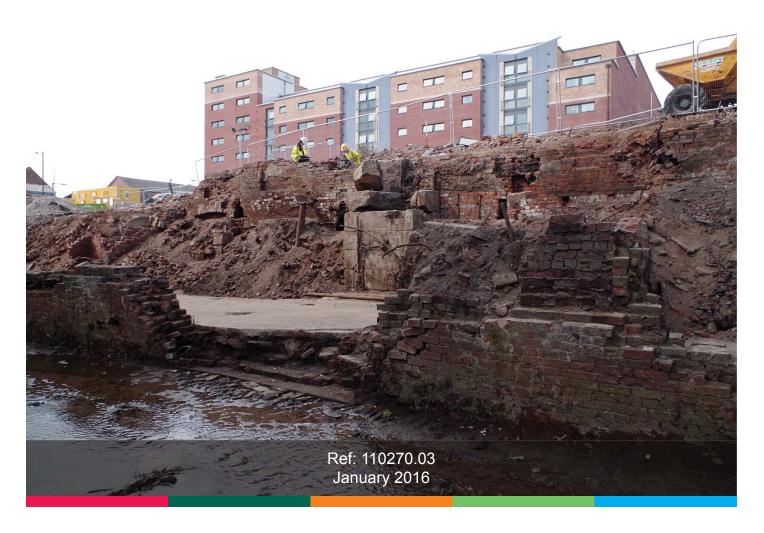


Archaeological Strip, Map and Record and Watching Brief





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Summary

Wessex Archaeology (WA) was commissioned by Sheffield City Council to carry out a programme of Strip, Map and Record and Watching Brief in advance of the redevelopment of the NCP car park, Sydney Street, Sheffield, hereafter 'the Site' (**Figure 1**), centred on National Grid Reference (NGR) 435500, 386670. The redevelopment comprises the landscaping of the Site and the creation of a terraced garden adjacent to Porter Brook.

The structural remains of a 19th century brick and steel frame cutlery works were well preserved on Site. The structure comprised a series of cellars next to the Porter Brook, with structural remains at ground floor level also recorded. Prior to excavation, it was thought that only ground floor structures existed, the discovery of cellars was unexpected and considerably adds to our understanding of the Site. It is likely that further unexcavated non-cellared structures extend to the west.

The first phase of 19th century cellars consisted of a north area and a large central area. A further southern cellar also existed, although it is likely that this was originally part of a sawmill adjacent to the cutlery works. The northern and southern areas were later remodelled, most extensively in the south.

The main central cellar contained a large machine base which survived to over 4m in height with in situ fittings still present. Nearby, a set of well-preserved belt power transfer drums demonstrated a power transfer method used in the works.

To the west of the cellars, a large chimney base was also excavated, and more of the largest machine base was partially revealed under watching brief conditions.

Artefacts from the site relate to the demolition of the works in the 20th century and are typical of industrial sites such as these.

The project archive resulting from the excavation will be deposited with Weston Park Museum. Deposition of any finds with the Museum will only be carried out with the full agreement of the landowner. The archive is currently held at the offices of Wessex Archaeology in Sheffield under site code 110270.

An OASIS form (**Appendix 2**), ID number **wessexar1-220252**, has been provisionally completed and will be finalised at the time of deposition.

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Acknowledgements

The fieldwork was commissioned by Sheffield City Council, and Wessex Archaeology is grateful to Sam Thorn in this regard. The assistance of Dinah Saich of South Yorkshire Archaeology Service who monitored the work is also acknowledged, as is the work of site contractors Esh.

The project was managed for Wessex Archaeology by Andy Norton. Fieldwork was directed by Ashley Tuck and undertaken by Hannah Dabill, Adam Green, Patrick Daniel, Maria Elena Calderón and Jess Tibber. Finds were assessed by Lorraine Mepham. This report was written by Ashley Tuck and illustrated by Rob Goller.



Archaeological Strip, Map and Record and Watching Brief

1 INTRODUCTION

1.1 Project background

- 1.1.1 Wessex Archaeology (WA) was commissioned by Sheffield City Council to carry out a programme of Strip, Map and Record and Watching Brief in advance of the redevelopment of the NCP car park, Sydney Street, Sheffield, hereafter 'the Site' (Figure 1), centred on National Grid Reference (NGR) 435500, 386670. The redevelopment comprises the landscaping of the Site and the creation of a terraced garden adjacent to Porter Brook.
- 1.1.2 Work was undertaken in line with a Project Design (Wessex Archaeology 2015) which was approved by South Yorkshire Archaeology Service (SYAS) in advance of the commencement of fieldwork. A desk-based Archaeological Study had previously been undertaken by ARS (2014). All work was undertaken in accordance with current industry standards and guidance issued by the Chartered Institute for Archaeologists (ClfA 2014a-d).

1.2 Location, topography and geology

- 1.2.1 The Site lies to the immediate south of Sheffield city centre and is bounded by Sydney Street to the northwest, Matilda Street to the southwest, the Porter Brook to the southeast and a commercial building to the northeast.
- 1.2.2 The Site is *c*.0.4 hectares (ha) and lies between 58m and 60m above ordnance Datum (aOD). The Site lies on Pennine Lower Coal Measures mudstone and siltstone, overlain by alluvium, gravel, silt and sand (http://maps.bgs.ac.uk/).

2 ARCHAEOLOGICAL BACKGROUND

2.1 Summary

2.1.1 The following section summarises the archaeological and historical background of the Site that was detailed in the Project Design (Wessex Archaeology 2015) and ultimately derives from the desk-based Archaeological Study (ARS 2014).

2.2 Prehistoric

2.2.1 There are no prehistoric remains recorded within the Site although several find spots are known in Sheffield and along the River Don suggesting a rich prehistoric past. A Romano-British routeway linking Chesterfield and the fort at Templeborough to the north ran through the centre of Sheffield, but no evidence for a settlement at Sheffield is known.



