



ARCHAEOLOGICAL
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**E-Campus
Sheaf Valley
Sheffield
South Yorkshire**

Archaeological Watching Brief

Report No. 1491

February 2006

CLIENT

Scarborough Developments (Sheffield) Ltd

**E-Campus,
Sheaf Valley
Sheffield
South Yorkshire**

Archaeological Watching Brief

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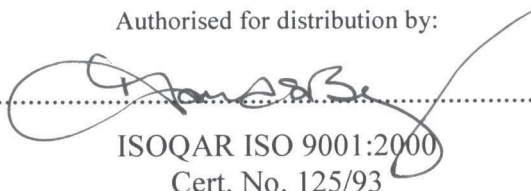
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Summary

An archaeological watching brief was undertaken during geotechnical investigations, in advance of proposed redesign and redevelopment of the site. The excavations uncovered the in-filled Bamford goit that had once served the forges and mills situated to the north of the site in the late 18th to early 19th century. In addition, brick constructed buildings and structural remains, believed to represent part of the former Sheaf Island Works or nearby cutlery works were also identified.

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Archaeological Services WYAS

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1. Introduction

- 1.1 Archaeological Services WYAS was commissioned by ARUP, on behalf of Scarborough Developments (Sheffield) Ltd, to undertake an archaeological watching brief during geotechnical investigations at E-campus, Sheaf Valley, Sheffield (Fig.1). The geotechnical fieldwork was undertaken to investigate the ground and water conditions, in advance of proposed redesign and redevelopment of the site.
- 1.2 The site covers an area of 14259m² and is situated to the north of Midland Station, Sheffield city centre (centred SK 3585 8720, Fig.1). It is bounded by Pond Hill to the north, Sheaf Street to the east, Harmer Lane to the south, and the Archway centre to the west (Fig. 2).
- 1.3 The northern area of the site comprises the tarmac surfaces of the former bus station. The southern area of the site covered by grass, which was the site of the Sheaf Valley swimming baths. The bus station area centres on 53m OD, with a rise in the south to around 56m OD.
- 1.4 The underlying geology is Middle Coal Measures, overlain by alluvial clays and gravels, above which is a considerable depth of made ground (Structural Soils Ltd 2005).
- 1.5 The archaeological watching brief was undertaken by two archaeologists between 7th to 14 February and 10th to 16th May 2005.

2. Archaeological Background

- 2.1 A comprehensive desk-based assessment (DBS) has been produced for the site by Archaeological Services WYAS for the 'Sheaf Valley Development' which includes historical maps of the area, and covers the E-campus site under discussion here (Lee, *et. al.* 2004).
- 2.2 This study revealed that the development site lay within agricultural/meadow land during the medieval period up until the late 18th century. Potential for discovery of medieval remains does, however, exist at the extreme north-west of the site, in the vicinity of the Old Queen's Head pub (formerly know as 'Hall-in-the Ponds'). This pub is thought to date from 15th century and is believed to have been a small banqueting house constructed at the edge of the medieval deer park (Lee *et. al.* 2004). Archaeological excavation, undertaken along the west side of the building, revealed considerable disturbance from post-medieval activity, however, wood was encountered during these excavations and has been dated by dendrochronology to 1510 (Webster 1992). The DBS also identified records of a wall of unknown construction/date adjacent to the pub. No further information, apart from its north to south orientation is known about this wall.
- 2.3 In the early 1770s the site is known to have been agricultural fields, with industrial activity being developed to the north and south. By 1789, a small colliery and coal yard has been built at the northern end of the site. This development is shown clearly on Fairbank's 1797 map (not reproduced), with detailed outlines of the colliery buildings. By this time the River Sheaf had been straightened (to the east of the site) and a new dam had been cut above

the newly created Sheaf Lane (later to become Harmer Lane). The Bamford Dam (also known as Bamforth Dam) was also created from a former meander of the river. These dams were used to power the forges and mills located to the north of the site. The dams were connected by a series of goits, one of which ran along the eastern side of the colliery buildings and was known as the Bamford goit. This connected the Bamford Dam which lay to the south of the site, to the Forge Dam which lay to the north (Lee *et. al.* 2004).

- 2.4 By 1808 the colliery buildings had changed little, although additional buildings, probably serving industrial functions, had been constructed at the north-east of the site between the Bamford goit and the River Sheaf. The large dam in the southern area of the site had been filled in, although the Bamford Dam remained (Lee *et. al.* 2004).
- 2.5 The colliery buildings appear to have been replaced by a larger complex, forming part of the Sheaf Island Works, by 1832. The northern part of the site housed a cutlery works, with a sawmill to the south. Several crucible shops were also thought to have been located in the southern area of the site, which were demolished in the mid 1960s to make way for the Sheaf Valley baths.
- 2.6 The Sheaf Island Works was demolished in 1984, and the site re-developed with car parking and the bus station (Lee *et al.* 2004).
- 2.7 The desk based assessment highlighted the high potential for the survival of below ground archaeological remains in this area, largely due to the depth of made ground known to cover the site. Structures associated with the dams and goits may be preserved, along with components of the colliery, Sheaf Island Works and cutlery works.

