



Marshalls Mills Leeds

Post-excavation Assessment and Updated Project Design



Planning Ref: 17/0645/FU
September 2019



© Wessex Archaeology Ltd 2019, all rights reserved.

Unit R6
Sheaf Bank Business Park
Prospect Road
Sheffield
S2 3EN

www.wessexarch.co.uk

Wessex Archaeology Ltd is a Registered Charity no. 287786 (England & Wales) and SC042630 (Scotland)


Disclaimer

The material contained in this report was designed as an integral part of a report to an individual client and was prepared solely for the benefit of that client. The material contained in this report does not necessarily stand on its own and is not intended to nor should it be relied upon by any third party. To the fullest extent permitted by law Wessex Archaeology will not be liable by reason of breach of contract negligence or otherwise for any loss or damage (whether direct indirect or consequential) occasioned to any person acting or omitting to act or refraining from acting in reliance upon the material contained in this report arising from or connected with any error or omission in the material contained in the report. Loss or damage as referred to above shall be deemed to include, but is not limited to, any loss of profits or anticipated profits damage to reputation or goodwill loss of business or anticipated business damages costs expenses incurred or payable to any third party (in all cases whether direct indirect or consequential) or any other direct indirect or consequential loss or damage.

Document Information

Document title	Marshall's A&B Mills, Holbeck, Leeds, West Yorkshire
Document subtitle	Post-excavation Assessment and Updated Project Design
Document reference	210750.04
Client name	ECUS Limited
Address	3 Blackburn Road Sheffield South Yorkshire S61 2DW
On behalf of	CEG
Address	Number One, Great Exhibition Way, Kirkstall Forge, Leeds, LS5 3BF
Site location	Globe Road, Holbeck Leeds
County	West Yorkshire
National grid reference (NGR)	429466 432956 (SE 29466 32956)
Statutory designations	None
Planning authority	Leeds City Council
Planning reference	17/0645/FU
Museum name	Leeds Museums
Museum accession code	TBC
WA project code	210750
Date(s) of fieldwork	12 March to 03 June 2019
Fieldwork directed by	Emily Eastwood
Project management by	Milica Rajic
Document compiled by	Emily Eastwood
Contributions from	Lorraine Mepham (finds), Lorrain Higbee (animal bone), Fiona Eaglesham (environmental), Inés López-Dóriga (environmental), and Liz Chambers (environmental).
Graphics by	Joanna Debska

Quality Assurance

Issue & issue date	Status	Author	Approved by
1 September 2019	Draft submitted to client	EE	



Contents

Summary.....	iv
Acknowledgements.....	v
1 INTRODUCTION	1
1.1 Project and planning background.....	1
1.2 Scope of the report.....	1
1.3 Location, topography and geology	2
2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND	2
2.1 Introduction.....	2
2.2 Previous works related to the development	2
2.3 Archaeological and historical context	3
3 AIMS AND OBJECTIVES	3
3.1 Aims	3
3.2 Research objectives	4
4 METHODS.....	5
4.1 Introduction.....	5
4.2 Fieldwork methods	5
4.3 Artefactual and environmental strategies	6
4.4 Monitoring.....	6
5 STRATIGRAPHIC RESULTS	6
5.1 Introduction.....	6
5.2 Existing impacts to archaeology.....	8
5.3 Soil sequence and natural deposits.....	8
5.4 Area A	8
5.5 Area B	9
5.6 Area C	11
6 ARTEFACTUAL EVIDENCE.....	16
6.1 Introduction.....	16
6.2 Pottery	16
6.3 Clay tobacco pipe.....	21
6.4 Glass	22
6.5 Stone	24
6.6 Metalwork and metalworking residues	24
6.7 Leather	25
6.8 Wood	25
6.9 Worked bone	25
6.10 Animal bone	25
6.11 Shell	26
6.12 Conservation	26
7 ENVIRONMENTAL EVIDENCE	26
8 STATEMENT OF POTENTIAL	28
8.1 Stratigraphic potential.....	28
8.2 Finds potential	28
8.3 Environmental potential.....	28
8.4 Summary of potential	29
9 UPDATED PROJECT DESIGN.....	30
9.1 Summary of recommendations for analysis	30
9.2 Updated project aims	31



9.3	Proposals for publication	31
9.4	Programme for analysis and publication	31
9.5	Personnel and resources	32
9.6	Management structure	32
10	STORAGE AND CURATION	33
10.1	Museum.....	33
10.2	Preparation of the archive	33
10.3	Selection policy	33
10.4	Security copy.....	34
10.5	OASIS	35
11	COPYRIGHT	35
11.1	Archive and report copyright	35
11.2	Third party data copyright.....	35
	REFERENCES	36
	APPENDICES.....	38
	Appendix 1: Context descriptions	38
	Appendix 2: Sediment descriptions	60
	Appendix 3: Environmental data.....	61
	Appendix 4: OASIS form.....	62

List of Figures

Figure 1	Site location
Figure 2	Site plan
Figure 3	Site plan overlay on UAV image
Figure 4	Site plan overlay on 1815 N and F Giles map
Figure 5	Site plan overlay on 1850 J Rapkin map
Figure 6	Site plan overlay on 1891 Ordnance Survey
Figure 7	Site plan overlay on 1901 Goad map
Figure 8	Site plan overlay on 1951 Ordnance Survey map
Figure 9	Area A
Figure 10	Area B
Figure 11	Area B, building group 1447
Figure 12	Area C
Figure 13	Area D
Figure 14	Area D, complex rectangular structure 2412
Figure 15	Sections: Section 1 West facing section of 1216. Section 2 South facing elevation of 1158 - 1162.
Figure 16	Sections: Section 3 North East facing walls 1320 and 1321 plus associated contexts Section 4 West facing elevation of 2287 and 2363
Figure 17	Sections: Section 5 North facing elevation of chutes 2337, 2338, 2339 Section 6 East facing elevation of wheel pit wall 2170

List of Plates

Cover:	Excavation of passage 1217 from South
Plate 1	Room group 1085 from North East
Plate 2	Stables 1040 cutting 1008 from North
Plate 3	Wall and surfaces 1113, 1115, 1117-1119 from North West
Plate 4	Overview of passage 1217 truncating chimney 1282 from South West
Plate 5	Wear pattern in floor 1196 from East



- Plate 6** Firebrick steam boiler base 1128-1131 from North East
Plate 7 Cells 1219 and 11231 (etc) from North
Plate 8 Structure group 2200 from West
Plate 9 Complex rectangular structure 2373 etc. from South West
Plate 10 Slopes 2360 and associated structure from North
Plate 11 Iron tank 2393

List of Tables

- Table 1** Quantification of excavation records
Table 2 Finds totals by material type
Table 3 Pottery totals by ware type
Table 4 Pottery by context
Table 5 Clay pipes by context
Table 6 Glass by context
Table 7 Task list



Summary

Wessex Archaeology was commissioned by ECUS Ltd on behalf of CEG to undertake archaeological mitigation works comprising an archaeological strip, map and sample excavation and watching brief of a total of 0.76 ha of land located at Marshall's A&B Mills, Globe Road, Holbeck, Leeds, West Yorkshire. The excavation area was centred on NGR 429466 432956.

The archaeological remains were predominantly structural and related to development of the site from 1791 through to the demolition of standing remains in 2019.

Remains of Marshall's first mill (Mill A, built 1791) and its ancillary buildings were excavated in Areas A, B and C. A long linear structure (1008) and smaller room (1085) at the eastern end of the site coincide with buildings marked on the 1815 N and F Giles Plan of the Town of Leeds and its Environs, however their function remains unknown.

A central structure (1243 etc) consisted of a series of four rooms connected by a passageway to buildings located at the northern extent of the site. The passageway (1243) and trackway located at its terminus (1231 etc) were likely used for the movement of goods in and out of the mill.

A warehouse constructed at the same time as Mill A was excavated in Areas C and D (1406 etc).

Remains of Mill B (2259 etc) were excavated in Area D. No evidence remained of the fire which destroyed the original Mill B building in 1795 causing it to be rebuilt in 1796. It is thought that the observed remains correspond with the 1796 rebuild.

By 1815 the Mill site was well developed with Mills A and B and numerous ancillary structures identified as seen on the N and F Giles plan.

Following the demolition of Mill B by 1891, a stone-built engine house, flue and chimney structure was constructed, truncating the Mill B remains excavated in Area D. This corresponded to the construction of the Monk Bridge bobbin and shuttle factory seen on the 1891 OS map. The development of the bobbin and shuttle factory continued with the construction of a turning shop to the west. The excavated remains of this turning shop dominated the eastern half of Area B.

By 1901, a stables complex had been constructed at the far east of the site, spanning the entirety of Area A. The excavated remains of the stables included a series of loose boxes for keeping horses, and a cart track as labelled on the 1901 Goad plan of the area.

Later development of the site included the 1950's Industrial Cooperative Society Garage which left its footprint in Areas C and D, and the Globe Works warehouse, which was demolished immediately prior to work beginning on site.

Demolition, levelling and made ground deposits were encountered across the site. The demolition deposits were generally ashy with a high percentage of crushed brick and mortar. The levelling and made ground deposits were silty and clinker rich.

Natural alluvial deposits were reached in numerous locations in all four areas of the site.

Preservation of the archaeological remains had been impacted by modern concrete footings and diesel tanks. Contamination by asbestos containing materials further hampered excavation.

The finds assemblage includes both domestic refuse and industrial waste and is primarily of 19th-/early 20th-century date with a few possibly earlier items. The presence of several groups of material representing the waste from various craft/industrial processes (pottery manufacture, metalworking,



cutlery handle manufacture) is of interest, but a high proportion of the assemblage derived from made ground and backfill layers and may therefore not represent on-site activity.

Environmental samples were largely uninformative and did not enhance interpretation of flax processing at the mills.

The archaeology to the south and north of the culvert was fully characterised and no significant archaeological remains extended into the culvert's buffer zone.

The culvert itself was constructed after the Marshall's phases of occupation and will have impacted any archaeological remains associated with the mills.

In the area along the railway viaduct it was demonstrated that the late 20th century occupation of the site had removed all earlier archaeological remains – these 20th century remains continued into the 'buffer zone'.

No further archaeological work is required on site.

There is little potential for further analysis of the site. Due to its significance as the site of the first integrated flax mill in Leeds it is proposed that a brief round-up of the excavation results appear in a local journal such as FORUM, the CBA journal for Yorkshire.

The archive is currently held at the offices of Wessex Archaeology in Sheffield, under the project codes 210750–3. In due course, the archive will be deposited with Leeds Museums under an accession number to be determined. An OASIS form, wessexar1-347314 has been completed for this project and will be finalised at the time of deposition.

Acknowledgments

Wessex Archaeology would like to thank ECUS Ltd, on behalf of CEG, for commissioning the archaeological mitigation works, in particular Alex Cassels. Wessex Archaeology is also grateful for the advice of David Hunter who monitored the project for West Yorkshire Archaeology Advisory Service (WYAAS), and to Sirius, in particular John Boreham, for their cooperation and help on site.

The fieldwork was directed by Emily Eastwood, with the assistance of Sam Birchall, Jamal Bingham, Viktoria Haldorsdottir, Otis Gilbert, Jasmine Porter, Rob Jones, Chris Hirst and Cecilia Levratto Francese. This report was written by Emily Eastwood and edited by Ashley Tuck. The illustrations are by Joanna Debska. The project was managed by Milica Rajic on behalf of Wessex Archaeology.

The samples were processed by Fiona Eaglesham. The flots were sorted by Fiona Eaglesham and assessed by Inés López-Dóriga. The sediments were described by Liz Chambers. The environmental report was written by Liz Chambers and Fiona Eaglesham and edited by Inés López-Dóriga.

The finds were assessed by Lorraine Mephram with contributions from Lorrain Higbee (animal bone).



Marshall's A&B Mills, Holbeck, Leeds, West Yorkshire

Post-excavation Assessment and Updated Project Design

1 INTRODUCTION

1.1 Project and planning background

1.1.1 Wessex Archaeology was commissioned by ECUS Ltd, on behalf of CEG, to undertake archaeological mitigation works comprising an archaeological strip, map and sample excavation and watching brief of a 0.76 ha (Area 1 0.45 ha, Area 2 0.31 ha) parcel of land located at Marshall's A&B Mills, Globe Road, Holbeck, Leeds, West Yorkshire. The excavation area was centred on NGR 429466 432956 (**Fig. 1**).

1.1.2 The work was carried out as a condition of planning permission, granted by Leeds City Council (ref: 17/06455/FU) for demolition of existing structures and phased development of mixed-use commercial, residential, leisure, amenity and associated infrastructure.

1.1.3 Planning application 17/06455/FU has a resolution to grant and is deferred and delegated for final sign-off by the Leeds City Council Chief Planning Officer subject to Section 106 obligations and a number of specified conditions. Draft condition 11 attached to the decision on 17/06455/FU states:

No development, including any Advance Infrastructure and Enabling Works, shall commence within each phase (or part therein) until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work associated with that phase (if any) in accordance with a written scheme of investigation to be submitted to and approved in writing by the Local Planning Authority. Work for each phase shall be carried out in accordance with the details and timescales thereby approved.

1.1.4 The excavation was the final stage in a programme of archaeological works, which had included; a desk-based assessment (DBA; NAA 2016), which considered the recorded historic environment resource within the study area of the proposed development and two archaeological trial trench excavations carried out to evaluate the extent, condition, and character of buried archaeological remains at the site (NAA 2017).

1.1.5 The excavation was undertaken in accordance with a written scheme of investigation (WSI), which detailed the aims, methodologies and standards to be employed, for both the fieldwork and the post-excavation work (Wessex Archaeology 2018). WYAAS' Senior Archaeologist (David Hunter) approved the WSI on behalf of the Local Planning Authority (LPA) prior to fieldwork commencing. The excavation was undertaken between 12 March and 3 June 2019.

1.2 Scope of the report

1.2.1 The purpose of this report is to provide the provisional results of the excavation and to assess the potential of the results to address the research aims outlined in the WSI. Where appropriate, to recommend a programme of further analysis work, and outline the resources needed, to achieve the aims (including the revised research aims arising from this



assessment), leading to dissemination of the archaeological results via publication and the curation of the archive.

1.3 Location, topography and geology

1.3.1 The excavation area is situated in the Holbeck district of Leeds, which is located on the south-west side of the city centre (**Fig. 1**). The site is defined on its north side by Globe Road, to the west by a railway viaduct and to the south by Water Lane and the river Hol Beck.

1.3.2 The site is roughly level at a height of 28–29 m aOD.

1.3.3 The underlying geology consists of sedimentary mudstone, siltstone and sandstone of the Pennine Lower Coal Measures Formation, which formed c. 318–319 million years ago in the Carboniferous period in a local environment previously dominated by swamps, estuaries and deltas (British Geological Survey online viewer 2019).

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

2.1.1 The archaeological and historical background was assessed in a desk-based assessment (DBA; NAA 2016), which considered the recorded historic environment resource within the study area of the proposed development. This section summarises information from the DBA, the evaluation report (NAA 2017) and the WSI (Wessex Archaeology 2018).

2.2 Previous works related to the development

2.2.1 Two archaeological trial trench excavations were carried out to evaluate the extent, condition, and character of buried archaeological remains at the site (NAA 2017). A total of 33 trial trenches were excavated across the development site in 2016 and 2017, positioned to target the locations of structures dating from Marshall's 18th- and 19th-century flax mill complex: the two main mill buildings, the hackling shops, a warehouse, drying sheds, the retaining wall running along the north edge of Hol Beck, and several smaller structures and spaces between buildings. The evaluation sought to ascertain the depth of made ground, any sub-surface remains of previous buildings on the site, and the alignment, depth and character of two 19th-century brick culverts known to traverse the site from north-west to south-east.

2.2.2 Most of the targeted features were identified, though the degree of preservation varied across the site, with structural remains best preserved in the centre of the site. Surviving sub-surface remains of structures included wall foundations, masonry drains, stone-paved surfaces and engine platforms, which were identified beneath thick layers of demolition debris and ashy industrial deposits possibly derived from nearby foundries. In addition, the trial trenching revealed evidence to suggest that architectural elements of the mill complex had been incorporated within later industrial buildings.

2.2.3 The functions of the smaller buildings of the mill complex were difficult to ascertain precisely. One was identified as a 'domestic' dwelling, although the majority are considered likely to have been linked indirectly to flax manufacturing processes, such as gas houses, storage facilities, or stables. A moderate assemblage of artefacts including pottery, metal, and animal bone was recovered. Little evidence of mechanical production at the site was identified in the finds assemblage, but evidence for contemporary domestic life was present in food and pottery remains and items of dress and personal objects.



2.3 Archaeological and historical context

- 2.3.1 In 1790 John Marshall purchased just over 0.40 ha (1 acre) of freehold land at Water Lane. Marshall was one of the first to acquire a manufacturing site in this area, and his company was influential in the subsequent development of Holbeck.
- 2.3.2 By 1791, Marshall had built a flax mill on the Water Lane site: 'Mill A'. It was four storeys high and 45.7 m long by 13.7 m wide, providing 9,000 square feet (836 m²) for flax preparation, spinning and weaving. The mill was initially powered by water, and a building at the east end of the mill housed an atmospheric engine to raise water from Hol Beck. When the water fell, it turned a wheel, which powered the preparation and spinning machinery. In 1793, this arrangement was replaced by a 20 HP (14.9 kW) Boulton and Watt steam engine, the first rotative engine to be employed in a textile mill (Clark 2000, 811).
- 2.3.3 Ancillary buildings were built around the paved yard of Mill A in the early 1790s, including a large warehouse, a counting house, stables, a dry house, smiths and joiners' shops, and several cottages. Land to the south and west was acquired in 1793, and a new, five-storey, 29,000 square feet (2,694 m²) steam-powered mill (Mill B) was completed two years later on the west side of Mill A. Mill B burnt down in tragic circumstances just five months later but had been rebuilt by mid-1796. In 1814, Mill B was fitted with a more powerful engine, and between 1810 and 1814 Marshall installed gas lighting, which necessitated construction of gas houses and gasometers in the yards.
- 2.3.4 An 1815 map shows the Water Lane flax mills as fully developed, with Mill A and Mill B, with the warehouse and hackling (flax dressing) shops arranged about a courtyard, with two chimneys positioned centrally. At this time, there was no road access to the north of the site, which was seemingly still farmland, as Globe Road was not established until around c.1850. The manufacturing site continued to evolve during the following years, with a succession of new structures, extensions and demolitions.
- 2.3.5 A map of c.1850 shows that Mill A had been demolished by this date. Production at the Water Lane site ceased shortly thereafter, and demolition of Mill B followed in c.1852. In the years following, open reservoirs south of Water Lane built to supply water to Marshall's 19th-century steam mills were filled-in and water was provided instead by an underground culvert.
- 2.3.6 The Holbeck Viaduct, part of the London and Western Railway, was built in 1882 and crosses over the west end of the development site. On the 1901 Goad Insurance Plan it can be seen that the site was divided into four uses. The east parcel was a stone yard, and the adjacent lot used as stabling for the new railways. Most of the site, over much of the original Marshall's mill site, was occupied by a bobbin and shuttle factory. The fourth parcel, to the west of the viaduct, was a timber yard. By 1908, the bobbin and shuttle factory had been superseded by a chemical works, whilst the layout of the stables remained, perhaps indicating that they remained in use as such.

3 AIMS AND OBJECTIVES

3.1 Aims

- 3.1.1 The general aims of the excavation, as stated in the WSI (Wessex Archaeology 2019) and in compliance with the ClfA's *Standard and guidance for archaeological excavation* (ClfA 2014a), were:



- to examine the archaeological resource within a given area or site within a framework of defined research objectives;
- to seek a better understanding of the resource;
- to establish the presence or absence of archaeological remains within the excavation area;
- to establish, as far as possible, the extent, stratigraphic sequence and date of archaeological structures, surfaces, equipment, features, and deposits occurring within the excavation area;
- to establish the nature of the activities and processes that occurred in different parts of the site during the various periods or phases of its occupation, with particular regard to the Marshall's mill buildings and yards;
- to retrieve material evidence for social, economic and industrial activity;
- to recover palaeoenvironmental remains from sub-surface deposits;
- to compile a lasting record of the resource; and,
- to analyse and interpret the results of the excavation and disseminate them.

3.2 Research objectives

3.2.1 Following consideration of the archaeological potential of the site the research objectives of the excavation defined in the WSI (Wessex Archaeology 2018) were:

- to ensure that any archaeological features discovered by the excavation are identified, sampled and recorded;
- to recover and identify any artefacts associated with archaeological deposits;
- to ensure that any deposits with the potential to yield palaeoenvironmental data are sampled and submitted for assessment to the appropriate researchers;
- to ensure that no excavation or other physical disturbance occurs outside the agreed area of investigation;
- to undertake a programme of investigation that meets with national standards;
- to prepare a post-excavation report on the results of the fieldwork to be provided to the client, to WYAAS, and to be deposited with the West Yorkshire Historic Environment Record and the Historic England Archive;
- to prepare an ordered archive for deposition with an appropriate museum (Leeds Museums);
- to make the results of the archaeological work available via the OASIS scheme/Archaeology Data Service; and,
- to inform decisions regarding requirement for any further archaeological mitigation at the site.



4 METHODS

4.1 Introduction

- 4.1.1 All works were undertaken in accordance with the detailed methods set out within the WSI (Wessex Archaeology 2018) and in general compliance with the standards outlined in ClfA guidance (ClfA 2014a). The methods employed are summarised below.
- 4.1.2 The Globe Works warehouse was demolished prior to Wessex Archaeology being notified that works were beginning.
- 4.1.3 Following the unmonitored demolition of standing structures, the foundations and other modern below-ground constructions were removed under watching brief conditions as part of the general reduction of the excavation area down to the top of archaeological deposits.
- 4.1.4 The excavation comprised open areas to provide an appropriate investigation of the potential archaeology within those parts of the site requiring deep below-ground excavation for the development. A known culvert, river flood defences and viaduct required that the final boundaries of the excavation were amended. The presence of asbestos-bearing materials and diesel tanks identified at the time of the work also required adjustment to the boundaries of the excavations.

4.2 Fieldwork methods

General

- 4.2.1 The excavation areas were set out using GNSS (**Fig. 1**). The WSI divided the site into two areas; Area 1 and Area 2. Following discussions with the contractor regarding logistics, these were later split into four smaller areas designated A to D. Area 1 comprised Areas A and B, and Area 2 comprised Areas C and D. For reasons of health and safety and structural stability an offset was left unexcavated around the perimeter of the site, between 3–5 m wide.
- 4.2.2 The topsoil/overburden was removed in level spits using a 360° excavator equipped with a toothless bucket, under the constant supervision and instruction of the monitoring archaeologist. Machine excavation proceeded in level spits until the archaeological horizon or the natural geology was exposed.
- 4.2.3 Where necessary, the surfaces of archaeological deposits were cleaned by hand to aid visual definition. A sample of archaeological features and deposits identified was hand-excavated as sufficient to address the aims of the excavation.
- 4.2.4 Spoil derived from both machine stripping and hand-excavated archaeological features was visually scanned for the purposes of finds retrieval. Artefacts were collected and bagged by context. All artefacts from excavated contexts were retained.

Recording

- 4.2.5 All archaeological features and deposits were recorded using Wessex Archaeology's *pro forma* recording system. A complete drawn record of excavated features and deposits was made including both plans and sections drawn to appropriate scales (generally 1:20 or 1:50 for plans and 1:10 for sections) and tied into the Ordnance Survey (OS) National Grid. The Ordnance Datum (OD: Newlyn) heights of all principal features were calculated.
- 4.2.6 A Leica GNSS connected to Leica's SmartNet service surveyed the location of archaeological features. All survey data is recorded in OS National Grid coordinates and



heights above OD (Newlyn), as defined by OSGM15 and OSTN15, with a three-dimensional accuracy of at least 50 mm.

- 4.2.7 A full photographic record was made using black and white 35 mm negative film, supplemented by digital cameras equipped with an image sensor of not less than 10 megapixels. Digital images have been subject to managed quality control and curation processes to ensure long term accessibility of the image set.

4.3 Artefactual and environmental strategies

General

- 4.3.1 Appropriate strategies for the recovery, processing and assessment of artefacts and environmental samples were in line with those detailed in the WSI (Wessex Archaeology 2018). The treatment of artefacts and environmental remains was in general accordance with: *Guidance for the collection, documentation, conservation and research of archaeological materials* (ClfA 2014b) and *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation* (English Heritage 2011).

4.4 Monitoring

- 4.4.1 David Hunter, Senior Archaeologist at WYAAS, monitored the watching brief and subsequent excavation on behalf of the LPA. Any variations to the WSI, if required to better address the project aims, were agreed in advance with both the client and the WYAAS Senior Archaeologist.

5 STRATIGRAPHIC RESULTS

5.1 Introduction

Summary of archaeological features and deposits

- 5.1.1 The archaeological remains excavated were predominantly structural remains of buildings (**Fig. 3**) that can be identified on historic maps from 1815 to the present day (**Fig. 4–8**). The earliest features in the centre and west of the site were heavily truncated by later development. The quantity and quality of the historic mapping supplemented by the materials used during construction meant that this did not hinder interpretation.

Mill A (1791)

- 5.1.2 Remains of Marshals original Mill A (built in 1791) and associated ancillary buildings were excavated in all areas (1008, 1085, 1298 and 1406 etc).
- 5.1.3 A long linear structure (1008) and smaller room (1085) at the eastern end of the site coincide with buildings marked on the 1815 N and F Giles Plan of the Town of Leeds (**Fig. 4**) and its Environs, however their function remains unknown.
- 5.1.4 A central structure (1243 etc) consisted of a series of four rooms connected by a passageway to buildings located at the northern extent of the site (**Fig. 11**). The passageway (1243) and trackway located at its terminus (1231 etc) were likely used for the movement of goods in and out of the mill.
- 5.1.5 A warehouse constructed at the same time as Mill A was excavated in Areas C and D (1406 etc).



