

257 Ordsall Lane Salford Greater Manchester

Archaeological Evaluation and Excavation

Report No. Y376/18

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CONTENTS

1.	INTRODUCTION	3
2.	WORKING METHODS	6
3.	RESULTS	8
4.	DISCUSSION	17
5.	CONCLUSION	21
6.	BIBLIOGRAPHY	22

Tables

- 2.1: Contents of the evaluation archive
- 3.1: Trench Summaries

Figures

- Fig. 1: Site location and trench layout
 Fig. 2.1-2.3: Location of archaeological features
 Fig. 2.1-2.5: Historia magning
- Fig. 3.1-3.5: Historic mapping
- Fig. 4.1-4.8: Evaluation trenching photographs
- Fig. 5: Orthographic photograph of the excavation area.
- Fig. 6.1-6.48: Excavation photographs

Appendices

1: Context Registers

SUMMARY

An archaeological evaluation and excavation was carried out by CFA Archaeology on land at Ordsall Lane, Salford during September and October 2018. Four trial trenches were excavated across the proposed site of a mixed use development in order to evaluate any potential surviving archaeological remains. The results of this initial phase of investigation informed an excavation on the site of the former Ordsall Chemical Works. The programme of archaeological works revealed the well preserved remains of a number of buildings of 19th century or later origin, associated with the industrial use of the site, and an air raid shelter of mid 20th century date. No evidence was observed for a structure of possible late Georgian origin known as Ordsall House.

1. INTRODUCTION

This report presents the results of an archaeological evaluation undertaken by CFA Archaeology Ltd (CFA) during early September 2018 at 257 Ordsall Lane, Salford, Greater Manchester (Fig. 1, NGR SJ 381946 397103) and a subsequent phase of excavation in late September and early October 2018. The work was commissioned by Beaumont Morgan Developments Ltd and was carried out in accordance with a written scheme of investigation (WSI) produced by CFA Archaeology (CFA 2018) and agreed with Norman Redhead, Heritage Management Director (Archaeology) for the Greater Manchester Archaeological Advisory Service (GMAAS). The work was carried out in advance of the proposed construction of a mixed use development with associated access arrangements, parking and landscaping.

1.1 Site Location and Description

The site comprises a square plot of land bounded to the north by Ordsall Lane (A5066), a disused block of land to the east, the Manchester Ship Canal to the south and a modern warehouse unit to the west. Until recently, the site had been used by a freight handling company, operating from a modern steel framed warehouse fronting onto Ordsall Lane, with a large concrete vehicle yard between the south side of the warehouse and the Manchester Ship Canal. Ground level sloped down very slightly to the south-east from Ordsall Lane, with a raised concrete podium providing a level platform for the warehouse.

The soils of the area are described as 'loamy and clayey floodplain soils with naturally high groundwater' (Landis 2019). The geology of the area consists of Chester Formation Sandstone with superficial deposits of alluvium - clay, silt, sand and gravel (BGS 2019).

1.2 Historical and Archaeological Background

In the early years of the 19th century, Ordsall Hall, a 16th century building located approximately 150m to the south-west of the site, stood largely in an open, undeveloped landscape. Within a short period of time however, the area rapidly became urbanised with a mixture of industrial and residential development and by the time of the opening of the Manchester Ship Canal in 1894, the area was densely occupied with commercial and manufacturing industries along the north bank of the waterway.

A Heritage Assessment was produced by Lambert Smith Hampton (LSH 2016) which identified heritage assets in the vicinity of the development through a review of the Historic England National Heritage List and pre-application dialogue with Salford City Council, GMAAS and Historic England North West. Any identified heritage assets were categorised as being within an inner, middle or outer study area, all centred on the site. No designated heritage assets were identified within the Inner Study Area (defined as the application site and all the heritage features within it), but the report stated that there was the potential for discovery of archaeological assets relating to a possible late Georgian building (labelled as Ordsall House on mapping of 1850), a reservoir and filtering pond and the western range of buildings belonging to Ordsall Chemical Works.

