PRN6489
Stat. Designation None
Site Type Textile Mill
Period Post-medieval
NGR SD 55431 28396

| | |
|--------------------|--|
| Description | Flats Mill is shown on the OS first edition 1:10,560 map of 1849. On the current sheet it appears to be part of a larger complex called Higher Walton Mill. Higher Walton Mill consists of two earlier buildings with cast iron pillars and timber beams on the upper floors. There is an early 20 th -century extension, a weaving shed for 2,000 looms. The mill is listed in a trade directory for 1891 as William Calvert & Sons, cotton spinners and manufacturers, who also operated Aqueduct and India Mills in Preston. 150, 566 spindles, producing medium counts (30s and 40s) twist and weft, and 2,456 looms (Worrall 1891, 169). William Calvert & Sons Ltd is similarly listed in a directory for 1917 (Barrett 1917, 386). |
| Assessment | The site is considered to be of Local/Borough Importance, but has no legal designation. It lies within the Scheme Area and is likely to be affected by the development. In particular, the sites of the original steam-power plant and its late nineteenth-century successor lie within the southern part of the Scheme Area. |

| | |
|--------------------------|--|
| Site Number | 06 |
| Site Name | Yew Tree Inn, 100 Victoria Road |
| HER Number | PRN8993 |
| Stat. Designation | Grade II Listed Building (Lancashire 5-138) |
| Site Type | Inn |
| Period | Post-medieval |
| NGR | SD 55599 28352 |
| Description | Inn, probably dating to the late eighteenth century or early nineteenth century, with rendered brick, stone dressings and a slate roof. Double pile plan; three storeys, symmetrical five-bay front, pilastered doorcase with open pediment and fanlight with radiating glazing bars; windows, all tall casements with glazing bars and stone sills. Left gable has very small two-light window at apex. |
| Assessment | The site is considered to be of Regional/County Importance, and is designated a Listed Building. It is beyond the boundary of the Scheme Area, and is unlikely to be affected by the development. |

| | |
|--------------------------|---|
| Site Number | 07 |
| Site Name | Walton Bridge (Ribble Bridge), Victoria Road, Walton-le-Dale |
| HER Number | PRN8994 |
| Stat. Designation | None |
| Site Type | Monument; eighteenth-century bridge |
| Period | Eighteenth century |
| NGR | SD 55286 28713 |
| Description | Bridge over River Ribble, built in 1779-81 by JS and R Laws, much widened on the west side 1939-50 by Ormerod and Shields. Stone. V-shaped cutwaters; three long segmental arches with rusticated voussoirs flanked by stepped pilasters; dentilled cornice and plain parapet moulded on the top. Replaced an earlier |

bridge, which was *c* 80m downstream; site of earliest and, until 1755, only bridge at Preston.

Assessment The site is considered to be of Local/Borough importance but has no legal designation. It is beyond the boundary of the Scheme Area and is unlikely to be affected by the development.

Site Number 08
Site Name Wigan to Lancaster Roman Road (Margary 70d)
HER Number PRN15531
Stat. Designation None
Site Type Road
Period Roman
NGR SD 53792 31767
Description From Walton-le-Dale to Broughton the projected route of the Roman road from Wigan to Lancaster passes through the built-up area of Preston and its suburbs. No trace has been recorded that would enable its line to be accurately fixed, but an approximation has been suggested, crossing the river and running up Manchester Road, and thence north-north-west to cross the Ribchester-Kirkham route east of the A6 junction and on to Broughton.

Assessment The site is considered to be of Regional/County Importance but has no legal designation. It lies beyond the boundary of the Scheme Area and is unlikely to be affected by the development.

Site Number 09
Site Name Bridge Inn, Bridge Bank, Walton-le-Dale
HER Number PRN22688
Stat. Designation None
Site Type Inn
Period Post-medieval
NGR SD 55300 28617
Description Pre-1849 Inn.

Assessment The site is considered to be of Local/Borough importance but has no legal designation. It is beyond the boundary of the Scheme Area and is unlikely to be affected by the development.

Site Number 10
Site Name Fountain, east of London Way near the junction with Victoria Road, Walton-le-Dale
SMR Number PRN20735
Stat. Designation None
Site Type Fountain
Period Post-medieval
NGR SD 55534 28374
Description Post-1848 fountain, east of London Way near junction with Victoria Road, Walton-le-Dale. No longer extant.

Assessment The site is considered to be of Low Local importance, and has no

legal designation. It lies outside the Scheme Area and is unlikely to be affected by the development.

| | |
|--------------------------|---|
| Site Number | 11 |
| Site Name | Well, south-west of Flats House, Winery Lane, Walton-le-Dale |
| SMR Number | PRN21650 |
| Stat. Designation | None |
| Site Type | Well |
| Period | Post-medieval |
| NGR | SD 55055 28404 |
| Description | Post-1849 well. No longer extant. |
| Assessment | The site is considered to be of Low Local importance and has no legal designation. It lies outside the Scheme Area and is unlikely to be affected by the development. |

| | |
|--------------------------|---|
| Site Number | 12 |
| Site Name | Nursery, south-west of Flats House, Winery Lane, Walton-le-Dale |
| HER Number | PRN21651 |
| Stat. Designation | None |
| Site Type | Nursery Garden |
| Period | Post-medieval |
| NGR | SD 55124 28317 |
| Description | Post-1849 nursery gardens. No longer extant. |
| Assessment | The site is considered to be of Low Local importance and has no legal designation. It lies outside the Scheme Area and is unlikely to be affected by the development. |