Mill B (1796)

- 5.1.6 Remains of Mill B (2259 etc) were excavated in Area D. No evidence remained of the fire which destroyed the original Mill B building in 1795 causing it to be rebuilt in 1796. It is thought that the observed remains correspond with the 1796 rebuild.
- 5.1.7 By 1815 the Mill site was well developed with Mills A and B and numerous ancillary structures identified as seen on the N and F Giles plan.

Mill extensions (1850)

- 5.1.8 Structural remains excavated in Areas C and D (1379, 2276 etc.) correspond to extensions to the Mill B buildings seen on the 1850 J Rapkin Map of Leeds (**Fig. 5**). The map also indicates that Mill A had been demolished by this time, although the excavated ancillary buildings in the east and north of the site continued to be depicted.

Bobbin and shuttle factory and stables (1891–1901)

- 5.1.9 By 1891 the main mill buildings had been demolished and only the ancillary structures marking the north-eastern extent of the site remained. A chimney (2145), flue (2090) and stone built square building (2411) were excavated in Area D which correspond to a structure first shown on the 1891 OS map (**Fig. 6**).
- 5.1.10 By the time of the 1901 Goad Fire Insurance Plan (**Fig. 7**), the site had been further developed, and the western extent was labelled 'G and R Mortimer Monk Bridge Bobbin and Shuttle Factory'. A series of walls (1137 and 1135 etc), a boiler room (1130 etc) and a chimney and flue structure (1090 etc) were excavated in Area B and correspond to the turning shop of the bobbin and shuttle factory.
- 5.1.11 The eastern end of the site had been developed into a stable complex following demolition of mill buildings in this area. Structure 1040 and associated cobbled surfaces excavated in Area A correspond with loose boxes and a cart track shown on the 1901 Goad Fire Insurance plan.

Chemical works (1908)

- 5.1.12 By 1908, an OS map (not illustrated) shows that the bobbin and shuttle factory had been developed into a chemical works. The archaeological evidence suggests the layout of these buildings did not change dramatically in that time, with a single extension to the larger central structure (1135) excavated in Area B.

Industrial Cooperative society garage (1951)

- 5.1.13 By 1951 another OS map (**Fig. 8**) shows that the west of the site was dominated by the Leeds Industrial Cooperative Society Garage. The remains of the garage were excavated across Areas C and D. Numerous unmapped internal vehicle inspection pits were present in the far west of Area D, however initial excavations uncovered asbestos containing materials and as such the remaining pits were photographed but not excavated.
- 5.1.14 Diesel tanks associated with the garage were uncovered in Areas C and D but due to the risk of contamination these were left unexcavated.

Methods of stratigraphic assessment and quantity of data

- 5.1.15 All hand written and drawn records from the excavation have been collated, checked for consistency and stratigraphic relationships. Key data has been transcribed into an Access database for assessment, which can be updated during any further analysis. The



excavation has been preliminary phased using stratigraphic relationships and the spot dating from artefacts, particularly pottery.

5.1.16 **Table 1** (below) provides a quantification of the records from the excavation.

Table 1 Quantification of excavation records

Type	Quantity
Context records	873
Context registers	31
Graphics (A4 and A3)	44
Graphics registers	4
Environmental sample registers	2
Digital photographs	2691

5.2 Existing impacts to archaeology

5.2.1 The concrete foundations of the former Globe Works have severely impacted the archaeological remains on the site. Monitoring of the removal indicated that the impacted areas measured approximately 5 m x 6 m and up to 3 m deep.

5.2.2 Asbestos was uncovered during the machine stripping in Areas B and D. In order to ensure no residual asbestos contamination remained Sirius over-excavated the ground leaving no archaeological deposits.

5.2.3 Diesel tanks were present across Areas C and D and posed a risk of contamination. One was found to be leaking and was immediately removed by Sirius. The others were left undisturbed, in situ, until the excavations were complete to limit the risk.

5.3 Soil sequence and natural deposits

5.3.1 Natural fluvial deposits were encountered across the site and comprised coarse gravels (1448) overlain with sandy alluvium (1003) at a height of 26 m aOD in Area A, 25.9 m in Area B, 26.75 m in Area C and 26.45 m in Area D.

5.4 Area A

Introduction

5.4.1 Area A (**Fig. 9**) comprised a 764 m² parcel of land at the far eastern end of the site.

Drainage and water management

5.4.2 The earliest feature in Area A was a substantial sandstone wall (1010) which ran from the south-eastern limit of excavation for 27 m from east to west. This wall consisted of six courses with larger blocks at the base and was previously interpreted as a retaining wall (NAA 2016). It formed a significant barrier between the mills and the river. Undisturbed natural alluvium (described above) was recorded south of wall 1010 with no obvious cut for the wall. Wall 1010 was butted by a small later structure (1085, see below) and the sandstone foundations of building 1008.

5.4.3 A series of capped drains and culverts crossed the area, the oldest probably 1034, a two-course brick-built drain capped with sandstone flags. This ran parallel to retaining wall 1010 and alongside building 1008 which occupied most of the southern section of Area A. Drain 1034 was cut by the later stables (1040) suggesting that drain 1034 was contemporary with the ancillary buildings of Mill A. Drain 1034 was cut by an inspection chamber for a modern

ceramic drain (1036), and by culvert 1039. The culvert 1039 had been opportunistically constructed of firebricks ten courses deep with substantial sandstone slab capping. It ran north-west to south-east across both Areas A and B towards the Hol Beck and was truncated by the foundations of the 1901 bobbin and shuttle factory (1135) at its north-western end.

Ancillary mill buildings

- 5.4.4 Two distinct structures occupied the southern extent of Area A. The smaller (1085) was a single room with a central brick partition which butted retaining wall 1010 (**PI. 1**). The line of the walls survived in places as a single course of brick without a substantial foundation suggesting it was a minor building.
- 5.4.5 A larger building (1008) was rectilinear in plan running east to west and measured 17.22 m in length and 5.20 m in width. Building 1008 was truncated in the west by stables 1040 (see below). It consisted of unfrogged handmade brick and was bonded with white lime mortar. The north wall of the building sat on a foundation (1065) of sandstone and lime mortar. The western end of building 1008 was divided into three parallel rooms (1055, 1057 and 1060) 5.2 m in width and between 3.5 m and 3.7 m long. Two of the rooms (1055 and 1057) had small interior features, brick walls 1056 and 1059 formed a rectangular tank measuring 1 m long and 0.8 m wide in room 1057, and brick walls 1054 extended 0.5 m into room 1055 and were 1 m apart. The eastern end of the building was divided into three smaller chambers (1016, 1050 and 1051) measuring 1.9 m, 1.6 m and 0.9 m wide with internal partitions (1017 and 1019 etc).
- 5.4.6 Building 1008 and structure 1085 appear to broadly correspond to two ancillary mill buildings marked on the 1815 N and F Giles, plan of the town of Leeds and its environs (**Fig. 3**) These buildings continue to be depicted through to the 1850 J Rapkin map of Leeds (**Fig. 5**) but were demolished by the time of the 1891 OS map (**Fig. 6**).

Stables

- 5.4.7 The western end of Area A was delineated by the west wall of a north to south running building (1040; **PI. 2**) and associated cobble surface (1446). The structure correlates to buildings on the 1901 Goad Fire Insurance plan (**Fig. 7**) labelled as stables, specifically 'loose box' stalls (a secure space to keep one untied horse). An associated east to west running cobbled surface (1446) correlates with a cart access depicted on a historic map (**Fig. 7**). The machine-made brick foundations of the loose boxes (1040) truncated building 1008 leaving it unclear as to whether the western walls 1106 and 1112 (see Area B below) are a continuation of 1008 or a separate structure.

5.5 Area B

Introduction

- 5.5.1 Area B comprised a 1555 m² parcel of land (**Fig. 10**).

Culvert 1039

- 5.5.2 Culvert 1039 excavated in Area A continued across Area B on a north-westerly alignment until it was truncated by the later bobbin and shuttle factory (1135).

Ancillary mill buildings

- 5.5.3 The heavily truncated remains of a building (1106, 1113 etc.) were excavated in the south-east corner of Area B. The walls were similarly constructed to 1008 with handmade brick on foundation of a single course of sandstone (1108). The walls (1106, 1113 etc) were intermittently preserved and were accompanied by a short section of drain (1104). Building

1106, 1113 etc was probably a continuation of buildings 1008 and 1034 seen in Area A. They correspond to a long linear rectangular building depicted on historic 1815 mapping (**Fig. 4**). A small section of an exterior surface remained (**Pl. 3**) comprising flagstones (1118) and cobbles (1114 and 1117).

Mill A

- 5.5.4 Several phases of structural remains were excavated in the western half of Area B (**Fig. 11, Pl. 4**).
- 5.5.5 The earliest was a truncated circular brick structure (1282) 6 m in diameter and surviving to a depth of 0.9 m (eleven courses). The structure consisted of two elements; a circular brick base (1281) topped with a wide circular wall (1273). The base consisted of a mix of red brick and firebrick and formed a solid foundation capable of supporting a larger superstructure. The circular wall was eight skins wide, the inner two skins comprised firebrick forming the edge of an interior chamber approximately 3 m in diameter, with the outer six being unfrogged handmade red brick. The use of firebrick and a sooty staining of the interior face of the upper structure support interpretation of the structure as a chimney.
- 5.5.6 The chimney base (1281) was truncated by a building (1447) which was broadly rectangular in plan. Building 1447 appears to have had at least two phases of construction. The first phase probably consisted of four rooms, although the south-west room as well as the west and east sides of the building as a whole had been removed by truncation by the Globe Works foundations. The rooms were separated by an east to west aligned wall (1161 and 1159) and by a subterranean passage (1207).
- 5.5.7 The passage (1207) was a complex brick structure initially running for 10 m from north to south through building 1447 before turning a right angle to run east for 4.5 m before turning 45 degrees to run to the north-east for 10 m. Brick vaulting survived at its far eastern end (1250) and presumably extended across most of the structure. The surviving eastern extent of the subterranean passageway had been truncated and later bricked up (1256) but a surviving short section of wall (1221-1223) to the north-east suggests it originally carried on on this alignment and connected to a series of rooms/cells discussed in Area C below.
- 5.5.8 The north to south section of the passage (1207) incorporated five open bays with a distinct change in the brick work from a vaulted brick arch to a steep brick 'slope' providing an opening into the rooms on both the east and west sides of the passageway. These bays were probably chutes down which materials could be tipped.
- 5.5.9 There was one sloped opening into the north-west room (1285) and two openings into the north-east room (1216 and 1217). These openings provided access for the movement of goods between the two northern rooms of 1447 and passageway 1207 (**Fig. 15: Section 1**). There were also openings into the south-west room of 1447 and the south-east room. These were later bricked up (1181 and 1147) indicating a change of use of the space.
- 5.5.10 The south-eastern room (1168 etc) had a narrow doorway in its southern wall complete with sandstone threshold (1315). The doorway would have allowed the movement of people between the room (1168 etc) and the passage (1207). The doorway was later bricked up (1176), further indicating a change of use. Probably at the same time the doorway was bricked up (1176), two short walls were built running north to south (1164 and 1307) These walls had single-course stone foundations (1165 and 1308) but were not substantial, constructed on a clinker fill (1166).

- 5.5.11 The north-eastern room (1196 etc) had a flagstone floor (1197, 1198 and 1199) with internal stone kerbs indicating partitions (1200, 1212 etc) and two circular wear patterns (**Pl. 5**) which corresponded with possible machine fixings (1201 and 1213) in the centre of the room. This room initially communicated with the south-eastern room (1168 etc) until the opening was bricked up (1160 and 1162) (**Fig. 10**). This probably coincided with the change of use in south-eastern room.
- 5.5.12 The earlier chimney (1282, described above) and the later building (1447) which truncated it broadly correspond to buildings marked to the north of the main Mill A structure on the 1815 map (**Fig. 4**). These buildings appear on the 1831 map (not illustrated) but had been demolished some time prior to the 1842 OS map (**Fig. 15: Section 2**). The mill evolved quickly in the short time between maps.

Bobbin and shuttle factory and chemical works

- 5.5.13 The eastern half of Area B was dominated by the remains (1135 and 1137) of the turning shop of the Monk Bridge bobbin and shuttle factory present on the 1901 Goad Fire Insurance plan (**Fig. 7**). In most places the exterior walls of the building reached a depth of approximately 3 m below ground level and as such any earlier remains had been entirely removed.
- 5.5.14 The main body of the building (1135 and 1137) was rectangular and the structure visible within the excavation area measured 38 m x 15 m. At its southern end were a chimney and flue (1009), and the base of a substantial firebrick structure (1128–1131; **Pl. 6**). These correspond to the chimney, flue and steam boiler associated with the bobbin and shuttle factory marked on the 1901 Goad Fire Insurance map (**Fig. 7**).
- 5.5.15 Historic maps show that at some point between 1901 and 1908 the building underwent a change of use from a bobbin and shuttle factory to a chemical works complex. Structural remains consisting of 6.3 m long 3.1 m wide brick-built room (1099 etc) bonded with black ash mortar and a 5.0 m length of a truncated brick-built channel (1139) 0.9 m wide were excavated at the south-eastern corner of 1137. These structures correspond to an extension visible on the 1908 Ordnance Survey map (not illustrated) although their purpose is unclear.
- 5.5.16 Whilst the building had several functions as indicated by historic maps (including as a turning shop and chemical works), the building appears to have been mostly structurally unchanged until it was truncated by the 1960s foundations of the Globe Works.

5.6 Area C

Introduction

- 5.6.1 Area C comprised a 1310 m² parcel of land (**Fig. 12**). The area had been heavily truncated by buildings associated with the Leeds Industrial Cooperative Society garage and electricity substation as seen on the 1951 OS map (**Fig. 8**). Several fuel tanks were present within the area and were left unexcavated due to the risk of contamination.

Ancillary mill buildings

- 5.6.2 At the east end of Area C, the remains of a series of rectangular cobbled and flagstoned cells (1219, 1231 and 1329 etc) were spread across multiple levels (between 26.35 m and 27.2 m aOD). These corresponded with buildings marked on the 1815 plan (**Fig. 4**) and marked the north-eastern boundary of the original mill site. They appear to have survived on the same alignment until 1891 where they are present on the 1891 OS map (**Fig. 6**) but had been demolished by 1901 as seen on the Goad Fire Insurance plan (**Fig. 7**) when the

- area became dominated by the bobbin and shuttle factory. The cells were constructed with handmade red brick and lime mortar laid in places on stone foundations.
- 5.6.3 Three of the cells extended from either side of a 13.7 m long north-west to south-east running wall (1320 and 1321; **Fig. 11**). The wall was predominately built with handmade red brick with some stone foundations (1352 and 1356) and bonded with a white lime mortar. It was truncated at its south-eastern end by the bobbin and shuttle works (1137), and to its north by drainage and construction associated with the electricity substation seen on the 1951 OS map (**Fig. 16: Section 3**).
- 5.6.4 The easternmost of the three cells (1219) was the largest, measuring at least 5.8 m long and 4.2 m wide. It extended to the south and had a flagstone surface (1219). It formed the entrance and exit to the mill passage (1207) excavated in Area B.
- 5.6.5 The central cell (1227– 231) measured 5.5 m long and 2.85 m wide and also extended to the south with a ground surface 0.50 m higher than 1219. The internal floor surface consisted of two parallel flagstone tracks (1229 and 1230) with a cobbled surface (1231) in-between to allow cart access to the passageway (**PI. 7**).
- 5.6.6 A third cell (1327 etc) measured 3 m long and 2.5 m wide and extended to the north with a cobbled floor surface (1329) 0.85 m below the trackway (1231 etc). The purpose of this space is unclear however it aligns with an addition seen on the 1850 J Rapkin map of the area (**Fig. 5**).
- 5.6.7 Two further cells 1437 (over 8 m long, over 2.7 m wide) and 1404 (3.65 m long, 3 m wide), followed the same alignment as 1320 etc. with variable levels of preservation. Preservation of cell 1437 was poor, although the surviving brickwork showed evidence of multiple repairs.
- Warehouse*
- 5.6.8 At the western end of Area C were the remains of a large warehouse present on the 1815 map (**Fig. 4**). This building is present in varying forms on maps until 1850 (**Fig. 5**).
- 5.6.9 The main north to south running exterior wall (1443) ran for 16.50 m and was constructed of sandstone and red brick bonded with a white lime mortar. It was up to 1.20 m deep suggesting it supported a substantial superstructure.
- 5.6.10 To the west of this wall were a series of internal rooms (1405–1411) constructed with handmade red brick and lime mortar and sat on a simple foundation (1408, 1409 etc.) comprising multiple courses of sandstone blocks.
- 5.6.11 A later stone-built extension was present on the east of the structure measuring 5.40 m x 6.40 m. The east wall of this extension was substantial and was exposed in a machine sondage to a depth of 2 m suggesting it also supported a significant structure above.
- 5.7 Area D**
- 5.7.1 Area D comprised a 1785 m² parcel of land (**Fig. 13**). Asbestos-bearing materials were found in several locations at the western edge of the area, and multiple diesel tanks were found on the northern edge. These areas were left unexcavated for health and safety reasons and it was agreed with David Hunter that we would leave the area to the north unexcavated due to the modern intrusions and risk of further contamination.



Warehouse

- 5.7.2 The mill warehouse survived as a large rectangular structure until 1831 (map not illustrated). By the time of the 1842 Ordnance Survey map the southern half had been demolished and the warehouse extended to the east (1379 etc). The remains of the southern end of the mill warehouse were excavated in Area D (2060). They were heavily truncated by modern drainage and a later structure (2065 etc) but showed a clear similarity in construction techniques to the other early mill buildings on site, with lime mortared handmade red-brick walls (2074 etc.) sat on top of sandstone foundations (2077 etc.).
- 5.7.3 There was also evidence of a brick-built drain (2107) with a stone capping (2108) running around the exterior of the warehouse.

Mill B

- 5.7.4 In the south west of Area D were a series of rectangular brick-built chambers (2200) running west to east that were enclosed on three sides by a brick- and stone-built drain (2204). It is possible though unlikely that drain 2204 instead represented a flue.
- 5.7.5 The structures (2200 and 2204) were truncated on their western edge by the foundations of the later Cooperative Society Garage buildings (2031, 2035 etc.) and by associated drainage (2030). A short section of drain or flue was excavated at the far western edge of the area (2045) beyond this disturbance. The construction materials and alignment suggest that drain 2045 was a continuation of the Mill B structures, indicating that the structural remains of Mill B once extended throughout the area of disturbance.
- 5.7.6 The purpose of the rectangular chambers (2200) is unclear. They consist of two skins of handmade brick wall bonded with a white lime mortar with a cavity 0.25 m wide between the skins (**Pl. 8**). The two skins were connected by bricks at regular intervals. The outer wall had occasional joist mortices indicating the floor level.
- 5.7.7 A small room (2222) with a flagstone floor (2226) to the south of these internal structures was in line with a series of smaller rooms visible on the southern edge of the Mill B building on historic mapping (not illustrated).
- 5.7.8 The centre of Area D was dominated by a complex rectangular structure (2412) representing several phases of building (**Fig. 14: Pl. 10**). The construction materials were similar to the Mill A remains seen in Area B being unfrogged brick and lime mortar. This structure was truncated along its eastern edge by the later bobbin and shuttle factory (2090), and on its northern and western edges by construction related to the mid-20th-century Cooperative Society Garage. Modern drainage and other later structures (2083 etc.) (possibly associated with the Garage) also cut the structure.
- 5.7.9 A chimney associated with Mill B to the north of structure 2412 was excavated during the evaluation phase (Trench 8:106: NAA 2018) but was not seen during these works due to the location of several diesel tanks.
- 5.7.10 The first phase of the central building 2412 comprised an 18 m-long brick vaulted passage (2292) running from west to east which was later partially bricked up (2304). Passage 2292 was similar to passage 1207 recorded in Area B although the two were not connected. Passage 2292 was overlain by later structures (2355 etc.).
- 5.7.11 The western end of the passageway (2274, 2275 etc) was mostly unmodified, with evidence of the brick vaulting surviving in places (2276). The passage had a flagstone floor (2271) which sloped up to an entrance point in the west and a single open bay on its northern edge



- (2284). This bay had a steep slope and appeared to have a similar form and function to those excavated in Area B, suggesting goods were loaded or unloaded at this point. The bay was flanked on its east and west by two brick platforms (2314 and 2310).
- 5.7.12 Further brick structures (2353, 2354 etc.) and a machine base (2074) represent a modification to passage 2292 and a change of use of the area. These structures comprised a brick-built platform built at the level of the top of the passage. Several voids in the platform were excavated revealing the line of the original passage 2292, 0.9 m beneath new floor surface and some of the bricks used to block it up (2366). Due to the nature of the later demolition and truncation of the structure 2412 its function within the mill is unclear. The machine base (2074) and the depth of the brickwork (more than 0.9 m in places) suggest that the platform may have needed to support a significant weight, perhaps providing a large base for several pieces of machinery.
- 5.7.13 The northern extent of complex rectangular structure 2412 consisted of a series of four protrusions (2362, 2357, 2340 and 2334) extending into a large (heavily truncated) room (2413) with a flagstone floor (2348). The room was at least 9.7 m long and 4.6 m wide with the northern wall (2413) constructed of lime mortared handmade brick. Due to the depth of deposits at the northern limit of excavation, this room (2143) was not entered due to health and safety concerns. The protrusions were between 1.57 m and 0.50 m wide and approximately 3 m long. They all had distinctive structural elements. The most westerly consisted of a brick-built platform (2363) with a large stone block (2289), possibly a machine fixing, to which a wrought iron bracket was attached (**Fig. 16: Section 4**). The second protrusion from west (2357) was the widest and had a structure (2060) comprising two brick-built chutes sloping from a central point 2.20 m from the body of complex rectangular structure (2412) (**Pl. 10**). Between the third (2340) and fourth (2334) protrusions were a series of three chutes (2337, 2338 and 2339) which were 0.35 m wide and fell 0.60 m over a distance of 0.40 m (**Fig. 17: Section 5**). These three chutes were constructed of firebricks which had been shaped to form a consistent slope and bonded with lime mortar. The use of firebrick and the discolouration on the chutes suggests that they carried hot materials from processes being undertaken above.
- 5.7.14 The south-east corner of the central mill structure 2412 was constructed on top of a large (1.70 m deep, 0.60 m wide) curved stone wall (2125). This curve follows that on the 1850 J Rapkin map (**Fig. 5**) denoting the northern end of a chamber at the far east of the main Mill B building (2412). The function of this large, semi-circular structure is unknown. The deposits seen within comprised rubble and levelling deposits (2414).

Drainage and water management

- 5.7.15 Further evidence of water management in Area D was a 3 m-deep circular stone-built chamber (2050). It had a dressed stone capping (2017) measuring 2 m x 2 m with a square opening approx. 0.65 m x 0.65 m. A handmade brick wall (2019) bonded with a white lime mortar was built on top of the stone forming an access point.
- 5.7.16 A brick-built channel consisting of two single skin brick walls 0.65 m apart (2052) with a flagstone base (2332) extended from mid-way up the west side of the chamber. The opening between the channel and the chamber had later been bricked up (2051). The channel was truncated at its western end by the insertion of both a stone culvert (2011) and cast-iron pipe (2019) (both 13 m in length and running north west to south east). Environmental samples taken from the channel (2052) showed multiple thin laminar deposits suggesting it was subject to multiple instances of slow-moving water flowing through it rather than being underwater for the duration of its use. It perhaps functioned as an overflow to the main well chamber.



- 5.7.17 A circular stone chamber (2050) was 1.80 m in diameter and 2.00 m deep. It was sat on top of a circular cast iron tank (**PI. 11**). This tank (2393) was 1.36 m high and 1.56 m in diameter. It had a 0.10 m wide rim around its top edge with regularly spaced holes (for rivets or bolts) and the base consisted of wooden planks with a 0.20 m diameter circular hole in the centre. A cast iron pipe (2415) extended through the central hole of the tank; various other pieces of pipework were recovered during the excavation suggesting that the chamber once served as part of a pumping mechanism. The chamber (2050) is first seen on maps from 1891 (**Fig. 6**) and the direction of the channel (2052) suggests it is associated with the engine house of the bobbin and shuttle works.
- 5.7.18 The southern edge of Area D lay alongside the Hol Beck, and much like in Area A, the area was crossed by various stone-built, stone-capped culverts directing water towards the beck (2010, 2007 etc).

Bobbin and shuttle factory

- 5.7.19 The centre of the area was dominated by the remains of one of the buildings associated with the Monk Bridge bobbin and shuttle factory. The excavated remains largely tie in with the structures visible on the 1891 OS map (**Fig 6**) and labelled on the 1901 Goad Fire Insurance plan (**Fig. 7**). They consist of a square white lime mortared stone-built engine and boiler house (2411) measuring 7.8 m long and 6.8 m wide to the south, connected by a 13.35 m long brick flue bonded with black ash mortar (2150) to a stone-built chimney bonded with lime mortar measuring 2.1 m long and 2 m wide (2145) to the north.
- 5.7.20 Structure 2411 consisted of a square stone-built walls 0.80 m wide and over 1.20 m high that enclosed an area 7.80 m long and 6.80 m wide. These stone walls housed a brick platform (2123) correlating with a steam boiler depicted on the 1901 Goad plan. The brick platform (2123) was bounded by a section of flue (2154 etc), a wheel pit (**Fig. 17: Section 6**) and associated iron fixings (2205 etc) and a stone machine mounting block (2165).
- 5.7.21 The wheel pit was a north south aligned channel 4.5 m long, 0.85 m wide and over 1.6 m deep at the western edge of the engine and boiler house 2411. Two arcs, 1.6 m across and 0.8 m deep, mirrored one another and were carved in wall 2170 and engine mounting block 2165 indicating the site of the wheel. Iron fixings (2205 etc) to the west of the wheel pit were situated in a smaller east west aligned channel (2108) 2.2 m long, 0.8 m wide and 0.48 m high.
- 5.7.22 The walls of the engine house and flue truncated the remains of Mill B (2412) to the west.