3. Method

- 3.1 The archaeological watching brief was undertaken following guidance notes provided by Dinah Saich of South Yorkshire Archaeology Service.
- 3.2 Twelve trial pits and six trial trenches were excavated in predetermined positions across the site. The investigations were undertaken to assess the general ground conditions across the site and specifically to:
 - identify the nature of the retaining walls adjacent to the River Sheaf and Sheaf Street (TP201 and 202)
 - locate outer walls and piles of the former Sheaf baths (TT204 and 205)
 - locate buried goits (man made water courses) (TP211, 212, 224 and TT201)
 - locate suspected buried mine shafts (TT201, 203, 301, 302A and 302B)
 - locate buried piles, drains and goits (TT303, 304 and 305)
- 3.3 All test trenches and trial pits were excavated using a mechanical 20 tonne excavator equipped with a toothed 1.6m bucket. Trenches 201 and 202 were afforded a more sensitive approach during machining, with both trenches being machined using a toothless ditching bucket in level spits.
- 3.4 Following machining, all trenches and tests pits (apart from TP227, see below) were inspected for archaeological remains. Due to the depth of the excavations

and health and safety considerations, all archaeological observations and recording was undertaken from the trench edge. The archaeological record therefore comprises measured sketches and field notes. No levels were obtained but depths below ground level were recorded. A list of the primary Archive is presented in Appendix I. The archaeological record is supplemented by the data logged by Structural Soils Ltd, particularly deposit depths, trench measurements, plans and sections (Structural Soils 2005).

- 3.5 Trench and test pit locations were recorded with GPS, following excavation. This data is presented in the Geotechnical report by Structural Soils Ltd and has been used to compose Figure 2. A schematic location of features is shown in Figure 3 and all trench dimensions have been taken from this.

4. **Results**

- 4.1 Observations made during the geotechnical investigations are presented below. All depths cited in the following text are below ground level (BGL), unless otherwise stated. As all the features identified were deemed to be of little/no archaeological significance and/or were identified at such a depth that precluded the archaeologist from entering the trench, no illustrations of the pits/trenches have been re-produced. Measured schematic plans and sections, in addition to a comprehensive photographic record is presented in Structural Soils Ltd. geotechnical report (2005), and a schematic location plan is shown in Figure 3.
- 4.2 The upper stratigraphic sequence for all trenches/pits in the northern and central part of the site (covering the area of the former bus station) comprised c.0.10m of concrete overlying 0.10m of hardcore. The sequence for the trenches/pits in the south of the site (the area of the former swimming baths) comprised grass overlying c.0.10m of topsoil. These layers sealed deep deposits of made ground, noted in all trenches/pits. This made ground comprised brick, concrete, clinker, sandstone fragments and cobbles within grey, brown and red gravel and clay deposits.
- 4.3 A summary table of the results is presented in Appendix III.

Trial Pits (Fig. 3)

4.4 TP201

- 4.4.1 This pit was located towards the north-eastern extent of the site and measured 4.4m by 1.7m. Excavation revealed 1.60m of made ground sealing a yellow brown sandy clay deposit (possibly redeposited natural). The excavations ceased at 2.00m.
- 4.4.2 No archaeological features were identified, however, a substantial sandstone wall and associated concrete foundations were identified in the eastern section of the trench. These formed part of the present day embankment for the River Sheaf.

4.5 TP202

- 4.5.1 Measuring 6.2m by 4.2m, TP202 was located to the south of TP201, adjacent to the retaining wall for Sheaf Street. Three modern floor surfaces were exposed following the removal of concrete and hardcore (0.15m BGL). These sealed a thick deposit of made ground *c.* 1.2m in depth.
- 4.5.2 At *c.* 1.5m BGL a brick wall was noted to traverse the south-eastern corner of the trench. This wall survived to two courses in height and measured *c.* 0.5m in width. Remnants of a concrete 'floor' butted the brick wall and continued into the north-western edge of the trench. These features are deemed to be post-medieval/modern in date and possibly form part of a cellar. Below this wall were further deposits of made ground which overlay a brown sandy clay (?natural), noted at 4.70m BGL. The trench was excavated to a total depth of 5m.