Following closure of the chemical works in the early 1960s and clearance of the buildings, the only development to take place on the site was the construction of the recently demolished warehouse and its associated area of hardstanding.

Historic mapping of Salford provides a useful source of information on the past use of the site and the surrounding area. A selection of maps showing the development of, and changes to the chemical works and environs follows below.

1.3 Historic Maps

OS Six-Inch Lancashire CIV, published 1848 (Fig. 3.1)

A complex of buildings labelled 'Chemical Works' are shown with a long range built alongside the river frontage, extending from the main works buildings at the eastern extent of the plot into the south-eastern corner of the excavation area. Two reservoirs are located along the north-west boundary of the development site, and a solitary building stands within open grounds which account for over half the area of the chemical works property. Beyond the chemical works, the surrounding landscape is undeveloped, open land crossed by field boundaries, with the only buildings in the vicinity being those of Ordsall Hall to the southwest.

OS town Plan (1:500): Manchester (including Salford) Lancashire and Furness, 1891-1895 (Fig. 3.2)

Expansion of the chemical works has taken place, with buildings added at the south-western extent of the facility, extending into the location targeted by evaluation trench 3 and the excavation area. The western reservoir has been removed and a boundary wall has been constructed to separate the chemical works to the east, from the grounds of the building (now labelled 'Ordsall House') at the western side of the development area. Ordsall Lane has been realigned from its earlier east/west orientation alongside the buildings of the chemical works, to a north-east / south-west orientation slightly further to the north-west of its original position. Formerly open land to the west and north of site has been extensively developed for industrial and residential uses. The Manchester Ship Canal and the dock system have been constructed by this time.

Insurance Plan of the City of Manchester Vol. IV: sheet 104, 1902 (Fig.3.3)

The layout of the buildings across the western part of the chemical works remains largely unchanged from the 1891-1895 mapping, with the exception of the addition of a two

storey wooden structure against the south-west elevation of the building fronting onto the Manchester Ship Canal.

OS Six-inch to the mile map, Lancashire CIV. South-West, published 1909 (Fig. 3.4)

The buildings of the chemical works remain unchanged from mapping of 1902, but Ordsall House with its driveways and surrounding gardens is no longer shown: the land across the western half of the chemical works plot is indicated as being unused.

OS 1:10,560 Sheet SJ 89 north-west (Includes: Manchester; Salford; Stretford), published 1956 (Fig. 3.5)

The reservoir and buildings forming the south-western extent of the chemical works are no longer present, and a structure is shown at the centre of the development area, located to the west of the former site of the Cooperage shown on the 1902 Insurance Plan. Mapping of a similar date labels this newly constructed building as 'Day Nursery'. A slight change has taken place to the western property boundary of the chemical works plot, with a structure now shown breaking east of the formerly straight north-west / southeast orientated boundary.

1.4 Previous Archaeological Work

There has been no previous invasive archaeological work on the site. A desk-based assessment (RSK 2017) and a programme of trial trenching had been carried out on land off Fairbrother Street (the plot of land immediately east of 257 Ordsall Lane) which targeted the various buildings and structures of the eastern half of the chemical works (RSK 2017, currently unpublished). RSK carried out an open area excavation on the eastern part of the chemical works in June of 2019: an exchange of information about the results of the CFA and RSK investigations took place in order to identify the continuity of the remains of the chemical works across both development areas.

1.5 Project Aims

In accordance with the written scheme of investigation, the primary aim of the of the evaluation and excavation was to determine the location, extent, date, character, condition, significance and quality of any archaeological remains liable to be threatened by the proposed development, should they exist on the site.

2. WORKING METHODS

CFA Archaeology Ltd is a registered organisation (RO) with the Chartered Institute for Archaeologists (CIfA). CFA Archaeology follows all relevant CIfA and Historic England Standards and Guidance (CIfA 2014a-b and EH 2008).

Archaeological remains were recorded by means of photographs, drawings and written records conforming to CIfA standards (CIfA 2014a) and CFA's quality manuals. All features were planned and drawn at appropriate scales. The trenches, section lines and drawing points were surveyed using an industry standard Trimble GPS. The same equipment was used to establish levels above Ordnance Datum for the trenches.