Industrial Cooperative Society Garage

- 5.7.23 The north and west of the area contained the remains of the mid-20th-century Industrial Cooperative Society Garage. This first appears on the 1951 OS map (**Fig. 8**) and was a sprawling warehouse complex covering the entirety of Area D.
- 5.7.24 A series of five parallel vehicle inspection pits (2031, 2035, etc.) were uncovered along the eastern edge of the area with evidence of four more continuing outside of the area of excavation. Two of these pits contained asbestos-bearing materials so the others were left unexcavated for health and safety reasons.
- 5.7.25 Three diesel tanks were uncovered at the northern limit of excavation, one was an imminent contamination hazard and was immediately removed by Sirius. The other two, along with a third in the south eastern corner of Area D, were left *in situ* and not excavated for health and safety reasons.



6 ARTEFACTUAL EVIDENCE

6.1 Introduction

- 6.1.1 The excavations at Marshall's Mills produced a finds assemblage of moderate size, which is entirely of post-medieval/modern date. It includes both domestic refuse and industrial waste and is primarily of 19th-/early 20th-century date with a few possibly earlier items. The presence of several groups of material representing the waste from various craft/industrial processes (pottery manufacture, metalworking, cutlery handle manufacture) is of interest, but a high proportion of the assemblage derived from made ground and backfill layers and may therefore not represent on-site use.
- 6.1.2 Finds from the evaluation of the Site (NAA 2017) are not included here. In general, the range of finds from the evaluation was echoed and expanded by those from the mitigation work. Cross-reference is made here to specific evaluation finds where appropriate.
- 6.1.3 All finds have been quantified by material type within each context; totals by material type are given in Table 2.

Table 2 Finds totals by material type

Material	No	Wt (g)
Pottery	339	11,698
Clay pipe	59	210
Stone	31	1015
Glass	110	2389
Slag	39	658
Metalwork	299	-
Synthetics	3	-
Leather	26	-
Wood	24	-
Worked bone	55	-
Animal bone	49	287
Shell	3	74

6.2 Pottery

- 6.2.1 The pottery assemblage amounts to 339 sherds, weighing 11,698 g. The whole assemblage is of post-medieval/modern date; the potential date range spans the period from 18th century onwards, but the likelihood is that with one or two exceptions all could be accommodated within the range of 19th–20th century.
- 6.2.2 The assemblage ranges in condition from good to poor. There is one whole complete vessel and a second complete but in fragments, as well as other small groups of conjoining sherds throughout the assemblage, but much of the assemblage is fragmentary. A small number of sherds show signs of slight burning or other discolouration. Mean sherd weight is 34.5 g, but this is skewed by the two complete vessels (large stoneware bottles); without these, the mean sherd weight falls to 20.3 g.
- 6.2.3 The assemblage has been quantified (sherd count and weight) by ware type within each context; Table 3 gives a quantified breakdown of the assemblage by ware type. Details of

identifiable vessel form (where known) and decoration have also been recorded. Estimated Vessel Equivalents (EVEs) have not been used as many of the rims have unmeasurable diameters; as an alternative means of quantification, the maximum Number of Vessels (MNV) has been used, counting each non-joining sherd as a separate vessel except where there is a high probability of a context containing same-vessel sherds (the fragmentation of the assemblage is reflected in the total MNV, which is 221). The level of recording accords with the 'basic record' advocated for the purpose of characterising an assemblage rapidly (Prehistoric Ceramics Research Group *et al* 2016, section 2.4.5). Table 4 summarises the data by context; full details are held in the project archive.

Table 3 Pottery totals by ware type

Ware type	No. sherds	Wt. (g)	MNV
Biscuit ware	13	143	9
Bone china	2	7	2
Buff/yellow ware	46	796	26
Creamware	8	39	6
English stoneware	7	119	5
Feldspathic-glazed stoneware	30	5958	9
Notts-type stoneware	4	39	4
Pearlware	130	2067	85
Porcelain	2	155	1
Redware	42	1879	33
Refined redware	1	4	1
Refined whiteware	53	486	40
Slipware	1	6	1
Total	339	11,698	221

Table 4 Pottery by context

Context	Ware	No.	Wt. (g)	MNV	Comments
1062	Redware	6	298	2	Black glazed; small bowl (flat rim)
1072	Buff/yellow ware	14	27	1	Banded blue & brown; prob all 1 vessel, incl rim & body (flared bowl)
1072	Pearlware	3	8	2	Cylindrical mug with banded dec; plain cup base
1072	Redware	1	2	1	Brown glaze, tiny body sherd
1072	Refined whiteware	9	6	2	Plain & hand-painted sherds, incl handle stump (cup/mug)
1073	Buff/yellow ware	1	109	1	Flared bowl with carinated base; banded dec
1154	Buff/yellow ware	1	16	1	Footring base
1154	creamware	2	13	1	Base
1155	Notts-type stoneware	1	8	1	Jug handle
1179	Redware	2	149	1	Convex dish with rolled-over rim; int black glaze
1189	Biscuit ware	10	121	7	Cylindrical (preserve?) Jars
1189	Bone china	1	5	1	Body sherd, lustre dec
1189	Buff/yellow ware	2	1	1	Body sherds, banded blue & white
1189	Notts-type stoneware	1	13	1	Body sherd
1189	Pearlware	3	15	1	Base, ?cup



Context	Ware	No.	Wt. (g)	MNV	Comments
1189	Porcelain	1	151		Telegraph insulator
1189	Redware	1	2	1	Black glaze, body sherd
1192	Biscuit ware	1	2	1	Tiny body sherd
1192	Buff/yellow ware	2	30	2	Base & banded body sherd
1192	Pearlware	4	4	4	Misc rim & body (1 hand painted)
1234	Buff/yellow ware	1	3	1	Body sherd
1234	creamware	2	3	2	Body sherds
1234	Notts-type stoneware	1	1	1	Body sherd
1234	Pearlware	8	47	8	3 plate rims with blue feathered edges; transfer-printed cup rim
1234	Redware	2	13	2	Black glaze, body sherds
1234	Refined whiteware	7	13	5	Transfer-printed & plain body sherds, incl cup/mug handle
1235	Bone china	1	2	1	Plain body sherd
1235	Buff/yellow ware	2	83	2	Cylindrical mug & flared bowl with banded dec
1235	Feldspathic-glazed stoneware	2	253	1	Large flagon with ochre-dipped top; carinated shoulder & handle stump
1235	Notts-type stoneware	1	17	1	Narrow tubular handle
1235	Pearlware	45	936	23	Transfer-printed polygonal jug & plates (1 Willow pattern); flared bowls & cylindrical mugs, with banded dec; chamberpot with hand painted dec and applied VR crown; plain chamberpot & jug handle; plates with blue feathered edges
1235	Redware	4	109	4	3 brown glazed body sherds; 1 unglazed ?flowerpot rim with traces of ?paint
1235	Refined whiteware	6	25	6	Misc body sherds, 1 with hand painted blue band
1238	English stoneware	2	31	2	Bowl rim; base
1238	Feldspathic-glazed stoneware	1	17	1	Bottle neck; iron-dipped top
1238	Feldspathic-glazed stoneware	1	21	1	Base of ribbed preserve jar
1238	Pearlware	9	66	7	Plates with blue feathered edges; transfer-printed plates & serving dish
1238	Redware				Brown glaze
1238	Redware	3	44	3	Brown/black glazed; upper part of ?bottle
1238	Refined whiteware	11	99	10	Transfer-printed mug; blue-glazed polygonal jug; cup base
1272	Buff/yellow ware	1	6	1	Body sherd, banded dec
1272	Redware	2	93	2	Body sherds, 1 with strap handle, black glaze, glaze over break on one sherd
1291	Pearlware	1	5	1	Plate body sherd
1349	Redware	2	202	2	Black-glazed; flared dish with flanged rim, and second base
1373	Refined whiteware	1	2	1	Transfer printed (purple)
1374	Redware	3	169	1	Thick-walled body sherds, prob all 1 vessel but non-joining; glazed both sides
1374	Slipware	1	6	1	Pale fabric; black glaze with yellow trailed slip (closed form)
1419	Buff/yellow ware	1	13	1	Jug rim & handle; banded dec
1421	Pearlware	3	14	3	Misc body & base sherds; banded & sponged dec



Context	Ware	No.	Wt. (g)	MNV	Comments
1421	refined redware	1	4	1	White int glaze; yellow /transfer printed ext
1421	Refined whiteware	3	18	2	Cylindrical mug with blue banded dec; red painted body sherd
1424	Redware	2	26	1	Joining body sherds; trailed slip dec; black glazed
2053	Redware	1	1	1	Small body sherd, brown glaze
2053	Refined whiteware	3	3	3	Body sherds, 2 green glazed
2122	Feldspathic-glazed stoneware	22	5272	2	2 cylindrical flagons, 1 complete & intact with ochre-dipped tops; carinated shoulders, shoulder handles; underglaze printed label on shoulder, of John Hollows of Leeds; one dated 1907; stamped marks of Pearson & Co of Chesterfield
2193	Buff/yellow ware	1	11	1	Jug rim, banded dec
2193	Feldspathic-glazed stoneware	1	217	1	Base of cylindrical jar/bottle, burnt
2193	Pearlware	1	28	1	Base of transfer-printed rounded cup
2194	Redware	1	8	1	Brown glazed teapot lid
2197	Buff/yellow ware	7	341	3	Convex bowl with flanged rim; sub rectangular pie dish with flanged rim; body sherd with blue sprigged dec
2197	Pearlware	6	231	5	Small plate with scalloped rim, transfer-printed, backstamp ETON COLLEGE; Willow pattern ?Dish base; misc plain & dec (transfer-printed, sponged) body & base sherds
2197	Redware	3	251	3	Internally white-slipped; flared bowl with flanged rim, manganese mottling
2197	Refined whiteware	2	45	2	Flared bowl with flanged rim, brown glazed
2201	Buff/yellow ware	4	94	4	Jug or teapot spout, plain; jug with banded & mocha dec; base of rectangular ?serving dish; transfer-printed body sherd
2201	English stoneware	1	25	1	Cylindrical bottle shoulder (unglazed int)
2201	Pearlware	3	32	1	Conjoining sherds, jug rim
2201	Pearlware	13	356	10	Transfer-printed bowl/chamber pot base & teapot lid; plates & convex bowl with sponged dec; blue banded body sherds
2201	Porcelain	1	4	1	Plate rim, blue dec
2201	Redware	3	287	2	Conjoining sherds, flared bowl with flanged rim, brown glaze int
2201	Redware	1	133	1	Flared bowl with flanged rim; pre-firing cross deeply incised on flange; brown glaze int
2201	Refined whiteware	8	221	6	Brown-glazed teapot/jug handle; flared bowls with mottled brown glaze; transfer-printed plate, and one with banded rim; plain saucer
2206	Biscuit ware	2	20	1	Body sherds from cylindrical vessel; underglaze stamped label GUARAN[TEED...]/ MA[DE] AT... (around trade mark)
2206	English stoneware	3	57	1	Top of cylindrical bottle, non-joining but prob all 1 vessel
2206	Feldspathic-glazed stoneware	3	178	3	Cylindrical ribbed preserve jar; plain body sherds body sherd from cylindrical vessel
2251	Buff/yellow ware	6	28	4	Flared bowl with carinated base, banded dec; body sherds from ?jug, banded dec; handle
2251	creamware	2	20	2	Cylindrical mug/jug base with handle stump

Context	Ware	No.	Wt. (g)	MNV	Comments
2251	English stoneware	1	6	1	Body sherd, Notts-type?
2251	Pearlware	11	86	9	Squat rounded jug with banded dec; transfer-printed body sherds (cup?); hand painted body sherds
2251	Redware	3	39	3	Brown glazed; bottle neck, brown glaze
2251	Refined whiteware	1	1	1	Transfer-printed (purple)
2294	Pearlware	1	18	1	Transfer-printed, convex cup
2294	Redware	1	36	1	Flagon rim with handle stump, brown glazed
2308	Buff/yellow ware	3	24	3	Flared bowls, 1 with flanged rim (plain), 1 with carinated base (banded dec)
2308	creamware	2	3	1	Non-joining but prob same vessel, footring base
2308	Pearlware	7	62	5	Transfer-printed cup; body sherds with banded dec
2308	Redware	1	17	1	Brown glazed, ?teapot
2309	Pearlware	12	162	4	Squat rounded jug with banded dec; cylindrical vessel, transfer-printed incorporating label SA... in rectangular cartouche; handle
2309	Refined whiteware	2	38	2	Hemispherical bowl with green banded dec; cylindrical mug with hand painted dec

- 6.2.4 Utilitarian redwares make up a small proportion of the assemblage (41 sherds). Most are brown- or black-glazed and these appear to derive mainly from bowls and dishes (flared or convex, with flanged rims) or bottles (either handled or not), glazed on the upper part of the body. There are also three sherds from large bowls (at least one with a flanged rim), white-slipped and glazed internally, and one unglazed rim, possibly from a flowerpot. All these vessels appear to be 18th-century or later rather than belonging to the earlier vernacular tradition and, given the known history of the Site, are more likely to date to the 19th or early 20th centuries.
- 6.2.5 Other utilitarian vessels (for food preparation and storage) are provided by stonewares. All are of English manufacture and include some possible Nottinghamshire-type wares (including a tubular pipkin handle and a jug handle). Some of these could be as early as 18th-century, but in all likelihood are 19th-century or later. Most of the stonewares, however, appear to belong to containers (cylindrical jars or bottles), and these are largely feldspathic-glazed, thus dating them after c. 1830, although a few are salt-glazed. The bottles include three large examples, all with carinated shoulders; they fall into the class of 'upright bottles' as illustrated in the 19th-century trade catalogues (see Green 1999, 362, 365). Two of these, one of which was found whole and intact, came from a single context (2122: a dump layer in the bobbin and shuttle factory) and are almost identical. Both carry underglaze printed labels on the shoulder identifying the bottles as belonging to John Hallow, 'botanical brewer' from Spring Mills, Water Lane, Leeds. One of the bottles also includes the date 1907 in the label; the other is just labelled as '6', which may mean 1906. Stamped marks on both bottles indicate that they were made by Pearson & Co of the Whittington Moor potteries near Chesterfield (Askey 1981, 170). Other feldspathic-glazed stoneware vessels include two ribbed cylindrical preserve jars of a type current in the later 19th and into the first decade of the 20th century before they were finally replaced by glass jars.
- 6.2.6 The date range of 19th-/20th-century suggested for the assemblage is supported by the almost complete absence of other wares that might be dated to the 18th century: there are no sherds of tinglazed earthenware or white salt glaze, and only eight sherds of creamware, which could all be late 18th-century or later, as could a single sherd from a porcelain plate

- (a second piece of porcelain is a telegraph insulator). Instead, the assemblage is dominated by factory-produced wares of 19th-/20th-century date: whitewares, pearlwares and buff/yellow wares, and the prevalence of pearlware over whiteware (see Table 4) suggests that the date range does not extend far beyond the end of the 19th century.
- 6.2.7 These factory-produced wares supplied tea- and tablewares (cups, saucers, plates, teapots), and also some kitchen bowls and chamber pots. These wares encompass a range of decorative styles, but particularly prominent are a number of vessels (flared bowls with carinated bases, jugs, cylindrical mugs) with banded slip decoration, sometimes including mocha motifs; these were supplied by both buff/yellow wares and pearlware. Slip decoration, which was popular throughout the 19th century, appeared on buff/yellow wares from the 1830s/1840s, and this period also saw the increased use of sponging with the introduction of cut sponges – a technique seen here on a small group of sherds (mainly from feature 2198). Transfer prints are also well in evidence, mostly in blue but also in brown, black and purple (brown was in use from the 1790s, and other new colours were introduced in the 1820s). There are at least two examples of Willow pattern (small plate from made ground 1235 and another flatware, possibly a serving dish, from backfill layer 2197), and another plate bears the backstamp ETON COLLEGE. This was a commonly used pattern produced by several manufacturers, including potters in Leeds and Ferrybridge (Coysh and Henrywood, 1989, 79). There are a few pearlware plates with blue feathered edges. The single sherd of refined redware probably belongs to a jug; this is internally white-slipped, and the exterior is decorated with a yellow transfer-printed design in a 'negative' effect; this is sometimes termed 'Portobello-style' due to a spurious link with a late 18th-century factory at Portobello near Edinburgh, but in fact the type was made at other locations, including Swansea and Staffordshire, in the early 19th century (Lewis 1987, 159).
- 6.2.8 Both chamber pots came from made ground 1235, and both are in pearlware. One is plain, while the second is elaborately decorated in blue (hand-painted stem/leaf design around the rim and foliage motifs around the body either side of an applied moulded crown between the letters V R, the main decorative zone defined by two narrow bands of annular reeding, also painted blue).
- 6.2.9 The occurrence of a few sherds (13) of unglazed biscuit wares is of some interest. These sherds had undergone the first (biscuit) firing but not the second (glost) firing. All sherds appear to belong to cylindrical containers; rim sherds from backfill 1189 are from preserve jars, and body sherds from dump layer 2206 carry an underglaze printed label: GUARAN[TEED...] / MA[DE] AT... While these sherds represent 'wasters' from pottery manufacture, it is more likely, given the small quantity, that they were introduced to the Site from elsewhere. The nearest known site of pottery manufacture was at Hunslet, some 2 km to the south-east (Leeds Pottery, also known as Hartley Greens & Co).
- 6.2.10 Overall, and apart from the few wasters, the assemblage gives the impression of relatively utilitarian domestic use, featuring a high proportion of 'kitchen wares' alongside readily (and cheaply) available plain and transfer-printed tea-/tablewares.
- 6.3 Clay tobacco pipe**
- 6.3.1 The assemblage of clay tobacco pipes totals 59 fragments, of which 50 are stem fragments (including three with bowl spurs), and nine are bowls or bowl fragments. Five pipes are decorated and there is one pipe with maker's marks. Datable pieces include nothing earlier than 19th-century. The condition varies, and several pipes appear discoloured (possibly through burning) and two pipes have lumps of slag/metal adhering. Table 5 lists the clay pipes by context.

Table 5 Clay pipes by context

Context	Stem	M'piece	Bowl	Bowl date	Marks	Dec	Additional Comments
1072	4		1			?RAOB	1 stem/spur; bowl frag, dec
1100	1						plain stem
1155	2		1	1820-40		floral	1 stem with burnt concretion; bowl has milled rim, and is slightly discoloured
1189	1						notably thick stem but narrow bore, burnt
1234	5	1			relief rosettes on spur		glazed mouthpiece; 1 stem/spur (spur marks)
1235	2		1	1840+			bowl slightly burnt/discoloured
1238	3						
1238	12	1					1 burnt
1272	1						
1373	3						
1374	6		2	1820-40		floral; Masonic	1 stem/spur; 1 bowl (discoloured)+ 1 bowl frag, both decorated
1424	2		1			Masonic	bowl fragment, dec
2053	2	1	2			Masonic	glazed stem frag from near mouthpiece; 2 bowl frags, 1 dec, 1 poss dec
2194	1						
2196	1						
2201			1	1820-40			
2294	1						

6.3.2 There are four datable bowls, all 19th-century. As is usual for this period, the bowls equate to London types (Atkinson and Oswald 1969, types 28 and 33). Two of these bowls (both of type 28, dating c. 1820–40) are decorated, both with floral designs (possibly roses) on both sides. There are four other decorated bowl fragments, three of which appear to represent parts of the same Masonic design, though on three separate pipes (see White 2004, fig. 148.11). The fourth fragment could be from a pipe featuring the insignia of the Royal and Ancient Order of Buffaloes. All four decorated fragments are likely to belong to type 28 pipes.

6.3.3 The only maker's mark present comprises paired rosettes as relief spur marks, on a stem/spur (lacking the bowl, but probably from a type 28) from made ground 1234.

6.4 Glass

6.4.1 The glass includes vessel and window fragments alongside objects and one small droplet of glass waste. All is of post-medieval/modern date, with a potential date range of late 17th century onwards, but with a focus in the 19th/20th century. A list of the glass by context is given in Table 6.

Table 6 Glass by context

Context	Type	No.	Wt. (g)	Additional Comments
1072	Object	1	1	Tiny fragment of solid rod (diam 5mm)
1072	Waste	1	1	Waste droplet
1072	Vessel	1	15	Post-med free-blown green bottle (onion?), late C17/early C18
1072	Window	2	3	Clear window
1073	Window	6	25	Window, dull greenish; poss deliberate scratching on 1 side?
1154	Window	2	4	Clear window (slight surface oxidisation)
1155	Window	2	135	Window: 1 clear (slight surface oxidisation); 1 crown 'bull's eye', blue/green
1189	Vessel	2	50	Vessel: 1 green beverage bottle (machine-made); 1 clear bottle neck (cork closure)
1189	Object	6	53	Fragments of hollow tubes (diam 18mm)
1189	Window	15	230	Clear window (slight surface oxidisation)
1192	Window	7	69	Clear window (slight surface oxidisation)
1235	Vessel	3	38	Vessel: 2 clear/aqua bodies; 1 pale blue/green cylindrical phial base
1238	Vessel	1	19	Rim/neck of pale blue bottle, top for cork closure (pharma?)
1238	Vessel	1	32	Aqua bottle frag, possibly Hamilton (torpedo)
1272	Window	2	147	Window: 1 clear (slight surface oxidisation); 1 crown 'bull's eye', blue/green
1373	Vessel	1	25	Post-med free-blown green bottle (C18)
1421	Window	1	2	Clear window
2002	Vessel	1	69	Base of thick-walled aqua bottle
2002	Window	3	302	Crown window 'bull's eye', blue/green
2122	Vessel	4	84	Vessel: 2 conjoining clear base, cylindrical bottle/jar; 1 clear bottle neck; 1 pale blue base, bottle/jar, embossed ...NOV...
2122	Window	36	806	Window: 22 clear slight surface oxidisation); 14 green frosted ('mayflower' design)
2197	Window	1	4	Clear window (slight surface oxidisation), edge
2197	Vessel	1	89	Base oval bottle, pale blue, machine-made
2201	Vessel	1	29	Olive beverage bottle, machine-made
2206	Object	6	71	Short lengths of tube (3 have flame-rounded ends); diam 12-17mm
2206	Vessel	2	7	Clear vessel frags
2309	Window	1	79	Crown window 'bull's eye', blue/green

Vessel glass

6.4.2 The vessels all appear to be containers (bottle and jars). The earliest of these comprise two fragments of free-blown green wine bottle. One of these (made ground 1373) is from a 'mallet' or 'cylindrical' form of 18th-century type, but the second fragment, from dump layer 1072, could be from an 'onion' form of late 17th-/early 18th-century date. There is one cylindrical phial base in pale blue/green glass, dating from the 18th or 19th century (made ground 1235). All other vessel glass consists of fragments of machine-made bottles/jars of 19th-/20th-century date, in clear, aqua or green glass. The only one on which any form of maker's mark was observed is a base in pale blue glass, embossed on the underside with the letters ...NOV... Function/contents therefore remain unknown, although beverage bottles are almost certainly represented (one fragment in aqua glass is likely to derive from a Hamilton, or torpedo, bottle). The rim/neck of one bottle in pale blue glass is of a type often used for pharmaceutical purposes. Other containers could have been used for



foodstuffs or other household goods. There is no evidence that any of the containers were used for anything other than domestic purposes.

Window glass

6.4.3 The window glass makes up around 70% of the total glass by fragment count (78 fragments). There are three main types. The majority comprises either clear (52 fragments) or green frosted (14 fragments) fragments which could well have belonged to one or more of the industrial buildings formerly on the Site. Thirty-six of these fragments came from dump layer 2122 inside the bobbin and shuttle factory. A further six fragments in a dull greenish glass from dump layer 1073 could also belong to this group; some regular (possibly deliberate) scratches were noted on these fragments.

6.4.4 Perhaps of more interest are the remaining six window fragments, which are of blue/green crown glass, and all from the central 'bull's eye' portion. Crown glass is made by gathering molten glass on a blowpipe and blowing a balloon shape; the blowpipe is then replaced by a pontil rod, and the glass spun to create a disc. The outer part of the disc is used to cut into separate panes, and the central thick 'bull's eye' discarded – in other words, these fragments appear to represent the waste from the manufacture of window quarries. There is no evidence for window glass manufacture on the Site, or even the cutting of blown crowns brought in for the final stage of preparation. Moreover, these fragments could have been dumped from elsewhere – three fragments came from made ground and three from overburden. Their date is also uncertain, although it seems likely, given the date range of the rest of the assemblage, that they date from the 19th century, at a time when crown glass production was largely obsolete. By this time, the only buildings that were still glazed in the more traditional way were churches or large civic buildings.

Objects

6.4.5 Objects comprise 12 fragments of glass tube (diameters 12–18 mm) and a tiny fragment from a thin, solid glass rod (diameter 5 mm). Two of the tube fragments have flame-rounded ends, but no complete lengths are present. These objects are assumed to have fulfilled some industrial function, either within the buildings formerly on the Site, or elsewhere.

6.5 Stone

6.5.1 Thirty-one pieces of worked stone were found. One is a part-cylindrical object (length 80 mm, width 19 mm) with both ends recessed, representing a part of some industrial mechanism. The other objects are all of a similar character; 29 are fragments of writing slate and the other is a slate pencil. The writing slates are incised with ruled lines or grids, and a few show traces of numbers and letters, and other inscribed (but illegible) graffiti. All these objects were found together in dump layer 1072, and a few have lumps of slag or metal adhering; they have the appearance of dumped redeposited waste.

6.6 Metalwork and metalworking residues

6.6.1 A total of 299 metal objects was recovered; this includes items of copper alloy, lead and iron, but also many pieces that are of indeterminate metal/metal alloy; all have been quantified together here. The condition is fair to poor; the ironwork in particular is corroded.

6.6.2 Despite the size of the metalwork assemblage there are few identifiable objects, and much of the assemblage comprises undiagnostic pieces of indeterminate function. Amongst the identifiable objects, most appear to represent either structural metalwork (masonry tie bars, bolts, nails etc) or objects related to the industrial use of the site. The latter include a cog wheel, a cast iron fire bar from a steam boiler, short lengths of tubing, washers, a possible zinc/carbon battery, rectangular cut slabs of cast iron or high carbon steel and a possible 7



lb weight. A group of 28 small cylindrical lidded canisters were found together in dump layer 2206 (two still contain some form of oily liquid), with two more from dump layer 2122 in the bobbin and shuttle factory.