4.6 TP211

- 4.6.1 This pit measured 5.68m by 3.2m and was excavated to a depth of 4.5m. Removal of 0.85m of made ground revealed three brick walls. At the eastern end of the pit two walls were exposed. They were positioned 2.9m apart and were observed to a depth of 3m BGL. The easternmost brick wall was bedded onto a foundation of unbonded thin slabs of York stone, which was observed to a depth of 4.1m. Contained within these walls was a limestone hardcore deposit and together these features are thought to represent the infilled goit.
- 4.6.2 To the west of the trench five courses of a modern brick wall were identified. Below the wall was a further deposit of made ground, noted to a depth of *c.* 2.80m. This overlay yellow-brown sandy clay natural.

4.7 TP212

- 4.7.1 TP212 was positioned in the centre of the site and measured 6.7m by 2.25m. Removal of 1m of made ground revealed three brick walls. At the west of the trench the corner of a building was identified. This walling, which traversed the trench in a north-east to south-west alignment, then turned 90° and continued to the south-east. Ceramic and copper pipes were noted in the vicinity of this walling. No further excavation was undertaken in this part of the trench and the wall was left *in situ*.
- 4.7.2 The two walls exposed at the east of the trench were positioned 2.90m apart and measured *c.* 1m in width. They crossed the trench on a north-east to south west alignment and were observed to 3.00m in depth. Contained within the walls was a deposit of limestone gravel and together formed a continuation of the goit seen to the north. Below these walls was a grey brown clay natural, noted to the excavated depth of 4.6m.

4.8 TP214

- 4.8.1 Located within the southern central area of the site, TP214 measured 4.3m by 1.8m. It was excavated to a depth of 3.6m and comprised 3.4m of made ground overlying natural deposits. No archaeological features were identified.

4.9 TP 221

4.9.1 Measuring 5.2m by 1.65m, TP221 was located at the very north-east corner of the site. Excavation revealed 4.2m of made ground above 0.2m of brown sandy clay natural. No archaeological features were encountered.

4.10 TP 222

4.10.1 TP222 was located in the north-eastern corner of the site and measured 6.6m by 2.6m. Made ground was observed to a depth of 1.7m, where a tarmac surface and hardcore foundation layer were identified (0.20m in depth). This sealed a further 1.4m of made ground, which overlay brown and grey clay natural. The trench was excavated to 5m in depth. No archaeological features were encountered

4.11 TP 223

4.11.1 Located within the central area of the site, this test pit measured 6.7m by 2.2m. Following the removal of brick sets and concrete, made ground was noted for a depth of 3.30m. A broken concrete surface was observed at a depth of 1.5m. Below the made ground a brown and grey sandy clay (0.60m in depth) was observed and may represent natural deposits. The excavations were ceased at 4.50m in depth where a grey clay sand gravel (natural) was noted.

4.12 TP 224

4.12.1 This test pit measured 13.7m by 4.1m and was located in the northern extent of the site. Removal of 0.70m of modern overburden revealed four brick structures. At the western end of the trench the corner of a brick built feature, comprising two skins of bricks, infilled with on-edge York stone flags was identified. Its construction suggests that this may have been a drain, however, no excavation was undertaken as the feature was left *in situ*.

4.12.2 Approximately 1m to the east a brick wall, measuring 0.70m in width was identified. A further two brick walls traversed the eastern end of the trench on the same north-east to south-west alignment. The westernmost of these measured 0.50m in width and was observed to a depth of 3.40m. A gap of 3.80m was noted between the walls and was filled with made ground containing frequent angular sandstone fragments and mining debris. The westernmost wall measured 0.30m and was observed to a depth of 2.80m. These walls are believed to represent the filled in goit. Below these walls was a yellow-brown clay sand (natural). The pit was excavated to a depth of 4.5m.

4.13 TP 225

4.13.1 Located within the central area of the site, TP225 measured 6.75m in length by 2.2m in width and was excavated to a depth of 5.1m. No archaeological features were observed within this pit. The stratigraphy comprised 2.1m of made ground, overlying a grey-black sandy clay (natural).

4.14 TP 226

4.14.1 Positioned to the south-west of TP225, this pit measured 6.2m in length by 1.7m in width. At *c.* 1m BGL, a sandstone floor surface was revealed beneath a black clinker rich deposit of made ground (referred to as BC in Section 5). Pottery, crucible fragments and glass were retrieved from this deposit. These surfaces were edged with stones and cobbles along its western side and crossed the trench in a north-east to south-west direction. It is unclear what this feature represents as it had been severely truncated. Excavation was continued at the eastern side to a depth of 3.6m, where made ground and redeposited clay were observed to overlie the orange brown clay natural.