All finds were treated in accordance with relevant guidance (CIFA 2014b). Modern finds were recorded and then discarded. The project archive, comprising all CFA record sheets, finds, plans and reports, will be prepared to current guidelines (CIfA 2014), ensuring the proper transfer of ownership.

Phase	File/Box No.	Description	Quantity
		Context register sheets	2
Evaluation File no	E:1 1	Context sheets	35
	riie no. i	Trench record sheets	4
		Digital photographic register sheets	2
		Context register sheets	4
Excavation	File no. 2	Context sheets	98
		Digital photographic register sheets	5

Table 2.1: Contents of the Archive

A summary of the results of archaeological works will be submitted for inclusion in OASIS. The OASIS reference is cfaarcha1-274258.

2.1 Trial Trenching

The original specification was for four trial trenches, each measuring 30m in length, to be excavated within the site boundary; two located on the site of Ordsall House; and two on the site of buildings forming part of the chemical works. Due to non-archaeological constraints, three of the trenches (1, 3 and 4) required re-siting. The re-location of the trenches was agreed with GMAAS based on the understanding that the original aims of the project would still be achieved by excavation in the new locations. The variation of the location of the trenches was as follows:

- Trench 1 was moved 4.00m east along its original axis to avoid cutting off vehicular access to site from the entrance gate.
- Trench 3 was moved 4.50m to the south east, parallel to its original position, in order to avoid the need to relocate a large stock pile of concrete debris.
- Trench 4 was moved approximately 8.00m south west along its original axis and shortened by 5.00m due to the eastern extent of the original location falling outside the present fence line.

All trench locations were marked out using Trimble GPS, and the reinforced concrete slab was broken out using the demolition contractors' tracked 360 excavator fitted with a hydraulic breaker. Lifting of the slab was undertaken using a 2.00m wide toothless

ditching bucket and the underlying material was removed in even, shallow spits until the first archaeological deposits or natural substrate was encountered. All mechanical excavation work was carried out under constant archaeological supervision. Any further excavation required to fulfil the objectives of the evaluation was carried out by hand.

2.2 Excavation

An appraisal of the archaeological remains present in the four evaluation trenches was made by GMAAS. Based on the results of the trenching, a programme of targeted excavation was commissioned at the south-eastern quarter of the development site in order to gain further understanding of the remains observed within the evaluation trenches. The area to be excavated was centred over structures recorded in trenches 3 and 4, most likely representing the westernmost buildings of the chemical works complex.

In consultation with GMAAS, a rectangular area measuring approximately 38 by 36m was defined as the area of excavation. The extents of the area were marked out using industry standard Trimble GPS equipment. A 50-ton tracked 360 excavator (under constant archaeological supervision) was used to remove the modern concrete slab from across the area: an 8-ton tracked excavator assisted with the clearance of modern overburden across smaller areas and within structures where space was limited. Any further clearance of material required to fulfil the objectives of the excavation was carried out by hand. GMAAS were notified of progress on site, and a site visit took place on 3rd October 2018 in order for the archaeological remains revealed in the excavation area to be inspected by GMAAS.

3. RESULTS

3.1 Trench Evaluation

A summary of all contexts from the evaluation and excavation forms Appendix 1. The following results should be read in conjunction with figures 1-6.

Descriptions of the four evaluation trenches appear in the Table 3.1. The trenches trenches containing archaeological features are described in detail below.

All four trenches were excavated through reinforced concrete surfaces (001 in the yard area, 002 on the warehouse podium) with associated coarse aggregate bedding in the west part of the yard and across the raised podium. The concrete slab was laid directly on top of the demolished remains of the previous standing structures in the eastern part of site.

No topsoil or subsoil was observed in the trenches, presumably having been removed during successive phases of redevelopment on the site, particularly during groundworks to establish a level for construction of the reinforced concrete delivery yard associated with the recently demolished warehouse. The natural substrate for the area was midbrown silty medium grained sand 032.