- 6.6.3 A small amount (658 g) of slag was also recovered. This appears to comprise fuel ash slag and clinker rather than metalworking slag, and possibly represents the by-products of more than one pyrotechnical process.

6.7 Leather

- 6.7.1 The small assemblage of leather (26 fragments) includes parts of at least two shoes. A stacked heel, part of a nailed sole (from the pointed toe) and fragments of upper from a man's shoe came from backfill layer 1189; while the heel end of a smaller shoe, with fragments from the upper, were found in layer 1349. These could represent the footwear of workers on the site, or alternatively could have been brought in with other waste as hardcore/backfill. Other leather includes two strip fragments (possibly from a belt), and various undiagnostic fragments.

6.8 Wood

- 6.8.1 The 24 fragments of wood all appear to represent structural pieces. The most recognisable are two small rectangular blocks of the same size (200 x 135 x 35 mm), each with two chamfered edges (at right angles), and each with two circular drilled holes on the long axis, towards either end. One came from dump layer 2122 (in the bobbin and shuttle factory) and one from dump layer 2206; they are of unknown function. A rectangular plank fragment (340 x 110 x 25 mm) also came from layer 2122. Other pieces are more indeterminate and could derive from posts or frames of some kind.

6.9 Worked bone

- 6.9.1 The 55 pieces of worked bone recovered all came from a single context (dump layer 1072), and all belong to the same type of manufacturing waste. These are scale plates from knife handles, with a lenticular cross-section and elaborate incised and cross-hatched decoration. None are complete, and all of them show signs of heavy burning – they could have gone through an incinerator. Knife handles formed from riveted pairs of bone or antler scales, usually with incised decoration to improve the grip, are the most common form recovered from post-medieval and early modern assemblages of cutlers' waste. Scale tang handles were usual for table knives until the later 19th century (Unwin 2014, 124). Most of these scale plates were made from antler, although there are a few bone plates, most probably made from cattle metapodials. The latter were the favoured material for the manufacture of handle scales; after removal of the ends, narrow segments of bone were sawn off vertically in sections (*ibid.*, 126).
- 6.9.2 There is also a roughout for a handle, made from a cattle metapodial, from backfill layer 2193.
- 6.9.3 There is no evidence for cutlery (or handle) manufacture on the Site, but this small group of bone-working waste could have been brought in from elsewhere; this is particularly suggested by the burnt condition of the fragments, and their occurrence in a single context.

6.10 Animal bone

- 6.10.1 The identified animal bones are mostly from sheep/goat; they include several cervical vertebrae, ribs and a few long bones, some of which show signs of butchery. The cuts of meat that these bones represent include scrag end which is often used in soups and stews,



chops and shank. The other bones include a few from pig, rabbit and chicken. Twelve bones from a cat were also found in layer 2194.

6.11 Shell

- 6.11.1 Three shells were recovered: two oyster and one cockle. Both oyster shells are right valves, one of which shows an infestation. While the oyster could have been used as raw material (eg for button manufacture), it is likely that this very small quantity of shell represents consumption waste.

6.12 Conservation

- 6.12.1 Objects in potentially unstable condition, and therefore possibly in need of conservation treatment, comprise the metalwork, leather and wood. The ironwork in particular is in poor condition and heavily corroded. The metalwork is currently packed in as stable a condition as possible, in airtight polythene tubs with drying agent (silica gel). The leather is packed waterlogged, in airtight plastic tubs, and kept in dark conditions. The wood is packaged according to condition: dry pieces in airtight containers with buffering silica gel; wet pieces kept damp, double-wrapped and stored in dark conditions.

7 ENVIRONMENTAL EVIDENCE

7.1 Introduction

- 7.1.1 Nine bulk sediment samples were taken from a range of Industrial, 18th and 19th century features such as pits, fills, channels and a possible fireplace and were processed for the recovery and assessment of the environmental evidence. A sample of laminated sediments, taken from a post-medieval brick-lined channel, was described to allow assessment of site formation processes.

7.2 Aims and methods

- 7.2.1 The purpose of this assessment is to determine the potential of the environmental remains preserved at the site to address project aims and to provide data valuable for wider research frameworks. The nature of this assessment follows recommendations established by Historic England (Campbell *et al.* 2011).

Macrofossils

- 7.2.2 The size of the bulk sediment samples varied between five and ten litres, and on average was around eight litres. The samples were processed by standard bucket flotation methods; the flot retained on a 0.25 mm mesh, residues fractionated into 5.6 mm and 1 mm fractions. The coarse fractions (>5.6 mm) were sorted by eye and discarded. The environmental material extracted from the residues was added to the flots. The fine residue fractions and the flots were scanned using stereo incident light microscopy (Leica MS5 microscope) at magnifications of up to x40 for the identification of environmental remains. Different bioturbation indicators were considered, including the percentage of roots, the abundance of modern seeds and the presence of mycorrhizal fungi sclerotia and animal remains, such as earthworm eggs and insects, which would not be preserved unless anoxic conditions prevailed on site. The preservation and nature of the charred plant and wood charcoal remains, as well as the presence of other environmental remains such as terrestrial and aquatic molluscs, animal bone and insects (in cases of anoxic conditions for their preservation), was recorded. Abundance of remains is qualitatively quantified (A*** = exceptional, A** = 100+, A* = 30-99, A = >10, B = 9-5, C = <5) as an estimation of the minimum number of individuals and not the number of remains per taxa.



Sediments

- 7.2.3 The sediment sample was cleaned prior to recording and standard descriptions were used (following Hodgson 1997 and Troels-Smith 1955), including Munsell colour, texture, structure and nature of boundaries (see **Appendix 2**). The results were tabulated to show the thickness of the units rather than the depth and are included in the appendix.

7.3 Results

Macrofossils

- 7.3.1 The flots from the bulk sediment samples are generally small except for one sample (fill 2218) which is 277 ml (**Appendix 3**). There are low numbers of roots and varying numbers of modern seeds that may be indicative of some stratigraphic movement and the possibility of contamination by later intrusive elements. No organic evidence preserved by waterlogging was observed.
- 7.3.2 Only the sample taken from fill 2218 has any charred plant remains within it, which is a well-preserved fragment of a tuber of indeterminate taxon. Wood charcoal has been noted in generally small quantities. Remains of terrestrial molluscs are also present in one sample taken from the channel 2052. No other environmental evidence was preserved in the bulk sediment samples however there is slag, coal, and clinker present in most of the samples, and also hammerscale in pit fill 2097, indicative of human activity.

Sediments

- 7.3.3 The sediment sample shows a sand deposit overlain by a series of laminated silts, which is then overlain by a homogeneous deposit of silty clay.

7.4 Discussion

Macrofossils

- 7.4.1 As this site was an industrial site, the lack of charred plant remains and therefore lack of environmental evidence originating from domestic processing activities is not unexpected. The site was in use as a flax mill and while this would suggest that flax remains could be expected, the lack of them could be due to the absence of waterlogged deposits which would allow for the preservation of uncharred organic evidence but also to the processes that took place in the locations that the samples were taken from: if they focused on the spinning process, the earliest stages of linen production (the ones producing the bulk of flax processing by-products) could have been undertaken elsewhere. The single tuber of indeterminate taxon, although well preserved, was unidentifiable even to family and cannot further our understanding of the site environment or site use. The fact that there are only small amounts of charcoal present in the samples, could be indicative of processes taking place in the mill that required no access to heat or fire and in turn no opportunity for charcoal remains to be left behind in the archaeological record except for the small amounts of wood charcoal in the samples. These, as well as the coal and clinker, could be residual in the floors or have been blown from the fireplace that was identified during the excavation.

Sediments

- 7.4.2 The channel that the sediment sample was taken from is located around 15 m north of the Hol Beck and around 150 m south of the River Aire. The superficial deposits in this area are alluvial clay, silt, sand and gravel (BGS online viewer 2019). The laminations present in the sample are indicative of low energy periodic deposition. It is assumed that this resulted from either inflow or overflow of the associated well (2017). Thus, the sample is an example of water management on an industrial site, possibly from the 18th century.



8 STATEMENT OF POTENTIAL

8.1 Stratigraphic potential

- 8.1.1 The stratigraphy has been subjected to a high level of examination; there is limited scope for further analysis.
- 8.1.2 The current understanding of the site stratigraphy meets several of the original project aims and research objectives including;
- *to establish, as far as possible, the extent, stratigraphic sequence and date of archaeological structures, surfaces, equipment, features, and deposits occurring within the excavation area;*

8.2 Finds potential

Evidence for industrial activity

- 8.2.1 There are elements of interest amongst the finds assemblage in the form of manufacturing waste from various processes: pottery making, the cutting of crown window glass and the manufacture of bone knife handles. No documentary evidence has been found to support any of these activities on the site. However, it is uncertain whether any of this material resulted from on-site production of any kind – in fact, it seems more likely, given the small quantities, that it was incorporated into waste redeposited on the site as backfill and made ground. This is probably also the case from the small dump of school writing slates. The research potential of all these finds is strictly limited.
- 8.2.2 Other finds relating to the industrial buildings include window glass and small parts of structural timbers. The metalwork includes a fire bar from a steam boiler, a cog wheel and a possible steam bar, as well as a series of small canisters possibly containing lubricant, and a group of small rectangular cut slabs of cast iron or high carbon steel. None of these can be related to specific industrial processes and again, most finds appear to have been redeposited. There may also be other more generic structural ironwork (nails, hinges, etc) amongst the ironwork. Again, the research potential here is limited.

Domestic refuse

- 8.2.3 As for the other finds, a domestic component is certainly present, and a concentration of this material was noted in the centre of the site during evaluation, where it was tentatively interpreted as the site of a caretaker's or overseer's cottage (NAA 2017). Pottery suggests that this domestic activity was fairly utilitarian, with few pretensions to gentility. Some of the domestic refuse could also relate to workers at the industrial works, such as leather shoes, clay tobacco pipes and a few other personal items.
- 8.2.4 The leather shoes warrant a more detailed specialist catalogue and a brief comment, but overall this part of the assemblage has very limited further potential, by virtue of the small quantities involved, and their redeposited provenance.

8.3 Environmental potential

Macrofossils

- 8.3.1 The macrofossil assemblages recovered have little potential and require no further analysis. No retention of any of the environmental material is recommended.

Sediments

- 8.3.2 Although we can assess formation processes, the composition of the sediments within the sample is such that further assessment is not advisable. Due to both the rationale for the sample and the minerogenic nature of the sediments, no further work is recommended on this sample and it is proposed for discard.

8.4 Summary of potential

- 8.4.1 The original aims and research objectives, as detailed in the WSI (Wessex Archaeology 2018) were:

Aims

- *to examine the archaeological resource within a given area or site within a framework of defined research objectives;*
- *to seek a better understanding of the resource;*
- *to establish the presence or absence of archaeological remains within the excavation area;*
- *to establish, as far as possible, the extent, stratigraphic sequence and date of archaeological structures, surfaces, equipment, features, and deposits occurring within the excavation area;*
- *to establish the nature of the activities and processes that occurred in different parts of the site during the various periods or phases of its occupation, with particular regard to the Marshall's mill buildings and yards;*
- *to retrieve material evidence for social, economic and industrial activity;*
- *to recover palaeoenvironmental remains from sub-surface deposits;*
- *to compile a lasting record of the resource; and,*
- *to analyse and interpret the results of the excavation and disseminate them.*

Research objectives

- *to ensure that any archaeological features discovered by the excavation are identified, sampled and recorded;*
- *to recover and identify any artefacts associated with archaeological deposits;*
- *to ensure that any deposits with the potential to yield palaeoenvironmental data are sampled and submitted for assessment to the appropriate researchers;*
- *to ensure that no excavation or other physical disturbance occurs outside the agreed area of investigation;*
- *to undertake a programme of investigation that meets with national standards;*
- *to prepare a post-excavation report on the results of the fieldwork to be provided to the client, to WYAAS, and to be deposited with the West Yorkshire Historic Environment Record and the Historic England Archive;*



- *to prepare an ordered archive for deposition with an appropriate museum (Leeds Museums);*
 - *to make the results of the archaeological work available via the OASIS scheme/Archaeology Data Service; and,*
 - *to inform decisions regarding requirement for any further archaeological mitigation at the site.*
- 8.4.2 The archaeological works undertaken at Marshalls Mills have examined the archaeological resource within the context of the above aims and research objectives. Excavations have determined, as far as possible, the extent, stratigraphic sequence and date of archaeological structures, surfaces, equipment, features, and deposits occurring within the excavation area.
- 8.4.3 The Mill structures excavated on site mostly represented below ground remains and were highly truncated by later development. As such we have been unable to establish the nature of the activities and processes that occurred in different parts of the site during the various periods or phases of its occupation, with particular regard to the Marshall's mill buildings and yards; other than that indicated in the documentary evidence. Any evidence for flax processing had been removed by demolition.
- 8.4.4 Material evidence was recovered from across the site adding a little to our understanding of the social, economic and industrial activity taking place. However most artefacts were recovered from demolition or backfill material and as such were most likely brought on to site from elsewhere leaving no potential for further analysis to add to our understanding of the activity taking place.
- 8.4.5 The lack of plant macrofossil evidence for flax is likely due to the absence of suitable waterlogged deposits which would allow for the preservation of uncharred organic evidence. The lack of plant macrofossil remains and therefore lack of environmental evidence originating from domestic processing activities is not unexpected on an industrial site. As such there is little potential for further analysis of the environmental samples.
- 8.4.6 The inclusion of hammerscale in an environmental sample of deposit 2097 is interesting but due to the nature of the surrounding levelling material it is most likely that this was intrusive and not indicative of processes occurring at the site.

9 UPDATED PROJECT DESIGN

9.1 Summary of recommendations for analysis

- 9.1.1 The leather footwear should be submitted for specialist cataloguing and brief comment on the styles of shoe represented.
- 9.1.2 No further work is proposed for any other finds categories.

Conservation

- 9.1.3 On the basis of the condition of the metal objects, their nature, date range and provenance, no conservation work in terms of cleaning and/or stabilisation is proposed. Archive photography is recommended for identifiable metal objects. These photographs will act as a basic record for the metalwork, for which selective retention is proposed: see below, **Storage and Curation**).



9.1.4 No further conservation treatment is proposed for the leather or wooden objects, and these items are not recommended for retention (see below, **Storage and Curation**); the catalogue will form the archive record, together with archive photography of the leather footwear, and of the worked wood.

9.2 Updated project aims

9.2.1 The significance and potential of the archaeology of West Yorkshire has been addressed through the publication of the West Yorkshire Archaeology Advisory Service Research Agenda - Industrial Archaeology (Gommersall 2005). This has been consulted in order to identify any research goals to which the excavated data may usefully contribute. The following works were also consulted:

- English Heritage 2010 English Heritage Thematic Research Strategies: a thematic research strategy for the historic industrial environment. Swindon, English Heritage
- Palmer, M 2005 Understanding the Workplace: A Research Framework for Industrial Archaeology in Britain, *Industrial Archaeology Review*, 27:1, 9-17

9.2.2 No research goals that the excavated data could usefully contribute to were identified.

9.3 Proposals for publication

9.3.1 Due to the extent of modern development on the site, the results of the excavation do not greatly contribute to our understanding of the development or industrial processes of flax production along the Hol Beck. The value of the results is primarily due to the historic significance of the Marshalls A and B Mills as the first integrated flax mill in Leeds. The importance of the results is commensurate with a brief round-up of the work to be published in a regional journal such as FORUM Yorkshire, the journal of CBA Yorkshire.

Provisional synopsis of publication

Working title: *Marshall's Mills; Industrial Flax Production in Leeds*

by Emily Eastwood, with specialist contributions by Lorraine Mepham and Inés López-Dóriga.

Introduction	1200 words
Results	2800 words
Finds and environmental reports	2800 words
Discussion	2800 words

Total: approximately 9600 words, 10 figures, 10 plates, 3 tables

9.4 Programme for analysis and publication

9.4.1 Analysis and publication will only commence when this document and the proposals therein have been approved by the WYAAS' Senior Archaeologist, David Hunter, on behalf of the Local Planning Authority, and the work has been commissioned in full by ECUS Ltd, on behalf of CEG.

9.4.2 Typically, the analysis and publication programme for a project of this scale and complexity will take around nine months but will vary depending on the availability of specialists and

external laboratories. A project-specific programme will be developed and agreed at the time of commission.

9.5 Personnel and resources

9.5.1 The following Wessex Archaeology core staff are scheduled to undertake the work as outlined in the task list for post-excavation analysis and publication (**Table 3**).

Table 7 Task list

Task no.	Task description	Days	Staff
Management and support			
1	Project management	2	M. Rajic
2	Project monitor and QA	2	P Daniel
3	Finds management	1	L Mepham
Analysis and specialist reporting			
<i>Finds</i>			
4	Leather catalogue and commentary	1	Q Mould
5	Archive photography: metalwork, leather and wood	1	J Crangle
Report compilation (journal article)			
6	Introduction and background	1	E Eastwood
7	Compile and integrate report	3.5	E Eastwood
8	Discussion	3.5	E Eastwood
9	Bibliography	1	E Eastwood
10	Captions (figures, plates and tables)	1	E Eastwood
11	Illustrations	4	I Atkins
12	Review article	1.5	P Bradley
13	Edit article	2	P Bradley
14	Text and figure corrections	2	E Eastwood, I Atkins
15	Copy edit	1	P Bradley
16	Revise article following journal review	2	E Eastwood, I Atkins
17	Journal liaison	0.5	P Bradley
18	Distribution of offprints/pdfs	0.5	P Bradley
19	Check proofs	5	P Bradley, E Eastwood, L Mepham, I López-Dóriga, M. Rajic
Archiving			
20	Physical archive preparation	3	L Ainscough
21	Digital archive preparation	3	L Ainscough
22	Finds selection policy finalisation and implementation	1	J Irwin, L Ainscough
23	ADS deposition costs	£500	
24	Archive deposition	1	PA
25	Museum box storage grant	£540	

9.6 Management structure

9.6.1 Wessex Archaeology operates a project management system. The team will be headed by a Project Manager, who will assume ultimate responsibility for the implementation and execution of the project specification as outlined in the Updated Project Design, and the achievement of performance targets, be they academic, budgetary, or scheduled.



9.6.2 The Project Manager may delegate specific aspects of the project to other key staff, who will both supervise others and have a direct input into the compilation of the report. They may also undertake direct liaison with external consultants and specialists who are contributing to the publication report, and the museum named as the recipient of the project archive. The Project Manager will have a major input into how the publication report is written. They will define and control the scope and form of the post-excavation programme.

9.6.3 The Project Manager will be assisted by the Senior Research Manager and the Senior Publications Manager, who will help to ensure that the report meets internal quality standards as defined in Wessex Archaeology's guidelines.

10 STORAGE AND CURATION

10.1 Museum

10.1.1 The archive resulting from the excavation is currently held at the offices of Wessex Archaeology in Sheffield. Leeds Museums and Galleries has agreed in principle to accept the archive on completion of the project, under an accession code to be determined. Deposition of any finds with the museum will only be carried out with the full written agreement of the landowner to transfer title of all finds to the museum.

10.2 Preparation of the archive

Physical archive

10.2.1 The complete physical site archive, which will include paper records, graphics, artefacts and ecofacts, will be prepared following the standard conditions for the acceptance of excavated archaeological material by Leeds Museums and Galleries, and in general following nationally recommended guidelines (SMA 1995; Brown 2011; ClfA 2014b).

10.2.2 All archive elements will be marked with the accession code, and a full index will be prepared. The physical archive currently comprises the following:

- 11 cardboard boxes or airtight plastic boxes of artefacts and ecofacts, ordered by material type
- 3 files/document cases of paper records and A3/A4 graphics

10.2.3 The archive quantities, particularly for finds, will reduce significantly following implementation of the proposed selection policy (see below).

Digital archive

10.2.4 The digital archive generated by the project, which will include born-digital data (survey data, databases and spreadsheets, photographs and reports), will be deposited with the Archaeology Data Service (ADS) to ensure its long-term curation. Digital data will be prepared following ADS guidelines (ADS 2013 and online guidance) and accompanied by full metadata.

10.3 Selection policy

10.3.1 Wessex Archaeology follows national guidelines on selection and retention (SMA 1993; Brown 2011, section 4), with the aim of retaining only those finds which are considered to have further research potential, or which fulfil other criteria within the Museum's collecting policy.



10.3.2 In this instance, the following selection policy is proposed, which is heavily influenced by the small size of the assemblage, the general poor condition of many items, and the largely redeposited provenance:

- Pottery: a relatively small assemblage, fragmentary, and primarily utilitarian, but some further research potential as a supplement to the existing dataset for Leeds. Retain all.
- Clay tobacco pipes: small assemblage, in poor condition, with few datable pieces; little further research potential. Retain none.
- Glass: small assemblage, fragmentary, but with some items indicative of industrial processes (crown window glass, tube fragments), and therefore with some limited research potential; retain these items only (maximum 18).
- Stone: very small assemblage, apparently completely anomalous to use of Site (school slates). Little or no further research potential. Retain none.
- Metalworking residues: very small assemblage, undiagnostic of specific processes; no further research potential. Retain none.
- Metalwork: relatively large assemblage, mostly ferrous and in poor, corroded condition, vulnerable to further deterioration. Few identifiable objects; none of which are diagnostic of specific industrial processes. Little further research potential. Retain selection of identifiable objects only (maximum 50).
- Leather: small assemblage, waterlogged (and therefore unstable); little further research potential; retain none.
- Wood: small assemblage, waterlogged (and therefore unstable); little or no further research potential. Retain none.
- Worked Bone: small assemblage, of some interest in illustrating industrial process (although not necessarily related to the Site); some further research potential as addition to dataset for Leeds. Retain all.
- Animal Bone: very small assemblage; no further research potential; retain none.
- Marine Shell: very small assemblage; no further research potential; retain none.

10.3.3 The selection policy will be agreed with the museum and will be fully documented in the project archive. All finds already have been, or will be, recorded to an appropriate archive level before any selection procedure is implemented.

10.4 Security copy

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



10.5 OASIS

- 10.5.1 An OASIS online record (<http://oasis.ac.uk/pages/wiki/Main>) has been initiated, with key fields and a .pdf version of the final report submitted. Subject to any contractual requirements on confidentiality, copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service ArchSearch catalogue.

11 COPYRIGHT

11.1 Archive and report copyright

- 11.1.1 The full copyright of the written/illustrative/digital archive relating to the project will be retained by Wessex Archaeology under the *Copyright, Designs and Patents Act 1988* with all rights reserved. The client will be licenced to use each report for the purposes that it was produced in relation to the project as described in the specification. The museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use conforms to the *Copyright and Related Rights Regulations 2003*. In some instances, certain regional museums may require absolute transfer of copyright, rather than a licence; this should be dealt with on a case-by-case basis.
- 11.1.2 Information relating to the project will be deposited with the Historic Environment Record (HER) where it can be freely copied without reference to Wessex Archaeology for the purposes of archaeological research or development control within the planning process.

