



FREEMAN'S REACH, DURHAM

Archaeological Evaluation Report





**FREEMAN'S REACH,
DURHAM**

Archaeological Evaluation Report

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Report reference: 84430.01

April 2012


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QUALITY ASSURANCE

SITE CODE	84430	ACCESSION CODE	TBA	CLIENT CODE	N/A
PLANNING APPLICATION REF.	N/A	NGR	NZ 2736 4278		

VERSION	STATUS*	PREPARED BY	APPROVED BY	APPROVER'S SIGNATURE	DATE	FILE
01	E	GC	APN		25/04/12	S:\PROJECTS\84430 (FREEMAN'S REACH, DURHAM)\REPORTS
02	E				02/05/12	S:\PROJECTS\84430 (FREEMAN'S REACH, DURHAM)\REPORTS
03	E				08/05/12	S:\PROJECTS\84430 (FREEMAN'S REACH, DURHAM)\REPORTS
04	E				10/05/12	S:\PROJECTS\84430 (FREEMAN'S REACH, DURHAM)\REPORTS
05	E				14/05/12	S:\PROJECTS\84430 (FREEMAN'S REACH, DURHAM)\REPORTS

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Summary

Wessex Archaeology was commissioned by Maple Oak Ltd on behalf of Carillion to undertake an archaeological field evaluation at Freeman's Reach, Durham ('the Site'). The Site, centred on grid reference NZ 2736 4278, is situated on the east bank of the River Wear at approximately 32m aOD and is c. 0.6ha in area, occupied by the post-medieval Bishop's Mill, the former Durham Ice Rink dating to the 1940s and associated car parks.

The Site is situated to the north of the historic Durham City centre and World Heritage Site (Durham Cathedral, Castle and the buildings between them). The earliest documentary evidence for the Site relates to a 12th century mill ('the Bishop's Mill', one of eight medieval mills recorded in Durham on the River Wear. The original Bishop's Mill was rebuilt after 1637 and the extant mill buildings at the south of the Site date to the mid-18th century, with later additions. The mill-race or leat extended north through the Site. Historic maps show a row of terraced cottages stood to the east of the mill race from the mid-19th to the mid-20th century; the gardens of these occupied the western side of the Site. The mill race was infilled by 1939 and the Durham ice rink opened in 1940. Originally an open air structure the ice rink was rebuilt in its current form in 1947 following a fire.

A programme of Site Investigation (SI) monitoring and archaeological trial trenching was undertaken from March 15th to March 27th 2012 in order to inform proposals for mixed use redevelopment. Five archaeological trial trenches were excavated within the Ice Rink building and three within the associated car parks.

No trace of the mill race was found during the trial trenching; however, levels taken at the head race suggest that the mill race may survive 0.7m below the excavated trench depth. Loose rubble deposits in the northern car park may represent the backfilling of the culverted mill race, or its subsequent removal.

Sandstone and brick walls found in three trial trenches do not correspond with any known feature identified on historic maps. Slag recovered from one trench suggests some industrial activity of possible late 17th to 18th century date, perhaps associated with the post-medieval mill.

Made ground seen in the archaeological trenches and site investigation pits may represent dumping and levelling activities, followed by the demolition of the terraced housing and associated outbuildings and features. No evidence for the freezing mechanism associated with the Ice Rink was found.

Wall foundations and natural deposits were not found within any of the trenches excavated. The project archive is currently held at the offices of Wessex Archaeology in Sheffield and will be deposited in due course with the Durham University Museum.

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This project was commissioned by Maple Oak Ltd through Chris Blandford Associates, Wessex Archaeology is grateful to Dominic Watkins in this regard. Wessex Archaeology would also like to thank Lee McFarlane, Senior Archaeologist at Durham County Council, for her contribution to the project. Wessex Archaeology is also grateful to Stephen Snook (Carillion), Ian Beaumont (IMB Management) and Paul Freeman (WSP Group).

The report was researched and compiled by Grace Corbett, illustrations were prepared by Chris Breeden. The artefacts were assessed by Lorraine Mephram with slag analysis by Rod McKenzie. The project was managed for Wessex Archaeology by Andrew Norton. Fieldwork was directed by Neil Dransfield with the assistance of Mike Hartwell and Chris Breeden.

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1 INTRODUCTION

1.1 Project Background

1.1.1 Wessex Archaeology was commissioned by Maple Oak Ltd on behalf of Carillion to undertake archaeological trial trenching at Freeman's Reach, Durham (hereafter 'the Site' **Figure 1**). The Site comprises the Bishop's Mill, a former ice rink and associated car park, and is proposed for redevelopment.

1.1.2 A programme of Site Investigation (SI) monitoring and archaeological evaluation was undertaken from March 15th to March 27th 2012 in order to inform development proposals. The evaluation was originally planned to comprise the excavation of nine trenches, however, due to site constraints only eight trenches could be excavated; seven measuring 5m by 2m and one trench measuring 7m by 2m (**Figure 2**).

1.2 Planning Background

1.2.1 The work was carried out in response to pre-planning consultation with the Archaeologist at Durham County Council (DCC). Two archaeological desk-based assessments (NAA 2004; AECOM 2011) concluded that there was high-potential for encountering medieval and post-medieval remains, associated with a former mill race and extra-mural settlement. Due to the nature of the presumed archaeological remains within the Site, an archaeological evaluation was required to inform proposals for mixed use redevelopment, prior to submission of a planning application.

1.2.2 A Written Scheme of Investigation ('WSI')(Wessex Archaeology 2012) was produced and approved by the Durham County Council Senior Archaeologist on behalf of the local planning authority, prior to starting work.

1.3 Site Location and Topography

1.3.1 The Site is located to the north of the historic core of Durham, and is bounded by the River Wear to the west, Freeman's Place to the east, the Milburngate Bridge to the south and a car park to the north.

1.3.2 The Site is located at approximately 32m aOD and is c. 0.6ha in area. The solid geology of the Site is Pennine Middle Coal Measures formation with superficial deposits of alluvium

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

2.1.1 The following is summarised from the archaeological desk-based assessments (NAA 2004 and AECOM 2011).

2.2 Prehistoric and Roman

2.2.1 Scatters of prehistoric and Roman finds have been recovered from the vicinity of the Site, but no occupation features have been revealed.

2.3 Medieval

2.3.1 Durham was established during the Anglo-Saxon period, and is first mentioned when Simeon of Durham recorded that the body of St Cuthbert was brought to Durham in 995. The Site was largely wooded at this time, with the exception of a small arable area.

