WYAS Archaeological Services

A61 Old Mill Lane Scheme
Barnsley
South Yorkshire

Desk-based Assessment and Archaeological Watching Brief

Report no. 3158
July 2018

Client: ARUP

Registered Organisation CIfA

West Yorkshire Joint Services

A61 Old Mill Lane Scheme, Barnsley South Yorkshire

Desk-based Assessment and Archaeological Watching Brief

Summary

ASWYAS undertook a desk based assessment and monitored preliminary ground investigation works prior to an expansion scheme of Old Mill Lane in Barnsley, South Yorkshire. A map regression exercise and walkover survey has identified remains relating to a 19th-century water management system to the north of the river. Due to modern commercial development there is low potential of encountering further remains

WYAS Archaeological Services

Report Information

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Address:	9th Floor, 3 St Pauls Place, Norfolk Street, Sheffield S1 2JE
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1 Test pit results

1 Introduction

Archaeological Service WYAS (ASWYAS) were commissioned by ARUP to undertake a desk-based assessment of land forming part of the A61 Old Mill Lane, concentrating on the area around Old Mill Bridge, Barnsley as part of a planning application submission (Fig. 1). This assessment follows on from an initial map regression report (ASWYAS Report No. 3139).

An assessment of the significance of any recorded heritage assets within a 500m zone around the site has been undertaken (Fig. 2), together with an assessment of any potential impacts, in line with the requirements of National Planning Policy Framework (NPPF; Chapter 12: 'Conserving and enhancing the historic environment', paragraph 128).

Archaeological Services WYAS (ASWYAS) was also commissioned by ARUP to undertake an archaeological watching brief during site investigation works. This consisted of the excavation of a group test pits across the site to investigate the makeup of the ground, and was undertaken in June 2018 (Fig. 3).

Site location, topography and land-use

The site lies along the A61 on Old Mill Lane north of Barnsley. It straddles the River Dearne and is in an area of vegetation. The site is located at SE 35044 07242. Located to the south of site are the Twibell Street Retail Park and ASDA Barnsley Superstore. The northern part of the site is located on grass land.

Geology and soils

The underlying bedrock comprises Kent's Rock formation sandstone, a sedimentary bedrock formed approximately 315 to 318 million years ago in the Carboniferous Period. Formed alongside this, bands of Pennine Middle Coal Measure consisting of mudstone, sandstone and siltstone cross the study area (BGS 2017).

The superficial deposits covering the area are alluvial, made up of clays, silts, sands and gravels laid down during the creation of the Dearne valley.

2 Information Sources

The following sources of information have been consulted in order to meet the requirements of the desk-based assessment and are in line with guidelines laid down by the Chartered Institute for Archaeologists (CIfA 2011).

Where events, monuments or listed buildings included in the catalogue (Section 5) are mentioned in the text, the relevant HER or listed building number is given in bold-type (e.g. **04986**).

Archaeological archives and databases

Information on previous archaeological finds and investigations within the study area was obtained from the South Yorkshire Historic Environment Record (HER) and the English Heritage National Monuments Record (NMR).

The holdings of Barnsley Archives and Local Studies Library were consulted for historic maps and plans, antiquarian histories and other relevant documentary sources.

Designated heritage assets

English Heritage's National Heritage List for England Database were consulted for information on all designated Scheduled Monuments, Listed Buildings, Registered Parks and Gardens, Registered Battlefields, Conservation Areas and World Heritage Sites within the study area.

Published and unpublished sources

A range of published and unpublished material has been researched and consulted. This includes academic articles together with general sources on the area and its wider archaeological and historical background. These are listed in the bibliography.

Geological and soil surveys

Information on the underlying geology and soils within the study area was taken from data collected by the British Geological Survey (BGS 2017) and the Soil Survey of England and Wales (1983).

Walkover survey

A walkover survey was undertaken on the 26th June 2018 in order to identify any archaeological features visible on the ground and to determine the potential for any future archaeological investigations.

Alongside this, an archaeological watching brief was undertaken to monitor the drilling of nine exploratory sample holes by the client. A selection of photographs of the walkover survey are provided in Plates 1-4. The site was very overgrown with scrub vegetation and criss-crossed with footpaths.