2.3 Anglo-Saxon and medieval

- 2.3.1 The name Sheffield is Old English in origin and derives from the River Sheaf; a corruption of shed or sheth, meaning to divide or separate, and feld, meaning a forest clearing (i.e. settlement in a clearing). The Domesday Book of 1086, contains entries on the manor of 'Hallun' (Hallam) and Sheffield is described twice; first as Escafeld, then later as Scafeld, but no known Saxon remains lie close to the Site.
- 2.3.2 The manor of Hallamshire was owned by Roger de Busli and passed to William de Lovetot, in *c*.1150AD. De Lovetot constructed the first Sheffield Castle around which Sheffield formed. It is thought that the Site formed agricultural land or parkland at this time. Architectural rubble and stonework, some of which may be associated with a medieval smithy, have also been recovered within the surrounding area of the Site

2.4 Post-medieval, 19th century and modern

- 2.4.1 The Site is shown as open fields (Alsop Farm) on Harrisons' Map of the Manor of Sheffield (1637) and remains so until the 1770s. As Sheffield became an increasingly important industrial city, especially in the metal trades, the population began to expand out of the historic core. This expansion was initiated in the early 18th century by the principal landowners, and following the setup of grids in the 'Crofts' (north) and Burgess Street/Cambridge Street (south), the Duke of Norfolk commissioned plans for a grid of new streets to be laid out in Alsop Fields.
- 2.4.2 The Fairbanks maps depict the Porter Brook as partially canalised by 1808; which may have happened during the overall re-planning of the area. Tayler's 1832 map shows that the Porter Brook was fully realigned and canalized and a building of uncertain function appears in the centre of the Site. By 1853 the Site was largely built-up, with buildings within the south part of the Site labelled as 'Sheffield Bone Mills'. By the 1891 map, the buildings on the Site are labelled as 'Sidney Works (Silver and Electro Plate)' to the south and the overall site is labelled as 'Saw Mills'.
- 2.4.3 The labelling on the 1891 map corroborates the evidence from the Commercial Directory of Sheffield (1879) which names Jas. Deakin and Sons, Silversmiths and Joseph Smith and Sons, Timber Merchants as the tenants on the Site. Kelly's directory of 1888, the first directory to name Matilda Street, also notes John Gorril (German silver manufacturer), Catherine Elizabeth (Shopkeeper) and William Cooper (Butchers and knife manufacturer) in the south of the Site. Between 1903 and 1933 the trade directories show that the exclusive tenants on the proposed redevelopment were James Deakin and Sons silversmiths and table cutlery (labelled as the Sidney Works).
- 2.4.4 The Site was cleared in the late 20th century and is shown as a car park on the 1992 OS map.

3 METHODOLOGY

3.1 General

3.1.1 Detailed methodology for the work can be found in the Project Design (Wessex Archaeology 2015). Wessex Archaeology procedures conform to industry best practice, as outlined in the standards and guidance documentation issued by the Chartered Institute for Archaeologists (e.g. CIfA 2014a-d) and relevant local and regional frameworks.



3.1.2 An area of Strip, Map and Sample excavation was carried out over the assumed footprint of the former cutlery works. An archaeological Watching Brief was maintained on all other groundworks performed by the contractor (Esh). After recording had concluded, and following discussions between Wessex Archaeology, the client and Dinah Saich (SYAS), the level of the surviving archaeology was reduced by the contractor and an archaeological Watching Brief held during this work.

3.2 Project aim

3.2.1 With due regard to the ClfA *Standard and guidance: archaeological excavation* (ClfA 2014a), the principle aim of the works was to record the archaeological resource during development within a specified area using appropriate methods and practices, and in compliance with the *Code of conduct* and other relevant by-laws of ClfA.

3.3 Aims and objectives

- 3.3.1 In furtherance of the project aim, the following objectives were defined:
 - to allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works; including
 - to ensure their preservation by record to the highest possible standard;
 - to confirm the approximate date or date range of the remains, by means of artefactual or other evidence:
 - to determine or confirm the approximate extent of any remains;
 - to determine the condition and state of preservation of the remains; and
 - to determine the degree of complexity of the horizontal and/or vertical stratigraphy present.
 - to provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard; and
 - to prepare a report on the results of the work.

3.4 Machine excavation

3.4.1 Overburden was removed using a 360° mechanical excavator fitted with a toothless ditching bucket, working under the continuous direct supervision of a suitably experienced archaeologist. Overburden was removed in a series of level spits down to the level of the upper archaeological horizon. The machine was used to empty demolition brick rubble from between the archaeological structures.

3.5 Setting out and pre-excavation

3.5.1 The Site was set out in accordance with the agreed plan using a survey grade GPS with an accuracy of less than +/- 100mm. A cable avoidance tool was used to identify services prior to excavation.



3.6 Hand excavation of archaeological remains

- 3.6.1 The exposed surfaces were hand-cleaned when necessary to clarify the extent of any revealed archaeological remains. All features were investigated in order to establish the date, nature, extent and condition of the archaeological remains.
- 3.6.2 A sufficient sample of all archaeological features and deposits were excavated in order to determine their date, extent, level of preservation, form, and, where possible, function and stratigraphic relationship to other features.

3.7 Recording

- 3.7.1 All archaeological features and deposits encountered were recorded using Wessex Archaeology's *pro forma* recording sheets and a continuous unique numbering system.
- 3.7.2 It was not possible to use a GPS system to record the location of excavated features due to the Site's low lying position between tall buildings and trees. Excavated areas were hand planned and related to drawing points in positions which could be located by means of an RTK GPS system and tied into the Ordnance Survey grid with a tolerance of better than + or 100mm. Spot heights were recorded in relation to Ordnance Datum, correct to two decimal places, partly through use of the GPS equipment and partly with a dumpy level. Plans, sections and elevations of archaeological features and deposits were drawn at 1:10, 1:20 or 1:50 scale as appropriate. All drawings were made in pencil on permanent drafting film.
- 3.7.3 A full photographic record was maintained using digital photography. The record illustrates both the detail and the general context of principal features, finds excavated, and the site as a whole. A photographic register, with brief details, was maintained throughout the works.