2.3.2 The Site lay outside the medieval limits (and northern town wall) of Durham, but 11th or 12th century occupation evidence has been found to the east of Freeman's Place and to the south of the Site. Much of the Site remained as fields until the 19th century.

2.3.3 The Bishop's Mill, one of eight medieval mills on the River Wear, was located directly to the south of the Site and was first mentioned in 1183.

2.4 Post-Medieval

2.4.1 The original Bishop's Mill was rebuilt after 1637, and is thought to have lain 200 yards to the south of the Site. The building known today as 'Bishop's Mill', and which is located within the southern part of the Site first appears on a 1754 plan of the area. A culverted mill-race or leat associated with the mill complex runs through the proposed Site, and is also first shown on the 1754 plan. A waterlogged deposit within the race was identified in a trench excavated on the Site in 1998.

2.4.2 By 1939 the race had been infilled and the Durham ice rink opened in 1940. Originally an open air structure the ice rink was rebuilt in its current form in 1947 following a fire. The Sands car park was opened to the north in 1970.

2.4.3 The Mill Close, a field adjacent to the river and to the north of the mill, was purchased in 1848 and a survey of the area in 1849 shows a row of cottages to the east of the mill race (Freemans Place, now generally referred to as Freeman's Place).

2.4.4 A 17th century carpet factory expanded onto land immediately to the east of Freeman's Place in 1848, and continued to grow into the 20th century. The factory was destroyed by fire in 1969 and the site was subsequently used for car parking.

3 METHODOLOGY

3.1 Aims

3.1.1 The general aims of the work were to:

- To identify and record any archaeological features exposed during trenching.
- To recover any artefact evidence during trenching.
- To make available the results of the investigation.

3.2 Objectives

3.2.1 The specific objectives of the work were to:

- Identify evidence for prehistoric or Roman activity.
- Identify the extent of the mill-race.
- Locate evidence for medieval extra-mural settlement or industry.
- Locate evidence for 19th century industrial expansion.
- Locate evidence for the 19th century cottages on Freeman's Place.
- To establish the survival/preservation of the underground piping for the ice rink and any associated structures and mechanisms.
- To provide sufficient information to devise a suitable mitigation strategy if required.

3.3 Methodology

General

3.3.1 The methodology for the excavations followed the agreed WSI (Wessex Archaeology 2011) and is not repeated here in detail.

Evaluation Trenches

3.3.2 Prior to the excavation of each trench a test pit was excavated within each trench footprint for site investigation (SI) purposes. Each test pit was excavated by specialist contractors, and monitored archaeologically. Once each test pit had been recorded, the test pits were enlarged to form the agreed evaluation trenches.

3.3.3 Seven evaluation trenches measuring 5m by 2m and one trench measuring 7m by 2m were excavated over the locations of the SI test pits (**Figure 2**).

3.3.4 Machining ceased at the level of the first archaeological horizon or the maximum depth achievable by the plant, whichever was reached first. All revealed deposits were hand cleaned and planned at an appropriate scale.

All recording took place in accordance with standard Wessex methodologies and IfA and EH best practice.

- 3.3.5 The finds collected by context and were treated in accordance with UKIC guidelines (UKIC 2001).

Inspection Pits

- 3.3.6 Seven inspection pits (1m by 1m) were hand excavated by specialist contractors in order to assess the foundations of the existing buildings and depths of car park surfaces. The excavated pits were recorded archaeologically with recording taking place as described above (**Figure 2**).

Window Samples

- 3.3.7 Specialist contractors carried out a programme of window sampling (WS) by means of mechanically augured bore holes (**Figure 2**). The records for two full sequences were provided to Wessex Archaeology and are presented in **Appendix 2**.

4 RESULTS

4.1 Introduction

- 4.1.1 Eight trenches (**Trenches 1-6, 8-9**; no **Trench 7** was excavated) were excavated within the existing building and within the associated car parks. Seven inspection pits (**IP 1-7**) and two window samples (**WS 6 and 8**) were also monitored during excavation (**Figure 2**). A full list of the trench and pit descriptions, context numbers and context descriptions is contained in **Appendix 2**.

4.2 Natural Deposits

- 4.2.1 The natural geology was not exposed in any of the trenches, inspection pits or window samples. Excavation ceased at the first significant archaeological horizon or at the maximum depth achievable by the plant, whichever came first.

4.3 Trenches 1-2

- 4.3.1 **Trenches 1 and 2 (Figure 2, Plates 1 and 2)** were excavated in the northern car park; both were excavated to a depth of 2.6m bgl. Successive layers of made ground, rubble and hardcore crush were observed beneath the car park surface.

- 4.3.2 No archaeological features were observed in either trench.

4.4 Trench 3

- 4.4.1 **Trench 3 (Figure 3)**, located within the Ice Rink building, was excavated to a depth of 1.3m bgl, at which point a double-skin sandstone and red brick wall **305**, oriented north to south, was encountered. The sandstone blocks were roughly dressed and shaped, and faced to both east and west. The bricks were confined to the southern and northern ends, bonded to the upper layer of sandstone blocks by white sandy lime mortar with large charcoal inclusions. Wall **305** leaned slightly to the east. A piece of worked

timber **315** of unknown function was observed in a void at the southern end of the wall. Measuring 0.31m by 0.07m the timber had a central groove, suggesting that it may have been reused.

4.4.2 Abutting the wall to the west were layers of mortar and dark sand (**306-308, 310, 311** and **314**) containing slag (see **Section 5.2** for slag analysis), with a further black gritty sand layer **304** overlying the wall. Another dark grey silty sand **313** deposit was located to the east of the wall; however, this did not display the same layering as the deposits to the west. A substantial cut **312** was revealed throughout the trench, filled by demolition material **303** consisting of brown silty sand with frequent of brick and sandstone rubble, mortar and concrete, probably relates to clearance and preparation of the Site prior to construction of the Ice Rink. The deposits were overlain by the existing Ice Rink floor surfaces (**301** and **302**).

4.4.3 A sondage excavated at the southern end of Trench 3 reached a depth of 1.85m bgl.

4.5 Trench 4

4.5.1 **Trench 4 (Figure 4)** was excavated within the Ice Rink building to a depth of 1m bgl, with a sondage at the southern end excavated to a depth of 2m. A north-east to south-west oriented red brick wall **404** was located along the centre of the trench at 1.06m bgl. The wall was constructed with handmade red bricks, bonded with grey lime mortar with no visible construction cut.

