LAND AT BROOK STREET, DERBY, DERBYSHIRE

EVALUATION REPORT

CP10191/12

13/06/2012

wardell armstrong

archaeology

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Quality Assurance
This report covers works as outlined in the brief for the above-named project as issued by the relevant authority, and as outlined in the agreed programme of works. Any deviation to the programme of works has been agreed by all parties. The works have been carried out according to the guidelines set out in the Institute for Archaeologists (IfA) Standards, Policy Statements and Codes of Conduct. The report has been prepared in keeping with the guidance set out by WA Archaeology Ltd on the preparation of reports.

REVISION SCHEDULE			
	01	**02**	**03**
PREPARED BY: **POSITION:** **DATE:**	Iain McIntyre Project Supervisor 05/04/2012	Matthew Town Project Manager 10/05/12	
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APPROVED BY: **POSITION:** **DATE:**	Frank Giecco Technical Director 30/04/2012	Frank Giecco Technical Director 10/05/12	

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SUMMARY

Wardell Armstrong Archaeology Ltd were invited by Wardell Armstrong LLP, on behalf of the Watkin Jones Group, to undertake an archaeological field evaluation on land at Brook Street, Derby, Derbyshire (centred on SK 3471 3664), prior to the construction of student accommodation and associated parking spaces (Planning Application, DER/04/10/00413).

The site has been the subject of an archaeological desk-based assessment (Tyler 2010) that identified the site had remained largely undeveloped until the latter years of the 18th century, as it is situated beyond the urban core of the town. The land belonged to the Convent of St Mary de Pratis from the 13th century but, following the Dissolution, passed to the Crown before being donated to the town as Common Land in 1555, becoming known as 'Nuns' Green'. The Commons were sold off in the 18th century and in the 1840s, William Abell's Iron Works were established on the southern side of the street but spread rapidly to encompass the whole site. The firm was in existence until 1962, when it closed.

As a result, the site is considered an area of high archaeological potential for evidence of industrial and post-medieval activity, in particular for below ground remains relating to the use of the site as an iron and brass works. To this end Derby City Council's Development Control Archaeologist (Steve Baker) attached planning conditions to the planning consent requiring a scheme of phased archaeological work to be undertaken at the site.

The archaeological evaluation consisted of the excavation of eleven trenches covering 235 m^2 of the proposed 4,300m^2 (0.43ha) development site. Trenches 1-10 were excavated between the 21st and 23rd March 2012; Trench 11 on the 12th April 2012 after removal of a large rubble pile.

Investigation revealed that the whole of the site had been substantially truncated, within the centre of the site this was down to a depth of nearly 2.00m below present ground-level. The fragmented surviving remains did though correlate to structures recorded on the 1852 *Derby Board of Health Map*, including a domestic cellar in Trench 8. Substantial deconstruction took place during the demolition works associated with the clearance of the site between 1969 and 1985. This had effectively removed the majority, if not all, of the features associated with the Iron Works – none of which were found during these investigations.

ACKNOWLEDGEMENTS

WA Archaeology Ltd would like to thank Wardell Armstrong LLP / Watkin Jones Group for commissioning the project. WA Archaeology is also grateful to Steve Baker, Derby City Council's Development Control Archaeologist, for his help during the project.

WAA would also like to extend its thanks to Wayne Towlson of Long Eaton Plant Hire for the expedient yet professional machine excavation of the trial trenches.

The archaeological excavation was undertaken by Angus Clark, Iain McIntyre, Krissy Moore, Charles Rickerby and Sue Thompson. The report was written by Iain McIntyre and the drawings were produced by Adrian Bailey. The project was managed by Matthew Town, Project Manager for WA Archaeology Ltd, who also edited the report.

1 INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 Wardell Armstrong Archaeology Ltd were invited by Wardell Armstrong LLP, on behalf of the Watkin Jones Group, to undertake an archaeological field evaluation on land at Brook Street, Derby, Derbyshire (centred on SK 3471 3664; **Figure 1**), prior to the construction of student accommodation and associated parking spaces (Planning Application, DER/04/10/00413).

1.1.2 The site has been the subject of an archaeological desk-based assessment (Tyler 2010) that identified the site had remained largely undeveloped until the latter years of the 18th century, as it is situated beyond the urban core of the town. The land belonged to the Convent of St Mary de Pratis from the 13th century but, following the Dissolution, passed to the Crown before being donated to the town as Common Land in 1555, becoming known as 'Nuns' Green'. The Commons were sold off in the 18th century under a series of Improvement Acts, and rapidly developed for industrial purposes and associated housing. Brook Street was laid out in 1799; in the 1840s, William Abell's Iron Works were established on the southern side of the street. The premises originally only occupied the western side of the development area, but spread rapidly to encompass the whole site. The firm was in existence until 1962, when it closed. The site was then used as a car body repair shop and builders yard. The foundry structures were cleared in the 1990s and the remaining structures were demolished in 2008.

1.1.3 As a result, the site was considered an area of high archaeological potential for evidence of industrial and post-medieval activity, in particular for below ground remains relating to the use of the site as an iron and brass works. The site also had a lesser residual potential for earlier deposits on the site, prior to the ironworks, relating to the exploitation of the Markeaton Brook.

1.1.4 Derby City Council's Development Control Archaeologist (DCC DCA; Steve Baker) attached planning conditions to the planning consent requiring a scheme of phased archaeological work to be undertaken at the site. This work comprises an archaeological evaluation to assess the nature and potential of the site, followed by a discussion as to the subsequent course of action, and mitigation where required. This is in line with government advice as set out in the Department for Communities and Local Government Planning Policy Statement 5 (DfCLG 2010) and its successor the National Planning Policy Framework (DfCLG 2012).

1.1.5 All archaeological trial trenches were excavated under full archaeological supervision and all stages of the archaeological work were undertaken

following approved statutory guidelines (IfA 2008a), and were consistent with the specification provided by DCC DCA (Appendix 3) and generally accepted best practice.

1.1.6 This report outlines the works undertaken on-site and the results of this scheme of archaeological investigation.

2 METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 A project design was submitted by Wardell Armstrong Archaeology Ltd (WAA; Town 2012) in response to a request by Wardell Armstrong LLP and the Watkin Jones Group, for an archaeological trial trench evaluation of the site. Following acceptance of the project design by Steve Baker DCC DCA, Wardell Armstrong Archaeology Ltd was commissioned to undertake the work. The project design was adhered to with any potential changes discussed with, and approved, prior to their implementation. The work was consistent with the relevant standards and procedures of the Institute for Archaeologists (IfA 2008a), English Heritage (1991, 2006) and generally accepted best practice.

2.2 THE FIELD EVALUATION

2.2.1 The evaluation consisted of the excavation of eleven trenches covering 235 m^2 of the proposed 4,294m^2 (0.43ha) development site. The purpose of the evaluation was to establish the nature and extent of below ground archaeological remains within the vicinity, the evaluation trenches being located to target both building footings and areas of open ground. A large section of the development area to the west was obscured by a pile of crushed concrete, measuring circa 25m in radius by 5m in height, which obstructed assessment of the ironworks in that area. The area may include the earlier alignment of the Markeaton Brook. All work was conducted according to the recommendations of the IfA (2008a).

2.2.2 In summary, the main objectives of the field evaluation were:

- to establish the presence/absence, nature, extent and state of preservation of archaeological remains and to record these where they were observed;
- to establish the character of those features in terms of cuts, soil matrices and interfaces;
- to recover artefactual material, especially that useful for dating purposes;
- to recover palaeoenvironmental material where it survives in order to understand site and landscape formation processes.

2.2.3 All trenches had minimum dimensions of 10m by 1.8m. Their positions were surveyed in using known Ordnance Survey points, through the use of a Trimble R8 Base and Rover GPS system with a TSC2 Controller.

2.2.4 Turf and topsoil was removed by a tracked mechanical excavator, to either the top of archaeological deposits, or the natural substrate, whichever was observed first, under close archaeological supervision. The trial trenches were subsequently cleaned by hand and all features were investigated and recording

according to WAA standard procedure as set out in the company's excavation manual (Giecco 2010).

2.2.5 The written record utilised WAA pro-forma record sheets. Blank trenches were recorded by means of a Trench Record Sheet with a 2m representative section of the stratigraphy also drawn.

2.2.6 Where archaeology was encountered, archaeological features were exposed and excavated accordingly, involving the 50% sampling of discrete features, 25% of linear features with a non uniform fill and 10% of linear features with a uniform fill. A trench edge section was drawn at 1:20, and all features encountered were planned at 1:20. A combination of multi and single context planning was utilised and all plans and sections were drawn on water resistant permatrace.

2.2.7 A full photographic record in monochrome and digital formats (7 megapixel resolution) was maintained. This included general site shots, shots of each trench, and shots of individual features and groups of features. All photographs included a suitable photographic scale and were recorded on a photographic register.

2.2.8 All electronic survey work was carried out using a Trimble R8 Base and Rover GPS system with a TSC2 Controller and was transferred into a CAD environment. The site will be levelled with respect to the Ordnance Datum, and the trenches will be tied into the National Grid.

2.2.9 A Harris matrix was compiled for stratified deposits to provide a detailed record of the stratigraphic sequence.

2.2.10 All fieldwork was carried out in accordance with codes and practices outlined by the Institute for Archaeologists regarding archaeological evaluations (IfA 2008a) and according to the conventions written in the WAA Excavation Manual and in accordance with English Heritage guidelines (1991, 2006).

2.2.11 Following completion of the on-site works and signing off by the DCC DCA, the trenches were back-filled but not otherwise reinstated.

2.2.12 The fieldwork programme was followed by an assessment of the data as set out in the *Management of Archaeological Projects* (MAP), 1991, and *Managing of Research Projects in the Historic Environment* (MoRPHE), 2006.

2.3 FINDS AND ENVIRONMENTAL REMAINS

2.3.1 All finds encountered were retained, including those from excavated overburden, and were cleaned and packaged according to standard guidelines, and recorded under the direction of Frank Giecco (WAA Technical Director).

2.3.2 Secure contexts were sampled according to the WAA standard environmental sampling procedure and nationally agreed procedures (English Heritage 2002).

2.3.3 Artefactual remains were analysed by Teresa Gilmore, WAA Finds and Archives Specialist. Ecofactual remains were analysed by Don O'Meara, WAA Environmental Supervisor.

2.4 THE ARCHIVE

2.4.1 A full professional archive has been compiled in accordance with the specification, and in line with current UKIC (1990) and English Heritage Guidelines (1991, 2006) and according to the Archaeological Archives Forum recommendations (Brown 2007). Copies of this report will be sent to Derbyshire Sites and Monuments Record, where viewing will be available on request. The site archive will be maintained at the company headquarters at Carlisle until it can be deposited with Derby Museum and Art Gallery by November 2012. All archive components are recorded under the accession number DBY-MU-2011-208.

2.4.2 WAA and Derbyshire City Council, support the **O**nline **A**cces**S** to the **I**ndex of Archaeological Investigation**S** (**OASIS**) project. This project aims to provide an on-line index and access to the extensive and expanding body of grey literature, created as a result of developer-funded archaeological work. As a result, details of the results of this project will be made available by WAA (wardella2-123500), as a part of this national project.

3 BACKGROUND

3.1 LOCATION AND GEOLOGICAL CONTEXT

3.1.1 The site is situated on the southern side of Brook Street, c.1km northwest of the modern city centre, just beyond the city ring road, centred on NGR SK 3471 3664 (**Figure 1**). Comprising undeveloped land following the demolition of a range of industrial buildings, the site measures approximately 4,300m^2 (0.4ha). The site is bounded to the northeast by Brook Street and to the southwest by Markeaton Brook, a tributary of the River Trent. To the southeast and northwest are newbuild residential developments, named 'Millhouse' and 'Westpoint' respectively. The site is essential flat averaging 48.50m Above Ordnance Datum (AOD) with a range of plus/minus 0.50m.

3.1.2 The bedrock geology comprises mudstone of the Mercia Mudstone Group formed approximately 206 to 248 million years ago in the Triassic Period (BGS 1972). Superficial geology comprises alluvial and fluvial sediments of clay, silt, sand and gravel, having formed up to 2 million years (Quaternary Period).

3.2 HISTORICAL CONTEXT

3.2.1 This historical background has been primarily compiled from secondary sources, and is intended only as a brief summary of historical developments specific to the study area. It is based on the desk-based assessment produced Birmingham Archaeology (Tyler 2010).

3.2.2 *Prehistoric (c.700, 000 Before Present - mid-1st century AD):* there is no evidence for any prehistoric activity on or within 1km of the site though it has been argued that a trackway may have been present along the eastern side of the River Derwent (Craven 1989 as in Tyler 2010).

3.2.3 *Roman (mid-1st - 5th century AD):* a Roman fort was established in c.AD 55-60 on the west bank of the Derwent, presently Strutts Park, c.1km northeast of the site. This was replaced in c.AD 80 by a further fort, Derventio, at Little Chester. The course of the Roman Ryknield Street has been established as following the line of Brick Street / Nuns Street to the west of the site.

3.2.4 *Early Medieval (5th - mid-11th century AD):* there is little evidence for activity within the Derby area from the 4th to 8th centuries though the present site of the city was in use by the Anglo-Saxon period known as 'Northworthy' or 'north enclosure', forming part of the kingdom of Mercia (Tyler 2010). From the 870's, following the Danish invasion of Mercia, Derby (djúr bý, Scandinavian meaning 'farm or village where deer are found) gain prominence within the Danelaw. By the time of the Norman Conquest Derby was an important regional centre with a mint (Page 1905 as in Tyler 2010).

3.2.5 *Medieval (mid-11th - mid-16th century):* Derby continued to be a prosperous market town with rights enshrined in charters from c.1155 onwards. The town including such trades as lead processing, wool, glove-making and malting (Craven 1989 as in Tyler 2010). With at least six churches by the time of the Norman Conquest a further six monasteries and convents were added in the subsequent 150 years.

3.2.6 From the 13th century to the Dissolution the site was owned by the Benedictine Convent of St Mary de Pratis (the Meadows).

3.2.7 *Post-Medieval (mid-16th - 19th century):* from the later 18th century onwards, Derby began to expand beyond its medieval core, coincident with the rise in the silk and tape, fine china and pottery industries. The railways first reached Derby in 1839 (Tyler 2010).