| | |
|--------------------------|---|
| Site Number | 13 |
| Site Name | Well, near the south corner of the Health and Leisure Centre, Winery Lane, Walton-le-Dale |
| HER Number | PRN21652 |
| Stat. Designation | None |
| Site Type | Well |
| Period | Post-medieval |
| NGR | SD 55141 28145 |
| Description | Post-1849 well. No longer extant. |
| Assessment | The site is considered to be of Low Local importance and has no legal designation. It lies outside the Scheme Area and is unlikely to be affected by the development. |

| | |
|--------------------------|--|
| Site Number | 14 |
| Site Name | Gas Works, west of Grove Road, off Victoria Road, Walton-le-Dale |
| HER Number | PRN22687 |
| Stat. Designation | None |

| | |
|--------------------|--|
| Site Type | Gas Works |
| Period | Post-medieval |
| NGR | SD 55247 28585 |
| Description | Post-1849 Gas Works. No longer extant. |
| Assessment | The site is considered to be of Local/Borough importance but has no legal designation. It is beyond the boundary of the Scheme Area and is unlikely to be affected by the development. |

5. SIGNIFICANCE OF THE REMAINS

5.1 INTRODUCTION

5.1.1 In total, one site of archaeological interest, Flats Mill (Site 05), has been identified within the proposed Scheme Area, and an additional 13 known sites lie in the immediate environs, including a Scheduled Ancient Monument (SM 28069) and a Listed Building (Fig 2). However, the proposed development will not have a negative impact on the setting of either of these designated sites, as it is encompassed by modern development.

5.2 CRITERIA

5.2.1 The archaeological site within the proposed Scheme Area does not have any legal designation, although there are several 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 previously listed (*Section 4, above*) were each considered using the criteria, with the results below.

5.2.2 **Period:** it is considered most likely that any buried archaeological remains that survive across the Scheme Area will pertain to the nineteenth-century textile mill. The possibility for some Roman remains to survive *in-situ* at depth below the modern ground surface cannot be discounted entirely, although this is considered unlikely; the mill is not thought to have incorporated a basement, although its construction will nevertheless have required considerable earth-moving works, which will have destroyed any buried archaeological remains close to the surface.

5.2.3 **Rarity:** physical evidence for the remains of steam-power plant features dating to the first half of the nineteenth century are of regional rarity. Other elements of the mill, including its early use of fireproof-construction techniques, may also be considered as rare in the region, although the physical evidence for this was destroyed during the demolition of the mill.

5.2.4 **Documentation:** the historical development of the study area from the nineteenth century can be traced reasonably well from cartographic and other primary sources. Further documentary research may furnish additional evidence for the development of Flats Mill, including more precise dating of the construction of the relevant buildings, although this is unlikely to alter the outline presented in this assessment.

5.2.5 **Survival/Condition:** previous archaeological interventions within the immediate vicinity of the Scheme Area have demonstrated a good survival of buried Roman remains, which have been in remarkably good condition. However, the construction of Flats Mill will almost certainly have destroyed any buried remains on the site. Conversely, the buried remains of the mill are

likely to survive below the modern ground surface, although their extent and condition can only be ascertained by intrusive investigation.

5.2.6 **Diversity:** the site within the Scheme Area relates exclusively to textile manufacturing activity in the nineteenth and twentieth centuries. As an integrated spinning and weaving complex, however, the site housed a diverse range of textile-manufacturing processes, and a sequence of steam plant infrastructure.

5.2.7 **Potential:** all sites have the potential to reveal specific information that is not available from other sources. In particular, however, Flats Mill has some potential to provide information on the development of its nineteenth-century steam-power plant.

5.3 SIGNIFICANCE

5.3.1 The archaeological site (Site **05**) identified within the boundary of the Scheme Area is considered to be of Local/Borough significance. In particular, any surviving elements of the steam-power plant, and especially that installed originally during the first half of the nineteenth century, would be considered as being archaeologically significant.

6. ARCHAEOLOGICAL POTENTIAL AND IMPACT

6.1 POTENTIAL

- 6.1.1 In its Planning Policy Guidance *Note 16*, the Department of the Environment (DoE) advises that archaeological remains are a continually diminishing resource and ‘should be seen as finite, and non-renewable resource, in many cases, highly fragile and vulnerable to destruction. Appropriate management is therefore essential to ensure that they survive in good condition. In particular, care must be taken to ensure that archaeological remains are not needlessly or thoughtlessly destroyed’. It has been the intention of this study to identify the sub-surface archaeological potential of the study area, and assess the impact of redevelopment, thus allowing the advice of the DoE to be enacted upon.
- 6.1.2 The desk-based assessment has identified a low potential for prehistoric remains to survive *in-situ* on The Flats; locations such as river confluences are favoured for later prehistoric activity, and the discovery of later prehistoric artefacts during previous excavations suggests some activity. The assessment has also concluded that there is considerable potential for buried remains of a Roman date to survive on The Flats, although the present Scheme Area is some distance to the east of known remains. Moreover, the study area was been entirely built upon in the nineteenth century, and any archaeological remains will undoubtedly have been truncated or destroyed to some degree by this building. Similarly, the assessment has identified no known features of medieval date within the boundary of the Scheme Area, and the potential for these features to be present within the Scheme Area is considered to be low.
- 6.1.3 Conversely, the Scheme Area has considerable potential to contain archaeological features dating from the nineteenth century, and specifically the buried remains of a former textile-manufacturing complex. The importance of any remains relating to this site would be at least of Local Importance, although elements could be considered to be of Borough Importance. In particular, any surviving remains of the early or mid-nineteenth-century steam-power plant would be of archaeological significance.