11.2 Third party data copyright

- 11.2.1 This document and the project archive may contain material that is non-Wessex Archaeology copyright (eg, Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which Wessex Archaeology are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferable 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 such material



REFERENCES

- ADS 2013 *Caring for Digital Data in Archaeology: a guide to good practice*. Archaeology Data Service and Digital Antiquity Guides to Good Practice
- Askey, D 1981 *Stoneware Bottles from Bellarmine to Ginger Beers 1500–1949*, Brighton: Bowman Graphics
- British Geological Survey online viewer <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> (accessed 04/2019)
- Brown, D H 2011 *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (revised edition). Archaeological Archives Forum
- CIfA 2014a *Standard and Guidance for Archaeological Excavation*. Reading, Chartered Institute for Archaeologists
- CIfA 2014b *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*. Reading, Chartered Institute for Archaeologists
- CIfA 2014c *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*. Reading, Chartered Institute for Archaeologists
- Coysh, A W and Henrywood, R K 1989 *The Dictionary of Blue and White Printed Pottery 1780–1880 Volume II*, Woodbridge: Antique Collectors' Club
- English Heritage 2011 *Environmental Archaeology: a guide to theory and practice of methods, from sampling and recovery to post-excavation*. Swindon, Centre for Archaeology Guidelines
- English Heritage 2010 English Heritage Thematic Research Strategies: a thematic research strategy for the historic industrial environment. Swindon, English Heritage
- Green, C 1999 *John Dwight's Fulham Pottery: excavations 1971–79*, English Heritage Archaeol Rep 6
- Lewis, G 1987 *A Collector's History of English Pottery*, Woodbridge: Antique Collectors' Club
- McKinley, J I 2013 Cremation: excavation, analysis, and interpretation of material from cremation-related contexts in S Tarlow and L Nilsson Stutz (eds) *The Oxford Handbook of the Archaeology of Death and Burial*, 147–171. Oxford University Press
- McKinley, J I and Roberts C 1993 *Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains*. Reading. CIfA Technical Paper 13
- Northern Archaeological Associates 2017 *Marshall's Mill, Holbeck, Leeds, West Yorkshire, Archaeological Evaluation Draft Report*. Unpublished report ref. NAA 17/12
- Palmer, M 2005 Understanding the Workplace: A Research Framework for Industrial Archaeology in Britain, *Industrial Archaeology Review*, 27:1, 9-17
- Prehistoric Ceramics Research Group, Study Group for Roman Pottery and Medieval Pottery Research Group, 2016 *A Standard for Pottery Studies in Archaeology*



SMA 1993 *Selection, Retention and Dispersal of Archaeological Collections*. Society of Museum Archaeologists

SMA 1995 *Towards an Accessible Archaeological Archive*. Society of Museum Archaeologists

Unwin, J 2014 The versatility of bone, ivory and horn – their uses in the Sheffield cutlery industry, *Anthropozoologica* 49, 121–32 (accessed online 20 August 2019:
<http://sciencepress.mnhn.fr/sites/default/files/articles/pdf/09-az2014n1a09-unwin.pdf>)

Wessex Archaeology 2019 *Written Scheme of Investigation for Marshalls A&B Mills, Globe Road, Leeds*. Unpublished report ref. 2018



APPENDICES

Appendix 1: Context descriptions

Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
1001			Surface	Tarmac			Layer of tarmac on the surface of phase 1
1002			Made Ground				Brick Rubble
1010			Wall	Same as 1013			Sandstone wall with lime mortar
1011			Wall				Red Brick Wall with lime mortar
1012			Surface	bedding for 1013			yellowish brown clay with lime mortar
1013			Foundation	Foundation for 1014			Sandstone foundation with lime mortar
1014			Wall				Red Brick wall with lime mortar
1015			Wall	Internal wall between 1014 and 1016			Red Brick wall with lime mortar
1016			Wall				Red Brick wall with lime mortar
1017			Wall	Internal wall between 1014 and 1016			Red Brick wall with lime mortar
1018			Wall	Fronting or internal wall			Red Brick wall with lime mortar
1019			Wall	Internal wall			Red Brick wall with lime mortar
1020			Surface	path or yard			Sandstone flags with lime mortar
1021	1082	1082	Wall	Internal wall	Construction cut		Red Brick wall with lime mortar
1022			Made Ground	Levelling layer			Greyish sand with gravel and brick
1023			Dump layer				Blackish Brown sand with gravel and mortar
1024			Made Ground	Levelling layer			Blackish brown sand with gravel and mortar
1025	1033	1034	Drain	Drain walls	Construction cut	E-W Drain	Red Brick with lime mortar
1026	1033	1034	Capstone	capping for drain 1034	Construction cut	E-W Drain	Sandstone flags
1027		1085	Wall	outer wall of 1085		Out building to the east	Red Brick wall with lime mortar
1028		1085	Wall	interior wall		Out building to the east	Red Brick wall with lime mortar
1029		1085	Made Ground	levelling layer		Out building to the east	Greyish Brown Silty sand with charcoal and gravel
1030			Surface	possible floor same as 1031			Yellowish Brown sand with charcoal and brick fragments
1031			Surface	possible floor same as 1030			Yellowish brown sand with charcoal and brick fragments
1032			Pier	two plinths			Red Brick with lime mortar
1035	1033	1034	Secondary fill	silt layer in drain 1034	Construction cut	E-W Drain	Brown silty clay
1036			Drain	Modern Drain cutting 1034			Red Brick and ceramic drain pipe, surrounded by a concrete block
1037		1039	Channel	Lining of a large culvert		Large culvert running across site	Fire brick culvert lining
1038		1039	Capstone	Capping for culvert 1039		Large culvert running across site	Thick sandstone blocks



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
1040			<i>Foundation</i>	footings for modern factory building			Red Brick with cement
1043	1042	1041	<i>Drain</i>	Drain lining and inlet	<i>Construction cut</i>	Drain running into culvert 1039	Red brick bonded with black clay, an iron grate sits atop the inlet
1044	1042	1041	<i>Capstone</i>	Capping for drain 1041	<i>Construction cut</i>	Drain running into culvert 1039	Sandstone blocks
1045			<i>Foundation</i>	foundation for 1066, same as 1065			sandstone block
1046			<i>Made Ground</i>	levelling layer for 1020			Blackish Brown sand with gravel
1047			<i>Wall</i>	External South wall of the eastern building			Red Brick wall with lime mortar
1048			<i>Wall</i>	Internal wall			Red Brick wall with lime mortar
1049			<i>Wall</i>	wall running off 1047			Red Brick wall with lime mortar
1050			<i>Wall</i>	Internal wall			Red Brick wall with lime mortar
1051			<i>Wall</i>	wall between 1049 and 1050			Red Brick wall with lime mortar
1052			<i>Made Ground</i>	Levelling layer			Grey Black ash and sand
1053			<i>Made Ground</i>	Levelling layer			Grey black ash and sand
1054			<i>Pier</i>	2 buttresses supporting 1055			Red Brick wall with lime mortar
1055			<i>Wall</i>	Internal wall between 1047 and 1066			Red Brick wall with lime mortar
1056			<i>Pier</i>	2 buttresses supporting 1055			Red Brick wall with lime mortar
1057			<i>Wall</i>	Internal wall			Red Brick wall with lime mortar
1058			<i>Pier</i>	Buttress supporting 1049			Red Brick wall with lime mortar
1059			<i>Wall</i>	Internal wall			Red Brick wall with lime mortar
1060			<i>Wall</i>	Internal wall			Red Brick wall with lime mortar
1061			<i>Made Ground</i>	layer capping 1062			Black clay with lime mortar
1062			<i>Made Ground</i>				Brown silty clay with brick and sandstone
1064	1063	1063	<i>deliberate backfill</i>	Backfill around 1066	<i>Construction cut</i>		Brown clay with brick fragments and lime mortar
1065	1063	1063	<i>Foundation</i>	foundation for 1066, same as 1045	<i>Construction cut</i>		Sandstone slabs with lime mortar
1066	1063	1063	<i>Wall</i>	External northern wall of the eastern building	<i>Construction cut</i>		Red Brick wall with lime mortar
1068	1067	1067	<i>deliberate backfill</i>		<i>Robber trench</i>		Grey Brown silty clay with brick fregments and lime mortar
1069		1085	<i>Wall</i>	Internal wall		Out building to the east	Red Brick wall with lime mortar
1071		1085	<i>Surface</i>	Floor within 1085		Out building to the east	Limestone flags
1072			<i>Dump layer</i>	Abandonment layer			Greyish Brown silty clay with charcoal and gravel
1073			<i>Dump layer</i>	Abandonment layer			Greyish brown silty clay with charcoal and gravel
1074			<i>Natural</i>	Natural alluvium, same as 1003			Yellow sandy clay
1075			<i>Surface</i>	cobbled surface			Cobbles



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
1076	1103	1103	Made Ground	Levelling layer	Construction cut		Yellow sand
1077	1103	1103	Foundation	Possible foundation	Construction cut		Sandstone slabs
1078			Made Ground	Levelling layer			Black Red ash with brick and lime mortar
1079			Made Ground	bedding for 1021			Green brown clay with brick and stone
1080	1083	1034	deliberate backfill		Construction cut	E-W Drain	Grey black ash
1081	1083	1034	Made Ground		Construction cut	E-W Drain	Green Brown Clay
1084			Staircase	Entrance steps for outbuilding			Red brick with lime mortar
1086	1087	1087	deliberate backfill		Construction cut		Brown loam with slate
1088	1087	1087	Pier	Buttress for 1090	Construction cut		Red brick with lime mortar
1089	1087	1087	Pier	Buttress for 1090	Construction cut		Red Brick with lime mortar
1090	1087	1087	Flue	Large curving flue	Construction cut		Red brick with lime mortar
1091			deliberate backfill				Grey Black ash with mortar and brick
1092	1087	1087	Wall	Chamber for flue gate mechanism	Construction cut		Red brick with mortar
1093	1087	1087	Wall	Chamber for flue gate mechanism	Construction cut		Red brick with mortar
1094	1087	1087	Gate	sluice gate in flue 1090	Construction cut		Iron plate
1095			Base	Base for 1096			Red brick with mortar
1096			Wall	wall of chimney			Red brick with mortar
1097			Foundation	Foundation for chimney			Red brick with black ash mortar
1098			Made Ground	Levelling layer			Grey black ash with brick and mortar
1099			Wall	exterior wall			Red brick with mortar
1100			Dump layer	dump in corner between 1055 and 1047			Black sandy clay
1101			Floor	floor formed with 1102			Lime mortar
1102			Floor	floor with 1101			Sandstone flags
1104			Drain	brick lining of a drain			Red brick with lime mortar
1105			Capstone	capping for drain 1104			Sandstone slabs
1106			Wall				Red brick with lime mortar
1107			Surface	surface off 1106			Red brick with lime mortar
1108			Foundation	foundation for 1106			Sandstone slabs
1109			Surface	flagstone surface			Sandstone flag
1110			Wall	stone wall			Sandstone wall
1111			Wall	return of 1112			Red brick with lime mortar
1112			Wall	same as 1113			Red Brick wall with lime mortar
1113			Wall	same as 1112			Red brick with lime mortar
1114			Surface	surface off 1112			Sandstone flags
1116	1115	1115	deliberate backfill		Construction cut		brown sand with gravel
1117			Surface	same as 1118			Sandstone cobbles
1118			Surface	same as 1117			Sandstone cobbles
1120	1119	1119	deliberate backfill		Drain		Blackish brown sand with gravel and brick
1121			Wall	same as 1122			Red brick with mortar
1122			Wall	same as 1121			Red brick with mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
1123			Foundation	foundation of 1121, same as 1124			Sandstone slabs
1124			Foundation	foundation of 1122, same as 1123			Sandstone slabs
1125			Made Ground				Blackish brown sand with gravel and bricks
1126			Made Ground				Blackish brown sand with gravel and brick
1127			Made Ground				Brown sand with gravel, stone and bricks
1128			Wall				Fire brick and red brick wall with lime mortar
1129			Wall				Fire brick and red brick wall with lime mortar
1130			Surface	surface between 1129 and 1131			Fire brick with lime mortar
1131			Wall				Red brick and fire brick with lime mortar
1132			Wall				Red brick and fire brick wall
1133			Made Ground				Greyish brown sand with gravel and brick
1134			Secondary fill				Grey brown silt
1135			Wall	Eastern wall of the chemical works			Red brick with black ash mortar
1136			Surface	External pavement of the chemical works			Concrete, brick, and sandstone flags
1137	1220	1220	Wall	Western wall of the chemical works	Construction cut		Red brick with black ash mortar
1138			Wall	internal wall			Red Brick with cement
1139			Wall	external wall			Red brick
1140			Drain				Red brick with cement
1141			Foundation	foundation of 1143			Sandstone and bricks with lime mortar
1142			Foundation				Red brick
1143			Wall	Interenal wall of the chemical works			Red brick with black ash mortar
1144			Floor	Floor of room within the chemical works			Concrete (poured)
1145			Base	possible machine base			Concrete
1146			Wall				Red Brick with cement
1150			Surface	surface south of 1052			cobbles
1151			Surface	surface west of 1050			Red brick
1152			Surface	surface north of 1050			cobbles
1153			Pit				Red brick sides with lime mortar
1154			Made Ground				Grey sand with rubble and gravel
1155			Made Ground				yellowish brown silty clay with charcoal
1156			Surface	floor of 1153			sandstone slab
1157			Made Ground				yellowish grey silty sand
1158	1280	1207	Vaulting	Vaulting of 1207	Construction cut	Large Tunnel, similar to 2292	Red brick and lime mortar
1159			Wall	wall butting 1158			Red brick with lime mortar
1160			Wall	runs off 1159			Red Brick with lime mortar
1161			Wall	runs between 1160 and 1162			Red brick with lime mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
1162			Wall	wall running west of 1161			Red brick with lime mortar
1163			Foundation	foundation for wall 1161			red brick with lime mortar
1164			Base	Possible machine base			Red brick with lime mortar
1165			Foundation	Foundation for 1164			Sandstone with lime mortar
1166			Made Ground	levelling layer			blackish brown sand with gravel
1167			Made Ground				blackish brown sand with gravel
1168			Wall				Red brick with lime mortar
1169			Made Ground				greenish brown sandy silt with cobbles
1170			Made Ground				reddish brown sand with brick fragments
1171			Made Ground				Blackish brown matireal with rubble
1172		1282	Wall	outer lining of 1173		Large circular chimney cut by 1207	Red brick with lime mortar
1173		1282	Wall	inner wall of 1282 on north side		Large circular chimney cut by 1207	Red Brick and fire brick with lime mortar
1174			Foundation				sandstone with lime mortar
1175			Surface	runs up to 1176			Red brick with lime mortar
1176			Wall				Red brick with lime mortar
1177			Wall				Red brick with lime mortar
1178	1280	1207	Wall	wall of 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1179			Made Ground				blackish grey sand with gravel and mortar
1180			Made Ground				grey sand with brick fragments
1181	1280	1207	Wall	wall of 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1182	1280	1207	Wall	wall of 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1183			Wall				Fire brick with lime mortar
1184			Surface				Red brick with lime mortar
1185			Wall				Red brick with lime mortar
1186			Foundation	foundation of 1181			Red brick with lime mortar
1187			Wall				Red brick with lime mortar
1188			Wall	wall of possible coal bunker			Red brick with lime mortar
1189			deliberate backfill				mid grey sand with ash , charcoal and cobbles
1190			Surface	base of possible coal bunker			concrete with metal fittings
1191	1280	1207	Wall	wall of tunnel 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1192			Made Ground				greyish brown silty clay with gravel
1193			Wall	wall on top of 1188			red brick with lime mortar
1194			Wall				Red brick with lime mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
1195			Surface	surface or foundation for wooden beam above			sandstone flag
1197		1196	Floor	floor of 1196		room to the north of 1159	sandstone flags with lime mortar
1198		1196	Floor	floor of 1196		room to the north of 1159	sandstone flags
1199		1196	Floor	floor of 1196		room to the north of 1159	sandstone flags with lime mortar
1200			Foundation	foundation for internal wall			sandstone with lime mortar
1201			Base	Possible workstation with fittings for machinery			sandstone slab
1202			Wall	footprint of internal wall			Red brick with lime mortar
1203	1280	1207	Wall	wall of 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1204			Pier				Red Brick with lime mortar
1205			Wall	External wall			Sandstone wall with lime mortar
1206			Drain				Red brick with black ash mortar
1208		1196	Threshold	threshold of entrance into 1196		room to the north of 1159	sandstone block
1209			Surface				sandstone block with lime mortar
1210		1196	Threshold			room to the north of 1159	Sandstone block with lime mortar
1211			Wall				Red Brick with lime mortar
1212			Wall	internal wall			Sandstone blocks with lime mortar
1213			Base	Workstation with machine fittings			Sandstone slab with lime mortar
1214			Pier				Red brick with lime mortar
1215			Wall	external wall			sandstone blocks with lime mortar
1216	1280	1207	Structure	bay/ opening in 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1217	1280	1207	Structure	bay/opening of 1207	Construction cut	Large Tunnel, similar to 2292	red brick with lime mortar
1218			Made Ground				Grey Black rubble
1219			Floor				sandstone slabs
1221			Wall				Red brick with lime mortar
1222			Made Ground				yellowish brown sand with gravel
1223			Wall				Red brick with lime mortar
1225	1224	1224	Primary fill		Cut		yellowish brown sand with rubble and gravel
1226	1220	1220	Primary fill		Construction cut		Yellowish brown sand
1227			Wall				Red brick with lime mortar
1228			Wall				Red brick with lime mortar
1229			Surface	trackway, same as 1230			sandstone flags
1230			Surface	trackway, same as 1229			sandstone flags
1231			Surface	trackway			sandstone cobbles
1232			Wall	walls of modern manhole			Red brick with cement
1233			Base	base or foundation			sandstone slab



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
1234			Made Ground				grey sand with ash and gravel
1235			Made Ground				greyish brown silty sand
1236			Made Ground				Greyish brown sandy silt
1237			Surface				cobbles
1238			Made Ground				grey sand with ash and bricks
1239			Surface				Red brick with lime mortar
1240			Wall				Red brick with lime mortar
1241			Staircase	single step			sandstone block
1242	1280	1207	Wall	wall of 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1243	1280	1207	Wall	wall of 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1244	1280	1207	Wall	wall of 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1245			Surface				
1246			Foundation				sandstone foundation
1248	1253	1247	Drain	lining of the drain	Construction cut	Drain	red brick with black ash mortar
1249	1253	1247	Capstone	capping of 1247	Construction cut	Drain	Thick sandstone flags
1250	1280	1207	Vaulting	vaulting of 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1251	1280	1207	Wall	wall supporting 1050	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1252	1280	1207	Wall	wall supporting 1050	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1254	1253	1247	Made Ground	bedding for iron pipe	Construction cut	Drain	orange sand with iron pipe
1255			Made Ground				brown clay sand with brick and slate
1256	1280	1207	Wall	bricked up entrance to 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1257			Wall				Red brick with lime mortar
1258			Wall				Red brick with lime mortar
1259			Primary fill				orange yellow sand with gravel
1260			Primary fill				orangey red sand with gravel
1261			Wall	inner skin of 1257			Red brick with lime mortar
1262			Wall				Red brick with lime mortar
1263			Floor	floor to contain fireplace			Red brick with lime mortar
1264			Floor				Red brick with lime mortar
1265			Floor				Red brick with lime mortar
1266			Wall				sandstone with lime mortar
1267			Made Ground				brown grey sand with brick fragments
1268			Made Ground				brown silty sand with charcoal
1269			Made Ground				grey mortar
1270			Made Ground				grey ash
1271			Made Ground				rubble and mortar
1272		1207	Made Ground	Rubble backfill within 1207		Large Tunnel, similar to 2292	Brown orange sandy clay with brick, stone and clinker



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
1273		1282	Wall	Chimney wall on south side		Large circular chimney cut by 1207	Red brick with lime mortar, fire brick inner skins
1274	1280	1207	Wall	wall of 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1275	1280	1207	Structure	repair to 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1276	1280	1207	Pier	support for 1207	Construction cut	Large Tunnel, similar to 2292	fire brick with lime mortar
1277	1280	1207	Foundation		Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1278	1280	1207	Wall	wall of 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1279			Made Ground				yellowish brown sand
1281		1282	Floor	chimney floor		Large circular chimney cut by 1207	fire brick with lime mortar
1283			Foundation	foundation of 1211			sandstone flags
1284	1280	1207	Wall	wall of 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1285	1280	1207	Structure	bay/ opening in 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1286	1280	1207	Pier	support for 1207	Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1287			Wall	wall of 1207			Red brick with lime mortar
1288	1280	1207	Floor		Construction cut	Large Tunnel, similar to 2292	sandstone flags
1289	1280	1207	Wall		Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1290			Surface				Red brick with lime mortar
1291			Secondary fill				grey brown sand with charcoal
1292			Drain				red brick with sandstone capping
1293			Wall				Red brick with lime mortar
1294			Wall				Red brick with lime mortar
1295	1280	1207	Floor		Construction cut	Large Tunnel, similar to 2292	red brick
1296	1280	1207	Floor		Construction cut	Large Tunnel, similar to 2292	Red brick with lime mortar
1297	1280	1207	Foundation		Construction cut	Large Tunnel, similar to 2292	sandstone with lime mortar
1298	1280	1207	Floor		Construction cut	Large Tunnel, similar to 2292	sandstone and red brick
1299			Made Ground				brown sand
1300			Made Ground				brown sand with bricks
1301			Foundation	foundation of 1257			Red brick with lime mortar
1302			Fire Pit	fire place			Red brick with lime mortar
1303			Wall				Red brick with lime mortar
1304			Foundation	bedding for 1306			mortar
1305			Dump layer				orange sand
1306			Floor				sandstone flags
1307			Wall				Red brick with lime mortar
1308			Foundation	foundation of 1307			sandstone and lime mortar
1309	1280	1207	deliberate backfill	fill of 1207	Construction cut	Large Tunnel, similar to 2292	mortar and ash
1310	1280	1207	Pier		Construction cut	Large Tunnel, similar to 2292	red brick with lime mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
1311	1280	1207	Floor		Construction cut	Large Tunnel, similar to 2292	sandstone flags
1312	1280	1207	Foundation		Construction cut	Large Tunnel, similar to 2292	sandstone slab and cobbles
1313	1280	1207	Foundation		Construction cut	Large Tunnel, similar to 2292	sandstone block
1314			Floor				red brick and sandstone slabs
1315			Threshold				sandstone slab
1316			Surface				Red brick with lime mortar
1317			Wall				Red brick with lime mortar
1318			Made Ground				greyish brown sand with gravel
1319			deliberate backfill				yellowish brown sandy silt
1320		1437	Wall	Exterior wall of 1437		wall	Red Brick with lime mortar
1321		1437	Wall	External wall		wall	Red Brick with lime mortar
1322	1354	1437	Post		Posthole	wall	Wooden post
1324	1323	1437	deliberate backfill		Cut	wall	yellow brown silty clay with brick fragments
1325			Wall				Red Brick with lime mortar
1326			Foundation	foundation for 1325			Sandstone with lime mortar
1327			Wall				Red Brick with lime mortar
1328		1437	Foundation	foundation for 1327		wall	Sandstone with lime mortar
1329		1437	Floor			wall	Cobbled surface
1331	1330	1437	Backfill		Modern Feature	wall	yellow black silty clay
1332			Wall				Red Brick with lime mortar
1333			Floor				cobbled surface
1334			Wall				Red Brick with lime mortar
1335		1437	Foundation	foundation for 1334		wall	Sandstone with lime mortar
1336	1420	1417	Drain		Construction cut	Drain	Red Brick with lime mortar
1337	1420	1417	Drain		Construction cut	Drain	Red Brick with lime mortar
1338		1417	Capstone			Drain	Sandstone flags
1339	1418	1416	Drain		Construction cut	Drain	Red Brick with lime mortar
1340	1418	1416	Drain		Construction cut	Drain	Red Brick with lime mortar
1341	1418	1416	Capstone		Construction cut	Drain	Sandstone flags
1342		1404	Wall			Room	Red Brick with lime mortar
1343		1404	Wall			Room	Red Brick with lime mortar
1344		1404	Floor			Room	Cobbled surface
1345		1404	Wall			Room	Red Brick with lime mortar
1346		1404	Wall			Room	Red Brick with lime mortar
1347		1404	Foundation	foundation for 1348 and 1446		Room	Sandstone flags
1348		1404	Wall			Room	Sandstone masonry with lime mortar
1350	1418	1416	Drain		Construction cut	Drain	Red Brick with lime mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
1351	1418	1416	Drain		Construction cut	Drain	Red Brick with lime mortar
1352		1437	Foundation	foundation for 1320 and 1321		wall	Sandstone and Red Brick with lime mortar
1353		1437	Backfill			wall	Orange red brick crush
1355	1354	1437	Secondary fill		Posthole	wall	Brown black ash
1356		1445	Foundation			Room	Sandstone flags
1357		1437	Foundation			wall	Sandstone with lime mortar
1358			Foundation	foundation for 1227			Sandstone with lime mortar
1359		1439	Wall			Chemical works	Red brick with cement
1360		1439	Surface	Ramp		Chemical works	Cast concrete
1361		1439	Wall			Chemical works	Sandstone masonry
1362			Wall	wall of cellar with buttresses			Red brick with cement
1363		1439	Wall			Chemical works	Red brick with cement
1364			Foundation				Sandstone
1365		1437	Wall			wall	Red Brick with lime mortar
1366	1377	1440	Pier	pier supporting 1440	Construction cut	Co-op Garage diesel tanks	Standstone block
1367		1440	Wall			Co-op Garage diesel tanks	Red brick with black ash mortar
1368		1440	Wall			Co-op Garage diesel tanks	Red brick with black ash mortar
1369		1440	Structure	Diesel tank		Co-op Garage diesel tanks	Ferrous metal sheeting
1370		1440	Structure	Diesel tank		Co-op Garage diesel tanks	Ferrous metal sheeting
1371		1440	Wall			Co-op Garage diesel tanks	Red brick, some glazed with black ash mortar
1372		1440	Floor			Co-op Garage diesel tanks	Sandstone flags
1373			Made Ground				Brown black silty clay
1374			Made Ground				Brown silty clay with gravel
1376			Wall				Sandstone
1378	1377	1440	Backfill		Construction cut	Co-op Garage diesel tanks	yellow sand
1379			Wall				sandstone with lime mortar
1380			Wall				sandstone with lime mortar
1381			Pipe				Iron pipe
1383	1382	1382	Backfill		Modern Feature		brown silty clay
1384			Wall				sandstone with lime mortar
1385			Wall				sandstone with lime mortar
1386			Surface				sandstone with black ash
1387			Surface				cobbled surface
1389	1388	1388	Backfill		Drain		white sandy silt with gravel
1390			Surface				Sandstone flags
1391			Surface				Sandstone
1392			Surface				Sandstone flags
1393		1443	Foundation			thick north to south wall	sandstone flags
1394		1444	Floor			Floor	Sandstone flags
1395		1443	Wall	West face of 1443		thick north to south wall	Sandstone with lime mortar
1396		1444	Surface			Floor	sandstone with lime mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
1397		1444	Surface			Floor	sandstone with lime mortar
1399	1398	1398	Backfill		Modern Feature		Brown clay with rubble
1400		1443	Wall	wall core of 1443		thick north to south wall	Sandstone with lime mortar
1401			Wall				Red Brick with lime mortar
1402		1443	Foundation	foundation for 1443		thick north to south wall	sandstone with lime mortar
1403			Pier				Red brick
1405		1441	Wall			rooms off 1443	Red Brick with lime mortar
1406		1441	Wall			rooms off 1443	Red Brick with lime mortar
1407		1441	Wall			rooms off 1443	Red Brick with lime mortar
1408		1441	Foundation			rooms off 1443	Sandstone with lime mortar
1409		1441	Foundation			rooms off 1443	sandstone flags
1410		1441	Wall			rooms off 1443	Red Brick with lime mortar
1411		1441	Wall			rooms off 1443	Red Brick with lime mortar
1413			Wall				sandstone with lime mortar
1414		1441	Wall			rooms off 1443	Red Brick with lime mortar
1415			Wall				Red Brick with lime mortar
1419	1418	1416	Backfill		Construction cut	Drain	brown silty clay with gravel
1421	1420	1417	Backfill		Construction cut	Drain	brown silty clay with gravel
1422		1437	Wall			wall	sandstone with lime mortar
1423		1437	Wall			wall	Red Brick with lime mortar
1424	1425	1437	Backfill		Construction cut	wall	Brown silty clay with charcoal
1426		1437	Wall			wall	Red Brick with lime mortar
1427		1437	Wall			wall	Red Brick with lime mortar
1428			Wall				Red Brick with lime mortar
1429		1437	Wall			wall	Red Brick with lime mortar
1430			Wall				Red Brick with lime mortar
1431			Foundation				sandstone with lime mortar
1432		1440	Wall			Co-op Garage diesel tanks	Glazed red brick with black ash mortar
1433			Surface				sandstone slab
1434			Wall				Red Brick with lime mortar
1435			Foundation				sandstone with lime mortar
1436		1441	Foundation			rooms off 1443	sandstone flags
1438		1439	Pier			Chemical works	red brick with cement
1442		1441	Wall			rooms off 1443	Red Brick with lime mortar
2001			Surface	surface pre-excavation on phase 2			Tarmac and concrete
2002			Overburden				General overburden across phase 2
2003			Natural	Natural on phase 2			Yellow sandy silty