4.5.2 Successive layers of dark silty sand and clinker **408** were exposed abutting the east side of the wall within the sondage. Above this was a compact surface of dark grey silt with clinker **407**, also abutting wall **404**. A beam slot **405** was cut through this surface, and filled with the decayed remains of a timber beam **406**.

4.5.3 The wall and other deposits were sealed by a rubble layer **403** with frequent red brick and rough sandstone blocks, above which was the concrete floor and associated bedding deposit (**401** and **402**).

4.6 Trench 5

4.6.1 **Trench 5 (Figure 2, Plate 3)** was located in the Ice Rink building over the projected location of the historic open mill race. The trench was excavated to a depth of 2.1m bgl and contained successive layers of made ground and rubble deposits (**502, 503, 504, and 505**) and a modern concrete pad **506** beneath the concrete floor surface **501**. Levels taken on the extant head race of the mill and on deposit **505** at the base of Trench 5 indicate that this deposit may lie approximately 0.7m above the mill race.

4.7 Trench 6

4.7.1 **Trench 6 (Figure 2, Plate 4)** was excavated within the Ice Rink building to a depth of 2m bgl. Excavation revealed successive layers of rubble, made ground, and construction sand layers containing industrial waste (clinker, slag) and fragments of Ceramic Building Material (CBM), mortar and sandstone.

4.7.2 An iron pipe was located at 0.75-0.87m bgl, oriented north to south within sand layer **603**.

4.8 Trench 8

4.8.1 **Trench 8 (Figure 5)** was excavated to 1.1m bgl in the southern car park to the east of the extant mill buildings, over the location of an historic building shown on the 1919 OS map.

4.8.2 A four course red brick wall **805** constructed of un-frogged bricks bonded by grey-brown sandy mortar, set on a stepped out foundation was observed at 0.7m bgl. Made ground and demolition debris **806** overlay wall **805** and was overlain by a sandy dump **809**. A demolition cut **807** extended from the wall 2.5m westwards and was filled by brick rubble and mortar **808**, below dumped deposits **803** and **804**. The deposits were overlain by the tarmac car park surface and associated bedding layers **801** and **802**.

4.9 Trench 9

4.9.1 **Trench 9 (Figure 2, Plate 5)** was excavated within the Ice Rink building to a depth of 1.1m bgl. A rectangular brick pad **905**, of at least two courses, was located at the western end of the trench at 1m bgl. This was overlain by a clinker and slag rich rubble layer **903**. An iron pipe **906**, oriented north to south, was found west of **905**, from 0.8-0.92m bgl. These deposits were overlain by the concrete floor surface and associated bedding layers.

4.10 Inspection Pits

IP 1 (Figure 2)

4.10.1 Excavated in the northern car park, this pit revealed an electric duct surrounded by a yellow sand deposit. Above this was a rubble layer, which lay below the tarmac car park surface.

IP 2-4 and 6 (Figure 2)

4.10.2 Excavated against the outside walls of the existing ice rink building, pits 2-4 and 6 revealed the concrete wall and foundations of the existing building, abutted by deposits of made ground, the car park surface and topsoil.

IP 5 (Figure 6)

4.10.3 Excavated against the western wall of Bishops Mill this pit showed two phases of wall construction. The southern wall **2502** was constructed of irregular sized sandstone blocks, roughly coursed sitting on a sandstone foundation. The original mortar was obscured by cement repointing. This wall was surrounded by rubble backfill **2507**. Wall **2502** was abutted by a redbrick extension wall (**2503**, foundation **2505**), which had a stepped sandstone foundation and the construction cut was backfilled with rubble **2506**.

4.10.4 The 2004 desk based assessment (NAA 2004) suggests that walls **2502** and **2503** represent the third phase of the mill building, which was constructed by 1939.

IP 7

4.10.5 Yellow sand was revealed within **IP 7** at 0.78m bgl. The pit was excavated against a modern red brick boundary wall **2702**. The wall extended to 0.98m bgl and was abutted by rubble rich made ground **2703**, above which was the tarmac car park surface.

4.10.6 Although this pit was located within an area thought to be within the 18th century mill building, no archaeological deposits associated with this building were identified.

4.11 Window Samples

4.11.1 **WS 6** was excavated to 4.5m bgl and revealed a series of made ground layers with inclusions of CBM, mortar, tile, glass and pottery. **WS 8** was excavated to a 5.22m bgl and revealed a similar sequence of made ground layers. No archaeological features were observed in either window sample.

5 FINDS AND SAMPLES

5.1 Finds

5.1.1 The evaluation produced a small quantity of finds, deriving from contexts in all eight archaeological trial trenches. The finds are all of post-medieval/modern date, and include domestic refuse (pottery, glass, clay tobacco pipe, animal bone, oyster shell, metal cutlery), and structural material (bricks, ceramic drainpipes, wall tile, plaster, roofing slate). Quantities by context are given in **Appendix 3**.

5.1.2 The pottery constitutes the primary dating evidence for the Site; wares represented include creamware, pearlware, refined whiteware, porcelain, bone china and English stoneware; there is nothing here that need be earlier than the mid-18th century, and the majority probably belongs to the 19th to 20th centuries.

5.1.3 This dating is supported by the glass (all bottle/jar, including branded beer bottles from the Westoe Brewery, South Shields, and the Tower Brewery of Newcastle, and a fish/meat paste jar); the clay pipes (one datable bowl, early 19th century); and the metal objects (1989 2-pence coin, spoon/fork handle).

5.1.4 Two retained samples of brick, one from wall **305** and one from wall **404**, could be slightly earlier; these are both handmade, unfrogged forms, one measuring 240 x 110 x 60mm and the other 220 x 105 x 50 mm. The size and manufacture would be consistent with a date range in the later 17th or 18th centuries.

Potential and further recommendations

5.1.5 No further analysis or publication is warranted; the finds have already been recorded to an appropriate archive level. Given the small quantity of material recovered, and its date range, retention for long-term curation is not recommended, and these finds can be discarded prior to archive deposition.

5.2 Slag

5.2.1 A total of 382g of slag and residues was recovered from the Site. The slag has been visually examined and the results of the assessment are described below.