6.2 IMPACT ASSESSMENT

- 6.2.1 Construction impacts on buried remains would include any operations involving ground disturbance, such as landscaping, levelling, and installation of service trenches and foundations. Impacts from ground disturbance are frequently adverse, permanent and irreversible, whilst those from other construction activities will be more varied. Following on from the above considerations, the significance of impact is summarised in Table 6.

| Site Number | Importance | Impact | Significance of Impact |
|-------------|-----------------|-------------|------------------------|
| 01 | National | Negligible | Neutral |
| 02 | Local/Borough | Negligible | Neutral |
| 03 | Local/Borough | Negligible | Neutral |
| 04 | Local/Borough | Negligible | Neutral |
| 05 | Local/Borough | Substantial | Intermediate |
| 06 | Regional/County | Negligible | Neutral |
| 07 | Local/Borough | Negligible | Neutral |
| 08 | Regional/County | Negligible | Neutral |
| 09 | Local/Borough | Negligible | Neutral |
| 10 | Low Local | Negligible | Neutral |
| 11 | Low Local | Negligible | Neutral |
| 12 | Low Local | Negligible | Neutral |
| 13 | Low Local | Negligible | Neutral |
| 14 | Local/Borough | Negligible | Neutral |

Table 6: Assessment of the archaeological impact significance on each site

7. CONCLUSION

7.1 CONCLUSION

- 7.1.1 Current legislation draws a distinction between archaeological remains of national importance and other remains considered to be of lesser significance. Those perceived to be of national importance may require preservation *in-situ*, whilst those of lesser significance may undergo preservation by record, where Local/Borough or Regional/County significance can be demonstrated. Preservation by record includes a requirement to consider the stabilisation and storage of any artefacts recovered from the site; the conservation and long-term storage of Roman and medieval waterlogged artefacts would require considerable funding.
- 7.1.2 The desk-based assessment has demonstrated that the Scheme Area has a potential to contain buried archaeological remains of Local/Borough Importance, which may require preservation by record should they be directly affected by future development proposals. The scope and specification of any archaeological recording required in advance of redevelopment would be devised in consultation with the Historic Environment Planning Officer for Lancashire. However, in general terms, it is anticipated that, in the first instance, a programme of targeted archaeological evaluation may be required. The primary objectives of any such evaluation would be to establish to presence, character, date and extent of any buried archaeological remains. In particular, the evaluation should be targeted on the buried remains of the mill's steam-power plant.