Trench	Description
	The trench was orientated north-east to south-west. The western third of the trench was at ground level, with the eastern two thirds located across the raised podium of the former warehouse (Fig. 4.1).
	No topsoil or subsoil was observed. The natural substrate was observed in small areas along the base of the trench.
1	A modern pipe trench aligned north-east to south-west cut across the west end of the trench. Foundation trenches associated with the former modern warehouse cut across the width of the trench on a north-west to south-east orientation.
1	A brick built inspection chamber was located in the western half of the trench. A ground-raising dump (026) was present across the raised warehouse podium. A layer of cinders (027) underlay the dump (026) in the central part of the trench.
	A surface comprising unmortared, pitched bricks, concrete edging and compacted cinders (028), underlay layer 027 in the central part of the trench. A similar feature (029), was observed in Trench 2.
	A layer of cinders (035) extended across the eastern end of the trench.
	The trench was orientated north-north-west to south-south-east. The north end of the trench was dug through the raised warehouse podium; the rest of the trench lay across the flat, concrete yard surface (Fig. 4.2).
	No topsoil or subsoil was observed. The natural substrate was observed across the base of the trench in the area to the south of the warehouse podium.
2	A wide construction cut for the western elevation of the warehouse and a modern pipe crossed the north end of the trench on a north-west to south-east alignment.
	The south-west corner of a brick and reinforced concrete structure was located towards the southern end of the trench. The internal space had been backfilled with brick rubble.
	A surface comprising unmortared, pitched bricks, concrete edging and compacted cinders (029) was located at the north end of the trench. A similar feature (028), was observed in Trench 1.

Trench	Description
	The trench was orientated south-west on level ground in the concrete delivery yard area (Fig. 4.3).
	No topsoil or subsoil was observed. The natural substrate was observed along the base of the trench in areas between modern intrusions and archaeological features.
	An area of redeposited natural containing modern rubble was present across the western end of the trench.
	A reinforced concrete lined structure (internally backfilled with demolition rubble) was located in the centre of the trench, orientated north to south.
	A sub-oval intrusion was cut into the natural substrate and part of a brick pad (022), immediately east of the concrete structure.
3	A north-west to south-east aligned foundation cut (for the ramp up to the former warehouse podium) crossed the trench towards its eastern end, with an associated shallow, north-east to south-west orientated cut extending from its eastern side along the north edge of the trench.
	A north-north-west to south-south-east orientated flagstone path (011) was located at the eastern end of the trench. A surface (012) comprising bricks was laid on edge, butting up to the west side of the path (011). Curved brickwork (013) continued below the brick surface (012). A brick wall (014), orientated north-east to south-west, butted up to the western face of curved brickwork (013).
	A worked stone block (016) was located in the far northern corner of the trench, at a lower level than surfaces 011 and 012.
	A layer of black cinder (015) extended below Surface 012 and covered an underlying brick feature (030). A north-west to south-east aligned brick wall (017) crossed the trench to the west of the features described above. A brick drain inspection chamber (019) filled by debris (018) was constructed against the west face of Wall 017. A partially truncated brick pad (022) was located two thirds of the way along the trench (from the west end). A north-west to south-east aligned brick wall (021) and associated buttress (020), crossed the western end of the trench.
	The trench was orientated north-east to south-west on level ground in the concrete delivery yard area (Fig. 4.4).
	No topsoil or subsoil was observed. The natural substrate was observed along the base of the trench in areas between modern intrusions and archaeological features.
	An east to west orientated, reinforced concrete-lined structure (internal space backfilled with brick and tarmac rubble) crossed the western half of the trench. Mid-way along the trench, a large modern intrusion truncated archaeological deposits and features along the north side of the trench.
4	Two rectangular brick pads (004 and 005) were identified at the east end of the trench, cutting through a thin spread of cinder (003).
	A north-west to south-east aligned brick wall (007) crossed the trench to the west of pads 004 and 005. Surface 006, comprising bricks laid on edge, butted up to the east side of Wall 007. A cinder deposit (023) extended below Surface 006. The north corner of an area of brickwork (024) was recorded to the east of Wall 007.
	A north-west to south-east aligned brick wall (009), with associated brick surface (025) along its east face, extended across the trench, mid-way along its length. A dump of mixed material (008) lay between walls 007 and 009. A thin layer of black granular cinders lay to the west of wall 010.