Of interest were the remains of water management structures relating to a 19th-century weir noted during the walkover (Plate 5). These are described below in Section 7.

3 Assessment Criteria

An assessment of the significance of any recorded heritage assets within a 500m radius around the site has been undertaken, in line with the requirements of the National Planning Policy Framework (NPPF; Chapter 12: 'Conserving and enhancing the historic environment', paragraph 128). Scheduled Monuments, Grade I and II* Listed Buildings, registered Parks

and Gardens, registered Battlefields and World Heritage Sites are assessed to be of *high significance*, in line with paragraph 132 of the NPPF.

The significance of other heritage assets has been determined based on the following criteria, and broadly follows levels of national designation.

Significance	Type of Heritage Asset
High	Scheduled Monuments Listed Buildings (Grade I and II*) Registered Parks and Gardens Registered Battlefields World Heritage Sites
Medium	Listed Buildings (Grade II) Conservation Areas Heritage Assets identified as being of regional or local importance on the HER Sites identified within this assessment considered to be of regional or local importance
Low	Non-designated Heritage Assets recorded on the HER Previously unrecorded sites identified in this assessment and not considered to be significant
None	Previously recorded heritage assets or sites recorded in documentary sources now destroyed
Unknown	Potential but previously unrecorded sub-surface archaeological remains Historical sites or features identified through documentary evidence as part of this assessment

The assessed significance of each individual heritage asset identified as part of this assessment has been listed in the catalogue in Section 5. Where there is potential for an impact on a heritage asset, this impact is discussed in Section 4.

4 The Study Area

Identified archaeological sites, buildings and features

The remains of a water management system, constructed of brick with iron fixings, were noted during the walkover survey (Plate 5). Orientated northeast to southwest, this sluice feature is visible in the Ordnance Survey (OS) mapping of 1852 and 1892 to the west of the

Old Mill Bridge (Figs 4 and 5). By the publication of the OS map of 1929 the feature is no longer depicted.

Designated sites, areas or listed buildings

The study area contains no designated Scheduled Monuments, Registered Parks and Gardens, Registered Battlefields or listed buildings.

Previous archaeological investigations

There have been no previous archaeological investigations carried out within the limits of the proposed development site. Archaeological interventions within a 500m radius of Old Mill Bridge are recorded in Section 5. These predominantly relate to monitoring and surveys of the former gas works on Old Mill Lane (**ESY984** and **ESY1254**).

Archaeological background and heritage assets

Early prehistoric (c. 4000 BC – c. 800 BC)

The earliest human activity within northern Britain probably followed the retreat of the ice sheets around 10,000 BC, as small nomadic groups gradually moved north with the improving climate. Evidence for human activity in the Palaeolithic period is limited in South Yorkshire and no evidence for Palaeolithic activity has been identified in the study area.

From the Mesolithic and Neolithic onward, there has been extensive evidence of activity around the rivers of South Yorkshire. Although no finds have been recorded in the study area, the river Dearne may well have been well-utilised natural resource.

Iron Age and Romano-British periods (c. 800 BC – c.AD 410)

No evidence of prehistoric or Romano- British activity has been identified within the study area or its immediate surroundings.

Medieval and post-medieval periods

There has been a settlement at Barnsley since at least the late 11th century, when it was first recorded in the Domesday Book. Its entry refers to Bernseslai, meaning 'Beorn's Glade or forest-clearing' (Smith 1961, 302). The town was granted to the monks of St. John's, Pontefract in 1153, and a Cluniac priory was established here shortly after, at the site now known as Monk Bretton Priory, 2.3 km to the east of the study area (Smith 1961, 302).

It is likely that the industrial use of river Dearne was underway near the settlement by the mid-12th century. Indeed, the community of the Priory would have required mills, and the river Dearne would have provided a convenient source of power. There are documentary references to 'the mill of Barnsley' in the 13th century (Umpleby 2000, 131), and that mills existed in the Old Mill and Smithies areas from the medieval period; precursors of the 18th and 19th century mills (Umpleby 2000) seen to the north and south of the study area.