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9. ILLUSTRATIONS

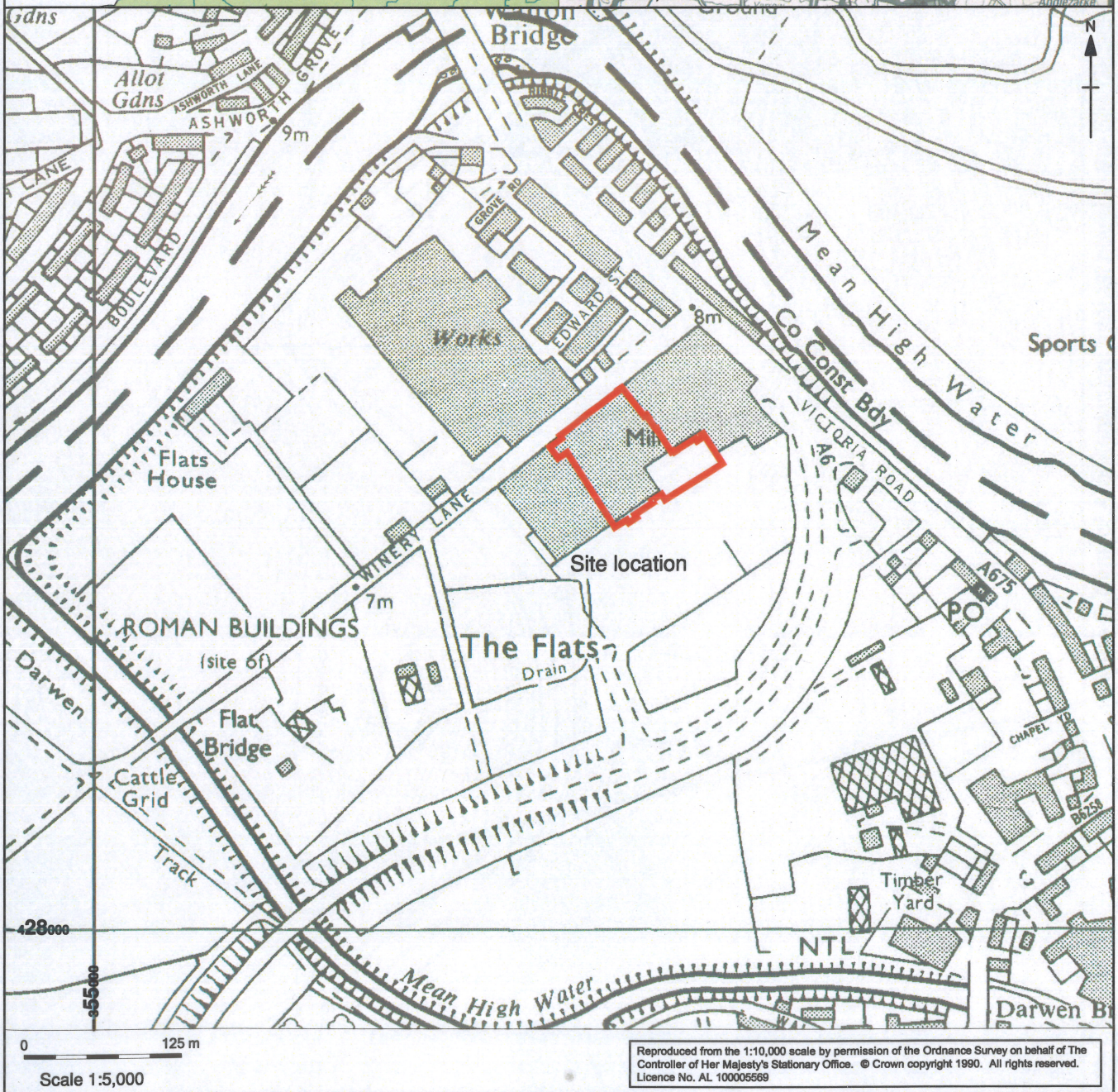
9.1 FIGURES

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9.2 PLATES

Plate 1: View looking north-east across the proposed Scheme Area

Plate 2: View looking east across the proposed Scheme Area