Table 1: Slag by context

Context Number	Number of pieces/volume	Weight	Description of material
308	2 fragments	25g	Undiagnostic slag
308	2 fragments	60g	Fuel ash slag. One piece has a small fragment of partially burnt coke inclusion.
310	Circa 100ml	105g	Dark brown/black fine grained sand, with less than 2g of magnetic material, which includes 5 pieces of possible spheroidal hammerslag
314	3 fragments	25g	Undiagnostic slag
314	1 fragment	2g	Fragment of coal
311	Circa 160ml	165g	Dark brown/black fine grained sand, with less than 2g of magnetic material, which includes 9 pieces of possible spheroidal hammerslag

Discussion and interpretation of results

- 5.2.2 The majority of the slag in the assemblage is not diagnostic of any particular metallurgical process. One fragment of slag from context **308** does contain a small fragment of coke. Coke was, and still is, used as fuel in blacksmiths hearths, cupolas and blast furnaces, so it is possible that this fragment of slag does relate to the production of metal.
- 5.2.3 Samples were analysed from contexts **310** and **311**, which both appear to be primarily composed of uniform fine grained sand that is dark brown-black in colour. A small amount of magnetic material was recovered from each sample, and this material included several small (typically <1.5mm) spheres of magnetic slag. The morphology of the sand and presence of fine spheroidal slag within it, suggests that it may have been used to make 'green sand' moulds for iron casting.
- 5.2.4 Although the assemblage does not contain enough evidence to prove beyond doubt that metal production was being carried out at the Site, the material does suggest the possible presence of an urban forge or foundry in the immediate vicinity.
- 5.2.5 If further material evidence in the form of metalliferous slag is found on the Site, this could confirm the past presence of a metal production there.

Recommendations

- 5.2.6 The material in the assemblage offers very limited scope for further analysis, and none is recommended. The assemblage can be disposed of in the normal manner. The potential presence of metal production at the Site should be noted in the relevant archive.

6 DISCUSSION

6.1 Interpretation

- 6.1.1 The Site was historically occupied by the Bishops Mill buildings and associated features, the earliest documentary evidence of which dates to the 12th century. Surviving structural remains on the Site relate to the mid-18th century mill with later additions, and a 1940s Ice Rink. The Ice Rink replaced a row of terraced cottages and associated garden plots, which occupied the former Mill Close north of the mill buildings from the mid-19th to the mid-20th century.
- 6.1.2 **Trench 5** within the Ice Rink was located in an attempt to identify any surviving remains of the 18th century mill race, however, excavation revealed successive layers of made ground, rubble and dark sandy deposits, similar to those found in the other trenches excavated within the ice rink building. No sign of the mill race was seen within the trench. However, levels taken at the head race of the extant mill and at the base of the trench suggest that the mill race may survive some 0.7m below the excavated depth of the trench.
- 6.1.3 The loose rubble deposits located within **Trenches 1 and 2** in the northern car park may be indicative of the line of the mill race. The deposits were over 2.5m deep and may represent the backfilling of the culverted mill race or its subsequent removal.
- 6.1.4 Archaeological deposits found within the Site include a series of sandstone and brick walls identified in **Trenches 3, 4 and 8**. **Trench 3** was located to the west of the mill race while **Trench 4** was located in the area occupied by terrace housing, known as Freeman's Place, during the mid-19th century.
- 6.1.5 The sandstone and brick wall (**305**) identified in **Trench 3** in an area to the west of the mill race thought to have served as gardens for the cottages on Freeman's Place during the 19th and early 20th century, does not correspond with any known feature identified on historic maps. The wall leaned slightly to the east and successive deposits of silty sand either side of the wall, with slag recovered from the western side, may indicate that the wall was part of a casting pit. Casting pits with leaning walls have been observed by the excavator at industrial sites in Sheffield; alternatively, the lean in the wall may also be explained by the wall being constructed on an unstable foundation. Brick from the wall dates to the late 17th to 18th century, indicating that this wall may represent an early phase of activity on the Site, perhaps associated with the post-medieval mill.
- 6.1.6 Wall **404** in **Trench 4**, was oriented north-east to south-west and does not correspond to the east-west cottage wall identified on 19th century historic maps. A possible surface identified to the east was cut by a beam slot that represented a later internal division. Brick from the wall dates to the late 17th to 18th century, again suggesting that this wall may represent an early phase of activity on the Site, possibly associated with the post-medieval mill.
- 6.1.7 **Trench 8** was located in the southern car park, to the east of the surviving mill building. A building was present in this area from 1919, and was demolished along with the terrace cottages in the 1930s. The location of the

wall identified in this trench does not correspond with the orientation of the building identified on 20th historic maps. Bricks from the wall were spot dated to the late 19th century; the wall may therefore relate to the construction of the cottages on Freeman's Place.

- 6.1.8 The build-up of made ground within the Site may represent dumping and levelling activities, followed by the demolition of the terrace housing and associated outbuildings and features. Dark silty sand deposits were present at the bases in all trenches excavated within the ice rink, and all were overlain by rubble deposits. No evidence of the ice rink freezing mechanisms were found.

6.2 Recommendations

- 6.2.1 The revealed archaeological remains are of post-medieval date and of local archaeological significance. Any groundworks for the proposed new development should be kept above 31m AOD to minimise disturbance to the archaeological structures. If kept to a level of c. 2% of the development area any piling is unlikely to result in archaeological remains being significantly disturbed, and the post-medieval structures and associated deposits could still be recorded and interpreted at a later date should the need arise.
- 6.2.2 If significant groundworks can be kept above 31m AOD a watching brief during development would be a suitable form of mitigation. Any service trenches, or excavations for ground beams/pile caps and other sub-structures/retaining walls, which impact below 31m AOD may need more detailed recording.

7 ARCHIVE AND COPYRIGHT

7.1 Archive

- 7.1.1 The project archive has been compiled into a stable, fully cross-referenced and indexed archive in accordance with Appendix 6 of *Management of Archaeological Projects* (2nd Edition, English Heritage 1991), and *Archaeological archives – a guide to best practice in creation, compilation, transfer and curation* (Brown 2007). The archive is currently held at the offices of Wessex Archaeology in Sheffield, under the project code **78241**. The full list of the contents of this archive is detailed in **Appendix 1** of this report. The archive will be deposited with Durham University Museum in due course. An OASIS form will be submitted at the time of deposition.

7.2 Copyright

- 7.2.1 This report, and the archive generally, may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which we are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferrable by Wessex Archaeology. Users remain bound by the conditions of the Copyright, Designs and Patents Act 1988 with regard to multiple copying and electronic dissemination of the report.