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
2004			Surface				sandstone flags
2005			masonry				single sandstone block
2006			Surface				sandstone flags
2007		2027	Capstone			Culvert	Sandstone flags
2008		2027	Wall	Walls of 2027 (not visible)		Culvert	Notional
2009		2027	Capstone			Culvert	sandstone flags
2010			Capstone	capping for 2011			sandstone flags
2011			Drain	culvert			sandstone and lime mortar
2012		2024	Drain			Drain	sandstone with lime mortar
2013		2024	Capstone			Drain	sandstone with lime mortar
2014		2024	Drain			Drain	sandstone with lime mortar
2015		2024	Drain			Drain	sandstone with lime mortar
2016		2027	Capstone	capping repair		Culvert	Red Brick with lime mortar
2017		2050	Capstone			well with stone capping and metal base section	sandstone with lime mortar
2018			Pipe				Cast iron pipe
2019			Pipe				Cast iron pipe
2020		2060	Wall			Warehouse	Red Brick with lime mortar
2021			Foundation	foundation of 2022			Poured concrete
2022			Drain				ceramic pipe
2023			Foundation				poured concrete
2025		2024	Made Ground			Drain	yellowish brown silt
2026			masonry	Isolated sandstones			sandstone masonry
2028			Drain				ceramic pipe and concrete
2029			Surface				Red Brick with lime mortar
2030			Drain				ceramic pipe and concrete
2031			Wall				Red brick with cement
2032			Wall	Internal glazed skin of 2031			White glazed brick with cement
2033			Wall				Red brick with cement
2034			Wall	Internal glazed skin of 2033			White glazed brick with cement
2035			Wall				Red brick with cement
2036			Wall	Internal glazed skin of 2035			White glazed brick with cement
2037			Staircase				sandstone with cement
2038			Foundation	footings			Red brick with black ash mortar
2040			Drain	casing around drain			Red brick with cement
2041			Drain				ceramic inlet and pipe
2042			Wall				Red brick with cement
2043			Wall	internal glazed skin of 2042			white glazed brick with cement
2044			Post				ferrous metal
2045		2204	Drain			Internal drain of Mill B	Red brick and sandstone with lime mortar
2046			Drain	Culvert			Sandstone masonry
2047			Wall				Red Brick with lime mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
2048		2050	Wall			well with stone capping and metal base section	sandstone with lime mortar
2049		2050	Modern Feature	Manhole		well with stone capping and metal base section	Red Brick with lime mortar
2051		2050	Wall			well with stone capping and metal base section	Red Brick with lime mortar
2052		2050	Channel			well with stone capping and metal base section	Sandstone with lime mortar
2053		2050	Secondary fill			well with stone capping and metal base section	Brown grey silty clay
2054		2050	Secondary fill			well with stone capping and metal base section	Orange brown sandy silt
2055		2050	Secondary fill			well with stone capping and metal base section	Grayish brown silty clay
2056		2050	Secondary fill			well with stone capping and metal base section	Yellow, brown and grey laminations of clay
2057		2050	Secondary fill			well with stone capping and metal base section	Brownish orange sand
2058		2060	Capstone			Warehouse	Sandstone with lime mortar
2059		2060	Drain			Warehouse	Red Brick with lime mortar
2061			Wall				Red brick with black ash mortar
2062			Foundation				Black ash mortar
2063			Foundation				Sandstone with lime mortar
2064			Surface	surface with square hole in centre			Concrete with red brick and iron plates
2065			Wall				Red brick with black ash mortar
2066			Surface				Sandstone masonry with lime mortar
2067			Pipe				Cast iron pipe
2068			Wall	small brick box			Red Brick with lime mortar
2069			Floor				Sandstone flag
2071	2070	2070	Backfill		Construction cut		Black silty clay with rubble
2072	2070	2070	Drain		Construction cut		Ceramic pipe with concrete
2073		2060	Foundation			Warehouse	Sandstone with lime mortar
2074		2060	Wall			Warehouse	Red Brick with lime mortar
2075			Drain				Ceramic pipe with concrete
2076		2060	Foundation			Warehouse	Sandstone with lime mortar
2077		2060	Foundation			Warehouse	Sandstone with lime mortar
2078		2060	Foundation			Warehouse	Sandstone with lime mortar
2079			Dump layer				Black silty clay
2080		2060	Drain			Warehouse	Red Brick with lime mortar
2081		2060	Drain			Warehouse	Red Brick with lime mortar
2082			Foundation	foundation for 2065			Concrete



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
2083			Drain				Concrete, red brick and ceramic pipe
2085			Wall				Fire Brick and Red Brick with lime mortar
2086			Wall				Fire Brick and Red Brick with lime mortar
2087		2120	deliberate backfill			Modern cellars	Yellowish brown sandy silt
2088	2182	2150	Backfill		Construction cut	Flue and chimney related to bobbin factory	Blackish brown sandy silt
2089		2150	Buttress			Flue and chimney related to bobbin factory	Red Brick with lime mortar
2090	2182	2150	Flue	Large north- south flue	Construction cut	Flue and chimney related to bobbin factory	Red brick with lime mortar
2091			Surface				Cement
2092	2113	2120	Surface		Construction cut	Modern cellars	Cement
2093	2113	2120	Wall		Construction cut	Modern cellars	Red brick with cement
2095			Wall				Red Brick with lime mortar
2096			Wall				Red Brick and fire brick with lime mortar
2097			Fill	fill of brick pit			Unknown composition
2098			Surface				Lime mortar and crushed brick
2099			Wall				Red Brick with lime mortar
2100		2060	Foundation			Warehouse	Sandstone with lime mortar
2101		2060	Foundation			Warehouse	Sandstone with lime mortar
2102			Surface				Sandstone with lime mortar
2103			Drain				Red brick with black ash mortar
2104			Drain				Red brick with black ash mortar
2105			Drain				Red brick with black ash mortar
2106		2060	Drain			Warehouse	Sandstone flags with lime mortar
2107		2060	Drain			Warehouse	Red brick and sandstone with lime mortar
2108		2060	Capstone			Warehouse	Sandstone flags with lime mortar
2109		2060	Drain			Warehouse	Sandstone with lime mortar
2110		2060	Capstone			Warehouse	Sandstone flags with lime mortar
2111		2060	Drain			Warehouse	Sandstone and red brick with lime mortar
2118	2117	2120	Wall		Construction cut	Modern cellars	Red brick with cement
2119	2117	2120	Floor		Construction cut	Modern cellars	Cement
2121		2411	Dump layer			Bobbin and shuttle factory	Brown black ashy clay
2122		2411	Backfill			Bobbin and shuttle factory	Brown with grey ash
2123		2411	chimney			Bobbin and shuttle factory	Red brick and fire brick with lime mortar
2124			Wall				Red brick with lime mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
2125			Structure	possible foundation			Sandstone with lime mortar
2126			Surface				Red Brick with lime mortar
2127			Foundation				Red Brick with lime mortar
2128			Foundation	foundation for 2129			Red Brick with lime mortar
2129			Pier	raised area on brick platform			Red Brick with lime mortar
2130			Backfill				Orange silty sand with rubble and cobbles
2131			Made Ground				grey silty sand with rubble
2132			Surface	surface covering pit			Red brick and fire brick
2133			Foundation	foundation for 2136			Red Brick with lime mortar
2134			Dump layer				Purple sand
2135			Made Ground				Black ash and silt
2136			Foundation				Red Brick with lime mortar
2137		2120	deliberate backfill			Modern cellars	Purple brown sandy silt
2138			Fill				Blackish brown sandy silt
2139			Foundation				Red Brick with lime mortar
2140			Foundation				Red Brick and fire brick with lime mortar
2141			Foundation				Red Brick with lime mortar
2142			Surface				Red Brick with lime mortar
2143			Foundation				Red Brick with lime mortar
2144			Capstone				Sandstone
2145		2150	chimney			Flue and chimney related to bobbin factory	Sandstone with lime mortar
2146		2150	Foundation	Chimney foundation		Flue and chimney related to bobbin factory	Sandstone with lime mortar
2147			Capstone				Sandstone with lime mortar
2148		2150	Wall			Flue and chimney related to bobbin factory	Red Brick with lime mortar
2149		2150	Wall			Flue and chimney related to bobbin factory	Red Brick and fire brick with lime mortar
2151		2411	Wall			Bobbin and shuttle factory	Sandstone with lime mortar
2152		2411	Wall			Bobbin and shuttle factory	Sandstone with lime mortar
2153		2411	Wall			Bobbin and shuttle factory	Red Brick with lime mortar
2154		2411	Flue	same as 2090		Bobbin and shuttle factory	Red Brick with lime mortar
2155			Pipe				Ceramic pipe and concrete
2156		2411	Capstone			Bobbin and shuttle factory	Sandstone slabs
2157		2411	Wall			Bobbin and shuttle factory	Red Brick with lime mortar
2158		2411	Wall			Bobbin and shuttle factory	Red brick with black ash mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
2159		2411	Pipe			Bobbin and shuttle factory	Ferrous metal pipe
2160		2411	Wall			Bobbin and shuttle factory	Red brick with black ash mortar
2161		2411	Pier	pillar		Bobbin and shuttle factory	Red Brick with lime mortar
2162		2411	Surface			Bobbin and shuttle factory	sandstone slab
2163		2411	Wall			Bobbin and shuttle factory	Red Brick with lime mortar
2164		2411	Wall			Bobbin and shuttle factory	Sandstone with lime mortar
2165		2411	Base	machine base		Bobbin and shuttle factory	Sandstone
2166		2411	Floor			Bobbin and shuttle factory	Sandstone
2167		2411	Wall			Bobbin and shuttle factory	Red brick with black ash mortar
2168		2411	Surface			Bobbin and shuttle factory	Sandstone with lime mortar
2169		2411	Wall			Bobbin and shuttle factory	Red brick with lime mortar
2170		2411	Wall	outer wall acting as one side of the wheel pit		Bobbin and shuttle factory	Sandstone with lime mortar
2171		2411	Surface			Bobbin and shuttle factory	Red brick with lime mortar
2172		2411	Wall			Bobbin and shuttle factory	Red brick with lime mortar
2173		2411	Wall			Bobbin and shuttle factory	Red brick with lime mortar
2174		2411	Wall			Bobbin and shuttle factory	Red brick with lime mortar
2175		2411	Wall			Bobbin and shuttle factory	Red brick with lime mortar
2176		2411	Capstone			Bobbin and shuttle factory	Sandstone slabs
2177		2411	Wall			Bobbin and shuttle factory	Red brick with lime mortar
2178		2411	Backfill			Bobbin and shuttle factory	Black ash
2179		2411	Pipe			Bobbin and shuttle factory	Cast iron pipe
2180		2150	Wall			Flue and chimney related to bobbin factory	Red brick with lime mortar
2181		2150	Surface			Flue and chimney related to bobbin factory	Sandstone
2183		2411	Wall			Bobbin and shuttle factory	Red brick with black ash mortar
2184		2411	Flue	same as 2090		Bobbin and shuttle factory	Red brick with lime mortar
2185		2411	Wall			Bobbin and shuttle factory	Red brick with lime mortar
2186		2411	Capstone			Bobbin and shuttle factory	Sandstone
2187		2411	Wall			Bobbin and shuttle factory	Red brick with lime mortar
2189		2150	Wall			Flue and chimney related to bobbin factory	Red brick with black ash mortar
2190		2150	Vaulting			Flue and chimney related to bobbin factory	Fire brick



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
2191		2150	Buttress			Flue and chimney related to bobbin factory	Sandstone, firebrick and red brick with black ash mortar
2192		2150	Buttress			Flue and chimney related to bobbin factory	Sandstone with black ash mortar
2193			Backfill				Black clinker and ash
2194			Backfill				Black clinker and ash
2196			Backfill				Black clinker and ash
2197			Backfill				Black clinker and ash
2199	2198	2198	Backfill		Modern Feature		Orange brown silty clay
2201	2195	2195	Backfill		Modern Feature		Yellow brown silty clay
2202		2200	Beam	floor joist		Internal walls of Mill B	Squared off wooden beam
2205		2411	Machinery	fitting for wheel axel		Bobbin and shuttle factory	Ferrous metal
2206			Dump layer				Rubble
2207			Drain				Sandstone masonry
2208		2411	Wall			Bobbin and shuttle factory	Sandstone with lime mortar
2209			Wall	Manhole			Red brick with cement
2210			Foundation				Concrete
2211			Wall				Red brick with black ash mortar
2212			Wall				Red brick with lime mortar
2213			Wall				Red brick with black ash mortar
2214			Buttress				Red brick with black ash mortar
2215			Wall				Red brick with cement
2216			Foundation				Red brick with lime mortar
2217			Surface				Sandstone and red brick with lime mortar
2218			Backfill				Rubble
2219			Foundation				Sandstone with lime mortar
2221			Surface				Sandstone, clinker and ash
2223		2222	Staircase			Cellar on South west of site	Sandstone with lime mortar
2224		2222	Foundation			Cellar on South west of site	Red brick with lime mortar
2225		2222	Foundation			Cellar on South west of site	Red brick with lime mortar
2226		2222	Floor			Cellar on South west of site	Sandstone with lime mortar
2227		2220	Foundation			Foundation of structure attached to bobbin factory	Sandstone flag
2228		2220	Foundation			Foundation of structure attached to bobbin factory	Sandstone flag
2229		2220	Foundation			Foundation of structure attached to bobbin factory	Sandstone flag
2230		2220	Foundation			Foundation of structure attached to bobbin factory	Sandstone flag
2231		2220	Foundation			Foundation of structure attached to bobbin factory	Sandstone flag
2233	2232	2232	Backfill		Modern Feature		Yellow brown sandy silt



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
2234		2204	Drain			Internal drain of Mill B	Sandstone with lime mortar
2235		2204	Drain			Internal drain of Mill B	Sandstone with lime mortar
2236		2204	Drain			Internal drain of Mill B	Red brick with lime mortar
2237		2204	Drain			Internal drain of Mill B	Red brick with lime mortar
2238		2204	Drain			Internal drain of Mill B	Sandstone with lime mortar
2239		2204	Drain			Internal drain of Mill B	Red brick with lime mortar
2240		2204	Drain			Internal drain of Mill B	Sandstone with lime mortar
2241		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2242		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2243		2204	Drain			Internal drain of Mill B	Sandstone with lime mortar
2244		2204	Drain			Internal drain of Mill B	Red brick with lime mortar
2245		2204	Drain			Internal drain of Mill B	Red brick with lime mortar
2246		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2247		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2248		2200	Buttress			Internal walls of Mill B	Red brick with lime mortar
2249		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2250		2200	Buttress			Internal walls of Mill B	Red brick with lime mortar
2251			Wall				Red brick with lime mortar
2252		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2253		2200	Buttress			Internal walls of Mill B	Red brick with lime mortar
2254		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2255		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2256		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2257		2200	Buttress			Internal walls of Mill B	Red brick with lime mortar
2258		2200	Buttress			Internal walls of Mill B	Red brick with lime mortar
2259		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2260		2200	Buttress			Internal walls of Mill B	Red brick with lime mortar
2261		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2262		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2263		2200	Wall			Internal walls of Mill B	Red brick with lime mortar
2264		2200	Foundation	Foundation of 2263		Internal walls of Mill B	Red brick with lime mortar
2265		2200	Foundation	Foundation of 2256		Internal walls of Mill B	Red brick with lime mortar
2266		2200	Buttress			Internal walls of Mill B	Red brick with lime mortar
2267		2200	Beamslot	Joist slot in 2256		Internal walls of Mill B	Sandstone with lime mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
2268		2200	Beamslot	Joist slot in 2256		Internal walls of Mill B	Sandstone with lime mortar
2269		2200	Beamslot	Joist slot in 2321		Internal walls of Mill B	Sandstone with lime mortar
2270		2200	Beamslot	Joist slot in 2321		Internal walls of Mill B	Sandstone with lime mortar
2271		2292	Floor	Ramped tunnel floor		Tunnel through brick platform, similar to 1207	Sandstone flags
2272		2292	Wall			Tunnel through brick platform, similar to 1207	Red brick with lime mortar
2273		2292	Wall			Tunnel through brick platform, similar to 1207	Red brick with lime mortar
2274		2292	Wall			Tunnel through brick platform, similar to 1207	Red brick with lime mortar
2275		2292	Wall			Tunnel through brick platform, similar to 1207	Red brick with lime mortar
2276		2292	Vaulting	Arch		Tunnel through brick platform, similar to 1207	Red brick with lime mortar
2277			Wall				Red brick and fire brick with lime mortar
2278			Wall				Red brick with lime mortar
2279			Surface				Red brick with lime mortar
2280			Wall				Red brick with lime mortar
2281		2292	deliberate backfill			Tunnel through brick platform, similar to 1207	Yellowish brown clay silt
2282			Made Ground				Black ashy silt
2283			Wall				Fire brick with lime mortar
2284			Floor				Fire brick with lime mortar
2285			Wall				Fire brick with lime mortar
2286			Wall				Red brick with lime mortar
2287			Wall				Fire brick with lime mortar
2288		2292	Pier			Tunnel through brick platform, similar to 1207	Red brick with lime mortar
2289			Foundation				Sandstone block with ferrous metal fittings
2290			Surface				Reddish brown ashy silt
2291			Dump layer				Brown silty sand
2293			Foundation	Foundation for 2277			Red brick with lime mortar
2294			Backfill				Greyish brown silty sand
2295			Backfill				Pinkish grey silty sand
2296			Backfill				Brownish red silty sand
2297			Backfill				Brownish red silty sand
2298			Backfill				Greenish brown silty sand
2299			Surface				Red brick with lime mortar
2300			Wall				Red brick with lime mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
2301		2303	Wall			Brick structure	Red brick with lime mortar
2302		2303	Wall			Brick structure	Red brick with lime mortar
2304			Wall	wall blocking up 2292			Red brick with lime mortar
2305			Surface				Red brick with lime mortar
2306			Wall				Red brick with lime mortar
2307			Wall				Red brick with lime mortar
2308		2292	Backfill			Tunnel through brick platform, similar to 1207	Black rubble
2309			Made Ground				Greyish brown silty sand with rubble
2310			Surface				Red brick with lime mortar
2311			Wall				Red brick with lime mortar
2312			Wall				Red brick with lime mortar
2313			Foundation	Foundation of 2307			Sandstone
2314			Surface				Red brick with lime mortar
2315		2292	deliberate backfill			Tunnel through brick platform, similar to 1207	Greenish brown silty sand
2316		2292	deliberate backfill			Tunnel through brick platform, similar to 1207	brown black deposit with charcoal
2317		2303	Wall			Brick structure	Red brick with lime mortar
2318			Wall				Red brick with lime mortar
2321			Wall				Red brick with lime mortar
2322			Surface				Sandstone
2323			Foundation	Foundation for 2168			Sandstone
2324			Foundation	Foundation of 2167			Sandstone
2325			Backfill				Unknown composition
2326			Foundation	foundation for 2153			Red brick
2327			Foundation	Foundation for 2089			Red Brick
2328			Secondary fill				Brown clay
2329			Secondary fill				Brown silty clay
2330			Secondary fill				Brown clay
2331			Drain				Stone
2332		2050	Surface			well with stone capping and metal base section	Sandstone
2334			Pier	pillar			Red Brick with lime mortar
2335			Pier	pillar			Red brick with lime mortar
2336			Pier	pillar			Red brick with lime mortar
2337			Chute				Yellow brick with lime mortar
2338			Chute				Yellow brick with lime mortar
2339			Chute				Yellow brick with lime mortar
2340			Wall				Red brick with lime mortar
2341			Wall	Outer skin of 2344			Red brick with lime mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
2342			<i>Buttress</i>				Red brick with lime mortar
2343			<i>Chute</i>	Shadow of a chute			Lime mortar
2344			<i>Foundation</i>	foundation of 2361			Red brick with lime mortar
2345			<i>Surface</i>	Slope/ Ramp on end of 2240			Yellow brick with lime mortar
2347	2346	2346	<i>Backfill</i>		<i>Modern Feature</i>		Brown silty sand with rubble
2348			<i>Surface</i>				Red brick with lime mortar
2349			<i>Surface</i>				Red brick with lime mortar
2350			<i>Modern Feature</i>				Black brown Ashy clinker
2351			<i>Surface</i>				Red brick and fire brick with lime mortar
2353			<i>Surface</i>				Red brick with lime mortar
2354			<i>Foundation</i>				Red brick with lime mortar
2355			<i>Surface</i>				Red brick with lime mortar
2356	2386	2386	<i>Backfill</i>		<i>Pit</i>		Black brown clinker and ash
2357			<i>Foundation</i>				Red brick with lime mortar
2358			<i>Surface</i>				Sandstone with lime mortar
2359			<i>Surface</i>				Iron plate with lime mortar
2360			<i>Chute</i>	2 chutes facing west and east			Lime mortar
2361			<i>Surface</i>				Fire brick with lime mortar
2362			<i>Wall</i>				Red brick and sandstone with lime mortar
2363			<i>Pier</i>				Red brick with lime mortar
2364			<i>Wall</i>				Red brick with lime mortar
2365			<i>Wall</i>				Red brick with lime mortar
2366			<i>Foundation</i>	Backfilled tunnel 2292			Red brick with lime mortar
2367			<i>Made Ground</i>				Yellow sand
2368			<i>Backfill</i>				Grey brown sandy silt with rubble
2369		2120	<i>Floor</i>	floor of 2370		Modern cellars	Cement
2370		2120	<i>Wall</i>			Modern cellars	Red brick with black ash mortar
2371		2120	<i>Drain</i>			Modern cellars	Ceramic inlet and red brick
2372			<i>Surface</i>				Red brick with lime mortar
2373			<i>Foundation</i>	Foundation for 2318			Sandstone with lime mortar
2374			<i>Base</i>				Concrete
2375			<i>Surface</i>				Red brick with lime mortar
2376			<i>Surface</i>				Red brick with lime mortar
2377			<i>Buttress</i>				Red brick with lime mortar
2378			<i>Foundation</i>				Red brick with lime mortar



Fill	Cut	Group	Deposit Type	Deposit Description	Cut Type	Group Description	Deposit Description
2380		2292	Wall			Tunnel through brick platform, similar to 1207	Red brick with lime mortar
2381			Made Ground				Brown silty sand
2382			Wall				Red brick with lime mortar
2383			Made Ground				Brown silty sand
2384			Foundation				Sandstone flags
2385			Wall				Red brick with lime mortar
2387			Wall				Red brick with lime mortar
2389			Wall				Red brick with lime mortar
2390			Pier				Red brick with lime mortar
2391			Floor				Red brick and fire brick
2392			Foundation				Sandstone masonry
2393		2050	Foundation	Foundation of 2050		well with stone capping and metal base section	Large ferrous metal ring with wooden board base
2394			Foundation				Sandstone
2395			Surface				Red brick with lime mortar
2396			Wall				Red brick with lime mortar
2397			Wall				Red brick with lime mortar
2398		2292	Wall			Tunnel through brick platform, similar to 1207	Red brick with lime mortar
2399			Surface				Red brick with lime mortar
2400			Wall				Red brick with lime mortar
2401			Wall				Red brick with lime mortar
2402			Foundation				Sandstone
2403			Foundation				Sandstone blocks
2404		2411	Pipe			Bobbin and shuttle factory	Metal pipe
2405			Wall	manhole			Red brick with black ash mortar
2406			Drain				Ceramic pipe with black ash mortar
2407			Wall				Red brick with black ash mortar
2408			Pipe				Cast iron pipe
2409			Pipe				Ferrous metal pipe
2410		2292	Foundation			Tunnel through brick platform, similar to 1207	Sandstone



Appendix 2: Sediment descriptions

Location: 210750 Marshall's Mill, Leeds Sample: 2002		Drawing: 2001 a & b		Comments: Sediment sample from channel 2052	
Thickness	Sediment description			Interpretation	
n/a	Fairly firm 7.5YR 2.5/1 black silty clay. Homogeneous. No inclusions. Faintly laminated. Occasional iron staining. Troels-Smith classification: As2, Ag2 Nig.4; Str.0; Elas.1; Sicc.3/4			Low energy deposit of sediment	Infilling of channel with sediment from surrounding area
0.18 m	Friable 10YR 7/6 pale brown, 10YR 6/8 brownish yellow, 10YR 2/1 black, very fine silts. No inclusions. Strongly laminated. Troels-Smith classification: Ag4 Nig.1; Str.4; Elas.2; Sicc.4; Lim.3			Laminated silts Low energy episodic deposition of silts	Alluvial silts from river/nearby water courses. Either water flowing into the well slowly or well filling up to the point that sediment-loaded water is seeping out into the channel
0.06 m	Fairly firm 7.5YR 3/3 dark brown clay silt. Homogeneous. No inclusions. Frequent iron staining. Troels-Smith classification: As3, Ag1 Nig.2; Str.0; Elas.2; Sicc.3/4; Lim.3			Iron staining is redoximorphic feature indicating period(s) of waterlogging	
0.05 m	Friable 10YR 7/6 pale brown, 10YR 6/8 brownish yellow, 7.5YR 2.5/2 very dark brown, very fine silts. No inclusions. Strongly laminated. Troels-Smith classification: Ag4 Nig.1; Str.4; Elas.2; Sicc.4; Lim.3			Laminated silts Low energy episodic deposition of silts	
0.04 m	Fairly friable 10YR 2/2 very dark brown clay silt. No inclusions. Faintly laminated. Occasional iron staining. Troels-Smith classification: Ag4 Nig.3/4; Str.2/3; Elas.2; Sicc.3/4; Lim.3			Laminated silts Low energy episodic deposition of silts	
0.25 m	Fairly firm 10YR 3/3 dark brown silty clay. Faintly laminated. Homogeneous. No inclusions. Moderate iron staining. Troels-Smith classification: As2, Ag2 Nig.3; Str.1; Elas.2; Sicc.3/4; Lim.3			Slightly redoximorphic indicating period(s) of waterlogging	
n/a	Friable 10YR 4/6 dark yellowish brown, very fine and fine sands. No inclusions. Troels-Smith classification: Ga3, Gs1 Nig.2; Str.0; Elas.2; Sicc.4; Lim.2			Higher energy deposition than units above	Natural sand - original deposit of sediment in channel

Key: Sediment properties - Argilla steatodes (As), Argilla granosa (Ag), Grana arenosa (Ga), Grana saburralia (Gs) 0=absence of, 4=maximum. Physical properties – Nigror (Nig.) 0=white, 4=black; Stratificatio (Str.) 0=homogeneous, 4=strong laminations; Elasticitas (Elas.) 0=clay, 4=peat, Siccitas (Sicc.) 0=water, 4=dry; Limes superior (Lim.) 0=>1cm, 1=<1cm and >2mm, 2=<2mm and >1mm, 3=<1mm and >0.5mm, 4=<0.5mm



Appendix 3: Environmental data

Assessment of the environmental evidence/macrofossils/charred plant remains and charcoal

Context	Group	Vol (l)	Flot (ml)	Sub-sample	Bioturbation proxies	Grain	Chaff	Cereal Notes	Charred Other	Charred Other Notes	Charcoal >2mm (ml)	Charcoal	Other	Comments (Preservation)
1035	0	10	29	-	<1%, A, I	-	-	-	-	-	1.5	Mature	Coal (C), clinker (C)	-
1155	0	5	14	-	<1%, A	-	-	-	-	-	12	Mature	Slag (B), clinker (B)	-
1291	0	5	16	-	-	-	-	-	-	-	<1	Mature	Coal (A)	-
1259	0	10	1.5	-	-	-	-	-	-	-	-	-	-	-
2053	0	7	94	-	<1	-	-	-	-	-	1	Mature	Coal (C), slag, (A), clinker (A) Slag (B), clinker (B), hammerscale (C)	-
2097	0	6	31	-	-	-	-	-	-	-	<1	Mature	Slag (A), coal (A), clinker (A)	Magnetic
2218	0	10	277	-	C, I	-	-	-	C	Indet. tuber	5.5	Mature	Slag (A), coal (A), clinker (A)	Good
2134	0	10	7	-	-	-	-	-	-	-	-	-	-	-
2329	0	9	16	-	C	-	-	-	-	-	<1	Mature	Moll-t (A**)	-

Key: Scale of abundance: A*** = exceptional, A** = 100+, A* = 30-99, A = 30-10, B = 9-5, C = <5; Bioturbation proxies: Roots (%), Uncharred seeds (scale of abundance), I = insects, Moll-t = terrestrial molluscs.