3.8 Finds

- 3.8.1 Finds were treated in accordance with the relevant guidance (English Heritage 2005, 2006).
- 3.8.2 All artefacts from excavated contexts were retained, except material of obviously modern date. All retained artefacts were washed, weighed, counted and identified. Any artefacts requiring conservation or specific storage conditions were dealt with immediately in line with *First Aid for Finds* (Watkinson and Neal 1998).

3.9 Environmental samples

3.9.1 Due to the industrial nature of the Site, no deposits suitable for environmental sampling were encountered.

4 RESULTS

4.1 Introduction

4.1.1 The following section provides a summary of the information held in the Site archive, with a full list of context numbers and context descriptions contained in **Appendix 1**.



4.2 General

- 4.2.1 Brick rubble overburden (**1000**) consisting mainly of handmade red brick but also machine and extruded brick, sandstone, *etc.*, overlaid the entire Site and abutted standing walls. Synthetic plastics *etc.* were present in this overburden, which relates to the demolition of the cutlery works in the 20th century.
- 4.2.2 The main area of excavation was focussed on a series of cellars adjacent to the Porter Brook River (**Figure 1**). In the north, several small rooms were partially exposed. In the centre, a large cellar was almost completely exposed, and in the south, an area had been modified in the 20th century. The northern and central areas originally formed part of the cutlery works as shown on historic mapping (**Figure 2**). However, the southern area was originally part of an adjacent sawmill and was remodelled in the 20th century to communicate with the cutlery works cellar. To the west of the cellars, partial structures were seen in plan suggesting that non-cellared buildings continued west beyond the exposed cellars.
- 4.2.3 Approximately 1m of overburden was left *in situ* at the base of the western upstanding structures (*e.g.* wall **1013**), as impact of the proposed terracing did not go beyond this level and removal would have threatened collapse of the structures.

4.3 Phase 1: early-mid 19th century

- 4.3.1 The majority of the archaeological structures encountered (e.g. **1013**, **Figures 1** and **3**) belong to the earliest phase of activity on Site. These structures consist of walls constructed from uniform handmade red bricks bonded with brownish lime mortar with 1-3% inclusions of both unreacted lime and coal.
- 4.3.2 Steel frame techniques were used to supplement the brick structure, with inverted "T" shaped girders used to support the ground floor (1014, Figure 2, Plate 1) and as part of the structure of the northern east-west wall (1001). These inverted "T" shape girders supported brick springers on either side that would have led to red brick vaulting supporting the ground floor above the excavated cellarage. Most of these girders had been removed (likely for scrap), but small truncated ends were occasionally seen and a pattern of voids in brick structures testified to the position of the rest. Circular steel piers with an external diameter of 0.135m (Plate 1) were used to support the girders, although in some cases these steel piers were replaced with red brick piers (e.g. where machine base 1016 prevented a steel pier being installed, Plate 2).
- 4.3.3 The pattern of steel girders was uniform, with each span of vaulting approximately 3m wide. The east-west running girders were supported by piers immediately adjacent to the west wall (1013) as well as two further evenly spaced piers. No piers were present adjacent to the east riverside wall, suggesting that the wall itself carried the weight of the floor.
- 4.3.4 The main riverside wall (1002, Figure 1) included sandstone window sills (1020, Plate 3) communicating with the river.
- 4.3.5 The north wall of the cutlery works adjoining the next plot (**1001**) was plain except for where a steel girder had been removed level with the other girders.
- 4.3.6 The main west wall of the cellars (1013, Figure 3, Plates 4-6) was a complex structure. This wall was penetrated by the ground flood girders. Below the level of the girders the wall was not fully exposed as it lay beyond proposed construction levels. However, an opening immediately south of machine base 1012 was partially filled with an iron frame

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and probably relates to the chimney structure (1031) nearby. This opening had been adapted to carry cables in the 20th century. At the south end, below the level of the girders, wall 1013 contained a blank archway which may represent a blocked communication but is more likely a decorative feature (Figure 2). On the ground floor above the cellars, a number of blank recesses were present forming a semi-regular pattern. Some of these blank recesses appear to have been blank as part of the initial design, however others were more crudely filled in at a later date. From north to south, these evenly spaced recesses were: originally blank, infilled, originally blank with sandstone fittings, absent, infilled, wall damaged, wall damaged, machine base (1012), infilled, absent, originally blank, absent, originally blank. Traces of plaster were seen on the east face of this wall at ground floor level (Figure 2).

- 4.3.7 The foundation of an east-west redbrick wall belonging to this phase (**1007**, **Plate 7**) was seen forming the division between the northern rooms and the main cellar.
- 4.3.8 At the south end of the main cellar were a series of structures which correspond approximately with the mapped southern limit of the cutlery works. Walls **1017**, **1019**, **1022** and **1028** are all surviving fragments of the original south limit of the main cellar.
- 4.3.9 At the southern limit of the site, a further handmade red brick and brownish lime mortar wall, **1023** (**Plate 8**), ran east-west. Wall **1023** was indicative of 19th century structures extending west out of the area of excavation.
- 4.3.10 A small part of the original sandstone flag flooring of the cellars was seen (**1008**, **Plate 9**). The original flooring was laid directly on a 19th century made ground layer of mid brown clay containing fragments of handmade red brick (**1027**, **Plate 9**).
- 4.3.11 A very large (2m by 1.36m by c.4m high) machine base (1012, Plate 5) made up of ashlar sandstone tied together with steel pins was built into west wall 1013. This machine base was truncated and would have extended even higher, well above the level of the ground floor. Cut outs and fittings were present on the base along with later electrical controls. West of wall 1013, machine base 1021 extended to the north and this extension was recorded as 1034 during the watching brief.
- 4.3.12 Another smaller (1m by 1.6m by *c*.1m high) machine base (**1016**) of ashlar sandstone was present to the south, although the full extent was not revealed.
- 4.3.13 An *in situ* set of iron belt power transfer drums (**1015**, **Plate 1**) was attached to wall **1013**. The spindle was 1.2m long and was mounted on ornate brackets. At the north end, a fragment of a belt 0.064m wide (2.5 inches) sat on a spoked drum 0.01m (4 inches) wide. At the south end, a set of drums formed a conical structure. These drums were 0.18m (7 inches), 0.23m (9 inches), 0.28m (11 inches) and 0.33m (13 inches) in diameter.
- 4.3.14 An east-west wall (**1032**, visible in front of chimney base in **Plate 10**) extended west of the cellars indicating that the cutlery works extended to the west. Nearby, a wooden floor joist (**1033**, **Figure 1**) indicated that the steel frame structure of the cellars likely did not extend to the west was only present adjacent to the river.
- 4.3.15 The canalised Porter Brook river had been floored with cobblestones (1009, Plate 9), which respected the riverside wall 1002. Steel girders spanning the river which would have originally carried a floor were removed during these works.