No archaeological evidence of medieval mill structures has been identified to date, but it is possible that sub-surface archaeological evidence may survive beneath the surviving 19th-century and modern structures. There is also a possibility that structural remains remain undisturbed in the banked woodland to the south of the river.

Post-medieval to modern

The character of the landscape of the Dearne Valley has been heavily influenced by the large-scale industrial activity which developed in the area from the late 18th century. The main catalyst for the expansion of industry in Barnsley from this time was its position over one of the main coal seams in the South Yorkshire Coalfield.

As well as the establishment of numerous collieries, the landscape was cut across by the infrastructure to serve them; initially the Barnsley and Dearne and Dove canals in the late 18th and early 19th centuries (e.g. **03464/01**), and then by a number of railways lines converging on Barnsley in the mid-19th century. These new transport links also helped to increase the size of other traditional industries, such as milling of corn and linen (**04106/01** and **04106/02**), lime production (**03465/01**), glassworks (**0350/01**) and bleach works (**04595**). Some of these industries will have taken place on a smaller scale in Barnsley since the medieval period, but during the 19th century production increased to meet the wider market demands.

Map regression

The earliest map of the area is the 1779 Enclosure Map, although not this does not show the area in great detail. It does, however, describe the mill is already 'old'. This map is not illustrated here as it survives in poor condition and could not be copied.

The earliest detailed map of the area is the 1852 OS Town Plan, which shows the layout of the 'old mill' (Fig. 4). Three of the interventions are likely to fall within the footprint of this linen mill, while those to the north are situated over a watercourse, possibly associated with this or another mill, and probably associated with the remains of a mill race observed during the walkover survey (Plate 5).

The OS map from 1892 shows an expansion of the mill buildings to the north-west and a gasometer is now shown to the north-east on the opposite side of Old Mill Bridge (Fig. 5). The mill race is still apparent to the north-east of the mill buildings.

The OS map published in 1929 shows development has taken place within the mill complex with a possible infilling between buildings to the north-east (Fig. 6). The mill race is no longer present. The OS map published in 1948 map shows no significant change to the mill or its immediate surroundings (Fig. 7).

5 Catalogue of Heritage Assets

Catalogue entries for heritage assets recorded on the SYHER and those identified as part of this assessment have been mapped using their unique identifier (Fig. 2). Each entry includes a National Grid Reference (NGR) number and where appropriate the relevant HER reference numbers.

Event and Monument Records

HER Record no.	Name	Grid Ref	Significance	Description
ESY846	Archaeological Survey of Cliffe Wood. Ancient woodlands in Barnsley	SE 3623 0685	Low	ASE Ltd was commissioned to carry out a Level 2 archaeological survey of Cliffe Wood. The survey was carried out in December 2005 under of the auspices of the Fuelling a Revolution Project. A total of 77 archaeological sites were identified within the woodlands, only nine of which had been recorded prior to the commencement of the survey. Whilst evidence of mediaeval activity is recorded in the locality, all of the sites identified during the course of the archaeological survey were considered to be post mediaeval or modern in date. Seventeen of the sites identified within Cliffe Wood has been significantly damaged or disturbed. No significant ongoing threats, however, were identified during the course of the Level 2 archaeological survey. Cliffe Wood lies close to the boundary between the historic parishes of Darfield, Royston and Silkstone. The topographic position of the woodland is indicative of an area of ancient woodland. Parts of the woodlands, however, were shown as open fields on the 3rd edition 6" Ordnance Survey map (1910). A series of possible woodland boundaries and possible charcoal burning platform (Site 17) were identified within the limits of the established woodland. Cliffe Wood was bisected by an open area of grassland, corresponding to the former course of the Aire and Calder Navigation built in 1799. The Barnsley and Cudworth branch of the Midland Railway crossed the canal at the eastern end of the woodland. Two possible mine shafts (Site 3 and 71) and extensive evidence of quarrying were also identified within Cliffe Wood.
ESY984	Archaeological Watching Brief at the former gas works on Old Mill Lane	SE 3521 0727	None	Archaeological monitoring was undertaken during remediation works at old gas works.