8 REFERENCES

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APPENDIX 1: ARCHIVE

File No.	NAR Cat.	Details	Format	No. Sheets
1	-	Index to archive	A4	1
1	A	Client report	A4	35
1	B	Site drawings	A4,A3	0
1	B	Site diary	A4	0
1	B	Trench records	A4	17
1	D	Context Sheets	A4	22
1	D	Structure Record	A4	4
1	D	Timber Record	A4	1
1	D	Photographic registers	A4	3
Finds	No. OF BOXES (0)			

APPENDIX 2: TRENCH DESCRIPTIONS
Trenches

Trench No. 1	Co-ordinates: E427382/N5420830; E427384/N542825	Dimensions: 5m x 2m Max depth 2.6m
Context	Description	Depth (m)
101	Tarmac car park surface	0-0.6
102	Hardcore crush	0.06-0.2
103	Grey-brown silty sand made ground	0.2-0.25
104	Hardcore crush	0.25-0.38
105	Black sand with clinker, ash and slag	0.38-0.46
106	Grey sand with brick, sandstone and mortar rubble. Some sandstone fragments were roughly dressed and squared.	0.46-2.6

Trench No. 2	Co-ordinates: E427359/N542833;E427364/N542832	Dimensions: 5m x 2m Max depth: 2.6m
Context	Description	Depth (m)
201	Tarmac car park surface	0-0.08
202	Hardcore crush	0.08-2
203	Dark brown silty sand made ground	0.2-0.4
204	Red pea-grit levelling with CBM	0.4-0.62
205	Sand with occasional brick fragments, bedding material	0.62-1.25
206	Ash and clinker deposit at the east side of the trench, containing modern white/cream ware.	0.8-1.8
207	Rubble tipping layer	1.25-2.4
208	Same as 207	2.4-2.6

Trench No. 3	Co-ordinates: E427351/N542809;E427349/N542804	Dimensions: 5m x 2m Max depth 1.85m
Context	Description	Depth (m)
301	Concrete floor surface	0-0.15
302	Yellow hardcore crush	0.15-0.45
303	Made ground consisting of brown silty sand with high concentration of brick and sandstone rubble, mortar, concrete	0.45-1.3
304	Black gritty sand layer with ash and clinker overlying wall 305	1.3-1.45
305	Sandstone wall consisting of sandstone block, roughly dressed and shaped, faced to the east and west. Wall is 2 skins thick bonded with lime mortar.	1.45-2
306	Black silty sand with high concentration of clinker	
307	Mortar layer to west of wall 305	
308	Clinker and slag layer to west of wall 305	
309	Mortar layer to west of wall 305	
310	Black sand layer to west of wall 305	
311	Sandy layer to west of wall 305	
312	Cut representing demolition event exposed throughout the trench	0.45-1.45
313	Dark grey silty sand layer to the east of wall 305, possibly bedding material	
314	Layer of clinker and slag	
315	Worked timber	

Trench No. 4	Co-ordinates: E427370/N542790;E427369/N542786	Dimensions: 5m x 2m Max depth 1.55m
Context	Description	Depth (m)
401	Concrete floor	0-0.16
402	Hardcore bedding layer	0.16-0.40
403	Rubble levelling layer with high concentration of brick and rough sandstone blocks	0.40-1.06
404	North-east to south-west linear red brick wall of handmade bricks bonded with grey lime mortar	1.06-1.7
405	Cut for beam slot	
406	Dark brown organic deposit created by the decay of an in situ beam.	
407	Dark grey silt with small amount of clinker forming a solid surface. Abuts wall 404	
408	Series of sloping layers of yellowish grey and dark grey silty sand and clinker.	

Trench No. 5	Co-ordinates: E427351/N542744;E427344/N542746	Dimensions: 7m x 2m Max depth 2.1m
Context	Description	Depth (m)
501	Concrete floor	0-0.16
502	Yellow hardcore crush	0.16-0.48
503	Levelling layer of fine sand and rubble crush	0.48-0.74
504	Demolition layer with bricks, mortar and modern plastic inclusions	0.74-1.6
505	Deposit of loose black silty sand with ash and clinker inclusions. May be located over the mill race	1.6+
506	Modern concrete pad which supports stanchions and existing building wall	0.7-1.1

Trench No. 6	Co-ordinates: E427339/N542777;E427335/N542778	Dimensions: 5m x 2m Max depth 2m
Context	Description	Depth (m)
601	Concrete floor	0-0.23

Trench No. 6	Co-ordinates: E427339/N542777;E427335/N542778	Dimensions: 5m x 2m Max depth 2m
Context	Description	Depth (m)
602	Yellow hardcore crush	0.23-0.55
603	Black sand with clinker and slag	0.55-0.9
604	Mixed rubble layer of grey, cream and yellow sand with concrete, sandstone and mortar	0.9-1.3
605	Grey-brown sand with rare CBM, mortar and sandstone	1.3-1.6
606	Rubble crush of red bricks, sandstone and mortar in sandy matrix	1.6-1.75
607	Grey-brown silty sand with occasional CMB and mortar	1.75-2
608	FE pipe within 603	0.75-0.87

Trench No. 8	Co-ordinates: N427347/N542716;E427351/N542714	Dimensions: 5m x 2m Max depth 1.1m
Context	Description	Depth (m)
801	Tarmac car park	0-0.18
802	Gravel bedding layer	0.18-0.38
803	Yellow hardcore crush	0.38-0.50
804	Demolition rubble	0.50-0.70
805	4 course red brick wall with grey brown sandy mortar on a stepped out foundation	0.7-1.1
806	Made round of clinker, pink mortar, sands and clay, abuts wall 805	0.63-1.1
807	Demolition cut	0.54-1.10
808	Brick rubble fill of 807	0.54-1.10
809	Sand layer	1.10+

Trench No. 9	Co-ordinates: E427344/N542796;E427339/N542797	Dimensions: 5m x 2m Max depth 1m
Context	Description	Depth (m)
901	Concrete floor	0-0.2
902	Hard core crush	0.2-0.6
903	Clinker and slag rubble layer	0.6-1
904	Rectangular cut for brick pad 905	1
905	Rectangular brick pad, at least 2 courses	1-1.1
906	FE pipe	0.8-0.92

Inspection Pits

IP No. 1		Dimensions: 0.5m x 0.4m Max depth 0.95m
Context	Description	Depth (m)
2101	Tarmac car park surface	0-0.2
2102	Rubble layer	0.2-0.7
2103	Yellow sand and gravel surrounding electric duct	0.7-0.9

IP No. 2		Dimensions: 0.5m x 0.5m Max depth 0.6m
Context	Description	Depth (m)
2201	Tarmac car park surface	0-0.15
2202	Dark grey-brown made ground with clinker and rubble	0.15-0.32
2203	Extant concrete building foundation	0-0.3