4.4 Phase 2: late 19th/early 20th century

- 4.4.1 In the north of the site, two similar structures (1003 and 1004, Plate 11) were recorded consisting of four skins of machine brick 1.54m long. Bullnosed bricks were used to create rounded corners on these structures. The mortar was bluish grey in colour but was neither as brittle nor as strong as typical ash mortar. This mortar was identified tentatively as lime mortar with a bluish hue.
- 4.4.2 West of the cellars, a large chimney 2.3m square (1031, Plate 10) was built in the corner between earlier walls (1013 and 1032). Chimney 1031 was built of black ash mortar and unfrogged machine brick. This chimney likely connects with an original opening in 1013 and as such may be a rebuild of an earlier, original chimney. The interior of the chimney was excavated for 0.7m and openings were revealed at ground floor level heading both west and south. This chimney appear on maps from 1891 onwards (OS 1:1250) which agrees with the ash mortar used, although the absence of the chimney before this date cannot be demonstrated with map data.
- 4.4.3 Some repairs in black ash mortar were performed on the main west wall (1013) as shown in Figure 2.

4.5 Phase 3: mid-late 20th century

- 4.5.1 The floors of the cellars were covered with poured concrete, occasionally incorporating steps and fittings, presumably to accommodate machinery (1005, 1010, 1025, 1026, 1030).
- 4.5.2 The southern part of the cellars was extensively remodelled during the 20th century (**Plate 8**). Most of the walls were rebuilt, although piecemeal portions of the original brickwork (*e.g.* 1023) survive, demonstrating that the 20th century rebuilding followed the floorplan of earlier structures. The south wall of the original cutlery works (**Figure 2**) was breached (leaving foundation 1022 at floor level), allowing access from the large cutlery cellar to the southern cellar. This suggests that the southern cellar may have originally been part of a separate works or, if part of the same establishment, was originally accessed separately. Early 20th century maps show a sawmill adjacent to the cutlery works.

4.6 Watching brief negative result

4.6.1 A watching brief was maintained on ground reduction along the north-west bank of the Porter Brook, south-east of the main recorded cellars. No archaeological deposits or structures were seen in this location (**Plate 12**).

5 FINDS

5.1 General

A small quantity of finds was recovered, collected from a demolition deposit (1000) and from the Porter Brook (1036); in other words, all finds are essentially unstratified. All finds are of post-medieval/modern date, and comprise a mixture of domestic refuse (pottery, bottle glass, clay tobacco pipes, animal bone) with evidence for craft/industrial activity (cutlery and cutlery handles, worked bone and shell, crucibles and metallurgical residues). Quantities by context are given in **Table 1**.



5.2 Pottery

5.2.1 Ware types represented amongst the pottery assemblage include redwares (mainly black-glazed), stonewares, bone china and various refined wares (creamware, pearlware, whitewares and buff/yellow wares). Vessel forms include kitchenwares and tablewares (bowls, mugs and cups, plates, a chamberpot, a jar and a flagon). The jar is stamped with the mark of Alfred Parrott of New Street and Bank Street, Sheffield (listed in Kelly's 1893 Directory as agent for Thomas Salt and Co, brewers). Although the redwares and stonewares could date as early as the 18th century, there is nothing here which is necessarily earlier than 19th century.

5.3 Clay tobacco pipes

5.3.1 Of the 13 fragments recovered, 11 are plain stems. These cannot be particularly closely dated, but the absence of wide-bore stems suggests that these are of 18th century date or later. There is one stem/spur fragment, with relief dots on each side of the spur, and one partial spurred bowl of 18th or 19th century date.

5.4 Other ceramics

5.4.1 Two crucible lids (one partial) were recovered from the demolition deposit (**1000**). Both are of typical disc form, and both had been used, from evidence of exposure to high temperatures.

5.5 Glass

5.5.1 The glass includes both vessel and window glass, and one spectacle lens; it is all of 19th or 20th century date. The vessel glass consists largely of bottle fragments, in clear, green and brown glass. One complete clear glass bottle (some damage to the rim) carries the mark of Cottam's Table Water, Sheffield.

5.6 Metalwork

- 5.6.1 Approximately half of the metalwork assemblage consists of cutlery a variety of knives, as well as some teaspoons and cake slices, and two serving forks. Most of the knives are table knives (including fish knives), with some carving knives. None of these are finished articles all lack handles, although handles were also found (two hollow metal handles, and see also Animal Bone, below). Most of the knives appear to have been ground, but only one is stamped (STAINLESS / RYALS / MADE IN ENGLAND). One teaspoon is also stamped (STAINLESS SHEFFIELD ENGLAND). The cutlery is assumed to relate to manufacture on the Site, most probably by James Deakin and Sons at the Sidney Works from the late 19th to late 20th centuries, but possibly also including products of some of the smaller manufacturers listed in the trade directories.
- 5.6.2 Various tools (file, wrench, chisel) are likely to have been used in the works. Files had a variety of uses in cutlery production, as well as in the maintenance of machinery. There are also two grinding wheels. Four large annular buckles could have belonged to leather horse harness, or other heavy-duty straps or belts.
- 5.6.3 Other metal finds included a handful of ferrules (almost certainly from tool or cutlery handles), a washer, some iron nails and screws and other small fittings, and an enamel mug.