3.2.8 Following the Dissolution the land passed to the Crown becoming 'King's Mead', before being donated to the town Corporation by Mary I in 1555. It was held by the Corporation as Common Land, becoming known as 'Nuns' Green'. The Commons were progressively sold off in the 18th century under a series of Improvement Acts, most importantly in 1792 when the area around Markeaton Brook. This access to such a natural power source commenced a rapid developed for industrial purposes, with many mill and factory premises being erected. These were interspaced with areas of workers housing in the form of courts and back-to-backs; Brook Street itself being laid out in 1799, named after the Markeaton Brook.

3.2.9 In the 1840s, William Abell's Iron Works were established occupying a plot towards the Bridge Street end of Brook Street, to the western end of the site. The works occupied a plot formally shown as formal gardens. The eastern part of the site was being laid down as housing, gardens, and larger back buildings of presumable industrial use (Tyler 2010).

3.2.10 By 1883 the site was dominated by the buildings of William Abell's Iron Works comprising a series of large industrial buildings grouped around interconnecting yards.

3.2.11 *Modern (19th century to present):* William Abell's Iron Works was in existence until 1962, when it closed. The site was subsequently used as a car body repair shop (to the east) and builders yard (to the west). By 1985 a significant portion of the foundry structures had been cleared; the remaining structures were demolished in 2008.

3.3 PREVIOUS WORK

3.3.1 No previous fieldwork events have occurred on the site. However excavations on Bridge Street revealed the remains of a 19th century dye-works (Cramp 2009)

but evaluations at Nos. 2-8 Brook Street revealed no features of archaeological significance but noted considerable disturbance during the 19th and 20th centuries (Tyler 2010).

4 ARCHAEOLOGICAL EVALUATION

4.1 INTRODUCTION

4.1.1 The evaluation consisted of the excavation of eleven trenches with minimum dimensions of 10m by 1.8m (Figure 2). Trenches 1-10 were excavated between the 21st and 23rd March 2012. A large section of the development area to the west was obscured by a pile of crushed concrete, measuring circa 25m in radius by 5m in height, during this first stage. As such Trench 11 was not investigated until the 12th April 2012, once this material had been removed.

4.1.2 The overburden of all evaluation trenches was stripped by a 13 tonne 360-degree tracked mechanical excavator fitted with a 1.80m wide ditching bucket, to either the top of archaeological deposits, or the natural substrate, whichever was observed first, under close archaeological supervision. All subsequent excavation and recording was undertaken by hand.

4.1.3 All trench results and records are summarised in Appendix 1. All figures can be found in Appendix 2. The specification for these works can be found in Appendix 3. Appendix 4 contains information on archiving and dissemination.

4.2 RESULTS

4.2.1 ***Trench 1 (Figures 2, 3, 11 and 12):*** Trench 1 was located in the northwest corner of the site, c.2.00m from the boundary wall. It was aligned approximately northwest-southeast, measuring 10.00m by 2.00m, at c.48.70m above Ordnance Datum (AOD). The trench was excavated to a maximum depth of 1.42m, revealing loose brown cobbles and gravels in a silt-sand matrix (**101**), at 47.10m AOD.

4.2.2 Within the centre of the trench an approximate northeast-southwest wall (**106**) was observed across the trench width, c2.00m, and 0.60m wide (**Plate 1**). This consisted of a single course of rough cut sandstone to a height of 0.30m, with a sparse white-yellow lime mortar. Abutting the walls northwest side a surface of compact black ash-silt (**105**) was observed above the natural, being 0.10m thick. Over this was compact grey sand (**103**), 0.12m thick, in turn covered by compact grey clay (**104**), 0.38m thick, both of which abutted wall **106**. All three layers (**103-105**) were observed across the entire trench northwest of the wall with lengths of c4.40m and widths of 2.00m.

4.2.3 To the southeast, abutting wall (**106**) compacted brick rubble (**109)**, with a length of 2.05m and width of 2.00m, was observed. The relationship between this layer and the wall (**106**) and its construction cut [**111**] is uncertain.

Above deposit (**109**) a layer of loose brick rubble within a silt matrix, 0.45m thick, was observed. Above this layer, and observable only in section, was a small length (1.20m) of a single course (c.010m) of red-brick; its relationship to wall (**106**) is uncertain.

4.2.4 A brick culvert (**110**) was observed in section at the northwest trench end, running northeast-southwest, it was overlain by brick rubble (**102**) but due to the instability of the trench edge no further excavation was undertaken.

4.2.5 All features were sealed below c.1.20m of mixed grey-red-black silt-clay containing large fragments of brick and tile rubble (**102**). In turn below 0.09m of compacted brown silt-clay topsoil (**100**).

*Plate 1: Trench 1, stone wall footings (**106**), facing southeast (scale 1m)*

4.2.6 ***Trench 2 (Figures 2, 4, 11 and 12):*** Trench 2 was located within the west of the site, c.7.50m from the western boundary wall and c.20.00m south of Trench 1. It was aligned approximately northeast-southwest, measuring 10.00m by 1.80m, at c.48.60m above AOD. The trench was excavated to a maximum depth of 1.35m. The natural was revealed as loose brown cobbles and gravels in a silt-sand matrix (**201**), at a minimum of 48.00m AOD and a maximum of 47.10m AOD.

4.2.7 Lying towards the southwest end of the trench, in no discernable cut, were two parallel walls. Wall (**203**), to the southwest, measuring 1.20m in length, consisted of a single course (c.0.09m high) of header-bond, unfrogged red-brick, one brick thick (c.0.27m), orientated northwest-southeast. Wall (**204**) was identical running parallel c.0.70m to the northeast with dimensions of 1.23m x 0.37m x 0.08m. Neither wall appeared well bonded but a small amount of a white-yellow lime mortar, with small angular stone inclusions,

was partially visible. Between the two walls, abutting up to each of them, a compact mixed red-brick and silt-clay layer (**205**) was observed, 0.22m thick. Excavation between the two walls revealed natural (**201**) at 48.00m AOD, the highest occurrence onsite. Laying outside of the two walls a mixed grey, red, black layer of silt-clay and brick rubble (**202**) was observed, 0.40m thick. The relationship between the walls (**203**) and (**204**) and this layer is unclear but tentatively it appears to be later, covering the two and butting up to each of them.

4.2.8 Truncating walls (**203**) and (**204**) and layers (**202**) and (**205**) to the southeast is a large modern pit [**206**]. It occurs along the entire southeast edge of the trench and had a minimum diameter of 9.00m and depth of 1.35m. Natural sediments were observed at its base at 47.10m AOD. Its single fill (**207**) consisted of loose black silt with large fragments of brick rubble. All features were sealed below c.0.46m of mixed grey-red-black silt-clay containing large fragments of brick and tile rubble (**200**).

4.2.9 ***Trench 3 (Figures 2, 4, 11 and 12):*** Trench 3 was located within the centre of the site, c.27.50m southeast of Trench 2 and c.20.00m northwest of Trench 10. It was aligned approximately northeast-southwest, measuring 10.00m by 2.10m, at c.49.00m above AOD. The trench was excavated to a maximum depth of 1.43m. The natural was revealed as loose brown cobbles and gravels in a silt-sand matrix (**301**), at 47.47m AOD.

4.2.10 No archaeological structures were observed within the trench just a succession of rubble fills and layers. Layer (**305**) sat above the natural consisting of firm grey-black silt-clay with frequent pottery and shell inclusions, with a minimum thickness of 0.20m. Above this layer (**303**) consisted of loose black silt with frequent inclusions of whole red-brick, with a depth of 0.20m, overlying this was a further layer of black silts (**304**) containing a high percentage of fragmented glass inclusions, 0.12m thick. This in turn was overlaid by c.0.60m of firm brown clay (**306**) with the occasional inclusion of brick-rubble. Sealing all layers were two deposits of modern brick-rubble. Layer (**300**) consisted of loose grey silt with frequent brick and sandstone rubble, 1.51m thick. Within the west of the trench layer (**302**) lay above (**300**) with a thickness of 0.40m and consisted of loose red-brick and crushed-brick rubble.

4.2.11 ***Trench 4 (Figures 2, 11 and 12):*** Trench 4 was located within the northwest corner of the site, c.20m southeast of Trench 1 and c.10m southwest of Trench 5. It was aligned approximately northeast-southwest measuring 10.00m by 2.20m, at c.48.50m AOD. The trench was excavated to a maximum depth of 1.10m, revealing loose brown cobbles and gravels in a silt-sand matrix (**401**), at 47.10m AOD. Above this was a mixed overburden of brick-

rubble (**400**) in a grey silt-clay matrix, 1.10m thick. No archaeological features, structures or deposits were observed.

4.2.12 ***Trench 5 (Figures 2, 6, 11 and 12):*** Trench 5 was located along the northern boundary of the site, c.2.50m southwest of the boundary wall. It was aligned approximately northwest-southeast, measuring 10.00m by 1.80m, at c.48.50m above AOD. The trench was excavated to a maximum depth of 1.05m. The natural was revealed as loose brown cobbles and gravels in a silt-sand matrix (**501**), at 47.45m AOD.

4.2.13 Located c.2.00m from the northeast trench edge a steep-sided, flat-based cut [**505**] measuring 1.20m by 1.00m and 0.12m deep, was cut in to the natural. This contained a number of rough cut sandstone slabs (**503**), averaging 0.60m by 0.45m and 0.12m thick. Situated on top of this, a single course (c.0.12m high) dumping of unbonded, unfrogged, red-brick (**504**) was observed, measuring 1.00m by 0.80m (see **Plate 2**).

*Plate 2: Trench 5, stone slabs (**503**) and brick-rubble (**504**), facing southeast (scale 1m)*

4.2.14 A layer of brick-rubble (**502**), 0.42m thick, appears to be later than wall (**504**), partially sealing it. While to the south of this structure the edge of a pit [**507**] with a minimum diameter of 3.20m was observed, that appears to cut layer (**502**) and to truncate the brick wall (**504**), though this relationship is not for certain. The pit's single fill (**506**), with a minimum depth of 0.48m, consisted of a loose brown-black silt-clay with fragments of brick rubble.

4.2.15 Sealing all features was c.1.00m of mixed grey silt-clay containing large fragments of brick and sandstone rubble (**500**).

4.2.16 ***Trench 6 (Figures 2, 11 and 12):*** Trench 6 was located within centre of the site, c.12m south of Trench 5 and c.10m north of Trench 7. It was aligned

approximately northeast-southwest measuring 10.00m by 2.10m, at c.48.15m AOD. The trench was excavated to a maximum depth of 1.50m, revealing loose brown cobbles and gravels in a silt-sand matrix (**601**), at 46.77m AOD.

4.2.17 From within (**601**) a horse radius was recovered which appears to be partially fossilised; the internal matrix of the bones apparently in the process of being embedded with a calcium-based mineral (See **Section 5.3**).

4.2.18 Above this was a mixed overburden of brick-rubble **(600**) in a grey silt-clay matrix, 1.50m thick. No archaeological features, structures or deposits were observed though isolated fragments of bone where found within the natural sediment.

4.2.19 ***Trench 7 (Figures 2, 7, 11 and 12):*** Trench 7 was located to the east of the site, c.15m west of the eastern boundary. It was aligned approximately northwest-southeast measuring 10.00m by 1.80m, at c.48.50m AOD. The trench was excavated to a maximum depth of 1.71m, revealing loose brown cobbles and gravels in a silt-sand matrix (**707**), at 46.79m AOD.

4.2.20 To the southeast end wall (**703**) was observed running northwest-southeast along the southwest trench edge (**Plate 3**). Consisting of five courses (c.0.46m high) of English-bond, unfrogged, red-brick, one brick thick (c.0.25m), this wall in turn was abutted by wall (**702**) identical in construction, height (c.0.46m) and thickness (c.0.25m), running off to the east with a visible length of 0.90m. Both walls were bonded with a white-yellow lime mortar with small angular stone inclusion; neither wall exhibited a visible cut.

*Plate 3: Trench 7, wall (**703**) - to the right – abutted by wall (**702**), facing south (scale 1m)*

4.2.21 Within the centre of the trench a shallow layer (0.10m thick) of compact black silt (**708**) lay between the natural sediment (**707**) and the remains of wall (**704**). This wall (**Plate 4**) ran northeast-southwest across the trench width (1.80m) and consisted of sandstone rubble remains, c.0.10m high and 0.53m wide. A white-yellow lime mortar was visible between the sandstone rubble.

*Plate 4: Trench 7, wall (**704**) with underlying layer (**708**) in foreground, facing southeast (scale 1m)*

4.2.22 Covering and abutting walls (**702**), (**703**) and (**704**) was a compact layer of mixed sands and clay (**701**), c.0.46m thick. This layer occurred only over the southeast half of the trench. A single sheep tibia was recovered from this deposit. Only the distal half was present, though the material recovered was in a good state of surface preservation. Some cutmarks were noted on the surface of the bone. Little more can be said of this material, and as a single fragment in a post-medieval context its presence does not offer any greater interpretative value for this feature at this point.

4.2.23 Within the northwest of the trench, against the southwest edge a partial pit [**705**] was observed with a minimum diameter of 1.40m. Its single fill (**706**) consisted of a firm grey silt-clay.

4.2.24 Overlying layer (**701**) and fill (**705**) a firm mixed deposit (**700**) of grey-red silt-clay with brick rubble inclusions, c.1.20m deep, covered the rest of the trench.

4.2.25 ***Trench 8 (Figures 2, 8, 11 and 12):*** Trench 8 was located to the east of the site, c.2.00m southwest of the northern boundary wall. It was aligned

approximately northwest-southeast measuring 16.50m by 2.20m, at c.48.50m AOD. The trench was excavated to a maximum depth of 1.60m, revealing loose brown cobbles and gravels in a silt-sand matrix (**813**), at 46.90m AOD.

4.2.26 Located within the centre of the trench a brick-built culvert (**804**), orientated northeast-southwest, was visible across the trench width (c.2.20m). Sitting within a vertical-sided, flat-based cut [**803**] 0.60m wide, the culvert structure consisted of five courses of stretcher-bonded unfrogged brick. Each side was one-half brick thick (c.0.12m) with the base consisting of the same construction with a thickness of c.0.12m. The walls and base of the culvert were all bonded with a white-yellow lime mortar containing small angular stone inclusion. Covering the tops of the brick sides a firm yellow clay (**805**), c.0.10m thick, was observed below the sandstone capping (**806**) of the culvert. Each capping stone consisted of rough cut sandstone with average dimensions of 0.52m by 0.40m by 0.08m. Sealing the entire culvert structure was another layer of firm yellow clay (**807**), visible in section with a width of 1.10m and a thickness of 0.10m.