IP No. 2		Dimensions: 0.5m x 0.5m Max depth 0.6m
Context	Description	Depth (m)
2204	Same as 2202	0.5-0.6

IP No. 3		Dimensions: 0.5m x 0.5m Max depth 0.6m
Context	Description	Depth (m)
2301	Tarmac car park surface	0-0.22
2302	Concrete wall of extant building including reinforced concrete foundation	0-0.5
2303	Concrete deposit abutting foundation of 2302	0.2-0.4
2304	Made ground with clinker and rubble	0.4-0.6

IP No. 4		Dimensions: 0.4m x 0.4m Max depth 0.54m
Context	Description	Depth (m)
2401	Topsoil, heavily disturbed containing rubble	0-0.2
2402	Concrete wall and foundation	0-0.54
2403	Made ground, dark brown rubble rich deposit	0.2-0.5

IP No. 5		Dimensions: 0.55m x 0.44m Max depth 0.82m
Context	Description	Depth (m)
2501	Topsoil	0-0.34

IP No. 5		Dimensions: 0.55m x 0.44m Max depth 0.82m
Context	Description	Depth (m)
2502	Western sandstone mill building, original mortar obscured by cement repointing. Roughly coursed using irregular sized rectangular stones	
2503	Red brick building with sandstone foundation, 0.33m x 0.16m, max height of 4.15m	
2504	Backfill following construction of 2503 consisting of mid-yellow/brown silty sand with rare mortar and stone grit	0.34-0.62
2505	Foundation cut for wall 2503	
2506	Rubble fill used as bedding for wall 2503	
2507	Backfill of unseen construction cut relating to early sandstone mill building 2502, cut by 2507 prior to addition of building 2503	

IP No. 6		Dimensions: 0.5m x 0.5m Max depth 1m
Context	Description	Depth (m)
2601	Tarmac surface	0-0.15
2602	Crushed stone and gravel backfill	0.15-0.36
2603	Modern gym building with poured (shuttering) foundation	0-0.67
2604	Rubble layer	0.3-1.0

IP No. 7		Dimensions: 0.5m x 0.45m Max depth 0.78m
Context	Description	Depth (m)
2701	Tarmac surface	0-0.1
2702	Modern wall with concrete foundation	0-0.95
2703	Rubble rich made ground layer	0.1-0.78

IP No. 7		Dimensions: 0.5m x 0.45m Max depth 0.78m
Context	Description	Depth (m)
2704	Yellow-brown sandy gravel	0.78+

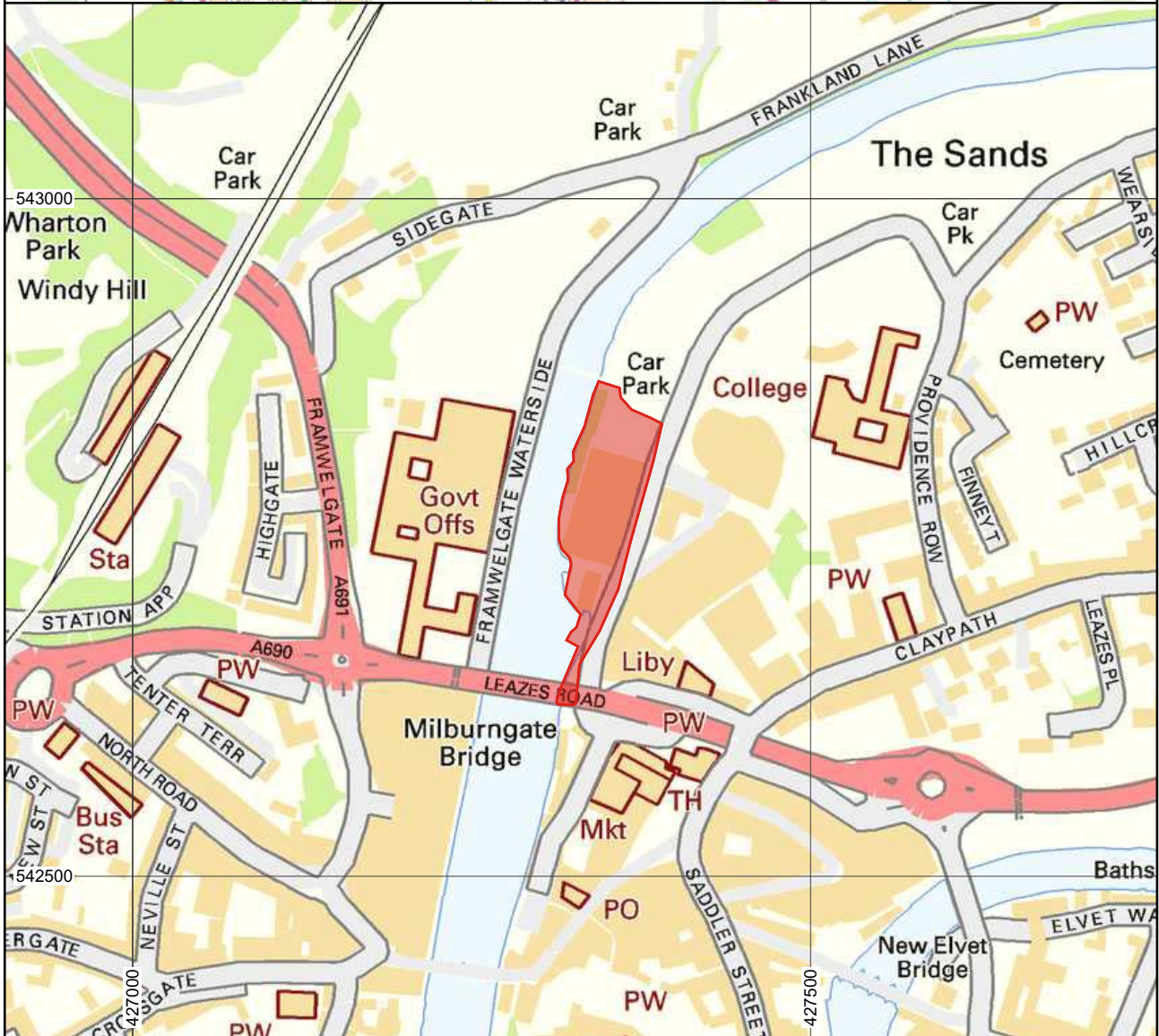
Window Samples



WS No. 6		
Context	Description	Depth (m)
3601	Concrete	0-0.15
3602	Compact cream sandy clay	0.15-0.35
3603	Made ground of pink sandy grit	0.35-1.15
3604	Compact sandy clay	1.15-1.3
3605	Dark green-brown compact sandy clay	1.3-1.7
3606	Loose light brown fine sand with CBM, mortar, tile, glass and pottery	1.7-2.6
3607	Black sandy clay with handmade red brick fragments, mortar and slate	2.6-2.95
3608	Loose red sandy silt	2.95-3.1
3609	Fine sandy silt with slag, clinker and CBM	3.1-3.8
3610	Mid yellow-brown sandy clay	3.8-3.95
3611	Yellow sand with gravel	3.95-4.5