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Figure 1: Site Location



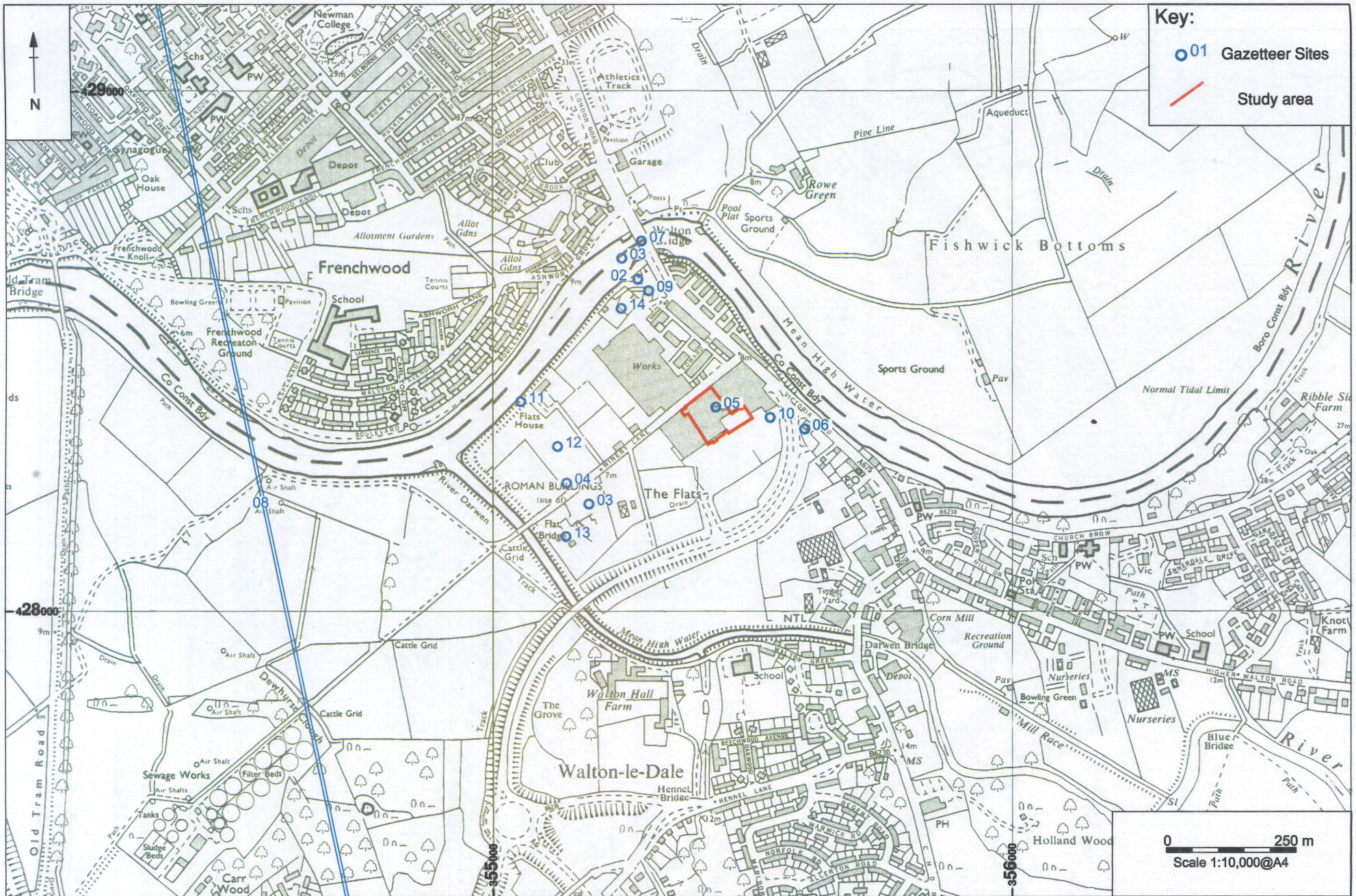




Figure 3: Extract from Porter's Map of 1738



Figure 4: Extract from Yates' map of Lancashire, 1786



Figure 5: Extract from Hennet's Map of the County Palatine of Lancashire, 1828-9