4.15 TP227

4.15.1 This small shallow trench was located at the southern area of the site, in the grounds of the former swimming pool. It was excavated to a depth of 0.30m, to aid location of a man-hole cover. ASWYAS staff did not monitor this trench, although data obtained from the Structural Soils report indicates that only made ground was identified.

Trial Trenches

4.16 TT201

4.16.1 Positioned at the very northern extent of the site, TT201, measured 12.3m by 2.1m. Below 0.8m of made ground a brick wall was observed to traverse the trench on a north-east to south west alignment. This wall measured 0.60m in width and was seen to a depth of 1m. A further two walls were identified in the east of the trench, on the same alignment. These walls were constructed with un-bonded York stone slabs and positioned *c.* 2.70m apart. They were observed to a depth of *c.* 3m BGL and contained a deposit of limestone gravel, indicating the position of the filled in goit. A possible mineshaft was also identified in the centre of the trench.

4.16.2 The trench was excavated to a depth of 4.50m, with brown sandy clay natural being noted from a depth of 4.00m.

4.17 TT202

4.17.1 Measuring 6.2m by 1.7m, TT202 was located at the north-western area of the site. Removal of brick sets and concrete/hardcore layers revealed 1m of made ground. Below this deposit were two walls, one constructed of brick the other of stone. They were observed in the very eastern part of the trench crossing it on a north-west to south-east alignment and are believed to represent a goit. Below these walls a further 1m of made ground was noted, overlying grey and orange clay natural (observed at 2.2m BGL). The trench was excavated to a depth of 4.7m.

4.18 TT203

- 4.18.1 This long trench measured 35m by 3.1m and was located within the central area of the site. The excavations revealed 4.00m of made-ground overlying brown and grey clay natural (excavated to 4.50m). No archaeological deposits/features were identified.

4.19 TT204

- 4.19.1 Located at the south-west of the site TT204 measured 11.2m by 3.2m. Two brick walls were noted at the very southern and northern parts of the trench following the removal of *c.* 0.80m of made ground. The northernmost wall measured 1.10m in width and was constructed upon sandstone block foundations (observed to 3.20m BGL). The southern wall extended into the section and was noted to 4.60m BGL. The walls rested on a brown clay natural.

4.20 TT204a

- 4.20.1 This additional trench was excavated to determine the extent of the foundations exposed in TT204. It measured 6.12m by 2.1m and removal of made ground revealed a brick floor and associated brick wall. They were exposed at 1.30m BGL, where excavation was ceased and the remains left *in-situ*.

4.21 TT205

- 4.21.1 Measuring 10.6m by 3.2m, TT205 was excavated to a depth of 5.2m. A substantial deposit (4.6m) of made ground, which contained a quantity of clay pipe stems, was observed overlying the brown clay natural. Only the buried piles, associated with the foundations for the former swimming baths and a small section of brickwork, were uncovered.

4.22 TT301

- 4.22.1 This large trench was positioned to the immediate west of TT201. It measured 21m by 5.2m and was excavated to a depth of *c.*4m. Removal of *c.*0.80m of made ground revealed brick walls, a small brick arch, stone steps, toilet furniture, glazed wall tiles (*in-situ*), wooden shuttering and a concrete floor. These formed two rooms of a building with the stone steps allowing access between them. The construction techniques of this structure indicates that it is of 19th-20th century date and probably forms part of the former cutlery or Sheaf Island Works. The structures remain *in-situ*.
- 4.22.2 A small test trench was excavated through the concrete floor in the centre of the building, revealing a yellow brown sandy clay, interpreted as a probable natural deposit.

4.23 TT302a

- 4.23.1 TT302a was located in the centre of the site and measured 10.75m by 8.5m. Removal of between 1.4-1.7m of made ground revealed the outline of a brick built rectilinear room. Contained within the four brick walls was a further 2.5m of made ground. This deposit was removed to reveal the wall elevations, which included brick alcoves. A concrete floor was also identified. The construction techniques employed for this building were similar to those identified in TT301, indicating a 19th-20th century date, and remain *in-situ*.
- 4.23.2 A small investigation trench was excavated through the concrete floor revealing a further 3.45m of made ground (to 6.8m BGL). This sealed laminated mudstone.

4.24 TT 302b

- 4.24.1 Positioned to the immediate south of TT302a, this smaller trench measured 6m by 4m. Sealed below 1.2m of made ground, the partially exposed remains of a brick wall were observed in the southern section. Removal of made ground contained by this wall revealed a truncated concrete floor 3.3m BGL. Similarly to TT302a, this floor overlay a further 2.7m of made ground, which sealed a grey silt, noted at 6m BGL. The trench excavation ceased at 7.00m.