5.7 Leather

5.7.1 The four pieces of leather include two conjoining fragments from a thick strip, possibly part of a drive belt. A smaller, perforated strip fragment could belong to a belt. There is also a small 'collar' of unknown function.

5.8 Animal bone and shell

- 5.8.1 Both the bone and the shell include worked pieces. One small piece of sheep jaw and a cattle astragalus could represent domestic refuse, but two other unidentified bones, one sawn at both ends, and the second cut at one end, could represent waste from boneworking, possibly for the manufacture of cutlery handles. Two bone handles were also recovered, both of scale type one is part of a finished knife, with the tang but not the blade surviving, while the other is a single scale, irregularly faceted and therefore perhaps unfinished.
- 5.8.2 All of the shell is oyster. There are six complete or almost complete valves (three left and three right valves), together with three utilised pieces, one with two cut edges, and two which have had circular blanks removed for button manufacture.

5.9 Other finds

5.9.1 Other finds comprise two synthetic knife handles; two small pieces of miscellaneous metallurgical residue; some small textile/rubber fragments; and two small wooden objects (including one possible peg fragment).

Table 1: All finds by context (number / weight in grammes)

	1000	1036	TOTAL
ANIMAL BONE	3/67	1/31	4/98
CLAY PIPE	13/51		13/51
GLASS	15/994		15/994
LEATHER	4/320		4/320
METAL	90/7417	3/73	93/7490
OTHER CERAMIC	2/3207		2/3207
POTTERY	73/1874	18/532	91/2406
SHELL	9/138		9/138
SLAG	2/63		2/63
SYNTHETICS		2/66	2/66
TEXTILE	4/43		4/43
WOOD	2/16		2/16
WORKED BONE	1/14	1/57	2/71



6 ENVIRONMENTAL EVIDENCE

6.1 General

6.1.1 Due to the industrial nature of the Site, no deposits suitable for environmental sampling were encountered.

7 DISCUSSION

7.1 Conclusion

- 7.1.1 The structural remains of a 19th century brick and steel frame cutlery works were well preserved on Site. The structure comprised a series of cellars next to the Porter Brook, with structural remains at ground floor level also recorded. Prior to excavation, it was thought that only ground floor structures existed; the discovery of cellars was unexpected and considerably adds to our understanding of the Site. It is likely that further unexcavated non-cellared structures extend to the west.
- 7.1.2 The first phase of 19th century cellars consisted of a north area and a large central area. A further southern cellar also existed, although it is likely that this was originally part of a sawmill adjacent to the cutlery works. The northern and southern areas were later remodelled, most extensively in the south.
- 7.1.3 The main central cellar contained a very large machine base which survived over 4m in height. Various fittings were present. Nearby, a set of well-preserved belt power transfer drums demonstrated a power transfer method used in the works.
- 7.1.4 To the west of the cellars, a large chimney base was also excavated, and more of the largest machine base was revealed under watching brief conditions.
- 7.1.5 Artefacts from the site relate to the demolition of the works in the 20th century and are typical of industrial sites such as these.

8 STORAGE AND CURATION

8.1 Museum

8.1.1 The project archive resulting from the excavation will be deposited with Weston Park Museum. Deposition of any finds with the Museum will only be carried out with the full agreement of the landowner.

8.2 Preparation of archive

- 8.2.1 The complete Site archive, which will include paper records, photographic records, graphics, artefacts, and digital data, will be prepared following the standard conditions for the acceptance of excavated archaeological material by Weston Park Museum, and in general following nationally recommended guidelines (SMA 1995; UKIC 2001; Brown 2011; ClfA 2014c; ADS 2013). All archive elements will be marked with the museum accession code, and a full index will be prepared.
- 8.2.2 An OASIS form (**Appendix 2**), ID number **wessexar1-220252**, has been provisionally completed and will be finalised at the time of deposition.



8.3 Discard policy

1.1.1 Wessex Archaeology follows the guidelines set out in *Selection, Retention and Dispersal* (Society of Museum Archaeologists 1993), which allows for the discard of selected artefact and ecofact categories which are not considered to warrant any future analysis. In this instance, although the evidence for industrial use of the Site is of interest, the evidence is only of limited local interest, and its potential for future research is extremely limited, due to the relatively small quantity of material recovered, its date range and nature (commonly occurring types of relatively recent origin), and provenance (essentially unstratified). Given these limitations, retention of the finds assemblage for long-term curation is not recommended, and the finds will be dispersed prior to archive deposition. This process will be fully documented in the project archive.

8.4 Security copy

8.4.1 In line with current best practice (e.g. Brown 2011); on completion of the project a security copy of the written records will be prepared, in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.