4.2.27 Within the northwest end of the trench, a vertical-sided, flat-based construction cut [**808**] measuring 4.00m along its northwest-southeast long axis and with a visible width across the trench of 2.00m and a minimum depth of 0.20m, held the remains of probable cellar (**Plate 5**). Three walls were visible on the northwest, southwest and southeast sides. Wall (**809**) to the southwest, and orientated northwest-southeast, consisted of three courses (c.0.22m high) of English-bond, unfrogged, red-brick, one-brick thick (c.0.22m) with a length of 3.20m. Wall (**814**) on the southeast side, orientated northeast-southwest was of the same material and construction but appeared to be of a two-brick thickness (c.0.44m). It survived to a height of two courses (c.0.14m) and its length was visible across the trench width (c.2.00m). Wall (**815**) on the northwest side, orientated northeast-southwest, was also of the same material and construction as walls (**809**) and (**814**), surviving to a height of two courses (c.0.14m), being one-brick thick (c.0.22m) and with a visible length across the trench (c.2.00m). Walls (**809**) and (**814**) were keyed in as were walls (**809**) and (**815**). All walls were bonded with a white-yellow lime mortar with small angular stone inclusion.

4.2.28 Lying above the cut and contained by the three walls, a c.0.10m thick layer of crushed sandstone (**810**) was overlaid by c.0.20m of firm black ash-silt (**811**). A single find of oyster shell from this deposit may be attributed to the making of building mortar. Built on top of this layer was a partial brick floor (**812**), c.0.07m thick, constructed from stretcher-bond, unfrogged blue-black brick. This brick floor only remained over the southwest half of the cellar with a length of 3.20m and a width of 1.20m. Its mortar bonding was similar to the ash-layer below.

4.2.29 Within the southeast end of the trench, in the southwest section, a brick-lined well (**802**) was observed. Despite its fragile yet active nature, it was observed to be constructed of stretcher-bond, unfrogged red-brick, one-half brick thick (c.0.12m). Ten courses (c.0.90m) of brick were visible above the water-table and the entire well had a diameter of 1.20m. A modern concrete cap (**801**) had been placed above it.

4.2.30 All features in-turn were covered by c.1.40m of soft grey silt-clay with brick-rubble inclusions (**800**).

*Plate 5: Trench 8, cellar [**808**] with brick floor (**812**) and walls (**809**), (**814**) and (**815**),facing south (scale 1m)*

4.2.31 ***Trench 9 (Figures 2, 9, 11 and 12):*** Trench 9 was located within the southeast corner of the site, c.7.50m west of the eastern site boundary wall. It was aligned approximately northeast-southwest measuring 10.00m by 2.00m, at c.49.00m AOD. The trench was excavated to a maximum depth of 1.90m, revealing loose brown cobbles and gravels in a silt-sand matrix (**901**), at 47.10m AOD.

4.2.32 To the southwest trench end a layer of firm red silt-clay (**906**) is observed in to which appear cut two parallel walls. Along the southeast edge, orientated northeast-southwest, wall (**904**) sat within a vertical-sided cut [**908**] and consisted of at minimum a single course (c.0.09m high) of irregular sandstone blocks. It had a visible length of 2.14m and a visible width of c.0.40m, bonded with yellow-white lime mortar. Abutting this wall to the northeast, a second wall (**902**) consisted of a single course of irregular-bonded red-brick. Wall (**902**) was orientated along the same line as wall (**904**) but did not sit within a discernable cut, it displayed a length of 2.60m a width of 0.60m and a visible height of 0.07m. On the opposite trench edge

along the same orientation sat wall (**905**) within its construction cut [**907**]. Being of the same materials and construction as wall (**904**) it had a visible length of 2.10m and a visible width of c.0.38m and was bonded with yellow-white lime mortar. In exactly the same manner and arrangement as wall (**904**), wall (**905**) was abutted by a second wall (**903**). This wall consisted of a single course of irregular-bonded red-brick and again did not sit within a discernable cut. It had a visible length of 2.40m with a width of 0.22m and a visible height of 0.07m.

4.2.33 Possible covering and butting up against the brick wall remains, though this relationship is not certain, layer (**906**) consisted of firm red silt-clay.

4.2.34 Covering the entire trench was a layer of soft grey-black silt (**900**) with very few (< 1%) inclusions. To the southwest this had a depth of 0.80m but to the northeast it increased to a depth of c.1.80m.

4.2.35 ***Trench 10 (Figures 2, 10, 11 and 12):*** Trench 10 was located to the south of the site, c.2.00m north of the southern boundary wall. It was aligned approximately northeast-southwest measuring 10.00m by 2.00m, at c.49.00m AOD. The trench was excavated to a maximum depth of 1.60m, revealing loose brown cobbles and gravels in a silt-sand matrix (**1001**), at c.47.40m AOD.

4.2.36 Visible within the southwest trench end a small L-shaped section of wall (**1002**) sat directly on the natural sediments. Consisting of a single course (c.0.07m high) of uncertain bonded unfrogged red-brick, one-brick thick (c.0.22m), its northwest-southeast aspect measured 0.97m in length and its northeast-southwest aspect 0.87m. Abutting both aspects was a firm white-red mortar (**1003**) c.0.08m thick. A patch of soft brown sand, visible across the trench width (c.2.00m) and 1.20m wide and 0.06m thick, sits on top of the natural sediments and has an uncertain relationship with wall (**1002**).

4.2.37 Covering all features within the trench is a layer of loose grey silt-clay with brick and stone rubble inclusions (**1000**), c.1.30m thick.

4.2.38 ***Trench 11 (Figures 2, 11 and 12):*** Trench 11 was located within the southwest corner of the site, c.25m south of Trench 2 and c.20m southwest of Trench 3. This trench was excavated independently of the previous 10 trenches, once the rubble pile that occupied this portion of the site had been removed. It was aligned approximately east-west measuring 10.00m by 2.00m, at c.49.30m AOD. The trench was excavated to a maximum depth of 1.20m, revealing loose brown cobbles and gravels in a silt-sand matrix (**1101**), at 48.10m AOD. Above this was a mixed overburden of brick-rubble (**1100**) in a grey silt-clay matrix, 1.50m thick. No archaeological features, structures or deposits were observed.

4.3 DISCUSSION

4.3.1 Within all trenches the natural superficial geology was identified. This consisted of mixed clasts of rounded gravels (2-4mm), pebbles (4-64mm) and cobbles (64-256mm) within a matrix of clays, silts and sands, and is typical of river terrace deposits. This is consistent with that described in the mapping (BGS 1972) and was probably laid down as glacial or peri-glacial river deposits over the last 2 million years by precursors to the River Trent.

4.3.2 What archaeological assets survive are fragmentary and of low significance. What has been recorded though in most cases correlates with structures recorded on the *Derby Board of Health Map* of 1852 (**Figure 11**).

4.3.3 In Trench 1 the single wall (**106**) tallies with the external wall of the southwest aspect of one of the buildings fronting Brook Street. The size of the building suggests domestic usage as they are not directly associated with the William Abel Ironworks (Tyler 2010). The culvert (**110**) appears to be within an open yard.

4.3.4 Within Trench 5 the sandstone slabs (**503**) correlate with the external south-eastern wall of a large building fronting Brook Street, part of the Ironworks. Such a substantial building and wall would require especial robust footings.

4.3.5 Wall (**704**) within Trench 7 aligns with the internal wall of another potential domestic structure, whereas the walls (**702**) and (**703**) seen at the southeast end of the trench appear to occur within the centre of a building, not aligning to any wall or structure. It is possible that this is an artefact of the alignment of two maps (the 1852 map and the OS Mastermap) and their relative margins of error (See also below, Trench 9).

4.3.6 The most substantial remains on site that of cellar [**808**] in Trench 8, appear to correlate with the footprint of domestic structures fronting Brook Street. These dwellings have been interpreted as back-to-backs (Tyler 2010). No artefacts were recovered to strengthen this hypothesis and the remains of the structure itself indicate a single phase of construction with no subsequent internal alterations as has been seen in other excavations of contemporary buildings (Wessex Archaeology 2006). The culvert [**803**] appears to run within an open yard and an unresolved yet distinct black spot more than likely notes the location of well (**802**).

4.3.7 Within Trench 9 it is with a high certainty that the wall remains (**902**)/(**904**) and (**903**)/(**905**) correlate with the parallel internal walls seen on the 1852 map. This is despite the trench position seeming to be fractionally to the northwest; another example of the relative margins of error when trying to merge data from two sources.

4.3.8 The wall footings seen in Trench 2 (**203**)/(**204**) and Trench 10 (**1002**) do not appear to match up with any internal or external structures observed on the 1852 map. The position of Trench 2 is within an open yard and Trench 10 occurs within the footprint of a moderate industrial building.

4.3.9 Trenches 4 and 11, void of archaeological remains also sit within the footprint of larger, presumably industrial structures. Whereas Trench 3 straddles the northeast external wall of another yet no surviving footings where observed.

4.3.10 The Ordnance Survey 1:500 Town Survey of 1883 (**Figure 12**) indicates that wall (**106**) was still in use as was the building associated with the sandstone slabs (**503**). All other structures associated with the remains seen in Trenches 7, 8 and 9 though have been superseded by further industrial buildings. The remains in Trenches 2 and 10 are still without any correlate. Their purpose is unknown.

4.3.11 It appears from the map regression in Tyler (2010) that by 1901 the structures associated with the remains in Trenches 1 and 5 were still in use and that these structures may have continued to be part of their associated structures until between 1951 and 1985. From the 1985 map it is clear that by then any and all remaining structures had been removed.

4.3.12 It can be firmly stated that the whole of the site had been substantially truncated apparently mostly during the demolition works associated with the clearance of the site between 1969 and 1985.

4.3.13 The extent of the clearance is site wide. Around the edges of the site truncation appears to proceed to a depth of between 0.60m and 1.20m. This has resulted in the survival of some remains as can be seen in Trenches 1, 5 and 8 and in the southern aspects of Trenches 9 and 10, all sitting near the periphery. Within the centre of the site this truncation is more severe being effective to a depth of nearly 2.00m below ground level. This can be most readily seen in the depth of overburden in Trenches 6 and 7 (both 1.70m) and Trench 9 (1.90m). Within Trench 2 and 9 particular severe examples can be seen. Within Trench 2 a large cut/truncation edge results in the observation of structural remains and natural sediments to the northwest at 0.60m below ground level, and beyond the truncated edge, to the southeast, natural sediments at 1.60m below. The same is viewed in Trench 9; to the southwest structural remains and natural sediments at 1.00m below ground level, to the northeast natural sediments at 1.90m below.

4.3.14 The nature of the overburden in all the trenches indicates a thorough deconstruction of the site. The rubble inclusions within seldom consist of whole bricks and only in very rare occasions, such as in the back fill of Trench 8 (**800**), do two or three mortar-bonded bricks appear. Across the

whole site about 10% of the rubble inclusions are not brick but sandstone blocks. These again are of varying sizes but are no bigger than c.0.025m^3 (c.0.30m on a side). From the surviving wall remains, for example walls (**106**) (**704**) and (**904**), these stone blocks consisted the basal courses of some of the walls on site – a sturdy foundation would be necessary for industrial-use buildings.

4.3.15 The extent and nature of the site clearance has effectively removed the majority, if not all, of the features associated with the Iron Works.

5 ARTEFACTS, ECOFACTS AND ENVRONMENTAL ANALYSIS

5.1 INTRODUCTION

5.1.1 A total of 89 artefacts, weighing a total of 4248g, were recovered from 11 contexts in eight trenches, Trenches 1, 3-4, 6-10 (**Appendix 1.2**).. The remaining trenches were void of archaeological features.

5.1.2 Artefact types recovered consisted of Modern and Post-Medieval pottery types, ceramic building material, clay tobacco pipes, bottle glass and metalwork.

5.1.3 The environmental potential of this site is quite limited. Finds of archaeozoological material was limited to two bones; a sheep tibia from Trench 7 (**701**) and a horse radius from Trench 6 (**601**).

5.1.4 No finds were recovered from Trenches 2 and 5.

5.1.5 All finds were dealt with according to the recommendations made by Watkinson & Neal (1998) and to the Institute for Archaeologists (IfA) Standard & Guidance for the collection, documentation, conservation and research of archaeological materials (2008b). Metalwork has been stored according to material type, in a sealed dry box with silica gel. All artefacts have been boxed up, according to material type and conforming to the deposition guidelines recommended by Derby Museums and Art Gallery (accession number DBYM 2011.208).

5.1.6 The material archive has been assessed for its local, regional and national potential and further work has been recommended on the potential for the material archive to contribute to the relevant research frameworks.

5.2 ARTEFACT REMAINS

5.2.1 ***Modern Pottery:*** the majority of the pottery recovered was of modern pottery types (40 sherds, weighing 1.46 kg), dating from 19th to 20th centuries AD. Pottery types present consisted of hand painted china, transfer printed china, creamware, metallic rimmed china, Nottinghamshire stoneware, Mocha ware, English stoneware. A variety of different forms were present including plates, cups, mugs and chamberpots. Of note was a complete English stoneware jar from overburden layer (**800**).

5.2.2 ***Post-Medieval Pottery:*** a total of seven sherds of Post-Medieval pottery types, weighing 320 grams, were recovered from three contexts. Pottery types represented included yellow wares, mottled brown glazed ware, Cistercian type, and local (unsourced) glazed wares. Vessels present consist of large open storage bowls, storage jars, mugs and a tankard. All Post-Medieval pottery

sherds are residual in nature, being present alongside later modern pottery types.

5.2.3 ***Ceramic Building Material:*** a total of two pieces of ceramic building material, weighing 320 grams, were recovered from two contexts. Both pieces consisted of pantile, used for roofing purposes since the 17th century AD and came from topsoil layer (**100**) and overburden layer (**300**).

5.2.4 ***Clay Tobacco Pipe:*** a total of 14 pieces of clay tobacco pipe, weighing 49 grams, were recovered from six contexts. Of note was an almost complete spurred bowl from overburden layer (**600**). It is of Oswald type 14, dated to c.1820-40 (Oswald, 1975, 38). The remaining pieces of clay tobacco pipe consisted of unmarked, undiagnostic stem fragments.

5.2.5 ***Modern Glass:*** two fragments of bottle glass, weighing 55 grams, were recovered from two contexts. Both fragments are consistent with 19th to 20th centuries AD dating.

5.2.6 ***Worked Bone:*** of note was a worked bone compound brush from topsoil (**100**). It is of 17th to 19th centuries dating and it probably functioned as a tooth brush. The head exhibits thirteen rows of three drilled holes, into which the tufts were inserted. Green staining on the head indicates that the tufts were composed from fine copper wire. The handle is elliptical in plan. The brush measures 127.6 mm in length, a maximum width of 11.8mm and is 5.0 mm thick. Macgregor published a brush with similar style head and handle, although the arrangement of the tufts is different (Macgregor, 1985, fig 99f).