4.25 TT 303

- 4.25.1 Measuring 15m by 3.2m, excavation of this trench uncovered 4m of made ground, sealing a grey green clay natural. Traversing the centre of the trench on a north-east to south-west alignment and cutting the natural clay was a linear feature. It was filled with limestone hardcore and may represent the truncated remains of a goit.

4.26 TT 304

- 4.26.1 This large trench measured 11.2m by 10.2m and was excavated to a depth of 2.8m. Only made ground was observed in this trench.

4.27 TT 305

- 4.27.1 This long trench was positioned between TP227 and TT303 and measured 35.2m by 1.7m. Excavation revealed 5.50m of made ground, where excavation ceased. No archaeological features or natural deposits were identified.

5. **Artefact Record**

by Daniel Lee

- 5.1 The 68 artefacts recovered during the watching brief were analysed on 4th January 2006. A list of the artefacts is presented in Appendix II. Whilst ranging broadly in material type the deep nature of excavations limited accurate contextual recording and the exact provenance of material was not

possible. The majority of the artefacts are therefore unstratified, which greatly reduces the significance of the assemblage. The catalogue presented in Table 1 is therefore presented in relation to trial pit number rather than context.

- 5.2 Excavation details demonstrated that the finds were recovered from mixed made ground layers that were machine excavated. The finds material recovered can aid in broadly characterising these deposits, although due to the nature of finds recovery any inferences should be treated with caution.
- 5.3 The recovery of pottery, clay pipes animal bone, shell and glass from industrial deposits, although in small numbers in this case, is well attested in Sheffield, as domestic waste was commonly combined with other material prior to deposition. The limited number of finds recovered from this category of material here is probably due to the conditions of excavation. The crucible fragments and ferrous metal slag originate from the Sheffield steel industry dating from the 19th and early 20th centuries. Due to the limited life span of crucibles and the high frequency of slag these materials were commonly used as hardcore and within made ground throughout the city. The fork blank recovered from TT301 is typical of the Sheffield cutlery industry in the 19th century and represents an unfinished item (Plate 1).

Trial Pit No.	Cxt	Type	No.	Weight (g)	Description	Date
TT204	U/S	Clay pipe	4	15	2 bowl frags (leaf dec seams), 2 stem frags, bore 4/64	mid to late 19 th C
TT204	U/S	Slag	1	286	Ferrous metal slag	-
TT204	U/S	Crucible	4	2557	2 wall, 2 base frags, Fe, used	19 th -20 th C
TT204	U/S	Crucible	1	5400	Near whole crucible, rim missing, 172mm diameter max. 692mm high, Fe, used	19 th -20 th C
TT205	U/S	Clay pipe	37	69	Plain stem frags, bore 4-5/64	19 th C
TT205	U/S	Shell	1	31	Oyster shell valve (<i>Ostrea edulis</i>)	-
TT205	U/S	Slag	1	8	Ferrous metal slag	-
TT205	U/S	Crucible	3	4974	Crucible lids (2 whole), Fe, 180-185mm diameter	19 th -20 th C
TT205	U/S	Crucible	1	352	Crucible wall frag.	19 th -20 th C
TP226	BC	Pottery	1	32	Brown glazed ware, flatware frag.	19 th -20 th C
TP226	BC	Pottery	1	4	Cream ware, flatware frag.	19 th -20 th C
TP226	BC	Pottery	2	9	Transfer printed white ware handle frags	19 th -20 th C
TP226	BC	Pottery	1	15	Transfer printed white ware, flatware frag.	19 th -20 th C
TP226	BC	Bone	2	9	Animal, one sheep rib, one distal end of juvenile bovine ulna, both butchered (sawn), latter an off cut	-
TP226	BC	Clay pipe	4	8	Plain stem frags, bore 4/64	19 th C
TP226	BC	Shell	1	64	Oyster shell valve (<i>Ostrea edulis</i>)	-

Trial Pit No.	Cxt	Type	No.	Weight (g)	Description	Date
TP226	BC	Slag	2	3993	Ferrous metal slag	-
TP226	BC	Glass	1	81	Bottle bas frag, clear glass	19 th -20 th C
TP226	BC	Crucible	1	139	Wall frag., used	19 th -20 th C
TT301	U/S	Cutlery	1	32	Fork cut out blank, un-stamped ?silver/nickel, 1.5mm thick, shank 90mm x 25mm, handle bent, Plate 1	19 th C
TT301	U/S	Misc.	2	205	Two white glazed ceramic cable/pipe clamps with central location groove and two screw holes to side, 89x33x 29mm, W. Canning & Co. manuf.	?20 th C

Table 1. Catalogue of artefacts (U/S = unstratified, BC = Black clinker layer)

- 5.4 The range of finds recovered from the trial pits are typical of the lower Sheaf Valley in Sheffield and similar to the 19th and 20th century finds retrieved from made ground deposits from recent excavations at Sheaf Square to the south of the site (Lee 2006, in prep). The made ground encountered in TT204, TT205, TP226 and TT301 can be tentatively dated to the mid 19th century to early 20th century, although many of these finds are likely to be residual due to the mixed nature of the deposits. The black clinker layer in TP226 may derive from 19th century industrial residues, but has also acquired domestic waste.
- 5.5 Due to the limited context information for the finds material and limited quantity of dateable material no further analysis is recommended.