Table 3.1: Trench Summaries

Y376/18/BRIW2 9 CFA

Trench 1

Trench 1 did not identify remains of the structure identified on historic mapping as Ordsall House. An area of neatly aligned pitched bricks (Fig. 4.5; 028), with a flat upper surface of compacted cinders, was part of a carefully laid external surface that may have been associated with the building labelled as 'Day Nursery' on 1949 OS mapping of the site. However, No walls were present to correlate the position of the surface to the location of the day nursery. A record was made of extensive overburden (026) which had been laid down in preparation for the construction of the modern warehouse.

Trench 2

No remains were observed to confirm the presence of Ordsall House. Trench 2 contained one archaeological feature; a cinder and brick surface (Fig. 4.6; 029), which was identical in form to Surface 028 to the north in Trench 1. This feature post-dates Ordsall House but its function and connection to the development of the site is unclear.

Trench 3

Archaeological remains were best preserved at the eastern end of Trench 3 (figs 2.2 and 4.7). An early brick wall or surface (030), was buried by a uniform dump of ash and cinders (015), which had been laid down in preparation for the construction of later surfaces (011 and 012). A short section of curved brickwork (013), which continued beneath these surfaces, was also buried by Dump 015, indicating several phases of activity.

A brick wall (017), lay to the west of the floor surfaces. It was three bricks wide, indicating that it was part of a major load-bearing structure, most likely the wall of a building associated with the remains recorded to the east. The sub-rectangular drain inspection chamber (019), which had been built against the west side of Wall 017, was a later insertion; indicated by the difference in mortar used in construction.

The central area of the trench was badly affected by modern truncation, and only the partial remains of a rectangular brick pad or base (022), survived. Towards the western end of the trench, a north-west to south-east aligned brick wall (021), three bricks wide, featuring an accompanying buttress (020) supporting the wall on its eastern side, were the only remains observed (Fig. 4.8), with no floor surfaces or deposits surviving to the same depth.

Trench 4

At the east end of the trench, two rectangular brick pads or bases (004 and 005), and a north-west to south-east aligned brick wall (007) were constructed using the same bricks and composition of mortar, suggesting they were part of the same structure and phase of activity (Fig. 2.2). Wall 007 was three bricks wide, with alternating courses of headers along one face, backed by stretchers along the other. The relationship of a well-built possibly square brick structure (024), to other features (004, 005 and 007) was unclear due to the insertion of a later brick floor surface (006) along the eastern side of Wall 007.

Running parallel to and south-west of Wall 007, another wall (009) was also three bricks wide, but with different coursing and mortar. Excavation of backfill within a modern intrusion along the northern side of the trench revealed a brick surface (025), built at a lower level against the east face of Wall 009, possibly acting as a drain. From the level of Surface 025, a 0.24m thick dump of mixed waste and rubble (008), extended between walls 007 and 009. A spread of black, granular cinders (010), lying west of Wall 009, was truncated at its western extent by the deeper truncation which affected the western half of the trench.

3.2 Excavation

In order to identify specific buildings within the site, structure numbers have been allocated to the major buildings which were clearly defined by their outer walls. See Figure 5 for the location of the structures.

Structure 1

A large subterranean structure, reverse 'S'-shaped in plan, crossed the excavation area from its north-western to south-eastern extent. Two, 20m long straight sections, aligned north to south and east to west were constructed with concrete side walls (190 and 191), forming an internal corridor 1.97m wide. At the south-eastern extent of the structure a set of concrete steps (187) between brick side walls (186 and 188) set at right angles to the attached passage, provided access into and out of the subterranean corridor (Fig. 6.3).