5.2.7 ***Metalwork:*** one iron artefact, weighing 885 grams, was recovered from layer (**701**). It is undiagnostic in form, but probably originated from a machine or similar structure. One copper alloy drawer handle, weighing 12 grams was recovered from topsoil (**100**). Both metal artefacts are of 19th to 20th centuries AD dating.

5.2.8 ***Metalworking residue:*** a metalworking crucible, weighing 494 grams, was recovered from rubble layer (**1000**). Remnants of a white metal, probably tin or pewter are present in the base. Other evidence for metalworking consists three pieces of undiagnostic slag from overburden layer (**300**) and fuel ash remnants from pit fill (**705**).

5.3 ECOFACT REMAINS

5.3.1 The horse radius from within (**601**) appears to be partially fossilised; the internal matrix of the bones apparently in the process of being embedded with a calcium-based mineral. As the bone is quite fragmentary little more can be said at this point. Though fragmented the elements recovered were in good general condition with little evidence for abrasion or wear caused by pre or post-

depositional movements such as water rolling. No evidence for butchery could be discerned on the surface of the bones. A single morphometric measurement was taken from the distal end (von Driesch Bd:69.59). It is possible this is the remains of a domestic horse, though of which period this is not clear. However, it is also possible that this is from the remains of a Pleistocene/early Holocene wild horse, in which case this find may be of interest to researchers interested in the biogeographic development of the region. It suggests that organic/subfossil remains of potential Ice Age date survives in this area; though evidence for human activity of this period was not recovered during this phase of work, making it of little value from an archaeological view point.

5.3.2 Finds of oyster shell could not be linked to specific activity, though the use of the shell in the making of building mortar is suggested. In any case shell finds were limited to three individual fragments making a firm conclusion difficult at this time.

5.4 ENVIRONMENTAL ANALYSIS

5.4.1 The majority of deposits encountered were deemed unsuitable for environmental sampling, though as a standard measure samples were collected from the basal layers within the cellars of Trenches 1 and 8. These may be processed if future need arises.

5.5 STATEMENT OF POTENTIAL

5.5.1 Due to the modern nature, and the high level of disturbance on the site, few of the finds are stratified and are of minimal archaeological significance. Even the finds from layer (**701**), pit fill (**705**), cellar layer (**811**) and levelling layer (**906**) include modern ceramic types and date from 19th to 20th centuries.

6 CONCLUSIONS

6.1 CONCLUSIONS

6.1.1 During the archaeological field evaluation at Brook Street, Derby, eleven trenches covering 235m2 of the proposed 4300m2 (0.43ha) development area were excavated. The purpose of the evaluation was to establish the nature and extent of below ground archaeological remains within the development area.

6.1.2 Trenches 3, 4, 6 and 11 contained no archaeological remains consisting of brick-rubble overburden overlying natural river terrace deposits.

6.1.3 Trenches 1, 2, 5, 7, 9 and 10 contained isolated and in some cases fragmentary remains of wall footings that corresponded to structures recorded on the Derby Board of Health Map of 1852 (Figure 11).

6.1.4 The remains in Trenches 2 and 10 appear to have no correlation with any structures recorded on any map and their purpose is unknown.

6.1.5 The most substantial remains on site that of cellar [808] in Trench 8, appear to correlate with the footprint of domestic structures fronting Brook Street. These dwellings have been interpreted as back-to-backs (Tyler 2010) though no remains or artefacts were encountered to strengthen (or weaken) this hypothesis.

6.1.6 It can be firmly stated that the whole of the site had been substantially truncated during the demolition works associated with the clearance of the site between 1969 and 1985.

6.1.7 The extent of the clearance is site wide. Around the edges of the site truncation appears to proceed to a depth of between 0.60m and 1.20m. This has resulted in the survival of some remains as can be seen in Trenches 1, 5 and 8. Within the centre of the site this truncation is more severe being effective to a depth of nearly 2.00m below ground level. This can be most readily seen in the depth of overburden in Trenches 6 and 7 (both 1.70m) and Trench 9 (1.90m).

6.1.8 The nature of the overburden in all the trenches indicates a though deconstruction of the site. The rubble inclusions within seldom consist of whole bricks and only in very rare occasions, such as in the back fill of Trench 8 (800), do two or three mortar-bonded bricks appear.

6.1.9 The extent and nature of the site clearance has effectively removed the majority, if not all, of the features associated with the Iron Works.

6.1.10 The remains encountered are of low significance in all three arenas; local, regional and national. What the site, its history and its final remains do

represent is another addition to the list of locations, within urban settings, that are examples to the changing nature of the economics that have driven this country for the last 300 years.

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APPENDIX 1: SUMMARY TABLES

APPENDIX 1.1: CONTEXT REGISTER

Trench	Context No.	Feature	Type	Dimensions (LxWxD; m)	Description
1	**100**	Topsoil	Layer	Depth, 0.09	Modern compacted brown silt-clay
1	**101**	Natural	Layer	-	Loose brown cobbles and gravels in a silt-sand matrix
1	**102**	Overburden	Layer	Depth 1.20	Mixed grey, red and black silt-clay with large fragments of brick and tile rubble, seals all deposits
1	**103**		Layer	4.40 x 2.00 x 0.38	Compact grey clay, above (**104**), abuts wall (**106**), possible levelling layer
1	**104**		Layer	4.40 x 2.00 x 0.12	Compact grey sand, below (**103**), above (**105**), abuts wall (**106**), possible bedding layer
1	**105**		Layer	4.40 x 2.00 x 0.10	Compact black ash-silt, below (**104**), possible floor
1	**106**	Wall	Structure	2.00 x 0.60 x 0.30	Stone footing for possible wall, orientated northeast-southwest
1	**107**	Wall	Structure	1.20m x unknown x 0.10	Single course, stretcher-bond, unfrogged, red brick wall, seen in section, orientated northwest-southeast, above (**108**)
1	**108**		Layer	2.00 x unknown x 0.45	Loose brick rubble in a silt-clay matrix, below (**107**), above (**109**)
1	**109**		Layer	2.05 x 2.00 x unknown	Compacted brick rubble, below (**108**)
1	**110**	Culvert	Structure	0.58 x 0.32 x 0.46	Brick culvert/drain, orientated northeast-southwest, seen in section below (**102**)
1	**111**	Wall	Cut	2.00 x 0.60 x unknown	Cut for wall (**106**), cuts natural (**101**), unknown relationship with deposit (**109**)
2	**200**	Overburden	Layer	Depth 0.46	Mixed grey, red and black silt-clay with large fragments of brick and tile rubble, seals all deposits

Trench	Context No.	Feature	Type	Dimensions (LxWxD; m)	Description
2	**201**	Natural	Layer	-	Loose brown cobbles and gravels in a silt-sand matrix
2	**202**	Rubble	Layer	Depth 0.40	Mixed grey, red and black silt-clay with fragments of brick and tile rubble
2	**203**	Wall	Structure	1.20 x 0.27 x 0.08	Single course, stretcher-bond, unfrogged, red brick wall, orientated northwest-southeast, parallel to wall (**204**) c.0.60m apart, above (**202**), truncated by pit cut [**206**]
2	**204**	Wall	Structure	1.23 x 0.37x 0.09	Single course, stretcher-bond, unfrogged, red brick wall, orientated northwest-southeast, parallel to wall (**203**) c.0.60m apart, above (**202**), truncated by pit cut [**206**]
2	**205**	Fill	Structure	1.23 x 0.67 x 0.22	Compact mixed red-brick, silt and clay layer, abuts walls (**203**) and (**204**), truncated by pit cut [**206**]
2	**206**	Pit	Cut	9.00 x 0.90 min x 1.35 max	Circular pit cut, sharp break-of-slopes, steep-sided, filled by (**207**)
2	**207**	Pit	Fill		Loose mixed black silt with large fragments of brick rubble, fill of [**206**]
3	**300**	Overburden	Layer	Depth 1.51	Loose grey silt-clay matrix with frequent large brick and sandstone rubble, seals all deposits
3	**301**	Natural	Layer	-	Loose brown cobbles and gravels in a silt-sand matrix
3	**302**	Overburden	Layer	Depth 0.40	Loose red brick and crushed brick rubble, covers western side of trench, above (**300**)
3	**303**	Rubble	Layer	Depth 0.20 min	Loose black silt matrix with frequent whole red-brick inclusion, above (**305**), below (**304**)
3	**304**	Rubble	Layer	Depth 0.12 min	Loose black silt with frequent glass and pottery inclusions, above (**303**), below (**306**)
3	**305**	Rubble	Layer	Unknown	Firm grey-black silt-clay with frequent pottery and shell inclusions, above (**301**), below (**303**)
3	**306**	Rubble	Layer	Depth 0.60	Firm brown clay with occasional brick rubble, above (**304**), below (**300**)
4	**400**	Overburden	Layer	Depth 1.10	Loose mixed brown-black silt with brick rubble
4	**401**	Natural	Layer	-	Loose brown cobbles and gravels in a silt-sand matrix

Trench	Context No.	Feature	Type	Dimensions (LxWxD; m)	Description
5	**500**	Overburden	Layer	Depth 1.00	Loose grey silt-clay matrix with frequent large brick and sandstone rubble, seals all deposits
5	**501**	Natural	Layer	-	Loose brown cobbles and gravels in a silt-sand matrix
5	**502**		Layer	1.80 x 1.70 x 0.45	Mixed concrete and brick demolition layer, above (**501**), below (**500**)
5	**503**	Surface	Structure	1.20 x 1.00 x 0.12	Surface consisting of mixed-sized sandstone slabs, above [**505**], below (**504**)
5	**504**		Structure	1.00 x 0.80 x 0.12	Single course, unbonded, unfrogged, above (**503**), truncated by [**507**]?
5	**505**	Surface	Cut	1.20 x 1.00 x 0.12	Steep-sided, flat-base cut for surface (**503**), cuts natural (**501**)
5	**506**	Pit	Fill	3.20 x 0.70 x 1.48 min	Loose brown-black silt-clay and rubble, fill of [**507**], below (**500**)
5	**507**	Pit	Cut	3.20 x 0.70 x 1.48 min	U-shaped pit cut, truncates (**504**)?, filled by (**506**)
6	**600**	Overburden	Layer	Depth 1.50	Firm mixed grey-red silt-clay with brick rubble
6	**601**	Natural	Layer	-	Loose brown cobbles and gravels in a silt-sand matrix
7	**700**	Overburden	Layer	Depth 1.20	Firm mixed grey-red silt-clay with brick rubble, seals all deposits
7	**701**		Layer	Depth 0.46	Compact yellow sand, abuts walls (**702**), (**703**), (**704**), below (**700**)
7	**702**	Wall	Structure	0.90 x 0.25 x 0.46	Five courses, English-bond, one-brick thick, unfrogged, red brick wall, orientated east-west, abuts wall (**703**)
7	**703**	Wall	Structure	2.00 x 0.25 x 0.46	Five courses, English-bond, one-brick thick, unfrogged, red brick wall, orientated northwest-southeast, above (**707**)
7	**704**	Wall	Structure	1.80 x 0.53 x 0.10	Rubble remains of sandstone wall, orientated northeast-southwest, above (**708**), below (**701**)

Trench	Context No.	Feature	Type	Dimensions (LxWxD; m)	Description
7	**705**	Pit	Fill	1.40 x 0.95 x 0.08	Firm grey silt-clay with 5% pebbles, fill of [**706**]
7	**706**	Pit	Cut	1.40 x 0.95 x 0.08	Shallow u-shape circular pit, filled by (**705**)
7	**707**	Natural	Layer	-	Loose brown cobbles and gravels in a silt-sand matrix
7	**708**	Structure	Layer	2.00 x 0.24 x 0.10	Compact black silt, above (**707**), below (**704**)
8	**800**	Overburden	Layer	Depth 1.40	Firm mixed grey-red silt-clay with brick rubble, seals all deposits
8	**801**	Well	Structure	2.00 dia x 0.20	Concrete well cap, above (**802**)
8	**802**	Well	Structure	1.50 dia x unknown	Ten courses (min), stretcher-bond, one-half-brick thick, unfrogged, red brick well, cuts natural (**813**)
8	**803**	Culvert	Cut	2.00 x 0.60 x 0.40	Linear vertical-sided flat-based cut, orientated northeast-southwest, contains brick culvert (**804**)
8	**804**	Culvert	Structure	2.00 x 0.60 x 0.40	Five courses, stretcher-bond, one-half-brick thick, unfrogged, red brick culvert, within cut [**803**]
8	**805**	Culvert	Fill	2.00 x 0.60 x 0.10	Firm yellow-grey clay, above (**804**), below stone capping (**806**)
8	**806**	Culvert	Structure	2.00 x 0.60 x 0.15	Capping surface of culvert consisting of mixed-sized sandstone slabs, above (**805**), below (**807**)
8	**807**	Culvert	Layer	2.00 x 1.10 x 0.10	Firm yellow-grey clay, seals stones (**806**), below (**800**)
8	**808**	Cellar	Cut	4.00 x 2.00 x 0.20 min	Square vertical-sided flat-based cut, contains walls (**809**), (**814**) and (**815**), layers (**810**) and (**811**) and floor (**812**)
8	**809**	Cellar	Structure	3.20 x 0.22 x 0.22	Three courses, English-bond, one-brick thick, unfrogged, red-brick wall, orientated northwest-southeast, interbonded with wall (**814**) and (**815**)
8	**810**	Cellar	Layer	3.20 x 2.00 x 0.10	Loose yellow crushed sandstone, above cut [**808**], below (**811**), construction trample
8	**811**	Cellar	Layer	3.20 x 2.00 x 0.20	Firm black ash-silt, above (**810**), below (**812**), levelling layer
8	**812**	Cellar	Structure	3.20 x 1.20 x 0.07	Single course, stretcher-bond, unfrogged, blue brick paver/surface, ash-silt mortar, abuts walls (**809**), (**814**) and (**815**), above (**811**)