9 REFERENCES

9.1 Bibliography

- ADS, 2013, Caring for Digital Data in Archaeology: a guide to good practice, Archaeology Data Service & Digital Antiquity Guides to Good Practice
- ARS, 2014, Porter Brook, Sheffield; Archaeological Study, unpublished client report
- Brown, D.H., 2011, Archaeological archives; a guide to best practice in creation, compilation, transfer and curation, Archaeological Archives Forum (revised edition)
- Chartered Institute for Archaeologists (CIfA), 2014a, Standard and Guidance for Archaeological Excavation
- Chartered Institute for Archaeologists (ClfA), 2014b, Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials
- Chartered Institute for Archaeologists (ClfA), 2014c, Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives
- Chartered Institute for Archaeologists (ClfA), 2014d, Codes of Conduct
- English Heritage, 2005, A Strategy for the Care and Investigation of Finds
- English Heritage, 2006, Guidelines on the X-radiography of archaeological metalwork
- Society of Museum Archaeologists (SMA), 1993, Selection, Retention and Dispersal of Archaeological Collections, Society of Museum Archaeologists
- Society of Museum Archaeologists (SMA), 1995, Towards an Accessible Archaeological Archive. Society of Museum Archaeologists
- United Kingdom Institute of Conservation (UKIC), 2001, Guidelines for the Preparation of Excavation Archives for Long Term Storage
- Watkinson, D. and Neal, V. (eds.), 1998, First Aid for Finds: Practical Guide for Archaeologists. United Kingdom Institute for Conservation of Historic & Artistic Works, Archaeology Section; 3rd Revised Edition
- Wessex Archaeology, 2015, Porter Brook Pocket Park, Sheffield: Project Design for Archaeological Strip, Map and Record and Watching Brief, unpublished client report ref. 110270.02

9.2 Online sources

British Geological Survey, Geology of Britain online viewer, accessed 12/08/14, http://www.bgs.ac.uk/discoveringgeology/geologyofbritain/viewer.html



10 APPENDICES

Appendix 1: Context descriptions

Context	Туре	Description
1000	Overburden	Demolition rubble derived from former structures on Site. Mid brown clay silt with 80% brick rubble, mostly handmade, also machine and extruded brick.
1001	Structure	E-W north wall, handmade red brick with brownish lime mortar
1002	Structure	Main N-S riverside wall, handmade red brick with brownish lime mortar
1003	Structure	E-W wall, bullnose corners, bluish grey lime mortar
1004	Structure	E-W wall, bullnose corners, bluish grey lime mortar
1005	Structure	Poured concrete floor with raised step inbuilt
1006	Fill	Overburden material continuous with 1000. Black soot/ash, possibly from in-situ burning
1007	Structure	E-W wall, handmade with brownish lime mortar
1008	Structure	Two partially exposed flagstones interior floor
1009	Structure	Cobblestone surface forming base of Porter Brook river
1010	Structure	Main poured concrete floor of cellar. Regular holes for missing steel piers
1011	Structure	3 iron pipes running N-S. Probably tie beams removed from structures above and laid in cellar during or prior to demolition
1012	Structure	Large sandstone machine base. Dressed ashlar blocks. Steel bars tying through blocks. Some cut away parts and original iron fixings. Also later electrical controls
1013	Structure	Main N-S wall forming W side of cutlery basement. Handmade red brick with brownish lime mortar. Originally plastered. Many details – see elevation and primary archive
1014	Structure	Iron Girder, inverted "T" shape. Originally supported ground floor via springer bricks and brick vaulting.
1015	Structure	In situ survival of belt gearing. Attached to wall 1013. See photos/primary archive for details
1016	Structure	Machine base of ashlar blocks with adjoining red brick pier to support removed girder/ground floor. Unstable.
1017	Structure	E-W wall, originally s wall of cutlery basement?
1018	Structure	Modern wall/complex structure E-W, cement and machine bricks
1019	Structure	E-W wall, handmade red brick and brownish lime mortar. Fragment of earlier structure preserved in centre of 1018 .
1020	Structure	Sandstone window sill facing river
1021	Structure	Modern replacement of riverside wall at S. Machine brick and cement
1022	Structure	Foundation of removed interior E-W wall. Handmade brick and brownish lime mortar
1023	Structure	E-W wall at S limit of cutlery works. Handmade red brick and brownish lime mortar.
1024	Structure	Modern replacement of 1023. Cement and machine brick
1025	Structure	Poured concrete floor of smaller part of cutlery works at S end.
1026	Structure	Poured concrete rectangular slab above 1025
1027	Layer	Made ground under main floor of basement. Mid brown clay with handmade RB fragments
1028	Structure	E-W return of main riverside wall. Handmade red brick and brownish lime mortar
1029	Structure	E-W redbrick wall north of 1018. Handmade red brick and brownish lime mortar
1030	Structure	L-shaped poured concrete machine base at S.
1031	Structure	Red brick chimney with black ash mortar. Square, 4 skins wide each side. Archways in S and W walls.
1032	Structure	Internal division of cutlery works N of chimney 1031 and W of main cellar. Handmade red brick and brownish lime mortar
1033	Structure	Wooden joist to support floor adjacent to chimney 1031



1034	Structure	Large machine base W of main cellar. Roughly tooled sandstone, steel rods running through blocks. Part of 1021
1035	Structure	Metal chute associated with chimney 1031
1036	Laver	Number used for identifying finds recovered directely from Porter Brook river



Appendix 2: OASIS form

OASIS ID: wessexar1-220252

Project details

Project name Porter Brook, Pocket Park, Sheffield

Short description of the project

Wessex Archaeology (WA) was commissioned by Sheffield City Council to carry out a programme of Strip, Map and Record and Watching Brief in advance of the redevelopment of the NCP car park, Sydney Street, Sheffield, hereafter 'the Site' (Figure 1), centred on National Grid Reference (NGR) 435500, 386670. The redevelopment comprises the landscaping of the Site and the creation of a terraced garden adjacent to Porter Brook. Structural remains of a 19th century brick and steel frame cutlery works were well preserved on Site. The focus of excavation was on a series of cellars adjoining the Porter Brook river, although structural remains at ground floor level were also recorded. Prior to excavation, it was thought that only ground floor structures existed and the discovery of cellars adds to our understanding of the Site. It is likely that further unexcavated archaeological structures extend to the west. The original 19th century cellars consisted of a north area and a large central area. Immediately south of the works, a further southern cellar existed, although it is likely that this was originally part of a sawmill adjacent to the cutlery works. The northern and southern areas were later remodelled, most extensively in the south. The main central cellar contained a very large machine base which survived over 4m in height. Various fittings were present. Nearby, a set of belt power transfer drums showed that belt power was used in the works. To the west of the cellars, a large chimney base was also excavated, and a second large machine base was glimpsed under watching brief conditions. Artefacts from the site relate to the demolition of the works in the 20th century and are typical of industrial sites such as these.