Appendix 4: OASIS form

OASIS ID: wessexar1-347314

Project details

Project name	Marshall's A and B Mills
Short description of the project	<p>Wessex Archaeology was commissioned by ECUS Ltd, on behalf of CEG, to undertake archaeological mitigation works at land located at Marshall's A and B Mills, Globe Road, Holbeck, Leeds, West Yorkshire. The archaeological remains were predominantly structural and related to development of the site from 1791 through to the demolition of standing remains in 2019. Remains of Marshalls first mill (built 1791), Mill A, and its ancillary buildings were excavated.. Remains of Marshalls second mill, Mill B which was constructed in 1795, were excavated. Several extensions to the Mill B and its ancillary buildings were excavated corresponding to buildings seen on the 1850 J Rapkin map, by which time the first Mill A structure had been demolished. Following the demolition of Mill B, a stone-built engine house, flue and chimney structure was constructed, truncating the Mill B remains was excavated. This corresponded to the construction of the Monk Bridge bobbin and shuttle factory seen on the 1895 OS map. The development of the bobbin and shuttle factory continued with the construction of a turning shop to the west, the excavated remains of which dominated the eastern half of Area B. By 1901, a stables complex had been constructed at the far east of the site, spanning the entirety of Area A. The excavated remains of the stables included a series of loose boxes for keeping horses, and a cart track as labelled on the 1901 Goad map of the area. Later development of the site included the 1950's Industrial Cooperative Society Garage and the Globe Works warehouse.</p>
Project dates	Start: 10-09-2018 End: 31-03-2020
Previous/future work	Yes / No
Any associated project reference codes	210750 - Contracting Unit No.
Type of project	Recording project
Site status	None
Current Land use	Vacant Land 3 - Despoiled land (contaminated derelict and ?brownfield? sites)
Monument type	FLAX MILL Post Medieval
Monument type	CHEMICAL WORKS Modern
Monument type	CHIMNEY Post Medieval
Monument type	TUNNEL Post Medieval
Significant Finds	BONE WORKING DEBRIS Post Medieval
Investigation type	"Open-area excavation", "Part Excavation", "Watching Brief"
Prompt	Planning condition

Project location

Country	England
Site location	WEST YORKSHIRE LEEDS LEEDS Marshall's A and B Mills
Postcode	LS11 9UD



Study area	7600 Square metres
Site coordinates	SE 29495 32950 53.791811556959 -1.552221440248 53 47 30 N 001 33 08 W Point
Height OD / Depth	Min: 26m Max: 26.5m

Project creators

Name of Organisation	Wessex Archaeology
Project brief originator	ECUS Ltd
Project design originator	Wessex archaeology
Project director/manager	Milica Rajic
Project supervisor	Emily Eastwood
Type of sponsor/funding body	construction company
Name of sponsor/funding body	CEG

Project archives

Physical Archive recipient	Leeds Museum
Physical Contents	"Glass","Metal","Worked bone"
Digital Archive recipient	Leeds Museum
Digital Contents	"Stratigraphic","Survey"
Digital Media available	"Database","GIS","Images raster / digital photography","Survey","Text"
Paper Archive recipient	Leeds Museum
Paper Contents	"Stratigraphic","Survey"
Paper Media available	"Aerial Photograph","Context sheet","Diary","Drawing","Map","Matrices","Miscellaneous Material","Photograph","Plan","Report","Section","Survey "

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Marshall's A and B Mills, Holbeck, Leeds, West Yorkshire Post-excavation Assessment and Updated Project design.
Author(s)/Editor(s)	Eastwood, E



Other bibliographic details 210750.04

Date 2019

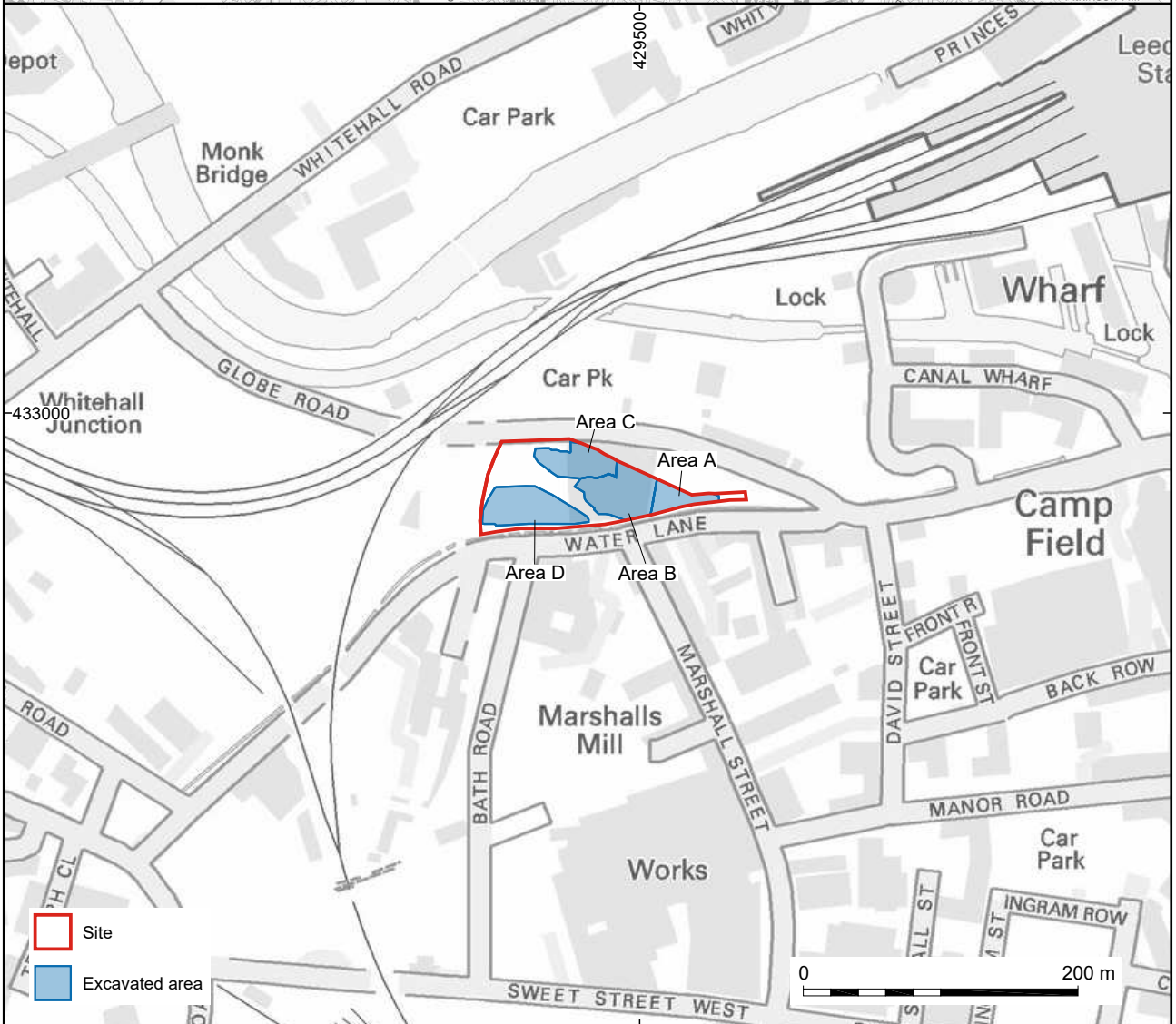
Issuer or publisher Wessex Archaeology

Place of issue or publication Wessex Archaeology North

Description A4 laser printed

Entered by Emily Eastwood (e.eastwood@wessexarch.co.uk)

Entered on 2 September 2019



Contains Ordnance Survey data © Crown Copyright and database right 2018.
 This material is for client report only © Wessex Archaeology. No unauthorised reproduction.



Date:	22/10/2018	Revision Number:	0
Scale:	1:50,000 and 1:5000 at A4	Illustrator:	IA/JD
Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15		

Site location

Figure 1



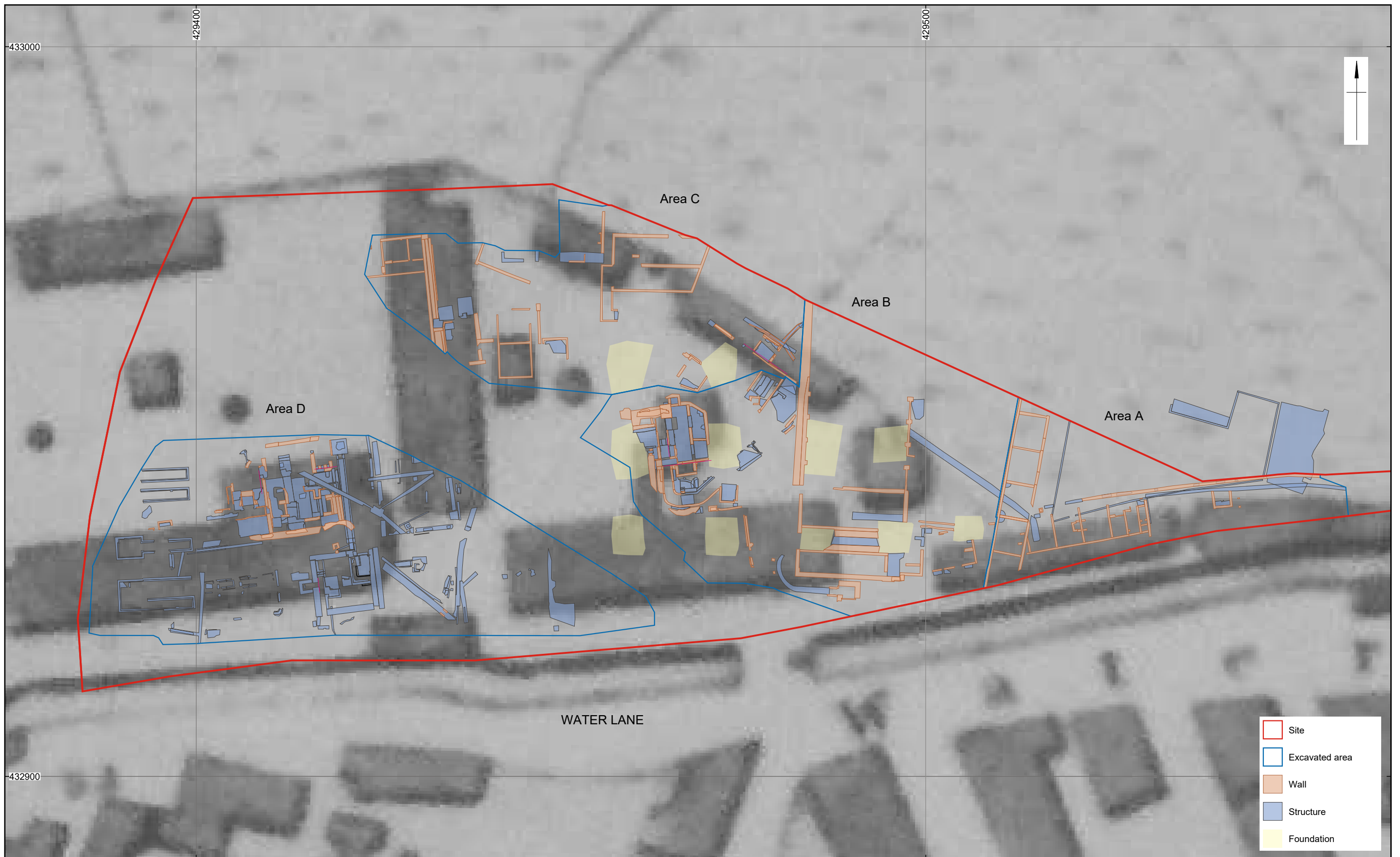
Site plan

Figure 2



Site plan overlay on UAV image

Figure 3



This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	03/09/2019	Revision Number:	0
Scale:	1:500 @A3	Illustrator:	JD
Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15		

Site plan overlay on 1815 N and F Giles map

Figure 4



- Site
- Excavated area
- Wall
- Structure
- Foundation

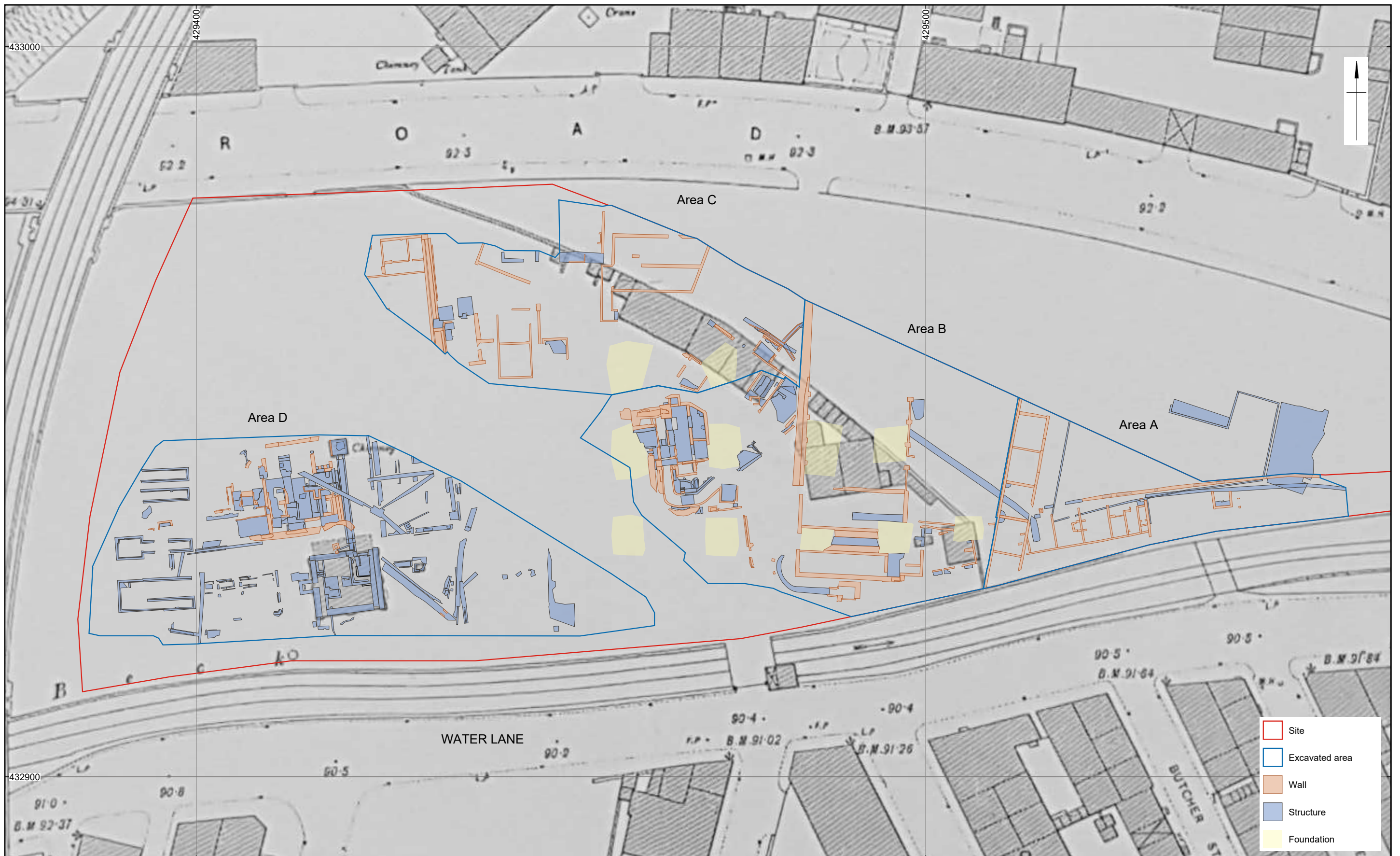


This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	03/09/2019	Revision Number:	0
Scale:	1:500 @A3	Illustrator:	JD
Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15		

Site plan overlay on 1850 J Rapkin map

Figure 5



This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	03/09/2019	Revision Number:	0
Scale:	1:500 @A3	Illustrator:	JD
Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PX\2019_08_15		

Site plan overlay on 1891 Ordnance Survey map

Figure 6



433000 429400 432900



0 20 m


This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	03/09/2019	Revision Number:	0
Scale:	1:500 @A3	Illustrator:	JD
Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PX\2019_08_15		

Site plan overlay on 1901 Goad map

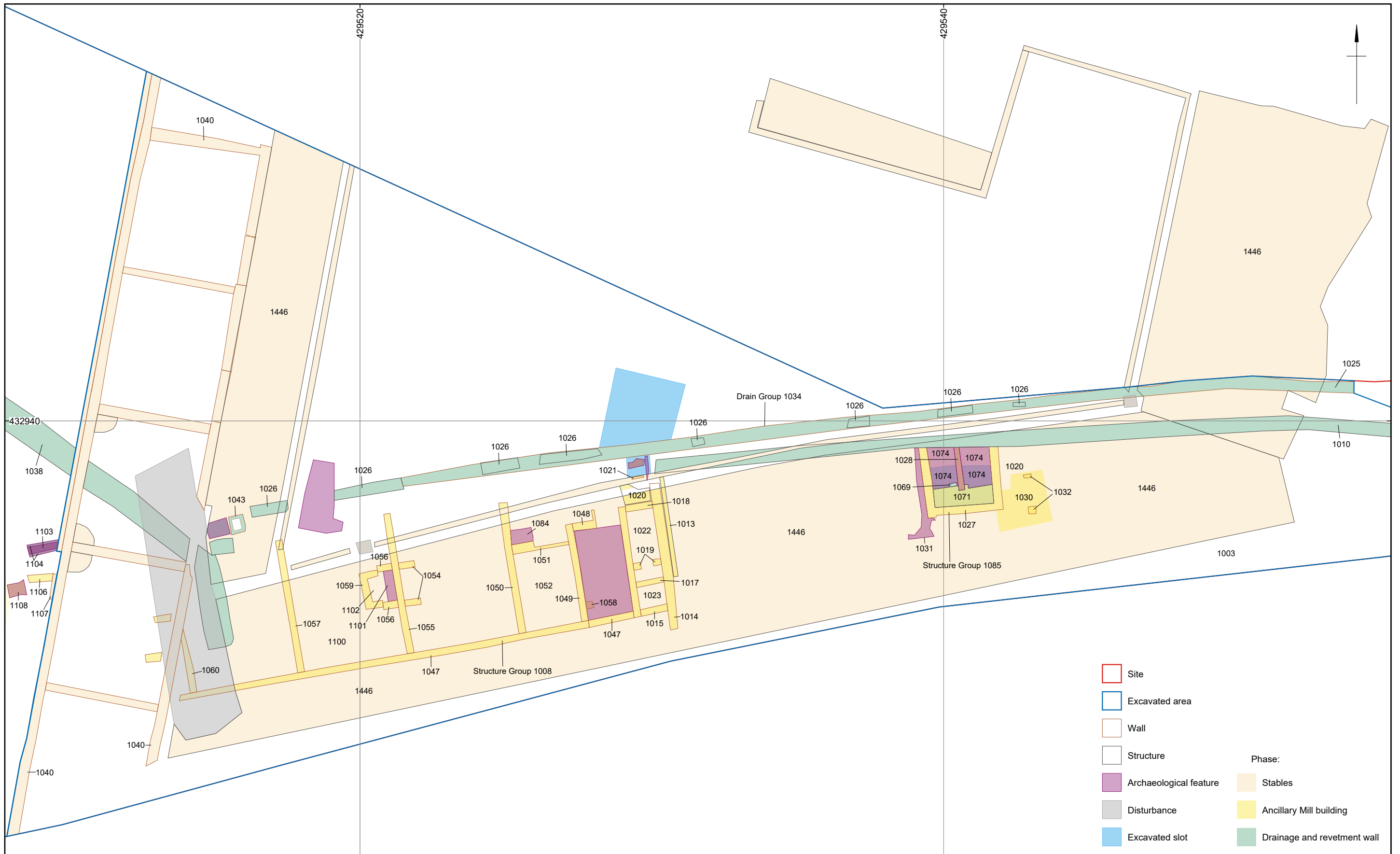
Figure 7



	Date: 03/09/2019		Revision Number: 0	
	Scale: 1:500 @A3		Illustrator: JD	
	Path: S:\PROJECTS\210753\Graphics_Office\Rep figs\PX\2019_08_15			

Site plan overlay on 1951 Ordnance Survey map

Figure 8



This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	03/09/2019	Revision Number:	0
Scale:	1:125 @A3	Illustrator:	JD
Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15		

Area A

Figure 9

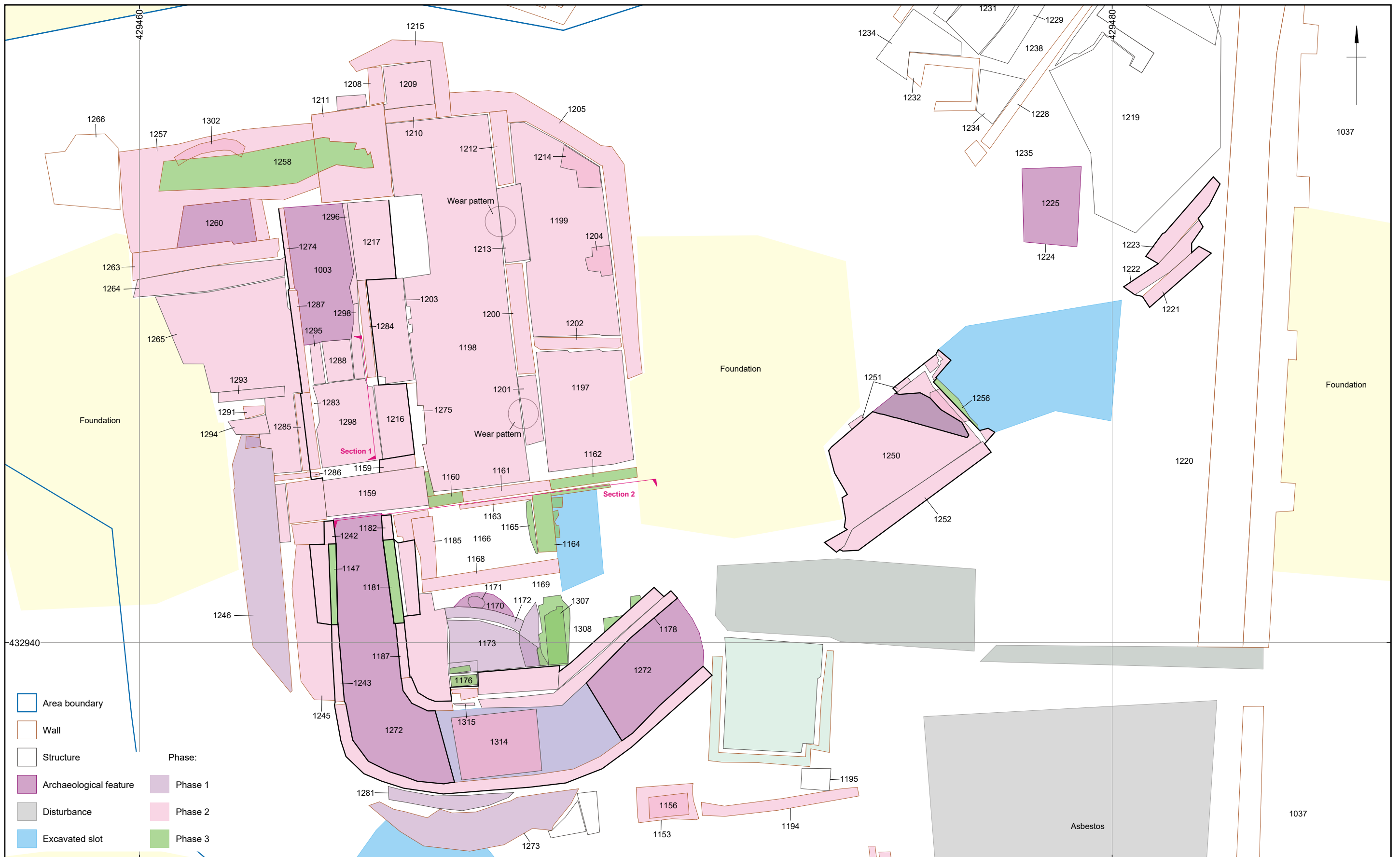



	0	5 m
	<p>This material is for client report only © Wessex Archaeology. No unauthorised reproduction.</p>	