HER Record no.	Name	Grid Ref	Significance	Description
ESY164	Archaeological Watching Brief at Canal Street	SE 34726 07239	Low	In May 2006 a watching brief was undertaken on land to be developed near Canal Street. During the watching brief a number of wooden and sandstone features relating to the canal basin and dry dock were found.
ESY1254	Building Recording of the gasholder at Barnsley Gasholder Station	SE 3516 0719	None	An archaeological building record was compiled of a telescoping gasholder constructed between 1931 and 1960, prior to its dismantling. The gasholder had a capacity of 2 million cubic feet and was typical for its period.
03464/01	Barnsley Canal (Disused)	SE 3373 0831	Low	Barnsley Canal (disused). The GIS polyline follows the route of the Barnsley section of the canal as shown on the OS 6" 2nd edition map dated 1894.
03465/01	Post-medieval to Industrial Period Lime Kilns, Barnsley	SE 3490 0712	Low	Lime kilns shown on the OS 25" 1st edition map of Yorkshire (1892).
0350/01	Old Mill Glassworks, Barnsley	SE 3504 0694	Low	1861 - original works near site of town, south of old corn mill on the Barnsley canal had little success. In 1862, bought by Redfearn Bros, who enlarged the works to 4 furnaces with 30 working holes, each with 5 men. Concentration on bottles and jars. Production methods adapted to changing technology. Other works acquired. In 1946 the Barnsley Canal burst its banks. Production was transferred to new works at Monk Bretton, and the old works demolished. In 1990, the sole visible reminder was part of the wharf, with large tie-up rings preserved behind modern store.

HER Record no.	Name	Grid Ref	Significance	Description
04106/01	Barnsley Old Mill, Corn Mill	SE 3503 0723	Low	Situated on the River Dearne, about 600m northwest of the town centre. The Old Mill site is recorded as a flax mill from 1823-47, and was later converted into a paper mill (reported 1880's by Wilkinson [1]). The site appears to have been occupied by linen weavers in 1851, but by 1857 was run by William Watson the papermaker, by the Partingtons by 1861, and by George Toothill from 1863-67. After its destruction by fire in September 1867 it was purchased by Charles Marsden and rebuilt. Likely to have been a water powered cornmill from the 15th century
04106/02	Barnsley Old Mill, Linen Mill	SE 3503 0723	Low	In operation as a flax mill between 1823 and 1847. Converted to a papermill after 1851
04106/03	Barnsley Old Mill, Papermill	SE 3503 0723	Medium	After 1851 the mill was converted from the flax mill **(04106/02)**. William Watson, papermakers employing 17 between 1857 -62. 1863-67 George Toothill papermakers, Mr Russell is the owner of the building. 1867 destroyed by fire: replaced by modern building and renamed Dearne Mills (Charles Marsden & Sons). 1883 old mill reported as belonging to Barnsley Corporation. In 1903 it was utilising water from the Dearne, fuel from Casefield and the canal passed right by. 1906 maps shows Dearne paperworks, south of weir on river Dearne and north west of old mill lane. In 1981 Dearne mills closed.
04595	Old Mill Bleach Works	SE 3484 0727		This bleach works is listed in White's Directory of 1852 under the name Robert Craik, who also owned coal mines in the Barnsley area. Craik and Co. operated here until 1871 at least, by which time the firm was also in charge at Greenfoot. By 1890 the Dearne Paper Mill occupied part of the site at Old Mill, but some of the bleach works buildings can still be seen on the 1904 OS map. The paper works closed in 1981 and the site is now occupied by ASDA supermarket.
04802	Remains of canal basin and dry dock, Canal Street	SE 3471 0724		In May 2006 a watching brief was undertaken on land to be developed near Canal Street. During the watching brief a number of wooden and sandstone features relating to the canal basin and dry dock were found. The canal was established in 1799 and was closed in 1953.