Project dates Start: 01-09-2015 End: 23-09-2015

Previous/future

work

No / No

Any associated project reference

110270 - Sitecode

codes

Type of project Recording project

Site status None

Current Land use Transport and Utilities 2 - Other transport infrastructure

Monument type CUTLERY WORKS Post Medieval

Significant Finds POTTERY Post Medieval

Significant Finds ANIMAL BONE Post Medieval

Significant Finds GLASS Post Medieval

Significant Finds LEATHER Post Medieval

Significant Finds METAL Post Medieval

Significant Finds SHELL Post Medieval
Significant Finds SLAG Post Medieval

Significant Finds SYNTHETICS Post Medieval



Significant Finds **TEXTILE Post Medieval** Significant Finds WOOD Post Medieval

Significant Finds WORKED BONE Post Medieval

Project location

Country England

Site location SOUTH YORKSHIRE SHEFFIELD SHEFFIELD Porter Brook, Pocket Park,

Sheffield

Postcode S1 2NX

Study area 0.4 Hectares

Site coordinates SK 3550 8667 53.375428246083 -1.466326717587 53 22 31 N 001 27 58 W Point

Height OD / Depth Min: 58m Max: 60m

Project creators

Name of Wessex Archaeology Organisation

Project brief

originator

SYAS

Project design

originator

Wessex Archaeology

Project

Richard O'Neill

director/manager

Project supervisor Ashley Tuck

Type of

sponsor/funding

body

City Council

Name of

sponsor/funding

body

Sheffield City Council

Project archives

Physical Archive

Exists?

No

Digital Archive recipient

Weston Park Museum

Digital Contents

"none"

Digital Media available

"Images raster / digital photography", "Survey"

Paper Archive

recipient

Weston Park Museum Sheffield

Paper Contents

"Animal

Bones", "Ceramics", "Glass", "Industrial", "Leather", "Metal", "Textiles", "Wood", "Worked

bone"

Paper Media

available

"Context

sheet","Diary","Drawing","Photograph","Plan","Report","Section","Unpublished

Text"

110270.03 16



Project bibliography 1

Grey literature (unpublished document/manuscript)

Publication type

Title Porter Brook Pocket Park, Sheffield: Archaeological Strip, Map and Record and

Watching Brief

Author(s)/Editor(s) Tuck, A.

110270.03

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Date 2015

Issuer or publisher Wessex Archaeology

Place of issue or Sheffield

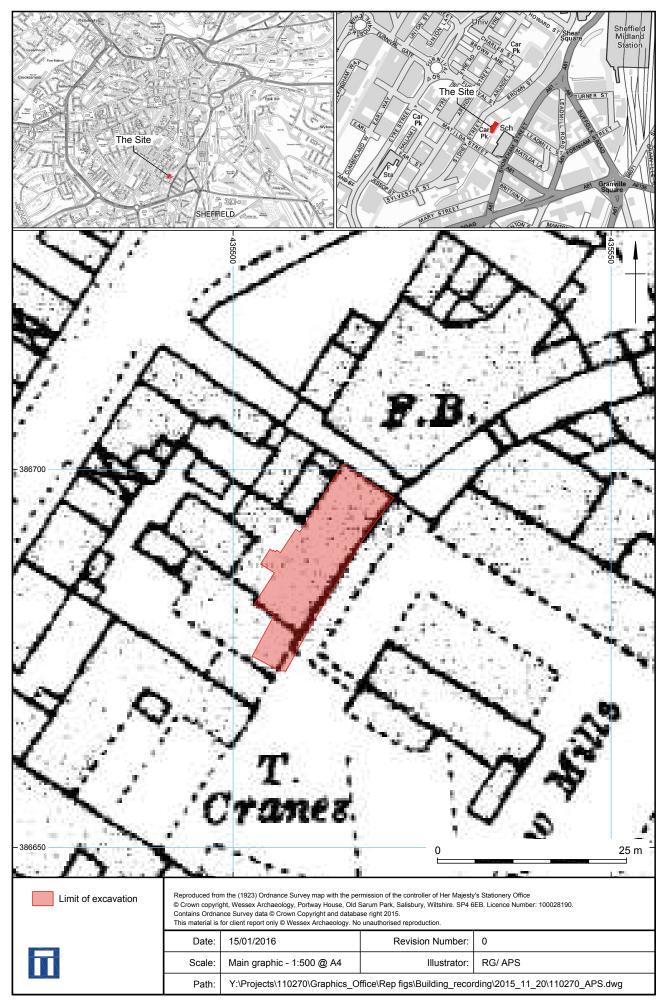
publication

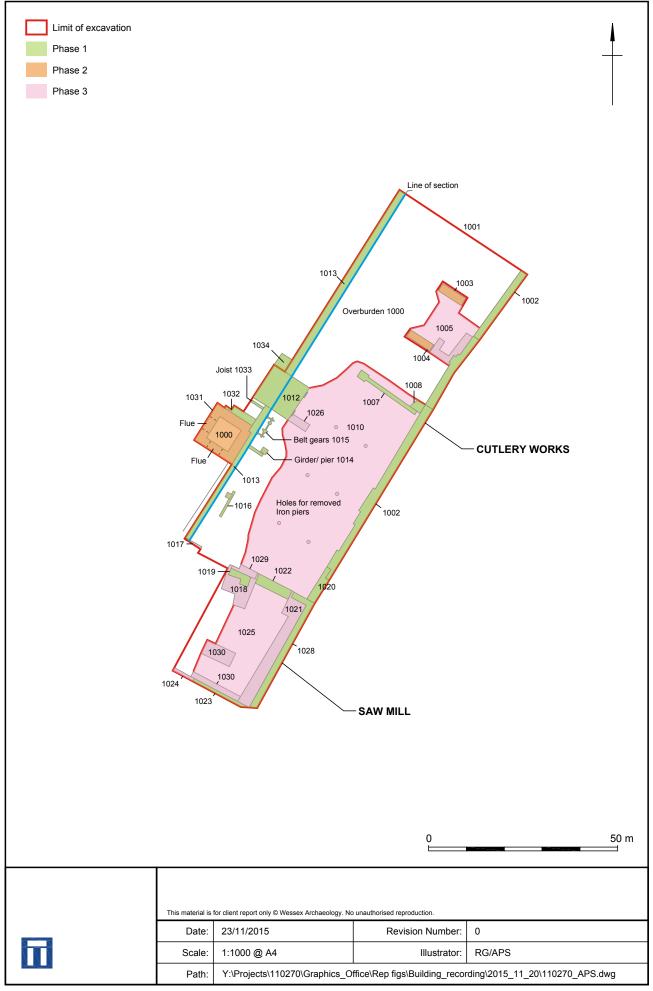
A4 laser printed comb bound report. Description