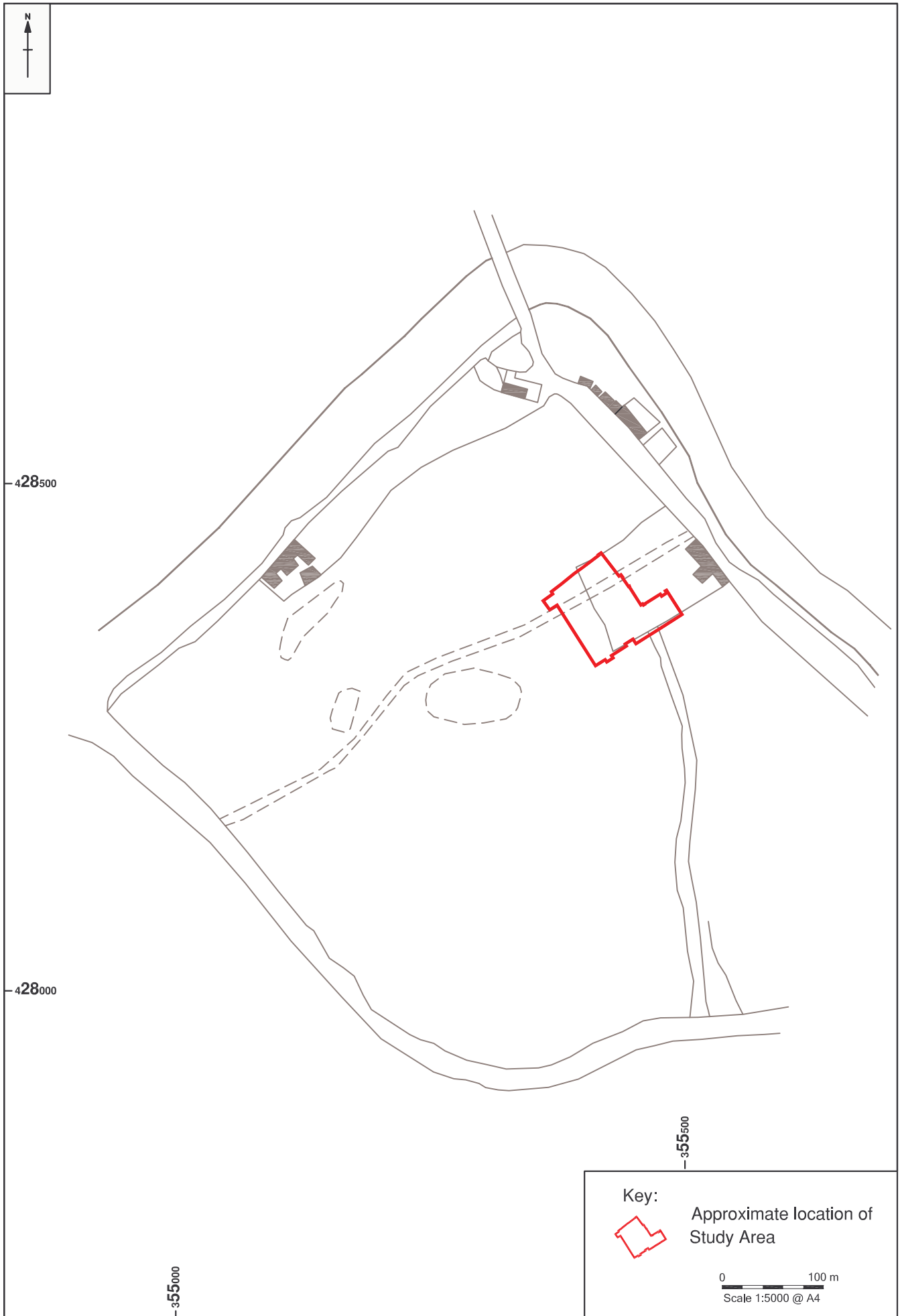


Figure 6: Extract from a tracing of the Tithe map, 1839



Figure 7: Extract from the Ordnance Survey First Edition 6":1 mile map, 1849

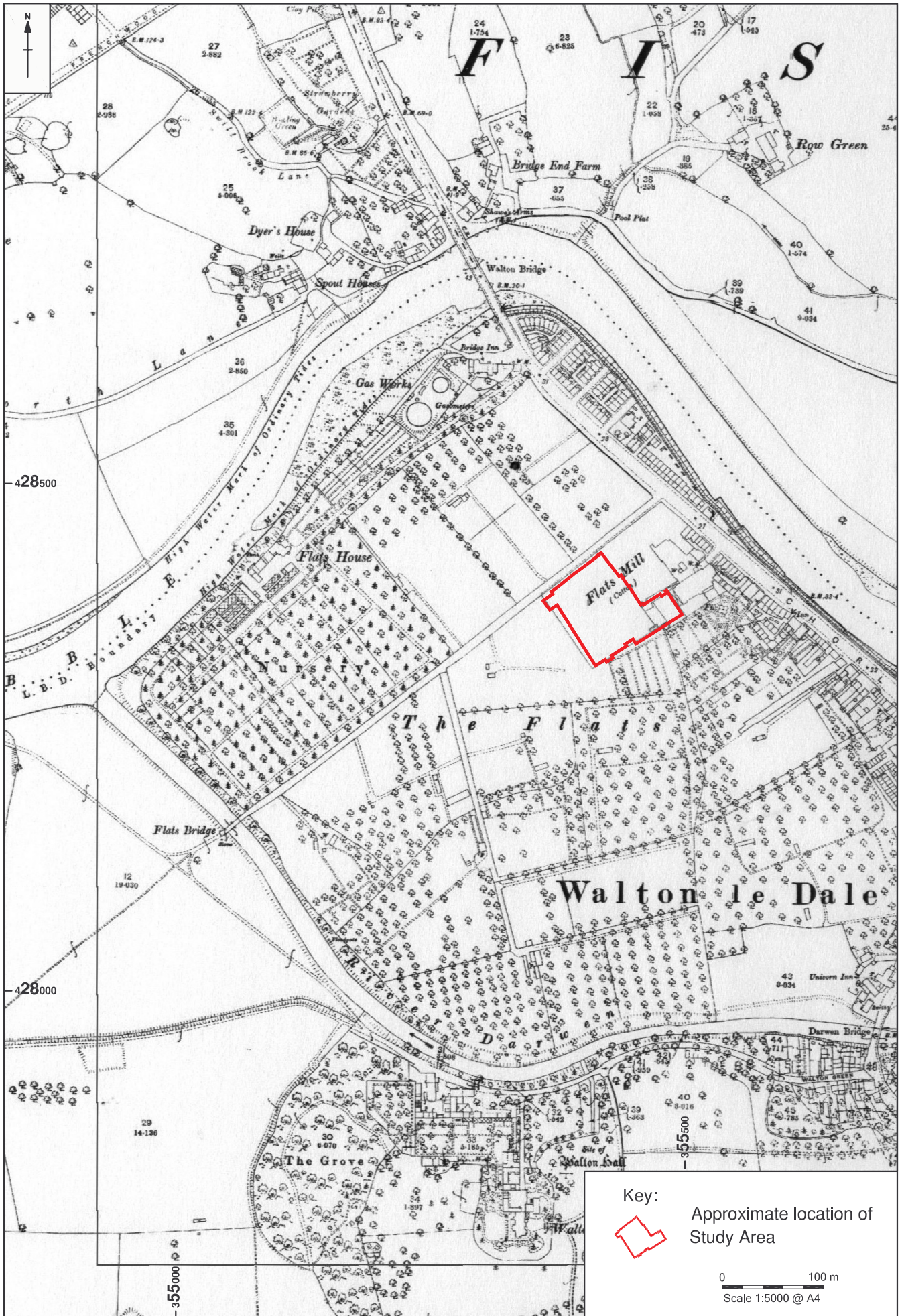


Figure 8: Extract from the Ordnance Survey First Edition 25":1 mile map, 1893