HER Record no.	Name	Grid Ref	Significance	Description
04986	Old Mill Gas Works	SE 3514 0731		19th century gas works. The Barnsley Gas Light Company purchased the site in 1867. Gas works continued production until early 1960s, by 1973 the works was fully demolished excepting Gasholder 3. The site was then used as a depot.
05014	Cliffe Wood post-medieval features	SE 3623 0685		The woods position near the township boundaries of Ardsley and Monk Bretton is indicative of ancient woodland. Earthwork features located by a woodland survey seemed to be post-medieval in date. These consist of mining features, possible charcoal burning platforms, quarrying, track ways, a railway cutting and the route of the Aire and Calder Navigation.

6 Impact Assessment

Recorded heritage assets

Direct impacts

The proposed development site may have an impact on the remains of mill buildings that once occupied land immediately adjacent to the west of Old Mill Bridge (**04106/01-03**). Further detail about the proposed development is required, however, in order to fully assess the extent of this impact.

Impact on setting

There are no listed assets that will be effected by the scheme, and given the level of modern development in the vicinity, there will be no negative effect on the current setting of the study area.

Potential sub-surface remains

With the development for the Asda supermarket and carpark immediately to the west of the proposed development, some features of archaeological interest pertaining to the early development of the water powered mill may already have been disturbed. Further features and/or structures closer to the river, however, may still survive, and certainly the partially buried remains of a water management system on the north bank have already been noted (see Section 7 below; Plate 5).

7 Archaeological Watching Brief

Aims and methodology

The overall aim of the watching brief was to provide information on the presence or absence and the extent, character, date, depth of burial and degree of survival and nature of preservation of any archaeological features or deposits that were exposed during the monitoring of ground investigation works.

The works consisted of the excavation of test pits across the site to investigate the makeup of the ground (Plates 6-8), and followed a Written Scheme of Investigation (Appendix 1). All interventions were machine excavated with an archaeologist in attendance at all times, and the locations of all completed test pits and bore holes were recorded. Any resulting surfaces, where possible, were inspected for archaeological remains.

All excavations were undertaken in line with the CIfA guidelines Standard and Guidance for Archaeological Watching Brief (2014), and in compliance with the Historic England's MoRPHE PPN3: Archaeological Excavation (2008).

A full written, drawn and photographic record of all material revealed during the course of the works was made, and an inventory of this archive is provided in Appendix 2. Additionally, a record was made of archaeological remains immediately adjacent to the area

of monitoring on the north side of the river Dearne, as these are likely to be associated with the Old Mill.

Results of test pitting

A total of nine test pits were excavated, each measuring approximately 0.20m across. Where possible, bore holes were then made through the pits to examine the natural soil and geology. Details of all planned pits are listed below, with measurements and details of interiors where applicable.

Table 1. Test pit results

Test pit No.	Length (m)	Width (m)	Depth (m)	Depth (including BH)	Nature of surface at end point
BH01	0.20	0.20	0.80	3.00	Shale – BH re-sighted. Plate 6
BH01a	0.20	0.20	0.20	3.00	Concrete – BH re-sighted
BH01b	0.20	0.20	5.00	3.00	Concrete
BH02	0.30	0.20	8.00	40.00	Natural clay overlying natural geology
DP01	0.20	0.20	0.50	0.80	Very compact limestone, possibly blocks/surface
DP02	0.30	0.30	0.30	5.30	Brick rubble and concrete surface in section. . Plate 7
WS01	0.20	0.20	0.50	0.80	Compact limestone, possibly blocks/surface
WS03	0.25	0.25	0.50	5.00	Compact limestone, brick rubble in pit section. . Plate 8
WS04	0.20	0.20	0.20	0.85	Brick/stone rubble surface
WAL01 - 06	-	-	-	-	cancelled
WS02	-	-	-	-	cancelled

In the test pits where it was possible to excavate to the full depth required, no archaeological remains were observed.

Possible mill race

Within the proposed development area, to the west of the test pits, structural remains were observed during the walkover survey (Fig. 3). Lengths of brick walls were noted with embedded iron fixings at spaced intervals along their interior surfaces. Approximately 6m of

each wall was visible, but their full extent could not be ascertained without further excavation. The visible wall remains comprised of six brick courses in height and two in width. The internal elevations of the walls are covered by a grey mortar, which would have acted as a barrier between the contained water and the brick structure.