Trench	Context No.	Feature	Type	Dimensions (LxWxD; m)	Description
8	**813**	Natural	Layer	-	Loose brown cobbles and gravels in a silt-sand matrix
8	**814**	Cellar	Structure	2.00 x 0.44 x 0.14	Two courses, English-bond, two-brick thick, unfrogged, red-brick wall, orientated northeast-southwest, interbonded with wall (**809**) and (**815**)
8	**815**	Cellar	Structure	2.00 x 0.22 x 0.14	Two courses, English-bond, one-brick thick, unfrogged, red-brick wall, orientated northeast-southwest, interbonded with wall (**809**) and (**814**)
9	**900**	Overburden	Layer	Depth 1.40	Soft grey-black silt, industrial backfill, above (**902**) and (**903**)
9	**901**	Natural	Layer	-	Loose brown cobbles and gravels in a silt-sand matrix
9	**902**	Wall	Structure	2.60 x 0.60 x 0.07	Single course, uncertain bonding, one-brick thick, unfrogged, red brick, orientated northeast-southwest, abuts wall (**904**), parallel with wall (**903**), no visible cut
9	**903**	Wall	Structure	2.40 x 0.22 x 0.07	Single course, uncertain bonding, one-brick thick, unfrogged, red brick, orientated northeast-southwest, abuts wall (**905**), parallel with wall (**902**), no visible cut
9	**904**	Wall	Structure	2.14 x 0.40 x unknown	Single course, irregular sandstone blocks, lime mortar, orientated northeast-southwest, within cut [**908**], abutted by wall (**902**)
9	**905**	Wall	Structure	2.10 x 0.38 x unknown	Single course, irregular sandstone blocks, lime mortar, orientated northeast-southwest, within cut [**907**], abutted by wall (**903**)
9	**906**		Layer	4.60 x 1.50 x unknown	Firm red silt-clay with 5% pebbles, above natural (**901**), levelling layer prior to construction
9	**907**	Wall	Cut	2.10 x 0.38 x unknown	Liner construction cut, orientated northeast-southwest, sharp top break-of-slope, contains (**905**)
9	**908**	Wall	Cut	2.14 x 0.40 x unknown	Liner construction cut, orientated northeast-southwest, sharp top break-of-slope, contains (**904**)
10	**1000**	Rubble	Layer	Depth 1.30	Loose grey silt-clay matrix with 60% brick and stone rubble
10	**1001**	Natural	Layer	-	Loose yellow-brown gravels and sand-clay
10	**1002**	Wall	Structure	0.94 x 0.87 x 0.07	Single course, uncertain bonding, one-brick thick, unfrogged, red brick, abutted by (**1003**), no visible cut

Trench	Context No.	Feature	Type	Dimensions (LxWxD; m)	Description
10	**1003**	Wall	Fill	0.80 x 0.70 x 0.08	Firm white-red mortar with 10% brick rubble, abuts wall (**1002**)
10	**1004**	Natural	Layer	2.20 x 1.20 0.06	Soft brown sand, uncertain relationship with (**1003**), above natural (**1001**)
11	**1100**	Rubble	Layer	Depth 1.20	Loose grey silt-clay matrix with 60% brick and stone rubble
11	**1101**	Rubble	Layer	5.00 x 2.00 x 0.78	Loose brown-black silts with 20% brick rubble
11	**1102**	Natural	Layer	-	Loose brown cobbles and silt-sand

APPENDIX 1.2: FINDS REGISTER

Trench	Context	Material	Count	Weight (g)	Spot-date
1	100	Modern pottery: Creamware, English stoneware, hand painted china, Nottingham Stoneware, mocha ware	11	153	C19
		Post-Medieval pottery: Mottled brown glazed ware, Cistercian, black glazed ware	5	123	
		Clay tobacco pipe: unmarked stem	2	5	
		Ceramic building material: pantile	1	138	
		Modern Glass: Bottle	1	40	
		Copper alloy: drawer handle	1	12	
		Worked bone: brush handle	1	8	
1	100	Oyster shell	2	62	-
3	300	Modern pottery: Mocha ware, creamware	6	410	C19
		Clay tobacco pipe: unmarked stem	4	10	
		Ceramic building material: pantile	1	182	
		Modern glass: bottle	1	15	
		Slag: undiagnostic	3	39	
4	400	Modern pottery: transfer printed china	1	2	C19-C20
		Clay tobacco pipe: unmarked stem	2	8	
6	600	Modern pottery: hand painted china, metallic rimmed china	4	132	C19-C20
		Clay tobacco pipe: bowl Oswald type 14	1	11	
6	601	Horse radius: partially fossilised, calcium-based mineral	11	418	-
7	701	Modern pottery: hand painted china, metallic rimmed china, creamware	6	78	C19-C20
		Iron: machine part	1	885	
	701	Sheep tibia	1	35	-
	705	Modern pottery: transfer printed china	1	4	C19-C20
		Post-Medieval pottery: black glazed ware	1	145	
		Clay tobacco pipe: unmarked stem	1	2	
		Fuel ash	1	5	
	705	Oyster shell	1	7	-
8	800	Modern pottery: hand painted china, English stoneware	4	642	C19
		Clay tobacco pipe: unmarked stem	2	5	
	811	Modern pottery: creamware	1	10	C19
		Post-Medieval pottery: black glazed ware	1	52	
	811	Oyster shell	1	79	-
9	906	Modern pottery: transfer printed china, creamware	2	57	C19-C20
		Clay tobacco pipe: unmarked stem	1	4	
10	1000	Modern pottery: Hand painted china, transfer printed china, creamware	5	12	C19-C20
		Clay tobacco pipe: unmarked stem	1	4	
		Crucible	1	494	
		TOTALS	**89**	**4248**	

APPENDIX 1.3: BLACK AND WHITE FILM REGISTER

Photo No.	Contexts/ description	Direction facing
Film 1 unused		
Film 2		
1	Identification shot	-
2-3	Trench 4, overall shot	W
4-5	Trench 4, representative section	N
6-7	Trench 1, overall shot	NW
8-9	Trench 1, overall shot	SE
10-11	Trench 1, oblique section	N
12-13	Trench 3, overall shot	W
14-15	Trench 3, representative section	N
16-17	Trench 1, overall shot	NW
18-19	Trench 1, overall shot	SE
20-21	Trench 1, oblique section	SW
22-23	Trench 6, overall shot	NE
24-25	Trench 6, representative section	SE
26-27	Trench 2, overall shot	E
28-29	Trench 2, overall shot	W
30-31	Trench 2, oblique section	SE
32-33	Trench 7, overall shot	S
34-36	Working shots	-
Film 3		
1	Identification shot	-
2-3	Trench 5, oblique section	W
4-5	Trench 5, overall shot	SE
6-7	Trench 5, overall shot	NW
8-9	Trench 4, representative section	SW
10-11	Trench 8, representative section	NE
12-13	Trench 7, pit [**706**]	S
14-15	Trench 7, wall (**704**)	S
16-17	Trench 7, mid-excavation wall (**703**)	S

Photo No.	Contexts/ description	Direction facing
18-21	Trench 7, Walls (**702**)/(**703**)	S
22-23	Trench 7, sondage	SW
24-25	Trench 10, wall (**1002**)	NW
26-27	Trench 10, representative section	NW
28-29	Trench 10, overall shot	SW
30-31	Trench 8, brick floor (**812**)	S
32-33	Trench 8, overall shot	W
34-35	Trench 8, overall shot	E
36	Unused	
Film 4		
1-22	Unused	-
23-24	Trench 9, representative section	SE
25-26	Trench 9, representative section	NW
27-28	Trench 9, overall shot	SW
29-30	Trench 9, overall shot	NE
31-32	Trench 5, stone slabs (**503**) and rubble (**504**)	SE
33-34	Trench 5, wall (**502**)	N
35	Identification shot	-
Film 5		
1-8	Unused	-
9	Identification shot	-
10-11	Trench 11, overall shot	NE
12	Trench 11, representative section	NW
13	Trench 11, oblique	W
14-15	Trench 11, overall shot	SW
16-36	Unused	-

APPENDIX 1.4: DIGITAL PHOTOGRAPH REGISTER

Photo No.	Contexts/ description	Direction facing
Download 1		
001-226	Unused	-
227-229	Trench 4, overall shot	W
230-231	Trench 4, representative section	N
232	Trench 4, oblique section	NW
233-234	Trench 1, overall shot	NW
235-236	Trench 1, overall shot	SE
237-238	Trench 1, oblique section	N
239-242	Trench 1, floor surfaces (**103**)/(**104**), wall (**106**)	NE
243-245	Trench 3, overall shot	W
246-248	Trench 3, overall shot	E
249	Trench 3, rubble dumps (**303**)-(**306**)	E
250	Trench 3, rubble dumps (**303**)-(**306**)	NE
251-252	Trench 3, representative section	NE
253-255	Trench 1, overall shot	NW
256-257	Trench 1, overall shot	SE
258	Trench 1, oblique section	SW
259-266	Site Ephemera	-
267-268	Trench 6, overall shot	NE
269-270	Trench 6, overall shot	SW
271-272	Trench 6, representative section	NW
273-274	Trench 6, bone *in-situ*	-
275-276	Trench 2, overall shot	E
277-278	Trench 2, overall shot	W
279-280	Trench 2, oblique section	SE
281-282	Trench 2, metal artefact – endplate?	-
283-284	Trench 7, overall shot	S
285-286	Trench 7, wall (**704**)	SE
287-288	Trench 7, wall (**704**)	E
289	Trench 8, overall shot	W

Photo No.	Contexts/ description	Direction facing
290	Trench 8, overall shot	E
291	Trench 8, oblique brick floor (**812**)	SE
292	Trench 8, brick floor (**812**)	E
293	Working Shot	-
294-295	Trench 10, overall shot	SW
296-297	Trench 10, overall shot	NE
298-299	Trench 10, representative section	NW
300-301	Trench 10, brick wall (**1002**)	NW
302	Trench 2, post-excavation shot walls (**203**)/(**204**) and infill (**205**)	W
303	Trench 2, post-excavation shot walls (**203**)/(**204**) and infill (**205)**	S
304	Trench 2, post-excavation shot walls (**203**)/(**204**) and infill (**205**)	E
305-307	Trench 7, sondage at southern end	SW
308-311	Trench 7, wall (**702**)/(**703**)	S
312-313	Trench 7, mid-excavation shot wall (**702**)/(**703**)	SW
314-315	Trench 7, wall (**704**)	S
316-317	Trench 7, pit [**706**]	S
318	Trench 8, representative section	NE
319-321	Trench 7, representative section	SW
322-323	Trench 5, overall shot	NW
324-325	Trench 5, overall shot	SE
326-327	Trench 5, oblique section	W
328-329	Trench 5, wall (**502**)	N
330-331	Trench 5, stone slabs (**503**) and rubble (**504**)	SE
332-338	Working Shots	-
339-340	Trench 9, overall shot	NE
341-342	Trench 9, overall shot	SW
343-344	Trench 9, representative section	NW
345-346	Trench 9, representative section	SE
347-348	Working Shots	-

Photo No.	Contexts/ description	Direction facing
Download 2		
001	Trench 11, overall shot	SW
002	Trench 11, overall shot	NE
003	Trench 11, representative section	NW

APPENDIX 1.5: DRAWING REGISTER

Drawing No.	Sheet No.	Scale	Plan/ Section	Description
1	3	1:20	Section	Trench 1, northeast-facing section
2	3	1:20	Plan	Trench 2, post-excavation plan
3	3	1:20	Section	Trench 2, north-facing section
4	1	1:20	Plan	Trench 3, post-excavation plan
5	1	1:20	Section	Trench 6, northwest-facing section
6	4	1:20	Section	Trench 7, east-facing section
7	5	1:20	Plan	Trench 7, post-excavation plan
8	6	1:20	Plan	Trench 10, post-excavation plan
9	6	1:20	Section	Trench 10, southwest-facing section
10	7	1:20	Plan	Trench 8, post-excavation plan
11	7	1:20	Section	Trench 8, southeast-facing section
12	7	1:100	Plan	Trench 8, location plan within site
13	8	1:20	Section	Trench 5, southwest-facing section
14	4	1:20	Plan	Trench 5, post-excavation plan
15	1	1:20	Section	Trench 4, south-facing section
16	2	1:20	Plan	Trench 1, post-excavation plan
17	1	1:20	Section	Trench 3, southeast-facing section
18	9	1:20	Plan	Trench 9, post-excavation plan
19	8	1:20	Section	Trench 9, southeast-facing section

APPENDIX 2: FIGURES

APPENDIX 3: SPECIFICATION FOR ARCHAEOLOGICAL FIELD EVALUATION

SITE NAME: Land at Brook Street, Derby (former Abell's Ironworks)

NGR: SK 3471 3664 (centre)

ISSUED BY: Steve Baker (Development Control Archaeologist for Derby City Council)

DATE: 5th March 2012

1 Introduction

1.1 Planning consent DER/04/10/00413 has been granted for the erection of student accommodation (389 units) and associated parking spaces, at the above site.

1.2 Because of the archaeological potential within the site, planning conditions were attached to secure a scheme of archaeological work (conditions 17 and 18).

1.3 A phased approach will be necessary to ensure the most appropriate and proportionate approach to archaeological recording. This will involve:

1. Archaeological field evaluation (trial trenching).
2. Discussion between the applicants, their agents/consultants and the development control archaeologist, aiming to understand the likely impacts of the scheme on below-ground archaeology as identified through evaluation, and formulation of an appropriate scheme to record any archaeological remains (if any) likely to be so impacted, either in advance of construction or within the construction schedule. The development control archaeologist will then produce a formal planning brief for this work.
3. The applicants, through their agents/consultants, should then submit a WSI against the requirements of Condition 17.
4. The archaeological work as contained in the WSI should then be carried out as approved, including reporting and archiving.

1.4 This document is a specification to guide the Phase 1 archaeological field evaluation **only** and does not therefore form a planning brief for the conditioned work as a whole. The planning brief will follow once the results of evaluation are known and the impacts of the development understood.

1.5 A partial discharge of Condition 17 will be recommended following approval of the planning WSI (Phase 3) and satisfactory completion of any pre-start fieldwork scheduled in the approved WSI. This will allow a start to construction work on site. Full discharge will be granted following completion of the archaeological work specified in the WSI, including reporting and archiving. Condition 18 is a pre-occupation condition and will be discharged once initial/assessment reporting is complete and provision for further reporting (if any) and archiving is secured.

2 Background

2.1 The proposal site is the location of the former Abell's Ironworks, established by William Oliver Abell in the late 1840s, producing a range of goods including steam engines and textile machinery for firms operating in the town.

2.2. The site is also adjacent to the Markeaton Brook and may contain evidence for 18th works to canalise the brook.

2.2 The archaeological potential of the site is further developed in a desk-based assessment (DBA) produced by Birmingham Archaeology.

3 Objectives

3.1 The field evaluation aims to provide sufficient information for informed decisions to be made regarding i) the presence or absence of archaeological features, ii) their significance and importance (see PPS5 and associated guidance notes), iii) the likely impact of the development upon any such features and iv) the appropriate mitigation of the development's impacts upon those remains, leading – if justified - to the production of a planning brief and WSI for a further scheme of recording.