6. Discussion and Conclusions

- 6.1 As anticipated, the excavations for the geotechnical investigations uncovered below ground remains of brick walls, structures and concrete floors surviving below deep deposits of made ground. The majority are believed to be 19th-20th century in date, however, it was not possible to investigate these features further due to the depth of the trenches and the excavation techniques employed.
- 6.2 The goit uncovered in the eastern part of the site (observed in TT301, TP224, TP21, TP212, TT303) is believed to be the Bamford Goit and may date back to the late 18th century. This goit connected the Bamford Dam to the Forge Dam to the north and served the forges in this area.(DL to check please).
- 6.3 The northern part of the site contained the best-preserved remains, comprising a number of brick built rooms, furnished with glazed tiles and lavatory fittings (TT301). These are believed to have formed part of the Sheaf Island Works and cutlery works, as are the other sections of walls identified in TP224, TP211, TP212, TP226 and TT302B. The Sheaf Island Works was only demolished in 1984. A further well-preserved room was located in trench TT302A (in the central part of the site) and corresponds with the area that

housed the Sheaf Saw Mill. The construction techniques for this building, which may have been a cellar, were similar to those employed to the north.

- 6.4 Further brick/sandstone walls (seen in TT204, TT204a, TT205) and a brick floor (TT204A) may be associated with the Sheaf Works or the later swimming baths that occupied this part of the site. It is of interest that all the crucible fragments collected during the excavations came from this area of the site, and corresponds to the documentary evidence that refers to former crucible shops in this area. Structural remains for the crucible shops, however, remained elusive.
- 6.5 Substantial deposits of made ground were observed, especially in the area of TT302a and b and TT305, with up to 6.8m of deposits being identified above natural deposits. This may indicate the location of a deep feature, such as an filled in dam which is probably that depicted on Fairbank's 1797 map of the site.
- 6.6 The investigations confirmed that components of what are believed to be the cutlery works and Sheaf Island Works and the Bamford Goit are preserved *c.*1m BGL. No evidence of earlier medieval/post-medieval deposits or structures was identified. In general, it has been demonstrated that there is the high potential for the disturbance of 19th and 20th century industrial archaeological remains if redevelopment occurs on the site. Investigations have also highlighted the deep nature of made ground deposits in this area of the Sheaf valley. Deep made ground has been investigated in recent excavations at Sheaf Square, where several metres depth of it had been used to fill in the Tilt Dam and surrounding area (Lee 2006, in prep). The investigations at E-Campus highlight the continuation of deep made ground along the Sheaf Valley to the north towards the confluence of the Rivers Sheaf and Don.