8 Discussion and Conclusions

The archaeological desk-based assessment has established that there is potential for buried archaeological features of interest to be encountered during the proposed works. These are likely to relate to mill buildings that previously occupied the site, as indicated by the remains of the mill race noted immediately to the west of the proposed development area.

Although no structural remains were encountered during initial groundworks, the interventions monitored were limited in size and scope and these results may not reflect the level of archaeological survival at the site. Indeed the presence of loose construction materials (e.g. brick or stone rubble) may relate to demolished mill structures although this could not be confirmed given the limited extent of the initial groundworks.

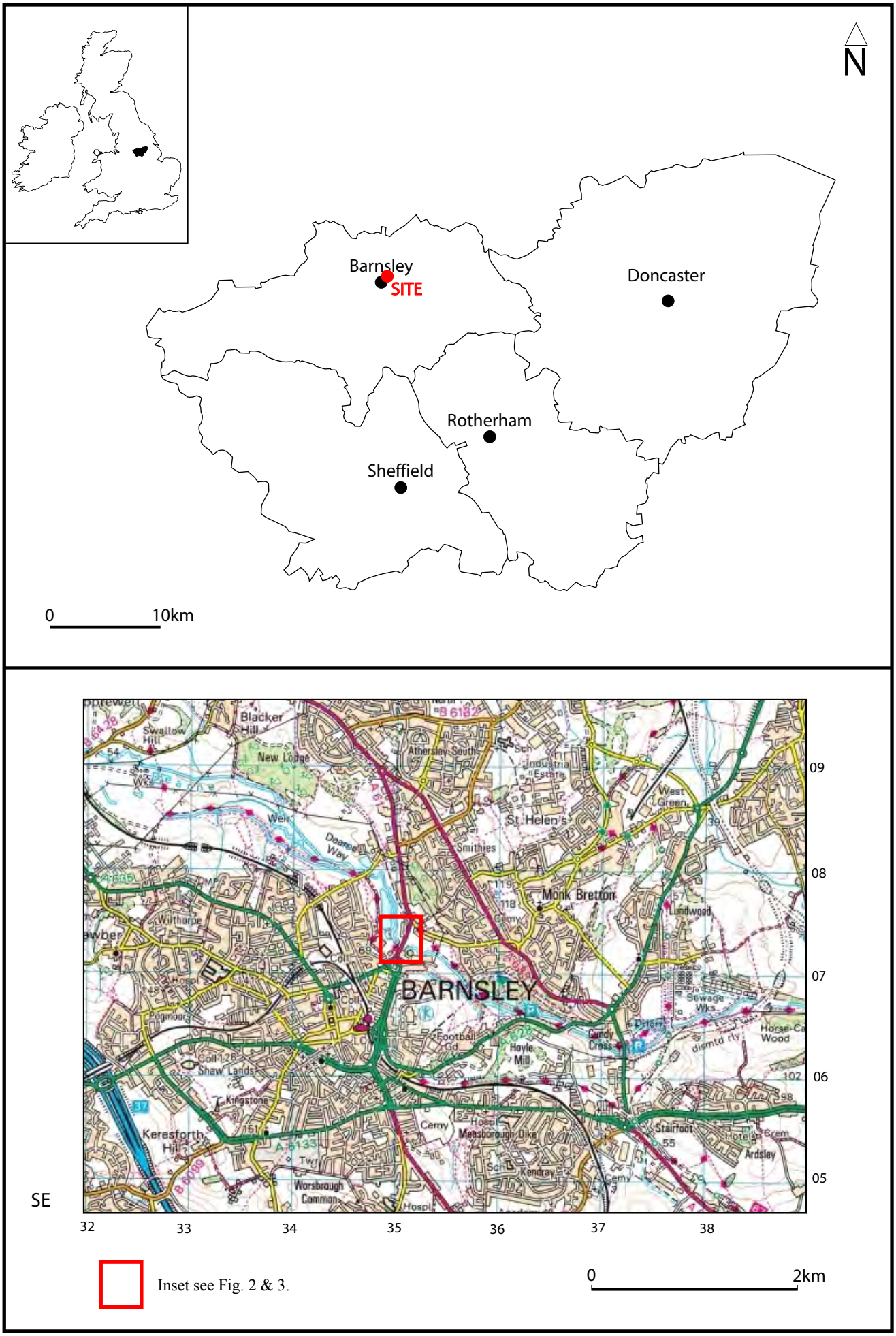


Fig. 1. Site location

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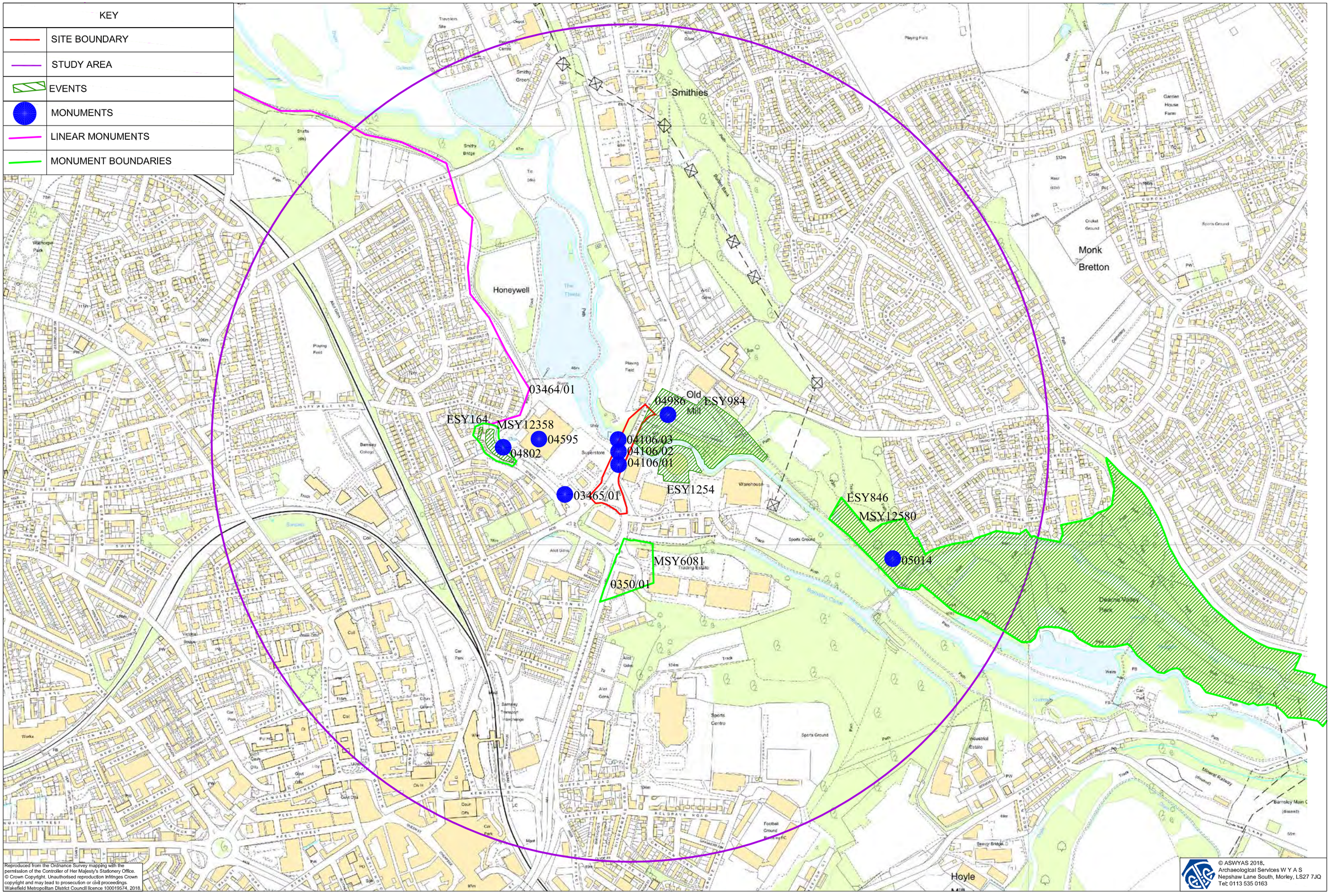