4 Methodology

Archaeological field evaluation trenching

4.1 A method statement, including a detailed trenching plan, for the evaluation trenching, should be submitted to the development control archaeologist for comment, discussion and approval in good time before the commencement of work on site.

4.2 The detailed trenching plan should be formulated to assess the archaeological potential of the site with reference to information contained in the DBA. In particular, structural elements of the historic ironworks should be targeted, with one trench perhaps reserved to assess potential for evidence relating to canalisation of the brook. The total trench area should achieve a 4% sample of the site (175 sq m), with a contingency for a further 20 sq m for extension where justified under the aims of the evaluation.

4.3 This sample area of 215 sq m must be achieved at the level of archaeological/natural deposits and provision must be made for shoring/stepping of trenches if necessary.

4.4 Evaluation trenches will be excavated under the supervision of a professional archaeologist, using a mechanical excavator of appropriate size and tonnage fitted with a toothless bucket, to the level at which archaeological features/structures are present, or to the upper surface of natural deposits, whichever level is reached first. A concrete breaker or toothless bucket may be used at the discretion of the supervising archaeologist to remove hard surface and/or obstructions only.

4.5 Following machine excavation and cleaning, sample excavation and recording of features will take place according to the general guidelines set out below.

4.6 Recording of blank trenches (where no archaeological features are identified), should be as follows:

- Completion of trench record sheet, giving dimensions, stratigraphy and interpretation;
- At least one photograph of trench base and another of a typical trench section;
- Drawn 2m sample section of stratigraphy;
- EDM/Total Station survey of trench location, including AOD levels of top and bottom of trench section.

4.7 Recording of trenches where archaeological features are present should be as follows:

- Plan of trench base at 1:20, with AOD levels (pre-excavation and post-excavation planning should be carried out as appropriate);
- At least one long trench section should be drawn at 1:20.
- Further detailed plans/sections of features and groups of features should be drawn at 1:10/1:20 as appropriate, with AOD levels;
- Standard stratigraphic recording using pro-forma sheets;
- General photographic shots of trench base and section(s), and detailed shots of archaeological features as appropriate;
- EDM/Total Station survey of trench location, including AOD levels of top and bottom of trench section.

4.8 No backfilling should take place until the Development Control Archaeologist has inspected trenches and records and is satisfied that the work has been carried out to an appropriate standard.

4.9 Following completion of the evaluation trenching a site meeting should be held with the Development Control Archaeologist to review the results and for an initial steer on the likely requirement for further work.

General guidelines for excavation and recording

4.10 All archaeological fieldwork, recording of archaeological features and deposits and post-excavation analysis should be carried out to acceptable archaeological standards. The contractor will be expected to abide by the Code of Practice of the Institute of Field Archaeologists, and to follow the guidance provided in *Archaeological Science at PPG16 Interventions* (English Heritage 2003).

4.11 Decisions made on the methods and strategies for sampling features should be based upon the nature and extent of any deposits which are revealed. These decisions should be made in consultation with the Development Control Archaeologist. However, all features potentially archaeological in origin should be investigated, and time must be allowed for full excavation of all features if this is necessary to achieve the aims of evaluation. In general, discrete features should be half-sectioned in the first instance; linear features should be sampled a minimum of 20% along their length (each sample section not less than 1m), or a minimum of a 1m sample section if the feature is less than 10m long. In addition, the deposits at junctions or interruptions in linear features should be sufficiently excavated for the relationship between components to be established.

4.12 Features are to be recorded according to the normal principles of stratigraphic excavation, and should be accurately located on a site plan and recorded by photographs, summary scale drawings and written pro forma sheets. Sufficient EDM/Total Station survey should take place to allow all features to be located accurately with relation to the National Grid and Ordnance Datum. Individual features will be planned at 1:20 where additional detail is required. Sections and profiles of each feature sampled will be drawn at 1:10 or 1:20, depending on the size of the feature. All plans, sections and profiles will be related to Ordnance Datum, in metres. Drawing conventions should follow the MoLAS *Archaeological site manual* (2004).

4.13 For brick/stone structures, the record should include details of brick dimensions and type (handmade/machine-made, plain/frogged), mortar (colour, composition, hardness) and the extent of structures (number of courses, thickness in skins).

4.14 Site photography should be in 35mm b/w print film and either 35mm colour slides or high resolution (7 megapixel or greater) DSLR photography. Photography should include general site shots, shots of each trench, and shots of individual features and groups of features. All photographs should include a suitable photographic scale and will be recorded on a photographic register with the subject and direction of each shot.

4.15 Should deposits of palaeo-environmental importance be identified then a recognized environmental specialist will visit the site to advise on a sampling strategy and the suggested strategy will then be implemented.

4.16 Artefact collection policy should be concerned with the provision of adequate samples for meeting the objectives of the work. Discarded artefactual materials should be described and quantified through assignment to broad categories in the field. All retained finds and palaeo-environmental samples should be treated in accordance with the EH guidance document *A strategy for the care and investigation of finds (1995)* and the UKIC's document *Guidelines for the preparation of excavation archives for long term storage*. Assessment and analysis of finds and palaeo-environmental samples will be undertaken, as necessary, by suitably qualified specialists.

4.17 Where there is evidence for industrial activity, samples will be taken to identify macroscopic technological residues in accordance with *Archaeometallurgy* (English Heritage 2001) and *Science for Historic Industries* (English Heritage 2006).

4.18 Any human remains encountered must initially be left *in* situ. If removal is necessary, this must comply with the relevant Ministry of Justice, Diocesan and other regulations, as appropriate. A strategy for the excavation, analysis, retention and/or reburial of a) disarticulated and b) articulated human remains will need to be developed and specified in the WSI. The cataloguing and analysis of all human remains will be undertaken, as necessary, by a suitably qualified osteoarchaeologist.

4.19 Provision must be made for additional specialist advice, eg for finds analysis, analysis of palaeo-environmental or industrial samples, and conservation.

4.20 The appointed archaeological contractor should undertake a site risk assessment and operate at all times with due regard to health and safety regulations.

5 Monitoring

5.1 The work will be carried out by appropriately qualified and experienced staff. CVs should be submitted to the Development Control Archaeologist for approval. Details of staff numbers and their relevant experience should be included, plus their responsibilities in carrying out the work.

5.2 Any changes to the agreed methodology must be discussed with, and agreed with, the Development Control Archaeologist before implementation

5.3 During the course of the fieldwork the Development Control Archaeologist may undertake monitoring visits. One week's prior notice of the commencement of fieldwork should therefore be given, including the name and contact number of the archaeologist on site.

5.4 Should significant archaeological deposits be encountered the archaeological contractor should contact the Development Control Archaeologist and arrange a convenient date and time for a site visit (Steve Baker 01629 539773 steve.baker@derbyshire.gov.uk)

6 Report(s)

6.1 The preparation of reports should follow the guidelines published by the Institute of Field Archaeology and English Heritage (MAP2). Provision should be made for assessment reporting (*sensu* MAP2) and interim reporting to be undertaken where appropriate. Should further work be required under the terms of the planning condition then the evaluation report may be subsumed into the final site reporting.

6.2 If a stand-alone evaluation report is appropriate, then it should be submitted within three months of the completion of fieldwork. A single bound copy should be provided to the development control archaeologist for accession to the HER. A pdf copy of the report and indexed copies of all digital site photographs should also be provided to the development control archaeologist on CD/DVD.

6.3 The evaluation report should include as a minimum:

- Non-technical summary
- Introductory statement
- Aims and purpose of the archaeological work
- Method
- An objective summary statement of results
- Phased stratigraphic discussion of the archaeological features
- A statement of significance - an interpretive discussion of the results, placing them in a local and regional context
- The results of assessments and/or analyses of artefacts and ecofacts carried out by suitable specialists, including recommendations for retention/discharge and recommendations for conservation where appropriate.
- Archaeological site photographs including key features and working shots
- Supporting illustrations and plans, suitably captioned, at appropriate scales. To include as a minimum: a location map at not less than 1:25000 and a site plan at not less than 1:500; copies of historic map extracts and historic photographs where relevant; a plan and section of each trench (sample section only if blank); detail plans/sections of archaeological features and structures as appropriate. The site plan must show trench locations accurately in relation to NGR and OS Mastermap background mapping. Plan/section drawings must include AOD levels and information to relate them accurately to NGR.
- A detailed context index
- Supporting data – tabulated or in appendices
- Index to archive, details of archive location and accession number, and a proposed date for final deposition.
- Publication statement – proposed timetable, location and scale of publication
- References

- A copy of the OASIS form
- A copy of this brief

6.4 A pdf copy of the report and indexed copies of all digital record photographs should be submitted on CD to the development control archaeologist.

7 Archive

7.1 From the outset of the project arrangements should be made for the archive, consisting of record sheets, original drawings, drawn plans, photographs, notes, copies of all reports along with an index to the archive to be deposited at Derby Museum and Art Gallery in accordance with the procedures set out in *Procedures for the Transfer of Archaeological Archives* (2003). All archive material should be marked with the museum accession number.

7.2 Initial contact with the Museum should be made before the commencement of fieldwork, using the appropriate notification form (Appendix 1 of the archive guidelines). An accession number should be drawn and notified to the Development Control Archaeologist in advance of evaluation fieldwork.

7.3 The Development Control Archaeologist and museum curator must be notified in writing on completion of fieldwork, with a proposed timetable for deposition of the archive. This should be confirmed in the project report.

7.4 The Development Control Archaeologist must be informed in writing on final deposition of the site archive.

7.5 At the start of work (immediately before fieldwork commences) an OASIS online record http://ads.ahds.ac.uk/project/oasis/ must be initiated and key fields completed on Details, Location and Creators forms. All parts of the OASIS online form must be completed for submission to the HER. This should include an uploaded pdf version of the entire report (a paper copy should also be included with the archive).

8 Publication

8.1 Publication costs must be built into agreed project budgets from the outset, and a publication proposal included in the report. Where no further publication is envisaged then a summary of the project, with selected drawings, illustrations and photographs, should be submitted within 2 years of the completion of the project to Derbyshire Archaeological Journal for publication.

APPENDIX 4: ARCHIVE AND DISSEMINATION

APPENDIX 4.1: ARCHIVE INDEX

PROJECT: ***Land at Brook Street, Derby, Derbyshire*** **TYPE:** ***Evaluation***

SITE CODE: ***BSD-A*** **CP NUMBER:** ***10191***

PROJECT SUPERVISOR: ***Iain McIntyre***

PROJECT MANAGER: ***Matthew Town***

ARCHIVE START DATE: ***13/04/12*** **PROJECTED COMPLETION DATE:** ***01/07/12***

CONTENTS (tick if included):	**LOCATION (state below):**	**Tick when completed:**
PAPER ARCHIVE:	**Box 1** - WAA Offices, Carlisle	☑
Site Registers	☑	
Trench Sheets	☑	
Context Sheets	☑	
Enviro Sample Sheets	☑	
PHOTOGRAPHS:	**Box 1** - WAA Offices, Carlisle	☑
B&W Print	☑	
Digital (on CD)	☑	
Negatives	☑	
DRAWINGS:	**Box 1** - WAA Offices, Carlisle	☑
Original Permatrace	☑	
PROJECT REPORT:	**Box 1** - WAA Offices, Carlisle	☑
Unbound copy	☑	
PDF (on CD)	☑	

DIGITAL DATA :	**Box 1** - WAA Offices, Carlisle		☑
Survey Data (On CD)		☑	
OASIS ID	***wardella2-123500***	☑	
ARTEFACTS:	**Box 2** - WAA Offices, Carlisle		☑
Ceramics		☑	
Glass		☑	
Metal		☑	
Other (give details)		☑	
	Slag, crucible fragment		
ECOFACTS:	**Box 2** - WAA Offices, Carlisle		☑
Animal Bone		☑	
Shell		☑	

RECEIVING MUSEUM: ***Derby Museum and Art Gallery***

DATE SENT:

COMMENTS:

APPENDIX 4.2: OASIS DEPOSITION

OASIS DATA COLLECTION FORM: England

OASIS ID: wardella2-123500

Project details	
Project name	Brook Street, Derby
Short description of the project	Land at Brook Street, Derby. Evaluation, 11 trenches.
Project dates	Start: 21-03-2012 End: 23-03-2012
Previous/future work	Yes / No
Type of project	Field evaluation
Methods & techniques	'Targeted Trenches'
Development type	Housing estate
Prompt	Planning condition
Position in the planning process	Not known / Not recorded
Project location	
Country	England
Site location	DERBYSHIRE DERBY DERBY Brook Street, Derby
Study area	4300.00 Square metres
Site coordinates	SK 3471 3664 52.9257300532 -1.483626253080 52 55 32 N 001 29 01 W Point
Project creators	
Name of Organisation	WA Archaeology
Project director/manager	Matt Town
Project supervisor	Iain McIntyre
Entered by	I McIntyre (i.mcintyre@wa-archaeology.com)
Entered on	16 April 2012

APPENDIX 4.3: PUBLICATION STATEMENT

If the results of these investigations are deemed significant then further publication may be considered. It is proposed that such publication should be within the Derbyshire Archaeological Journal, published by the Derbyshire Archaeological Society annually, within two years. The Derbyshire Archaeological Journal is considered most appropriate as it covers the history and archaeology of the county.

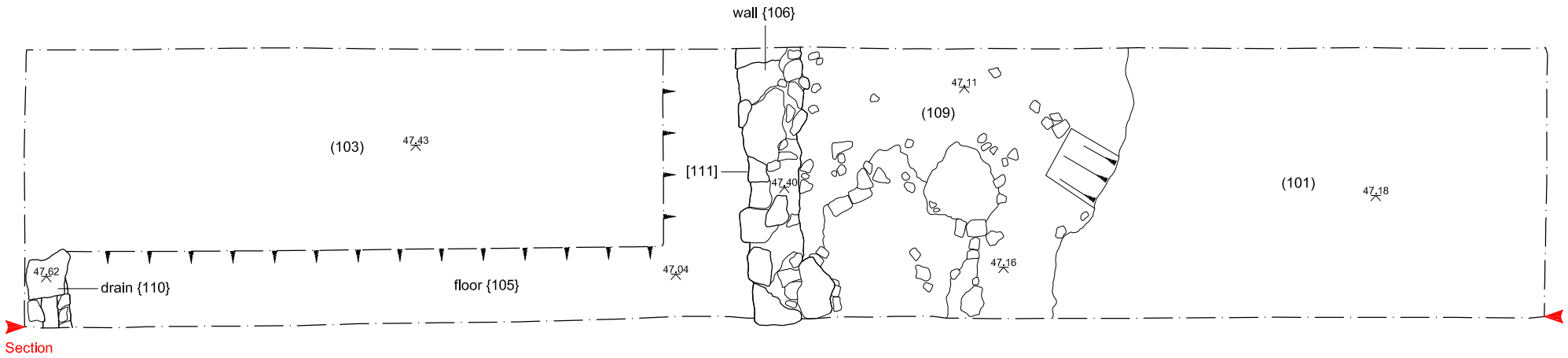
The publication will most likely consist of:

- Location information;
- Historical background;
- Excavation results, and;
- Appropriate plates and figures.