Date:	03/09/2019	Revision Number:	0
Scale:	1:125 @A3	Illustrator:	JD
Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15		

Area B

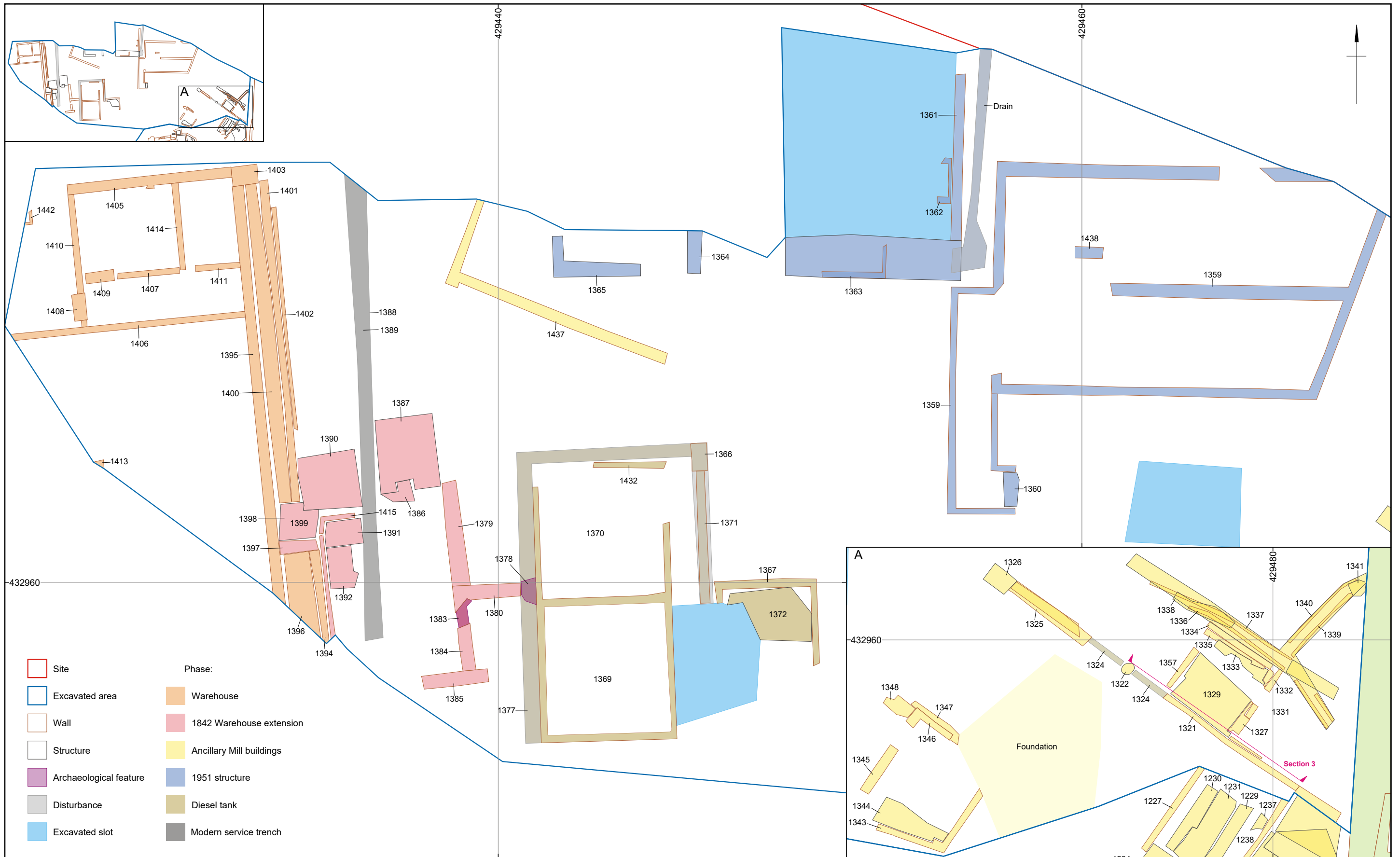
Figure 10



	Date: 03/09/2019		Revision Number: 0	
	Scale: 1:75 @A3		Illustrator: JD	
	Path: S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15			

Area B, Building group 1447

Figure 11

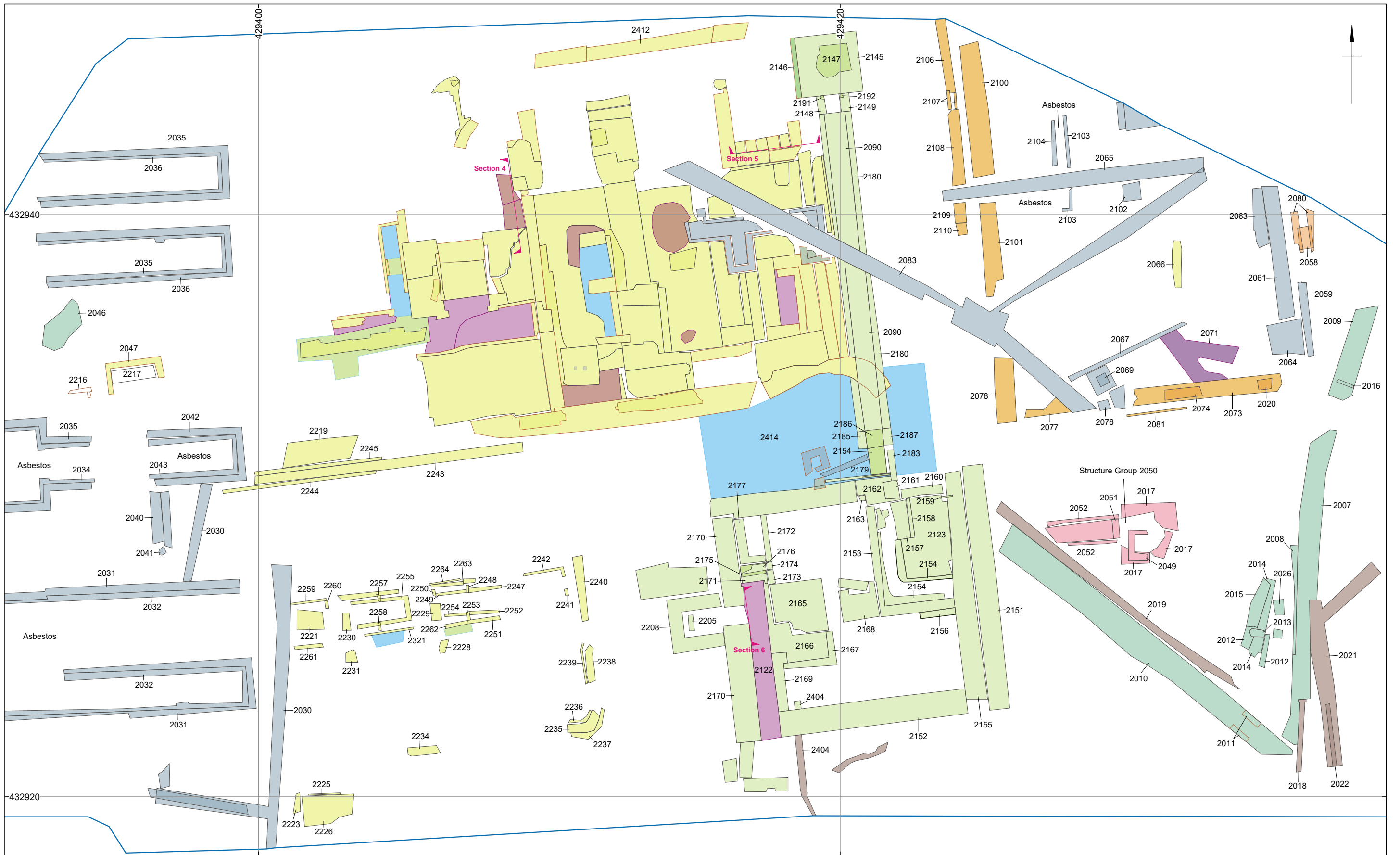




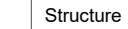

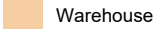
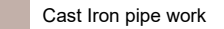



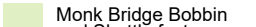






This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	03/09/2019	Revision Number:	0
Scale:	1:125 @A3	Illustrator:	JD
Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15		

Area C

Figure 12



	 Site	 Structure	 Excavated slot	 Warehouse	 Cast Iron pipe work
	 Excavated area	 Archaeological feature	 Phase:	 Monk Bridge Bobbin and Shuttle factory	 Drainage
	 Wall	 Disturbance	 Mill B	 Well	 Modern

This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	03/09/2019	Revision Number:	0
Scale:	1:125 @A3	Illustrator:	JD
Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PA\2019_08_15		

Area D

Figure 13

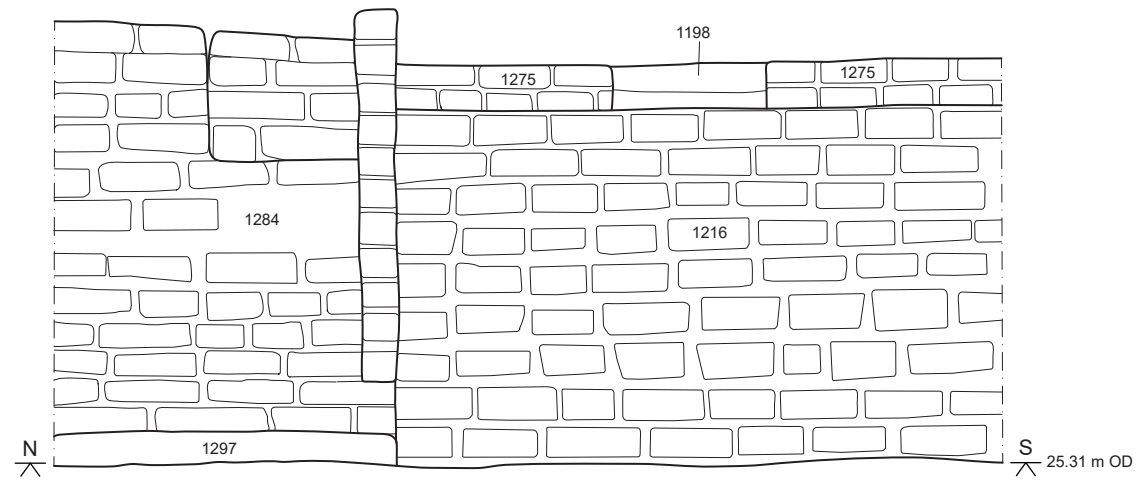




Area D, complex rectangular structure 2412

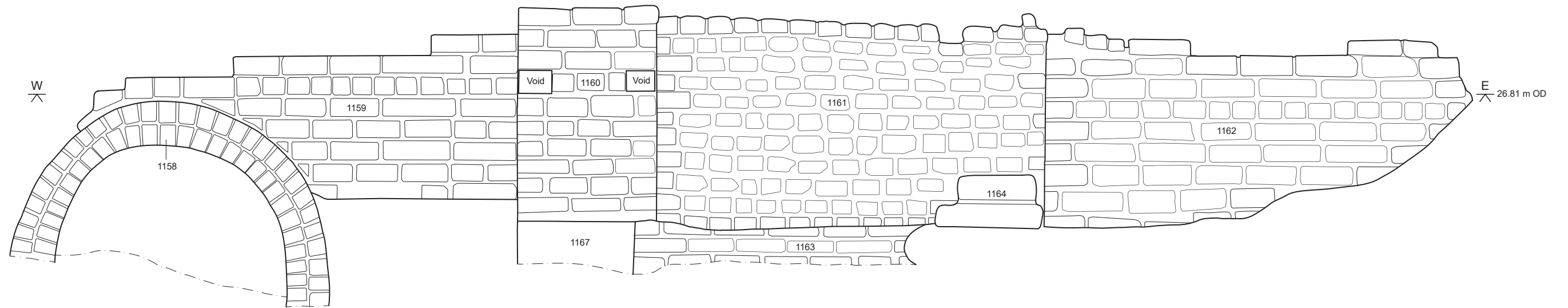
Figure 14

Section 1



West facing section of 1216

Section 2

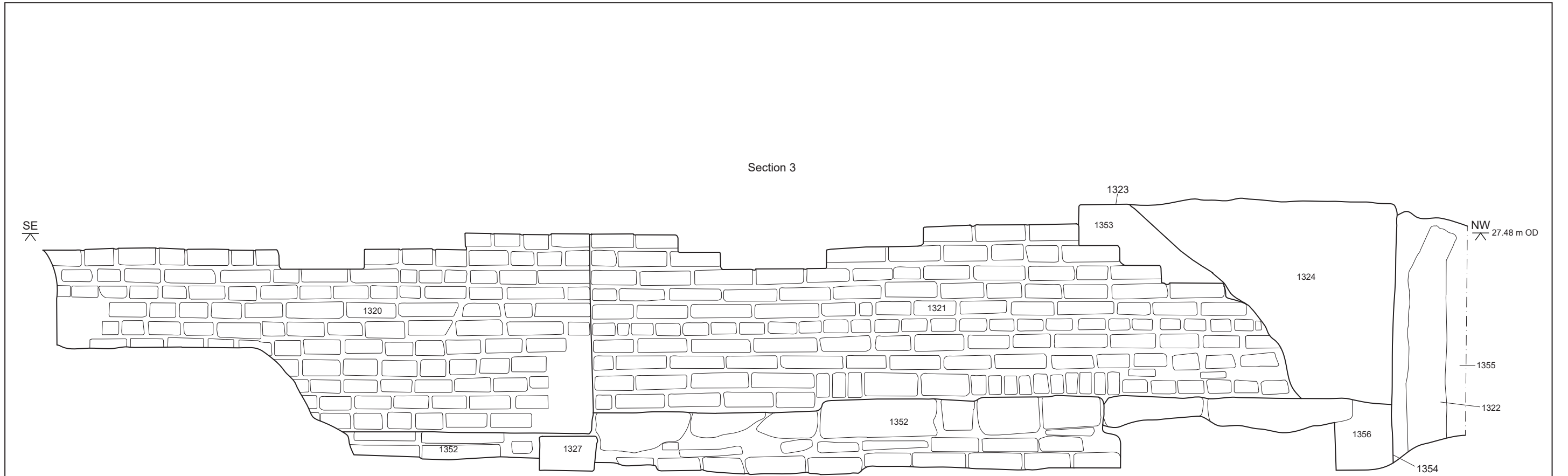


South facing elevation of 1158 - 1162

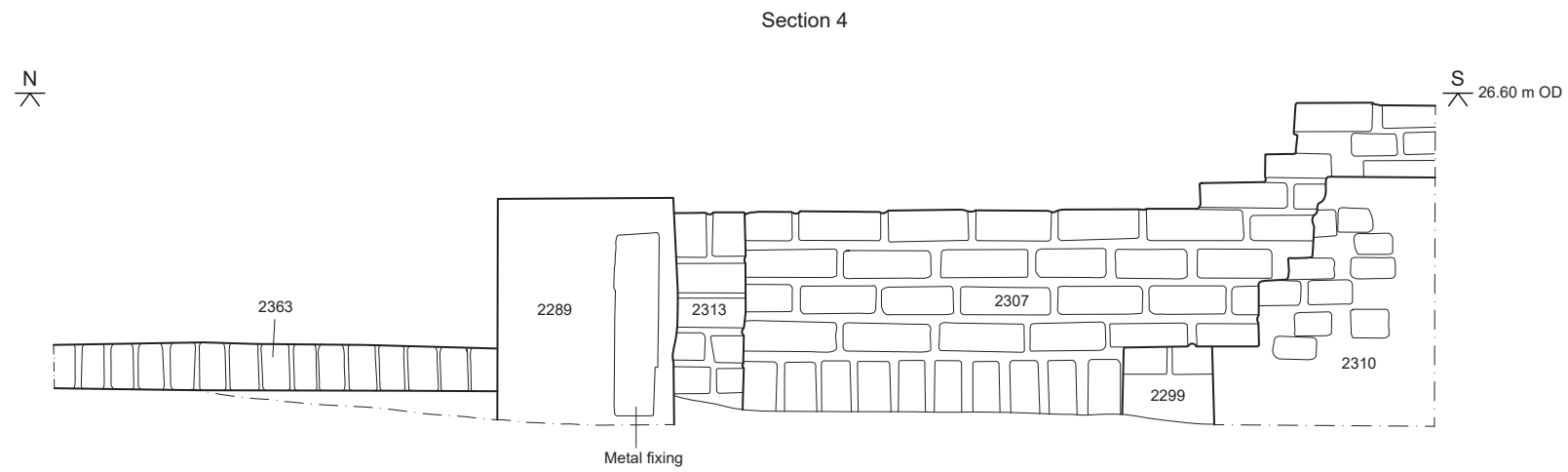


This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	16/08/2019	Revision Number:	0
Scale:	1:20 @ A3	Illustrator:	JD
Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PX\2019_08_15		



North East facing walls 1320 and 1321 plus associated contexts

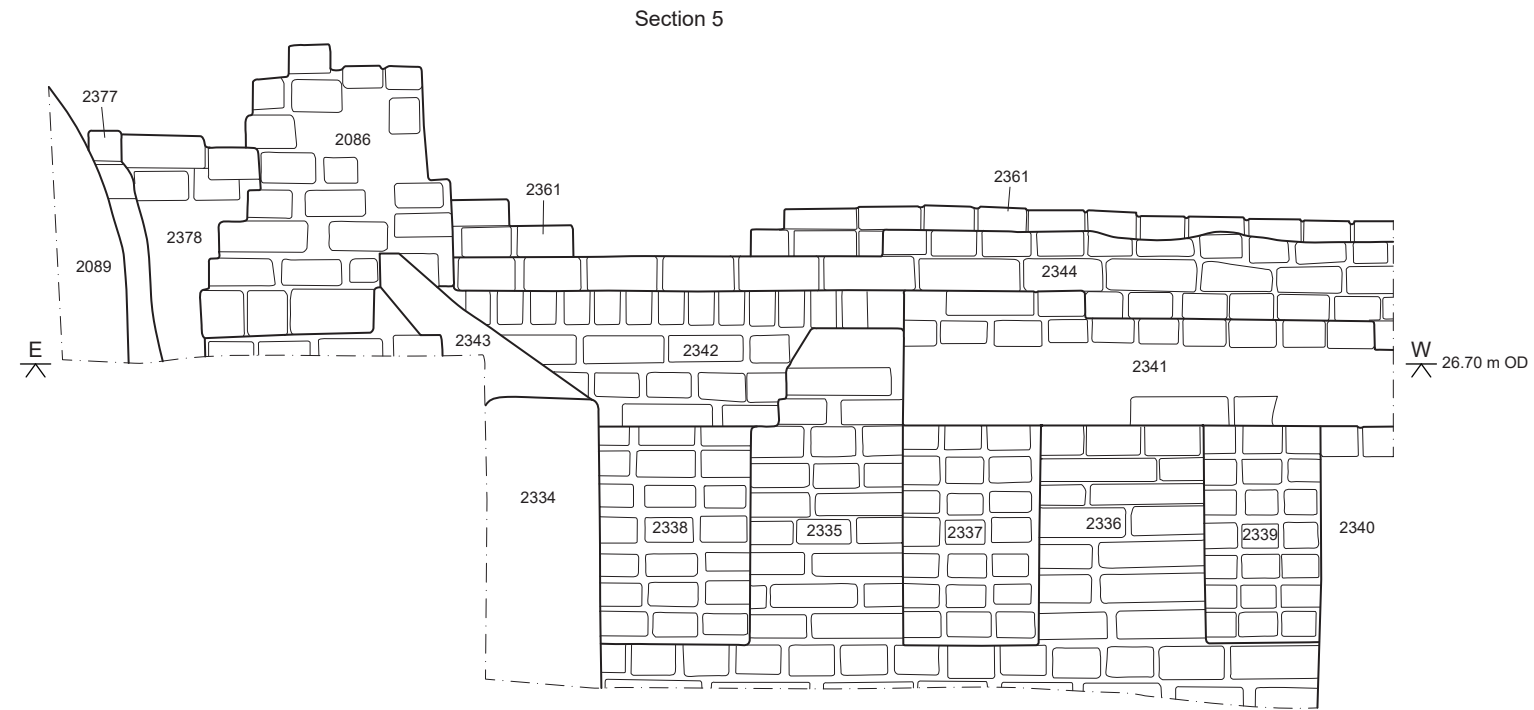


West facing elevation of 2287 and 2363

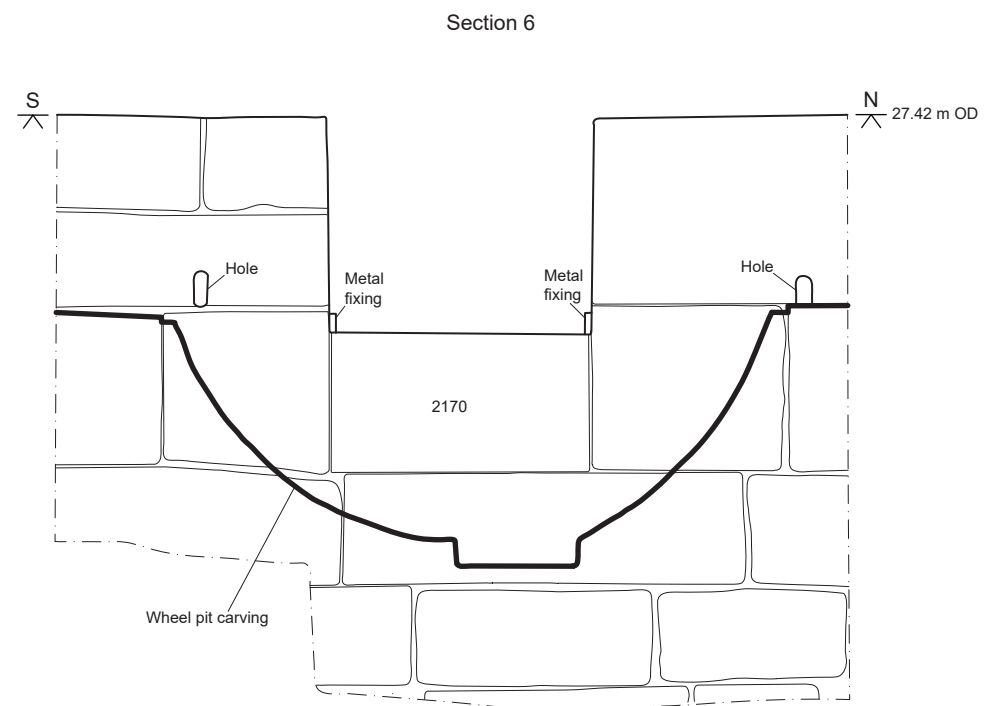


This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	16/08/2019	Revision Number:	0
Scale:	1:20 @ A3	Illustrator:	JD
Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXAI\2019_08_15		



North facing elevation of chutes 2337, 2338, 2339 and associated structures



East facing elevation of wheel pit wall 2170



This material is for client report only © Wessex Archaeology. No unauthorised reproduction.

Date:	16/08/2019	Revision Number:	0
Scale:	1:20 @ A3	Illustrator:	JD
Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PX\2019_08_15		



Plate 1: Room group 1085 from North East



Plate 2: Stables 1040 cutting 1008 from North


	This material is for client report only © Wessex Archaeology. No unauthorised reproduction.		
	Date:	15/08/2019	Revision Number: 0
	Scale:	Not to scale	Illustrator: JD
	Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15	



Plate 3: Wall and surfaces 1113, 1115, 1117-1119 from North West



Plate 4: Overview of passage 1217 truncating chimney 1282 from West


	This material is for client report only © Wessex Archaeology. No unauthorised reproduction.			
	Date:	15/08/2019	Revision Number:	0
	Scale:	Not to scale	Illustrator:	JD
	Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15		



Plate 5: Wear pattern in floor 1196 from East



Plate 6: Firebrick steam boiler base 1128 – 1131 from North East


	This material is for client report only © Wessex Archaeology. No unauthorised reproduction.			
	Date:	15/08/2019	Revision Number:	0
	Scale:	Not to scale	Illustrator:	JD
	Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15		



Plate 7: Cells 1219 and 1231 (etc) from North



Plate 8: Structure group 2200 from West


	This material is for client report only © Wessex Archaeology. No unauthorised reproduction.		
	Date:	15/08/2019	Revision Number: 0
	Scale:	Not to scale	Illustrator: JD
	Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15	



Plate 9: Complex multiphase mill structure 2373 etc from South West



Plate 10: Slopes 2360 and associated structure from North



	This material is for client report only © Wessex Archaeology. No unauthorised reproduction.		
	Date:	15/08/2019	Revision Number: 0
	Scale:	Not to scale	Illustrator: JD
	Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15	



Plate 11: Iron tank 2393

	This material is for client report only © Wessex Archaeology. No unauthorised reproduction.			
	Date:	15/08/2019	Revision Number:	0
	Scale:	Not to scale	Illustrator:	JD
	Path:	S:\PROJECTS\210753\Graphics_Office\Rep figs\PXA\2019_08_15		



Wessex Archaeology Ltd registered office Portway House, Old Sarum Park, Salisbury, Wiltshire SP4 6EB
Tel: 01722 326867 Fax: 01722 337562 info@wessexarch.co.uk www.wessexarch.co.uk