Fig. 2. Plan of the proposed development site, the study area boundary and catalogued assets (1:14000 @ A3)

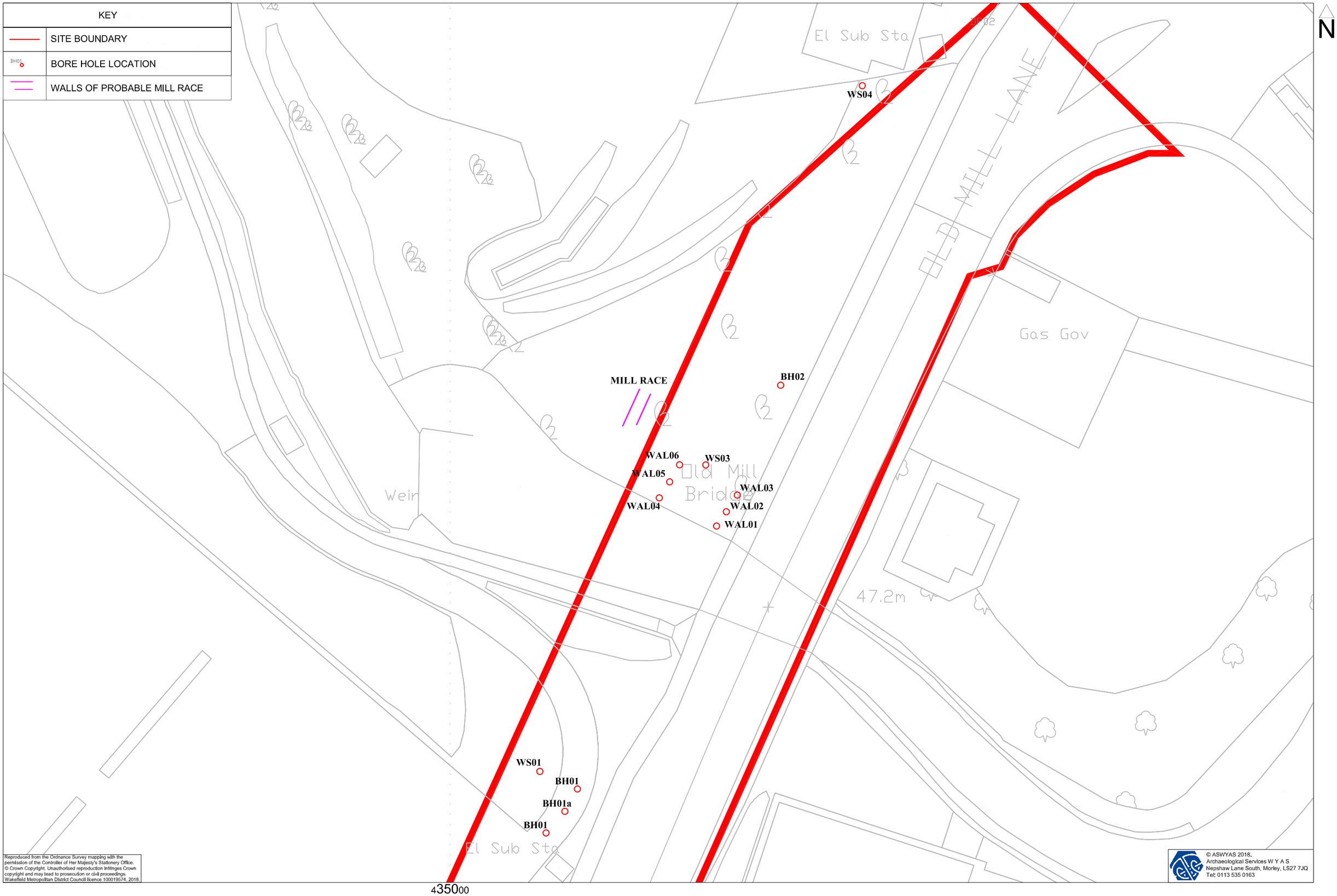


Fig. 3. Plan of the proposed development site showing test pit locations (1:500 @ A3)