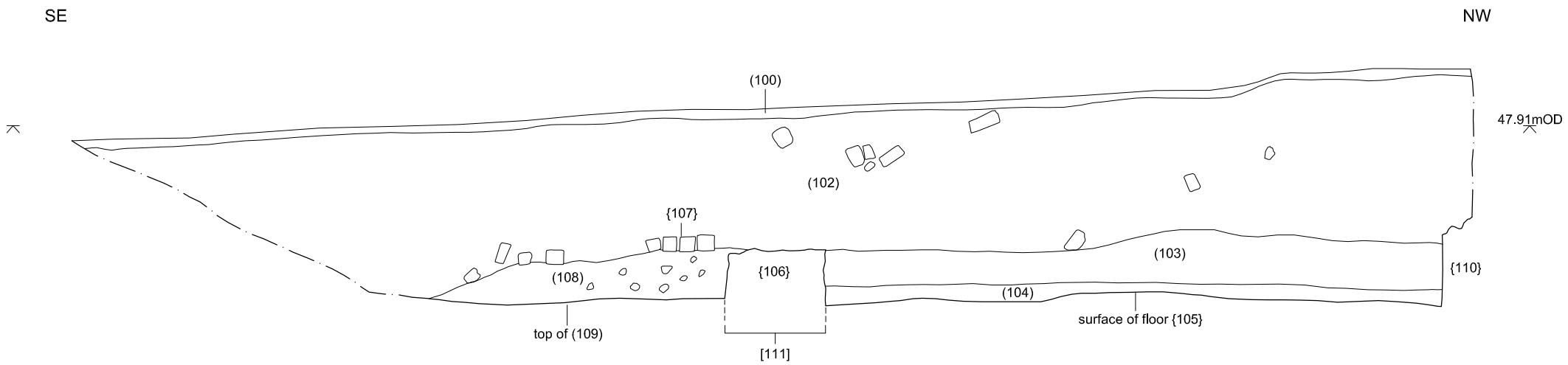
wardell armstrong archaeology WA Archaeology Ltd 2012	PROJECT: Land at Brook Street, Derby SCALE: 1:25,000 at A4 REPORT No: CP10191 CLIENT Watkin Jones Group DRAWN BY: AB DATE: April 2012 FIGURE: 1	KEY: Site location	

Figure 1: Site location.

Figure 2: Trench locations.



Trench 1. Plan.



Trench 1. North-east facing section.

wardell armstrong archaeology

WA Archaeology Ltd
2012

Land at Brook Street,
Derby

CLIENT: Watkin Jones Group

SCALE: 1:40 at A3

DRAWN BY: AB

DATE: April 2012

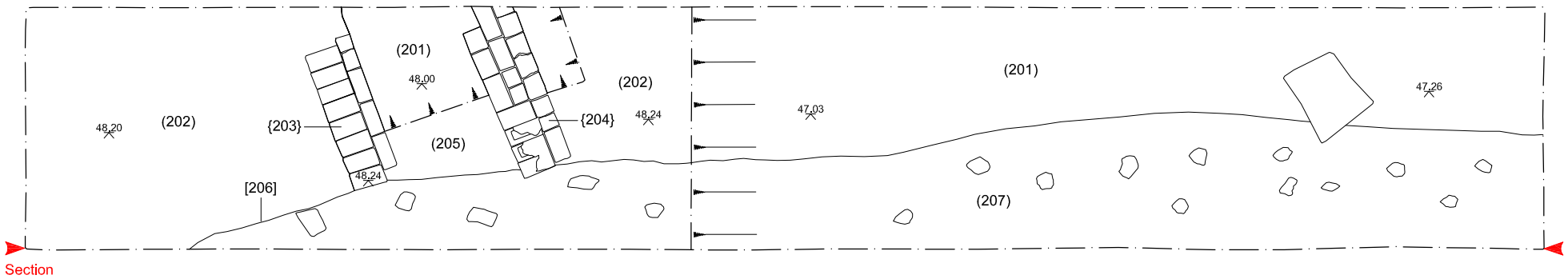
KEY:

- Limit of excavation
- Height mAOD
- [101] Context number
- Section location

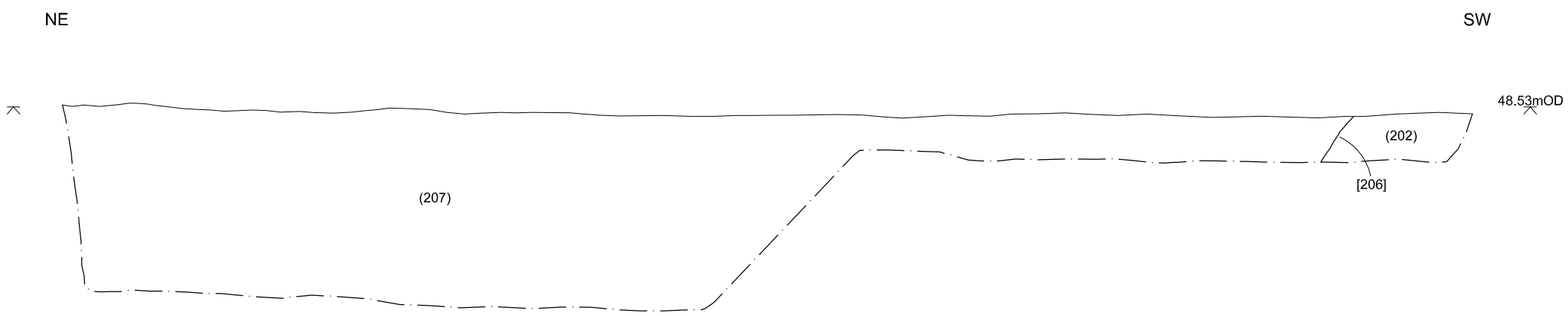
REPORT No: CP10191

FIGURE: 3

Figure 3: Trench 1, plan and section.



Trench 2. Plan.



Trench 2. North-west facing section.

wardell armstrong archaeology

WA Archaeology Ltd
2012

Land at Brook Street,
Derby

CLIENT:
Watkin Jones Group

SCALE: 1:40 at A3

DRAWN BY: AB

DATE: April 2012

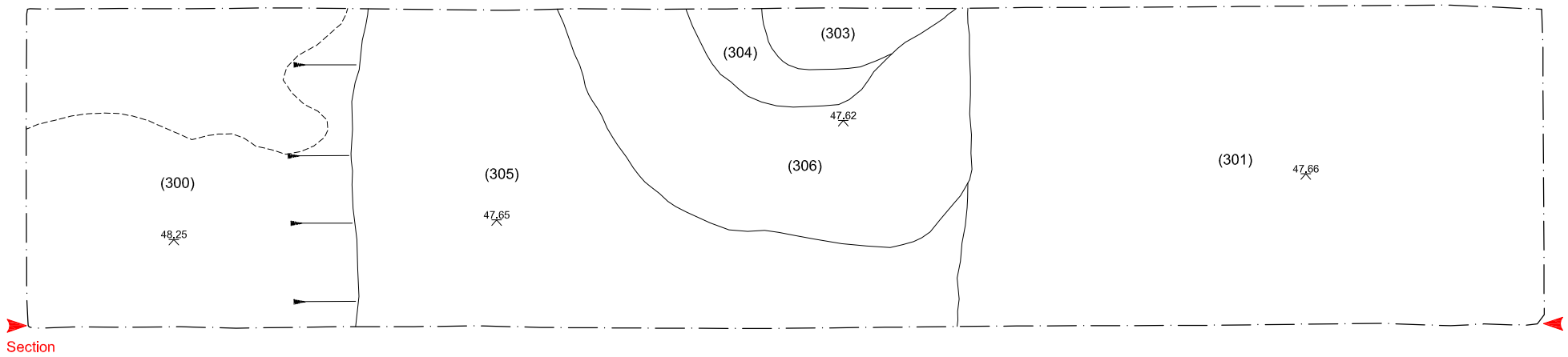
KEY:

- Limit of excavation
- Height mAOD
- [101] Context number
- Section location

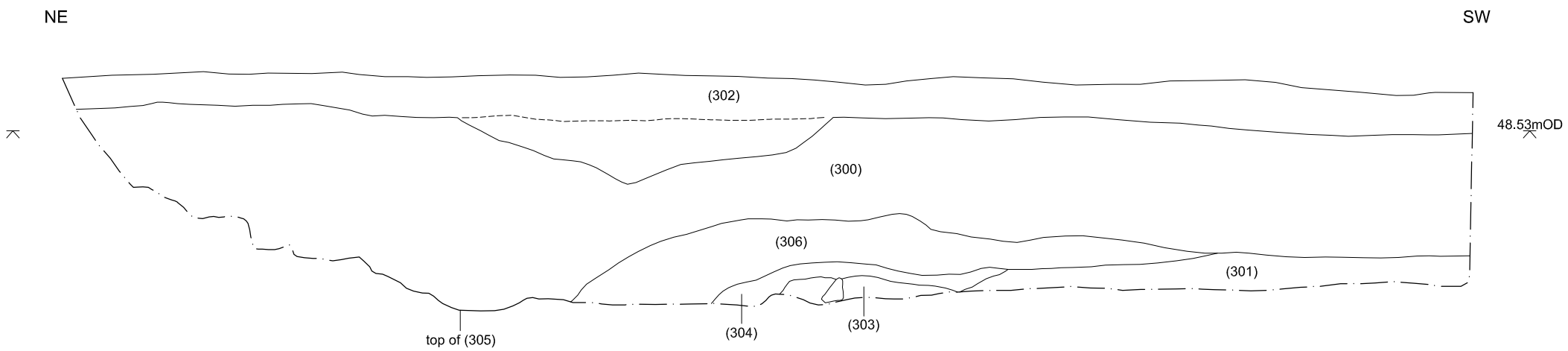
REPORT No:
CP10191

FIGURE:
4

Figure 4: Trench 2, plan and section.



Trench 3. Plan.



Trench 3. North-west facing section.

wardell armstrong archaeology

WA Archaeology Ltd
2012

Land at Brook Street,
Derby

CLIENT:
Watkin Jones Group

SCALE: 1:40 at A3

DRAWN BY: AB

DATE: April 2012

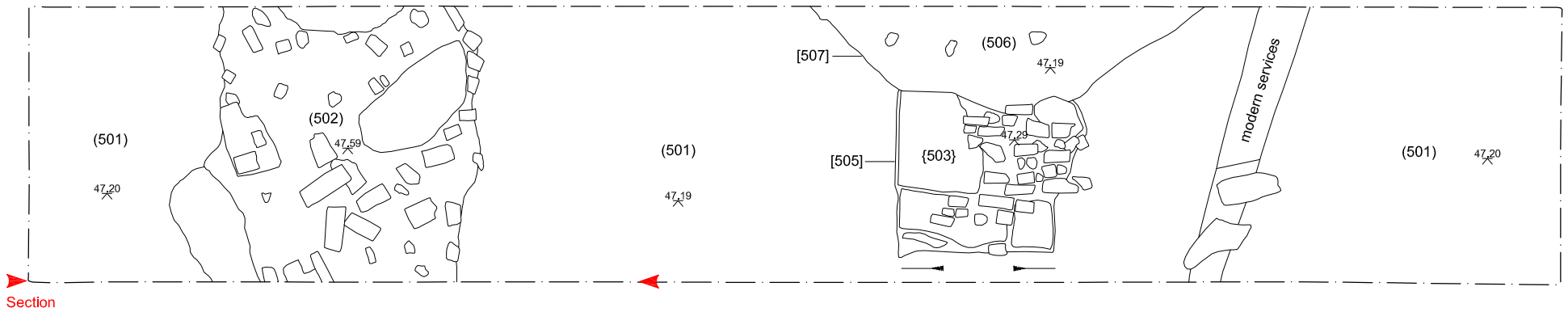
KEY:

- Limit of excavation
- Height mAOD
- [101] Context number
- Section location

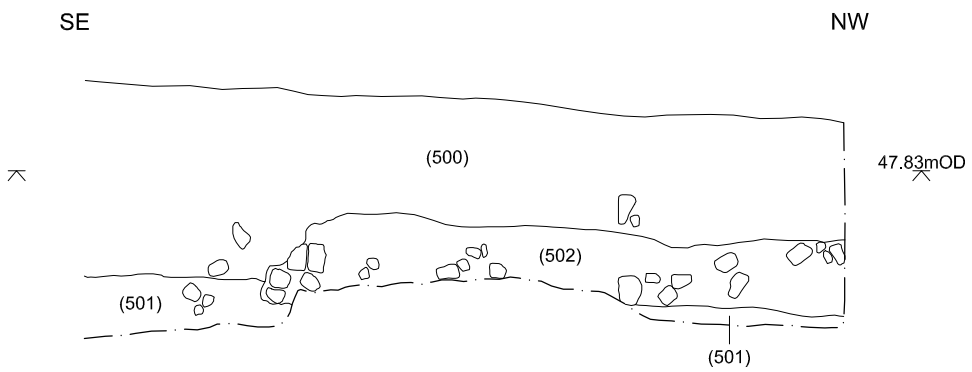
REPORT No:
CP10191

FIGURE:
5

Figure 5: Trench 3, plan and section.



Trench 5. Plan.