The side walls of the structure were built from numerous tall, narrow pre-fabricated panels of reinforced concrete, with adjacent panels bolted together to form the required length of walling. Clearance of a small area of backfill within the passage showed that the panels had been set in position prior to the laying of the poured concrete interior floor surface (Fig. 6.4; 189). The upper part of the concrete side walls had been truncated at or just above a level where the panels angled inwards towards the opposite side of the passage, probably indicating the base of a roof structure. It was not clear if such a structure would have comprised a single continuous piece with the two side panels, or if the roof would have been formed from a separate concrete section fixed onto the top of the walls. The floor level within the passage was 1.78m below the present ground level, with clear evidence of a construction cut (197) indicating that the structure had been built inside a wide, deep trench excavated through natural deposits (Fig. 6.5).

A second entrance with two flights of stairs (158 and 162) directly opposite each other was located at the north-west extent of the excavation area (Fig. 6.6). This entrance was a right-angled change in direction of the subterranean passage, with a return to the west extending from the steps and continuing beyond the limit of excavation. The steps down into the structure were made of individually cast concrete elements, built into brick side walls (159, 160 and 161), with the front edge of each step resting on the rear edge of the step below (Fig. 6.7). Construction of side walls (159 and 161) involved the use of bricks with rounded edges where the staircases opened into the concrete-lined corridor (Fig. 6.8).

Boundary Wall

A north-west to south-east aligned brick wall foundation (105) extended for 36m across the western extent of the excavation area (figs 2.3 and 6.9). The foundation was three bricks wide, with additional support provided by pairs of buttresses spaced 3.70m apart along the full length of the structure (Fig. 6.10). The buttresses were cut down through natural deposits to the level of the base of the foundation, and featured an offset bottom course (Fig. 6.11).

Structure 2

Wall foundations were identified in the north-western quarter of the excavation area, defining three sides of a rectangular building measuring at least 15m long by 8.85m wide (figs 2.3 and 6.12). The south-western wall (100) had been truncated at its northern end and mid-way along its length by the concrete walls of the later subterranean passage. Two shallow internal buttresses were located along the east side of the foundation (Fig. 6.13) and brickwork possibly forming the base to an additional support was located at the south end of the wall where it joined the south-eastern wall (101) of the structure. The east end of Wall 101 terminated with a short return to the north-west (Fig. 6.14). Four rectangular brick pads (022 from Trench 3, 102, 148 and 149) were observed in a line extending north-west from the return at the east end of Wall 101. Each pad measured 0.49m by 0.74m and was 2.80m away from the adjacent pad. Pad 148 was excavated to its base, showing the brickwork to have been built within a rectangular construction cut, and the main body of the structure sitting on two offset courses at the base of the feature (Fig. 6.15).

No internal floor surfaces survived within the building: the only structures recorded inside the foundations being a small area of brickwork (150) adjacent to a foundation pad (148) and a brick and stone drain (154). Only one course of Brickwork 150 survived, and the western extent had been truncated by a construction cut (164) for brick and concrete stairs (Fig. 6.15; 158, 159 and 160). Mortar across the upper surface of Brickwork 150 indicated that additional masonry had formerly been present, but no evidence of the form of those elements survived. A Drain (154) comprised brick side walls resting on a slate lined base, capped by stone slabs (Fig. 6.16), with the eastern extent of the feature, either associated with or truncated by, a brick pad (102).

Northern Quarter of the Excavation Area

An open area between structures 2 and 3 contained a number of features including drains and cable runs. A north-west to south-east aligned drainage system was recorded, extending for over 15m alongside the west wall (103) of structure 3. At the north observed extent of the drainage system, a square brick built inspection chamber (Fig. 6.17; 120) allowed access to a ceramic pipe; 9.50m to the south-east of the chamber, a second brick-built inspection chamber (019), initially recorded in Trench 3 was flanked by two rectangular, timber-lined structures (Fig. 6.18). A 0.27m diameter ceramic pipe entered the north side of Chamber 019, and a 0.19m diameter pipe entered from the west side (Fig. 6.19). Although the fill (018) was not entirely removed from within the structure, a sloping concrete floor was exposed across the north half of the base.