Entered by Ashley Tuck (a.tuck@wessexarch.co.uk)

Entered on 4 November 2015

> 17 110270.03





Plan of excavation Figure 2

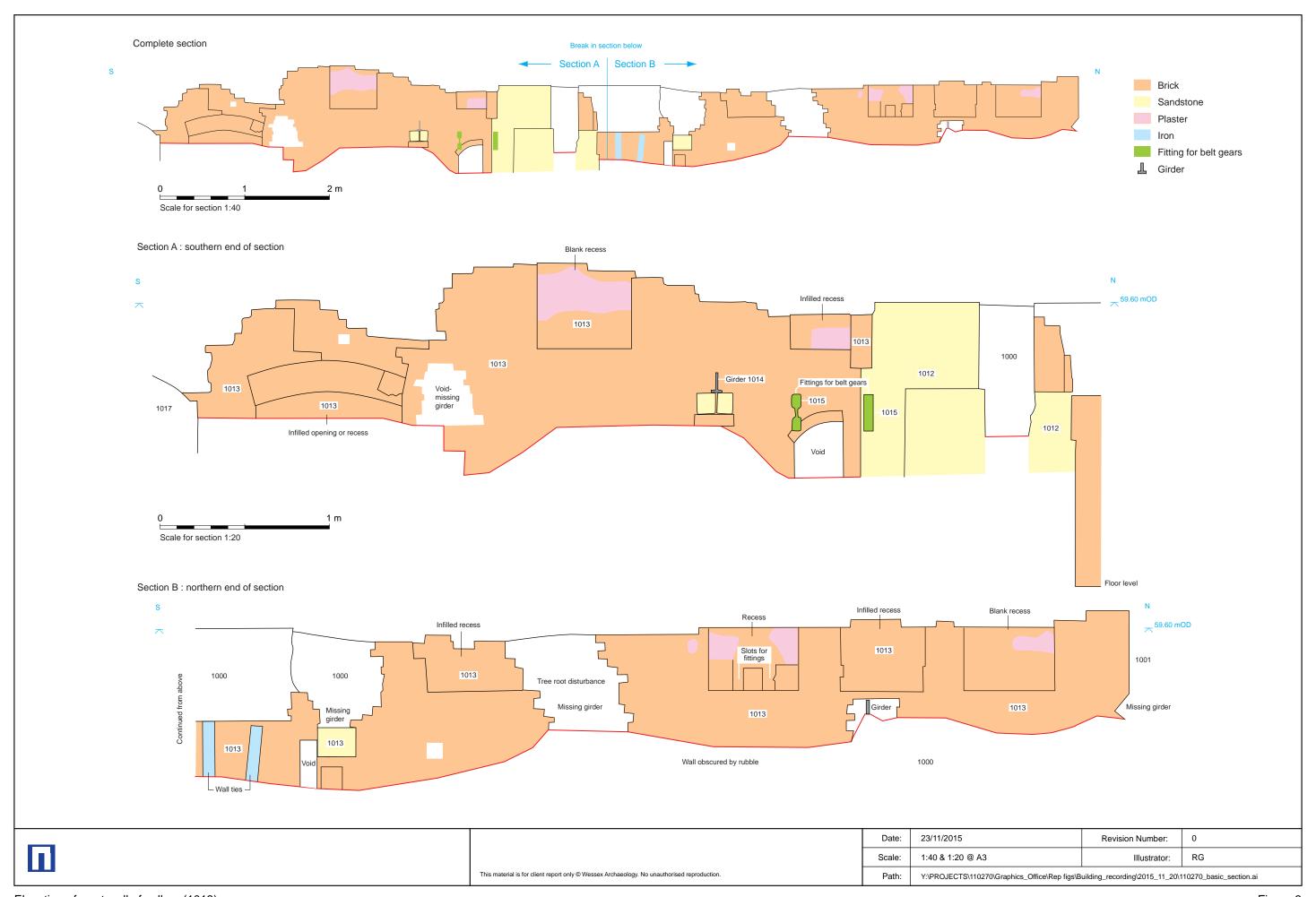




Plate 1: Steel girder and pier (1014) shown in left of shot from east



Plate 2: Machine base 1016 with brick pier from east

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Plate 3: Window sill 1020 from west



Plate 4: Oblique shot of south part of main west wall 1013 from north-east

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Plate 5: Oblique shot of middle part of main west wall 1013 from south-east



Plate 6: Oblique shot of north part of main west wall 1013 from south-east

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Plate 7: Foundation of redbrick wall 1007 from south



Plate 8: Southern wall 1023 of southern cellar from north

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Plate 9: Riverside area showing flag floor 1008 above 19th century made ground 1027 from east



Plate 10: Chimney 1031 with wall 1032 from north

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Plate 11: Northern area showing bullnosed structures 1003 and 1004 from west



Plate 12: Negative result of watching brief along southern riverside from north

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