Trench 5. North-east facing section.

wardell armstrong archaeology

WA Archaeology Ltd
2012

Land at Brook Street,
Derby

CLIENT:
Watkin Jones Group

SCALE: 1:40 at A3

DRAWN BY: AB

DATE: April 2012

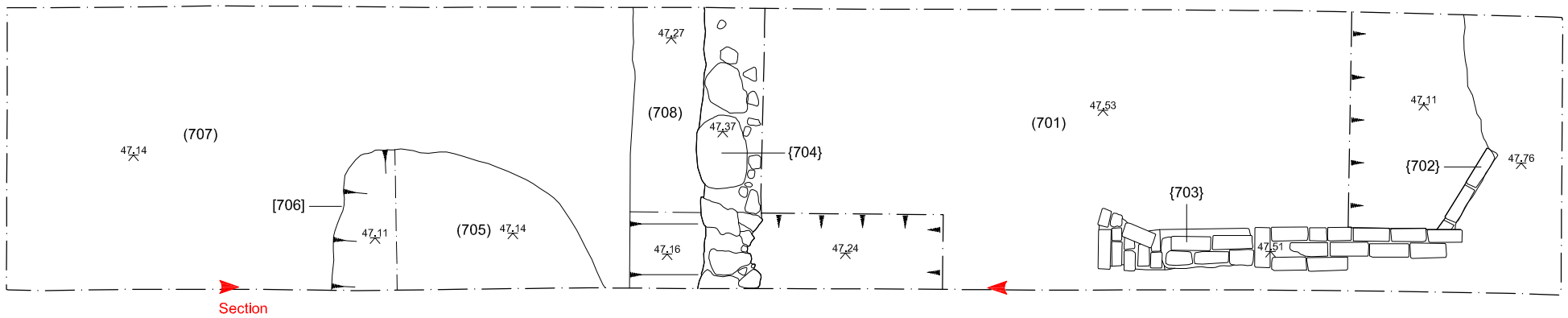
KEY:

- Limit of excavation
- Height mAOD
- [101] Context number
- Section location

REPORT No:
CP10191

FIGURE:
6

Figure 6: Trench 5, plan and section.



Trench 7. Plan.

Trench 7. North-east facing section.

wardell armstrong archaeology

WA Archaeology Ltd
2012

Land at Brook Street,
Derby

CLIENT:
Watkin Jones Group

SCALE: 1:40 at A3

DRAWN BY: AB

DATE: April 2012

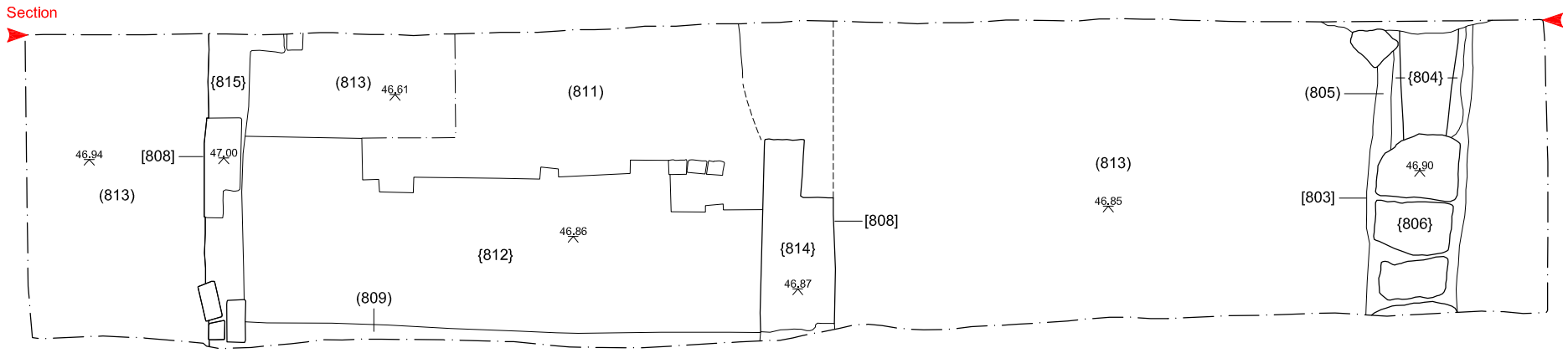
KEY:

- Limit of excavation
- Height mAOD
- [101] Context number
- Section location

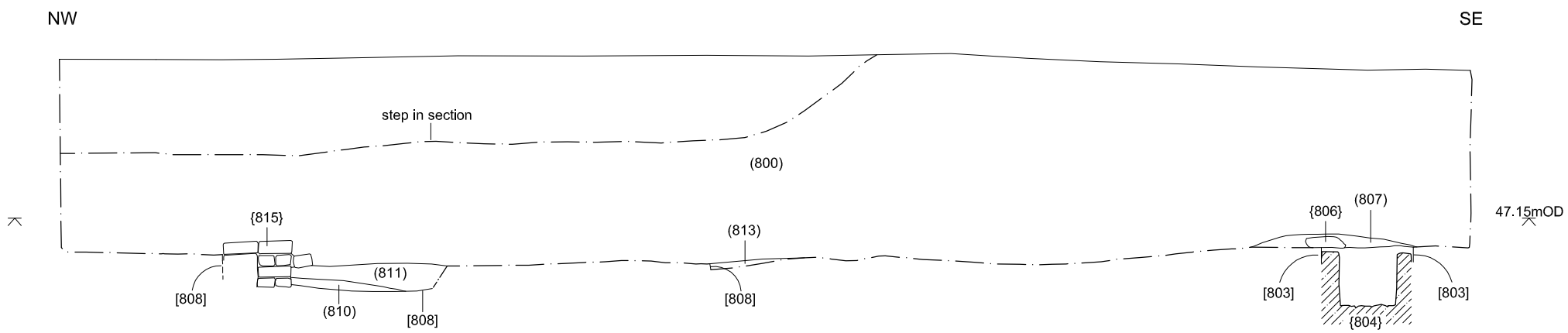
REPORT No:
CP10191

FIGURE:
7

Figure 7: Trench 7, plan and section.



Trench 8. Plan.



Trench 8. South-west facing section.

wardell armstrong archaeology

WA Archaeology Ltd
2012

Land at Brook Street, Derby

CLIENT: Watkin Jones Group

SCALE: 1:40 at A3

DRAWN BY: AB

DATE: April 2012

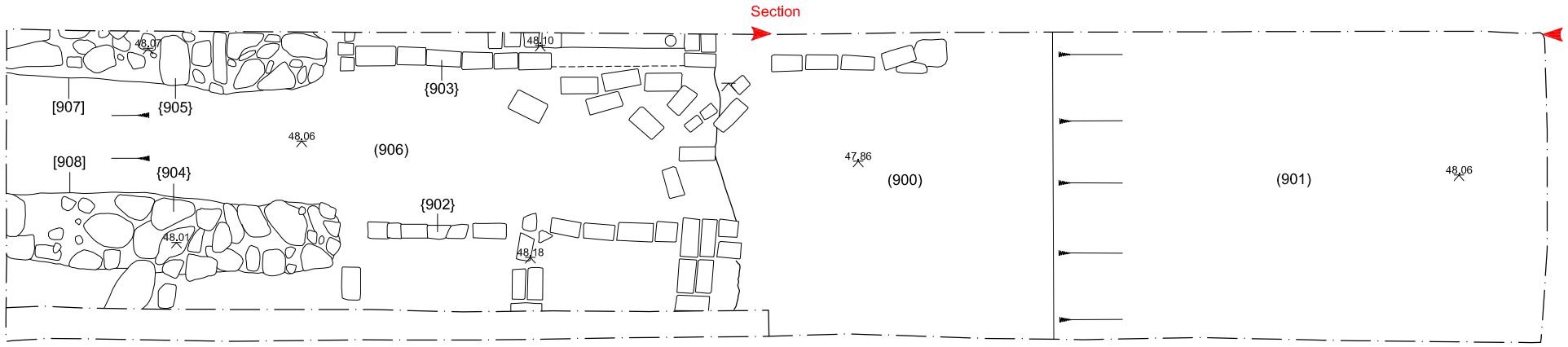
KEY:

- Limit of excavation
- Height mAOD
- [101] Context number
- Section location

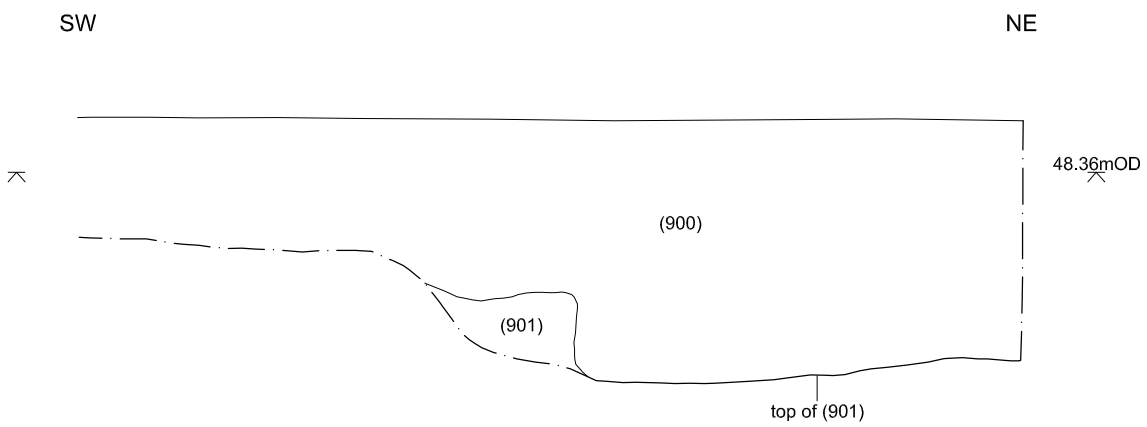
REPORT No: CP10191

FIGURE: 8

Figure 8: Trench 8, plan and section.



Trench 9. Plan.



Trench 9. South-east facing section.

wardell armstrong archaeology

WA Archaeology Ltd
2012

Land at Brook Street,
Derby

CLIENT:
Watkin Jones Group

SCALE: 1:40 at A3

DRAWN BY: AB

DATE: April 2012

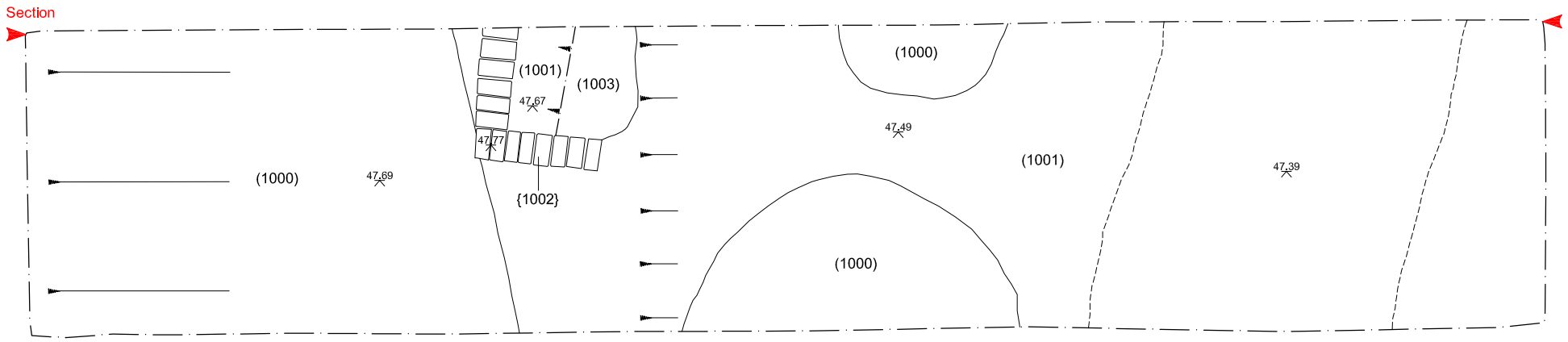
KEY:

Limit of excavation
Height mAOD
[101] Context number
Section location

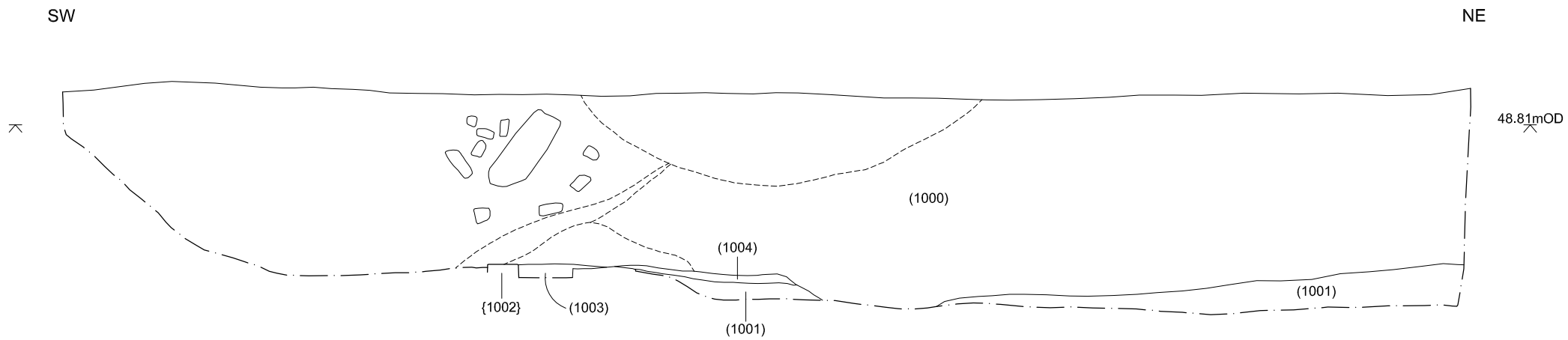
REPORT No:
CP10191

FIGURE:
9

Figure 9: Trench 9, plan and section.



Trench 10. Plan.



Trench 10. South-east facing section.

wardell armstrong archaeology

WA Archaeology Ltd
2012

Land at Brook Street,
Derby

CLIENT:
Watkin Jones Group

SCALE: 1:40 at A3

DRAWN BY: AB

DATE: April 2012

KEY:

- Limit of excavation
- Height mAOD
- [101] Context number
- Section location

REPORT No:
CP10191

FIGURE:
10

Figure 10: Trench 10, plan and section.

wardell armstrong archaeology

WA Archaeology Ltd
2012

Land at Brook Street, Derby

CLIENT:
Watkin Jones Group

SCALE: 1:500 at A4

DRAWN BY: AB
DATE: April 2012

KEY:

Site boundary
Evaluation trenches

REPORT No:
CP10191

FIGURE:
11

Figure 11: Site plan with overlay of Derby Board of Health map, 1852.

wardell armstrong archaeology

WA Archaeology Ltd
2012

Land at Brook Street, Derby

CLIENT:
Watkin Jones Group

SCALE: 1:500 at A4

DRAWN BY: AB
DATE: April 2012

KEY:

Site boundary

Evaluation trenches

REPORT No:
CP10191

FIGURE:
12

Figure 12: Site plan with overlay of Ordnance Survey 1:500 Town Survey of Derby, 1883.