Cartographic Sources

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Acknowledgements

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Louise Martin BSc

Illustrations

Daniel Lee BSc

Mitchell Pollington MA

Fieldwork

Vicky Brown BA

Paul Major MA

Marina Rose BSc

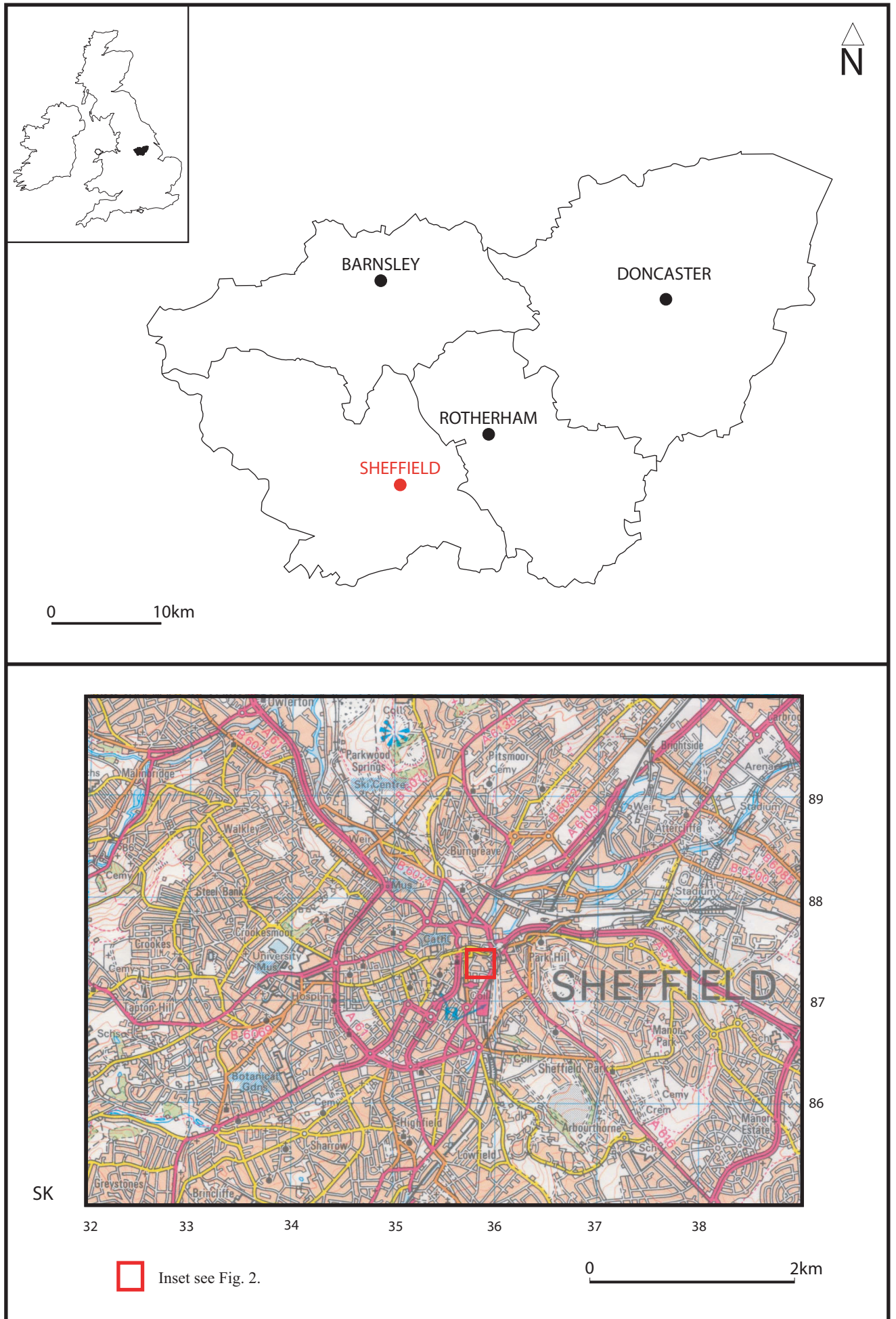


Fig. 1. Site location

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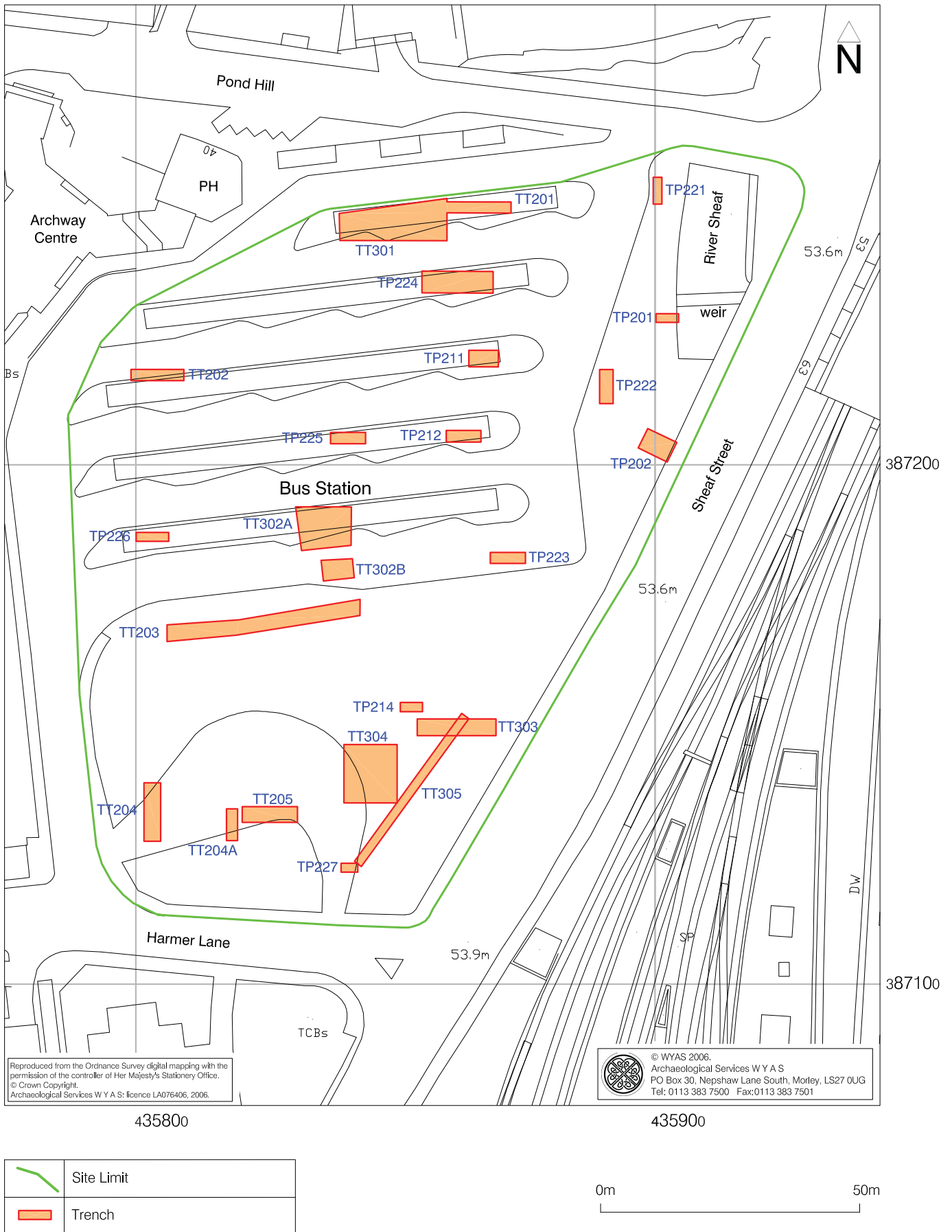