Two rectangular, timber-lined structures (115 and 180), were to the north and south of Chamber 119 and measured 3.00m long by 1.30m wide, and survived to a depth of 0.65m. Excavation within the northern structure revealed a poorly preserved lining of timber planks (115), with associated metal fixtures (Fig. 6.20). The timbers along the base of the structure had been truncated by the excavation of a trench (114) to allow for the insertion of a ceramic pipe along the centre line of the feature (discharging at its southern end into the inspection chamber). Following the laying of the pipe, the whole tank was backfilled with coarse clinker fragments.

Two north-east to south-west aligned features extended across the gap between buildings at the north end of the excavation area (Fig. 6.21). A timber beam (117) featured a channel along its upper surface containing wire cables fixed in place by a coating of tar and capped by a layer of thin slate. Running parallel and to the south of Beam 117, a lead pipe had been laid in a narrow trench (110), sealed by a capping of bricks (Fig. 6.22; 106). Both features appeared to respect the western edge of a wall foundation (103). The remains of the base of a timber barrel (118) were located between the east ends of the beam and lead pipe trench.

Structure 3

Brick built wall foundations (103 and 104) formed the western and southern limits of a structure measuring at least 15m north-west to south-east and 5.80m north-east to south-west (Fig. 2.3). Survival of internal structures and features within this building was very low, due to the construction of two parallel concrete foundations (for a ramp into the modern warehouse).

A heavily truncated area of brick floor surface (123) was recorded which formed a continuation of a floor (012) recorded in Trench 3 (Fig. 6.23). The north, east and west sides of Surface 123 had been damaged during construction of the modern ramp, and it was therefore not possible to identify how the surface related to Wall 103. To the south of the floor surfaces, a rectangular, brick-lined inspection chamber (125) had been cut through existing features. A metal pipe protruded from the south-west corner of the chamber (Fig. 6.24), although it was unclear in which direction the pipe continued. A small arc of neatly laid bricks (013) originally recorded at the east end of Trench 3 was further exposed in the excavation, when the removal of overlying floor surfaces (011 and 012) revealed a 1.80m diameter semicircle of brickwork (Fig. 6.25; 192). Only three courses of bricks survived, and the southern part of the structure had been truncated by the construction of an inspection chamber (125).

Removal of floor surfaces 011 and 012 also revealed more of a stone block (016), recorded in Trench 3. The fully exposed block was 0.89m long by 0.67m wide and 0.29m thick (Fig. 6.26). Only the south-eastern side of the piece was shaped – no fixings or other worked details were present on the upper surface or around the sides of the block. No additional information was gained of the relationship of it to the surrounding structures, due to extensive truncation caused by the two concrete foundations for the warehouse access ramp.

Structure 4

Wall foundations 121 and 122 formed the western corner of a building measuring at least 11.55m north-west to south-east and 10.50m north-east to south-west (figs 2.3 and 6.27). A north-west to south-east aligned foundation (121) was three bricks wide and constructed from orange unfrogged handmade bricks, bonded with light cream-coloured sandy mortar containing occasional flecks of lime (Fig. 6.28). A north-east to south-west foundation (122) was built using the same materials and to the same width as Foundation 121 (Fig. 6.29); both walls were keyed together at the western corner of the building (Fig. 6.30).

The internal space within the building was subdivided by Wall 171. The area to the north of the wall contained a number of surfaces, with a brick floor (157) being the best preserved example (Fig. 6.31). Surface 157 comprised a 1.80m wide area of bricks laid on edge with a row of rectangular flagstones running along its central axis. The surface was constructed against the north side of Wall 171 and had been heavily truncated at its western extent. A further section of the same surface was recorded to the south-west of Surface 157 as Floor 172, laid against the east face of Wall 121 (Fig. 6.32).