WS No. 8		
Context	Description	Depth (m)
3812	Concrete	0-0.22
3813	Hard core crush	0.22-1.72
3814	Loose sandy silt	1.72-2.72
3815	Compact sandy clay	2.72-3.22
3816	Loose sandy silt with pottery, glass and plastic	3.22-4.22
3817	Compact clayey sand with rare CBM and sandstone fragments	4.22-4.72
3818	Loose orange sands with rare small CBM, slag and sandstone fragments	4.72-5.22

APPENDIX 3: FINDS
Table 2: All finds by context (number / weight in grammes)

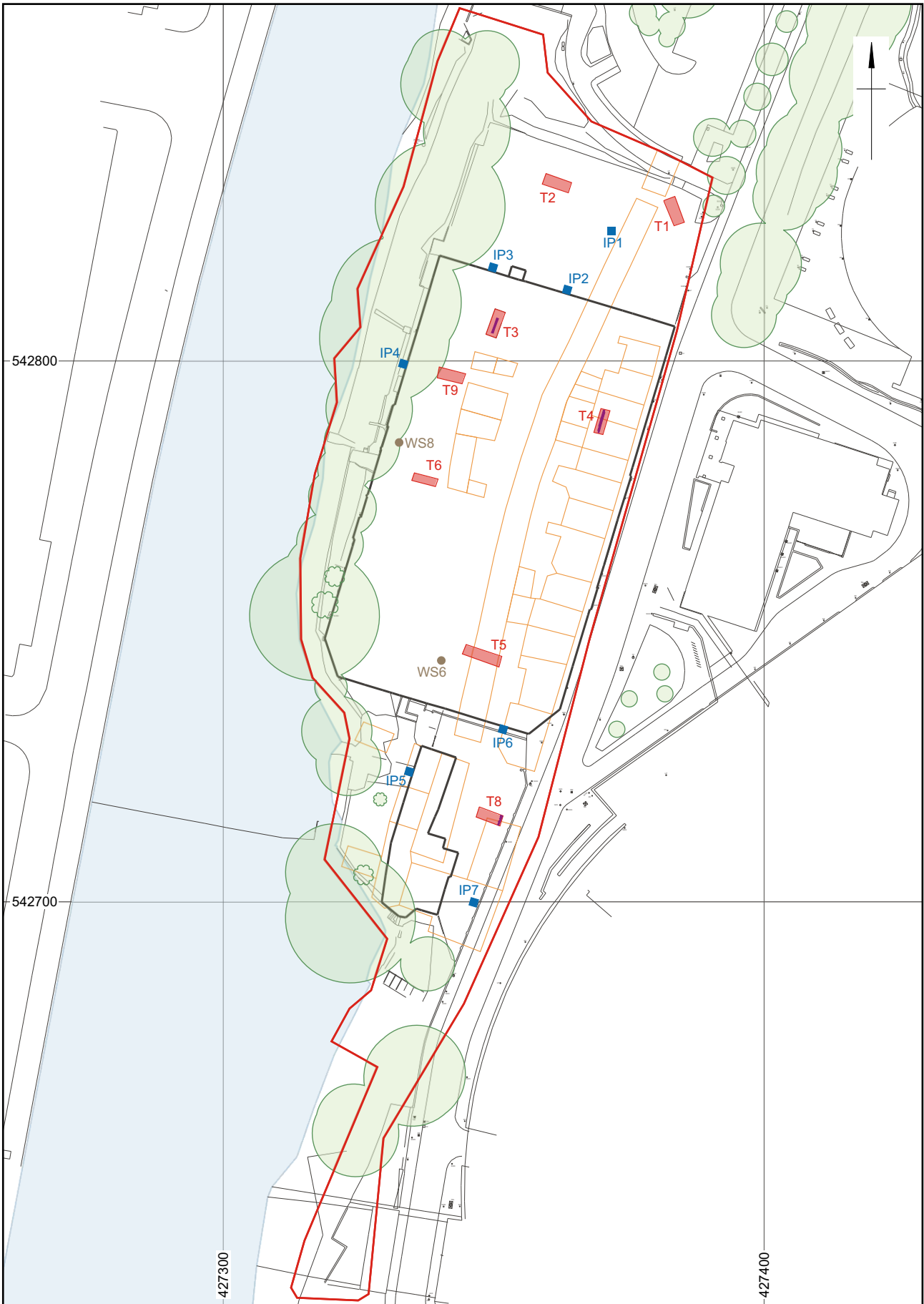
Context	CBM	Clay Pipe	Glass	Pottery	Other Finds
103			1/2		
106	1/7			1/7	2p coin (1989)
203			4/1030	8/216	
206		1/1	4/1634	5/49	
207		21/99		3/70	2 oyster shell
208				1/22	1 oyster shell
304	1/156			6/45	1 slate; 1 plaster; 1 metal cutlery handle
305	1/3000				
307				1/4	
404	1/3500				
603				1/6	
903				4/6	
2504				1/20	
3106	1/22		1/3		
3116			3/8	4/6	2 plastic; 1 animal bone
TOTAL	5/6685	22/100	13/2677	35/451	




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	Scale:	Main graphic 1:5000 @ A4	Illustrator:	CB
	Path:	Y:\Projects\84430 (Freeman's Reach, Durham)\Drawing Office\Report Figs\Eval\March 2012		