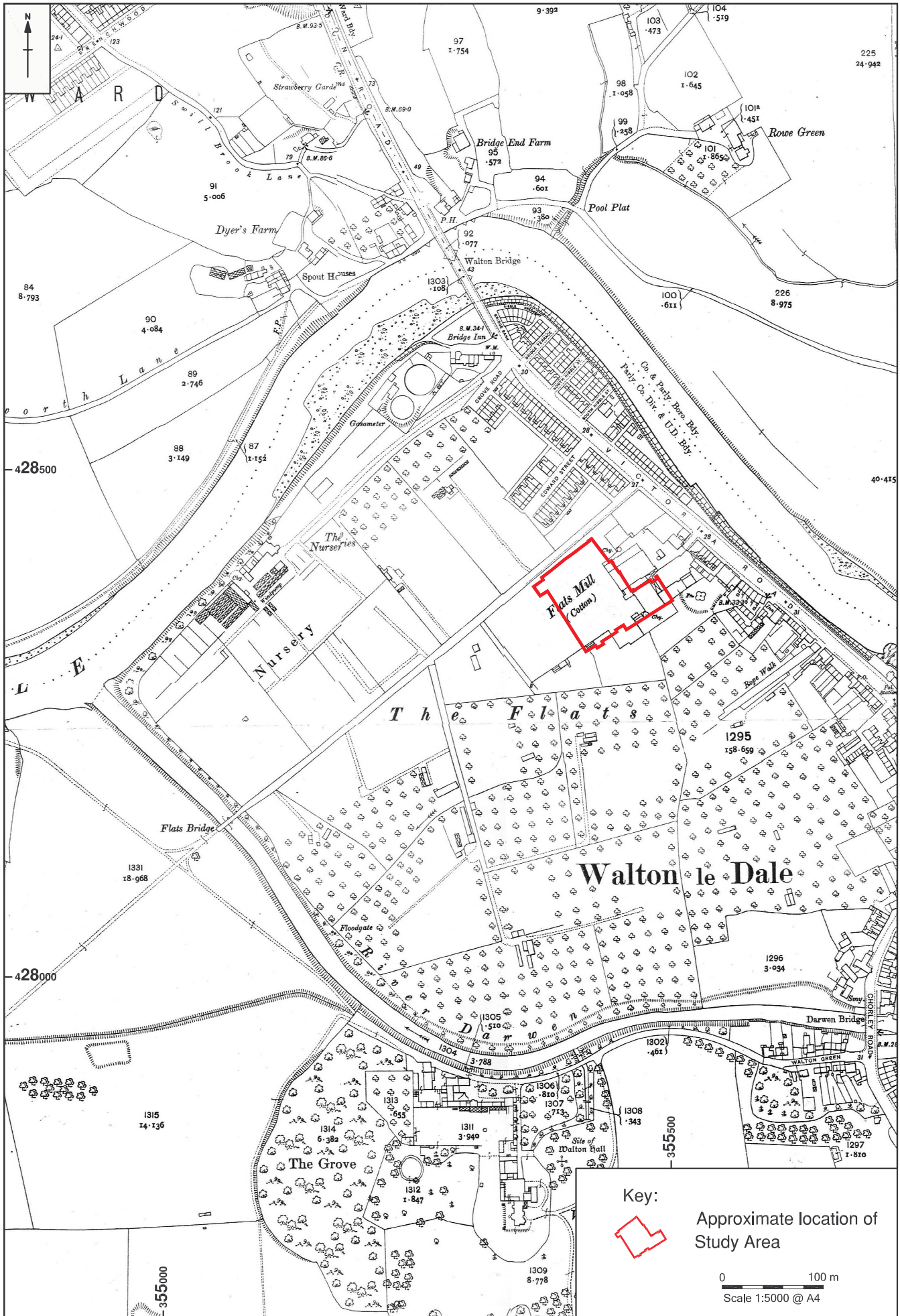


Figure 9: Extract from Ordnance survey 1:2500 map, 1912



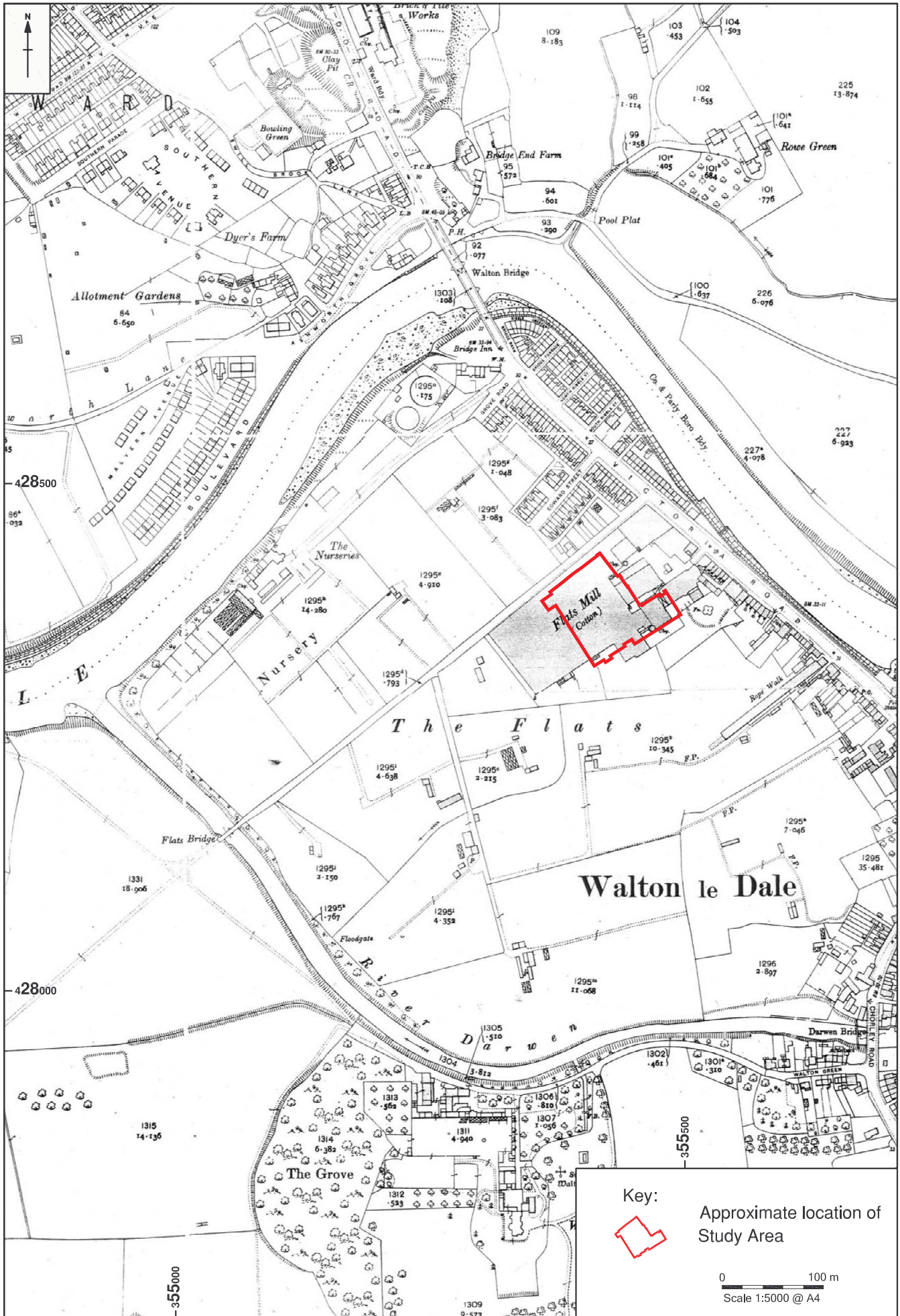


Figure 10: Extract from Ordnance Survey 1:2500 map, 1932

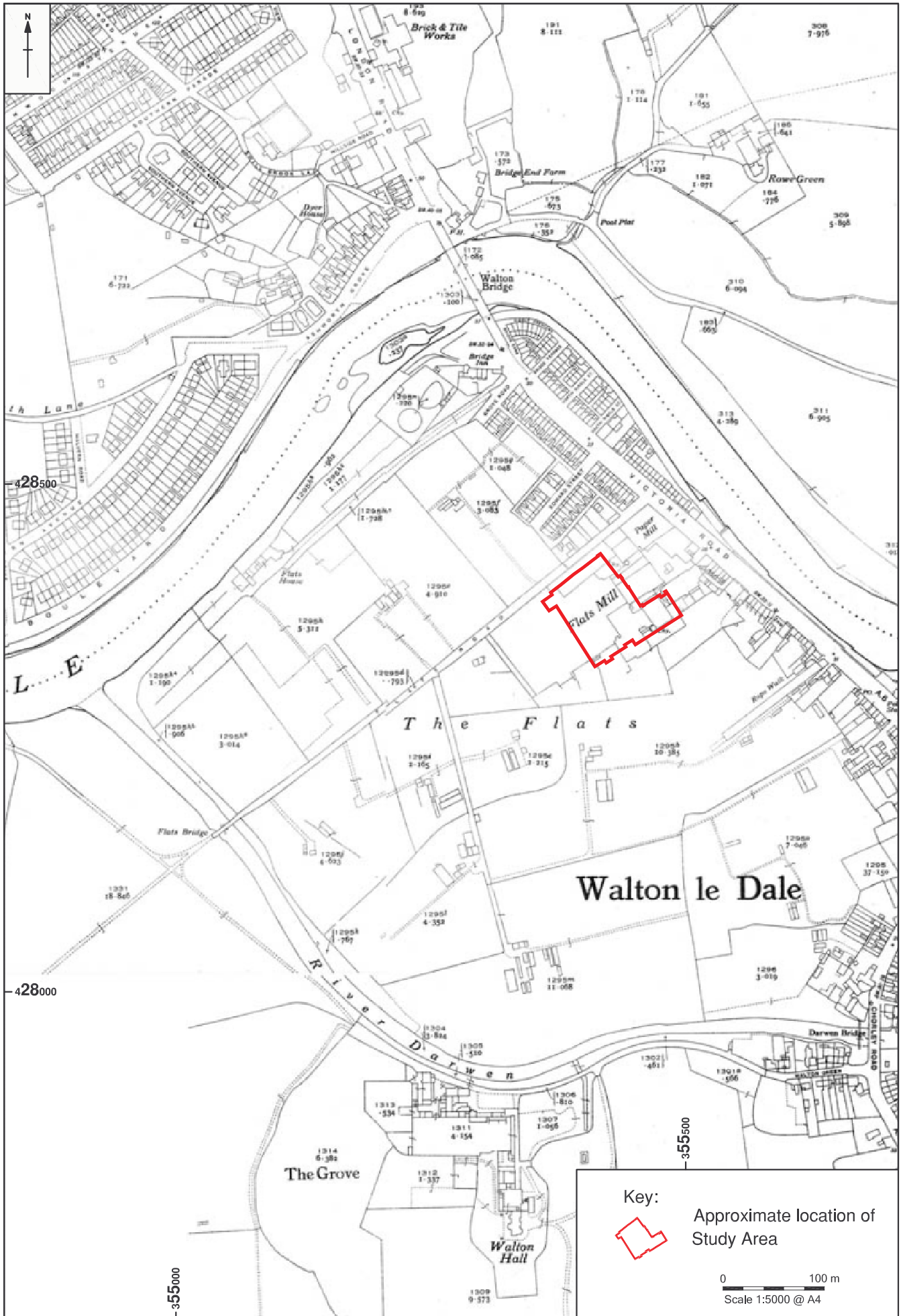


Figure 11: Extract from Ordnance Survey 1:2500 map, 1938

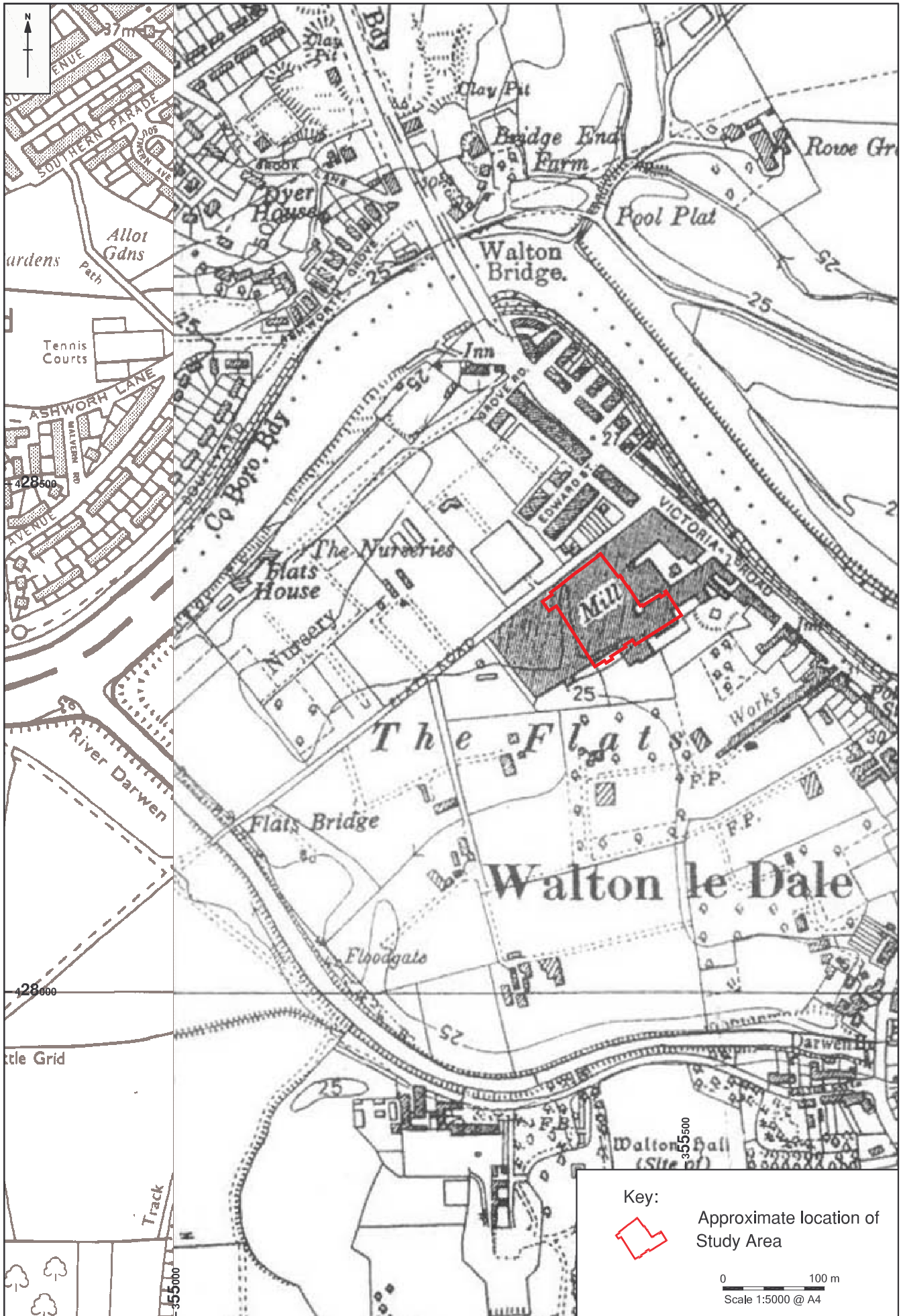


Figure 12: Extract from Ordnance survey 1:10560 map, 1962



Figure 13: Areas of Archaeological Potential, superimposed upon the Ordnance Survey 1:2500 map of 1938



Plate 1: View looking north-east across the proposed Scheme Area



Plate 2: View looking east across the proposed Scheme Area