Fig. 2. The study area showing location of test pits and trial trenches (1: 1000 scale).

Appendix I**Inventory of primary archive**

File no.	Description	Quantity
1	Watching brief monitoring forms	11
1	Trench record sheets	33
1	Photographic record sheet	2
1	Colour transparencies	1
1	Black & White photographic negatives	1
1	Black & White photographic contact sheet	1

Appendix II**Inventory of Artefacts**

Artefact Type	Area	Context	Quantity
Clay pipe	TT204	U/S	4
Slag	TT204	U/S	1
Crucible	TT204	U/S	1
Clay pipe	TT205	U/S	37
Shell	TT205	U/S	1
Slag	TT205	U/S	1
Crucible	TT205	U/S	4
Pottery	TP226	BC	5
Bone	TP226	BC	2
Clay pipe	TP226	BC	4
Shell	TP226	BC	1
Slag	TP226	BC	2
Glass	TP226	BC	1
Crucible	TP226	BC	1
Cutlery	TT301	U/S	1
Ceramic cable clamp	TT301	U/S	2

Appendix III

Summary of results

Test Pit/Trench	Length	Width	Depth Excavated	Observations	Finds
TP201	4.4	1.7	2.00	Modern sandstone wall and concrete foundations of embankment of River Sheaf	
TP202	6.2	4.2	5.00	Brick wall and concrete floor-post-medieval cellar?, modern concrete floors	
TP211	5.68	3.2	4.5	Infilled goit, brick wall	
TP212	6.7	2.25	4.6	Infilled goit, corner of modern brick building	
TP214	4.3	1.8	3.6	No features	
TP 221	5.2	1.65	4.4	No features	
TP222	6.6	2.6	5m	Tarmac surface, no archaeological features	
TP223	6.7	2.2	4.5	No archaeological features	
TP224	13.7	4.1	4.5	Two brick walls- modern in date, Infilled goit	
TP225	6.75	2.2	5.1	No features	
TP226	6.2	1.7	3.6	Sandstone floor surfaced edged with stones and cobbles	Glass, clay pipe, slag, crucible, pot, animal bone
TP227	3.2	1.7	0.3	No features	
TT201	12.3	2.1	4.5	Brick wall and infilled goit	
TT202	6.2	1.7	4.7	Infilled goit	
TT 203	35	3.1	4.5	No features	
TT 204	11.2	3.2	4.8	Two brick walls-swimming bath foundations	clay pipe, slag, crucible
TT204A	6.12	2.1	1.3	Brick wall and associated floor-swimming bath foundations	
TT205	10.6	3.2	5.2	Brick work-swimming bath foundations	clay pipe, slag, crucible, shell
TT301	21	5.2	4	Two brick built rooms- toilet blocks	
TT302a	10.75	8.5	6.8	Brick constructed room with concrete floor- cellar	
TT302b	6	4	7	Brick wall and associated concrete floor- cellar	
TT303	15	3.2	5.1	Linear feature-infilled goit	
TT304	11.2	10.2	2.8	No features	
TT305	35.2	1.7	5.5	No features	