Site location

Figure 1



— Location of structures from historic mapping
 Existing/revealed structure

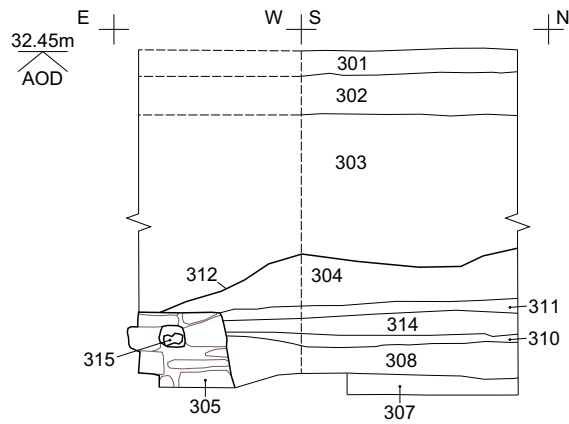


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Trench location

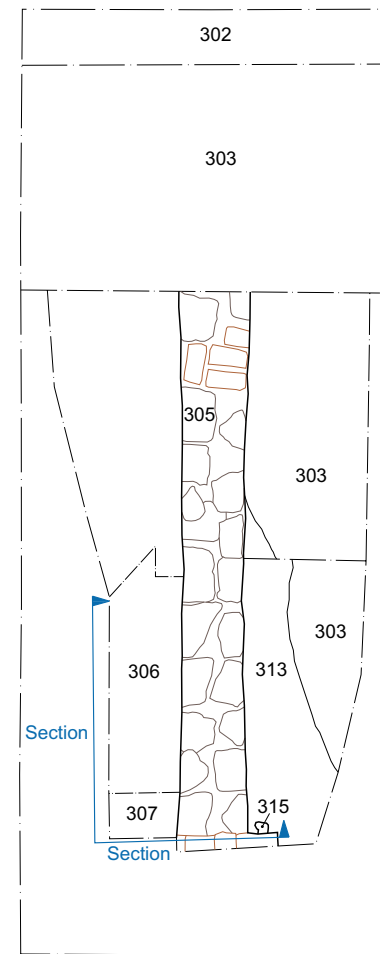
Figure 2



North / East facing section



Photograph of features 305 & 315, looking south

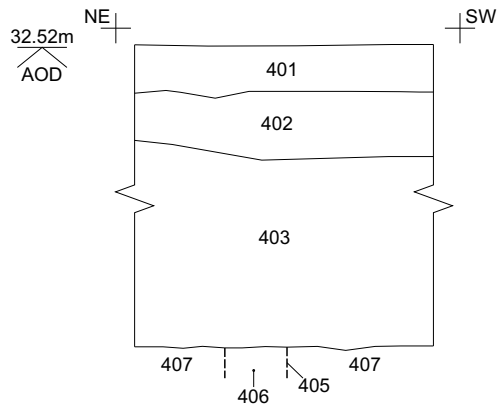


Plan of Trench 3



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North-west facing section



View of Trench 4, looking north-east

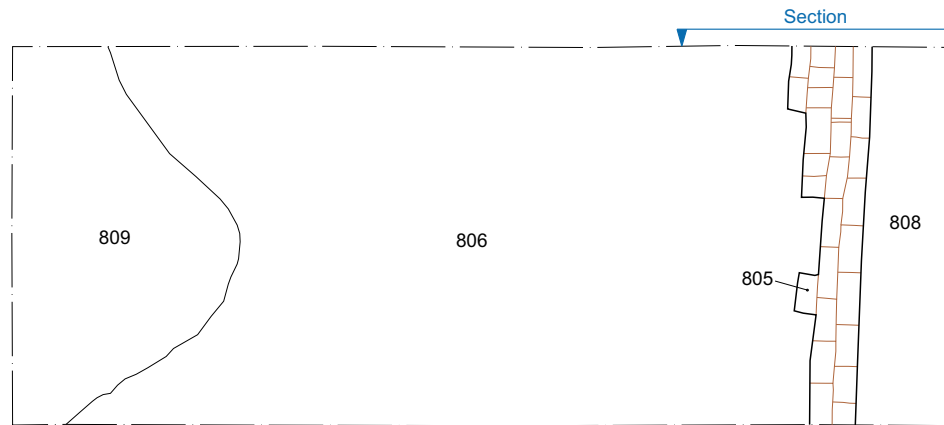
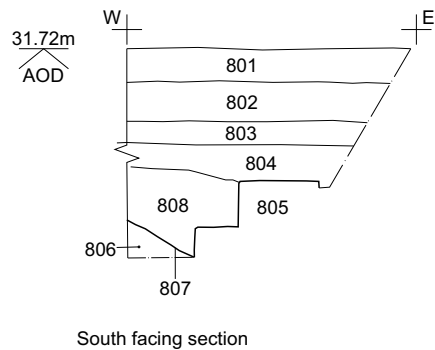


Plan of Trench 4



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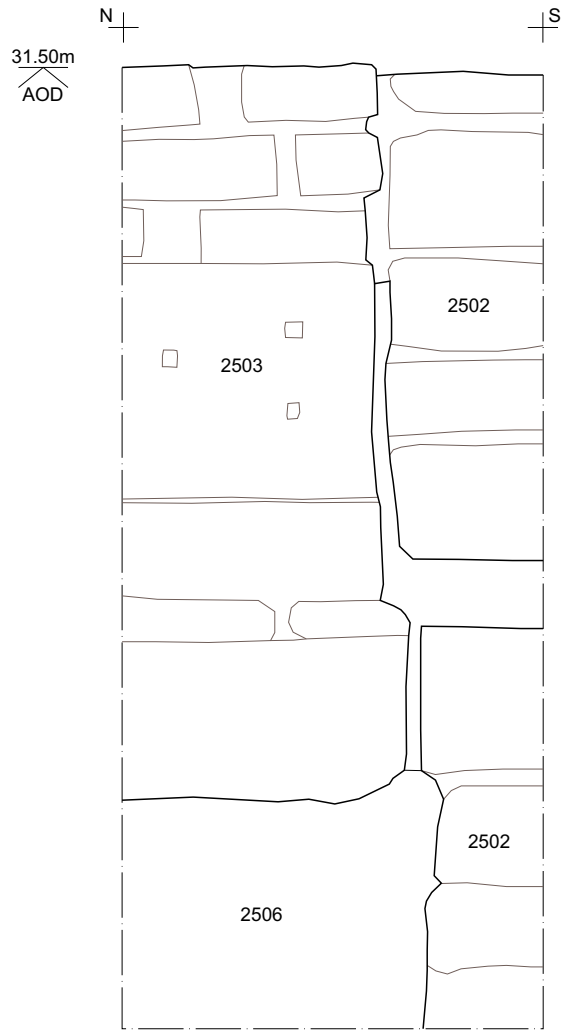


Photograph of feature 805, looking east



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West facing section



Plan of Inspection Pit 5



Photograph of Inspection Pit 5, looking east

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Plate 1: Trench 1, looking south-east



Plate 2: Trench 2, looking south-east

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Plate 3: Concrete pad **506** at east end of Trench 5



Plate 4: Trench 6, looking west

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Plate 5: Trench 9, looking east

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