Remnants of a second internal floor surface (145) extended for 1.80m between the north edge of Surface 157 and the south side of foundation 122 (Fig. 6.33). The floor was constructed from bricks laid on edge, set on a bedding layer of sandy material (146): a small area of brick flooring (175) recorded to the south-west of Surface 145, was probably part of the same surface, prior to extensive truncation. Floor 145 overlay an earlier wall foundation (147).

A rectangular structure comprising brick walls (137, 138 and 139) and brick floor (140) had been constructed against, but not bonded into, the south side of foundation 122 (Fig. 6.34). The floor level inside the structure was up to 0.32m below that of surviving floor surfaces within the building, and sloped down slightly to the north-east. Although all three side walls were contemporary, and had been keyed into each other at their corners, the south-eastern wall appeared to have been built directly on top of and neatly in line with the bricks used in the floor, whereas walls 138 and 138 featured uneven gaps between their lowest courses and the floor surface. The construction of this rectangular structure had truncated an earlier wall foundation, creating two separate sections of brickwork (147 and 177).

Earlier foundation 147 / 177

A north-east to south-west aligned wall foundation, recorded in two sections (147 and 177) ran parallel and to the south of Wall 122. The upper (truncated) surface of foundations 147 and 177 featured the remains of a channel along their centre line, most likely to house a drain or flue within the structure of the foundation. Foundation 147 was no longer in use by the time brick floor surface 145 was laid across it (Fig. 6.33). The foundation was also truncated by the north-east wall (138) of a square, sunken floor structure, which cut through the full width of Foundation 147, with parts of Wall 138 and associated floor (140) being constructed on top of the lowest courses of the redundant foundation (Fig. 6.35). At the west side of the sunken floored structure, a further fragment of the disused foundation (177) had again been incorporated into the side wall (139) of the later structure (Fig. 6.36). The truncated upper surface of Foundation 177 retained a

patch of render with a concave profile and a scar along the centre line of the brickwork perhaps indicating the position of a vertical pipe or aperture feeding into the conduit.

Dividing wall 171 and features to the south

The internal space within Structure 4 was subdivided by a north-east to south-west aligned wall foundation (171), with the area to the south of the dividing wall being more heavily truncated than that to the north. Two large stone bases were located at the south eastern extent of the excavation area; both had been neatly finished with square edges and flat upper surfaces. Base 107 measured 2m north east to south-west and at least 2m north-west to south-east. It featured a shallow chamfered groove cut parallel to the outer edge of its upper surface, and a metal strap fixed within a square recess along the western edge of the block (Fig. 6.37). Immediately to the west of Base 107 another stone base (109) was of similar dimensions and finish (Fig. 6.38).

The area to the south of Foundation 171 contained evidence for the support of an upper storey or roof, in the form of buttresses and foundation pads laid out in a regular grid pattern. Foundation 171 incorporated a projecting buttress along its southern side, which aligned along a north-west to south-east axis with brick foundation pads (119 and 108) partially truncated by a stone base (Fig. 6.37; 107). A north-east to south-west aligned series of supports included a large stone block incorporated within the build of the main outer wall (121) of the building, and a brick foundation pad (Fig. 6.39; 124) which aligned with Pad 119. One foundation pad (124) retained a large fragment of slate across its upper surface, possibly used as a damp proof course.

Fragmentary remains survived of a brick floor surface (178) which had been built against the east side of Wall 121 (Fig. 6.40). This surface overlay a brick-built drain (193), incorporating a later alteration (195), with Drain 193 passing through Wall 121.

A short 'L'-shaped length of brick wall (142) with associated brick floor (143) was recorded in the space between structures 3 and 4, but the original extent of the structure was unclear due to later truncation by a boiler-base wall (Fig. 6.41; 129). The south end of Wall 142 abutted the north elevation of Wall 122, indicating that it was built as a later addition. Floor 143 incorporated a brick-lined drain (144), which passed through Wall 142 but was truncated by later walls (128 and 129).

Structure 5

A north-east to south-west aligned rectangular boiler base comprising two brick platforms flanking a central flue channel was located against the north side of Wall 121 (Fig. 6.42). The structure measured at least 8.80m long by 3.30m wide and the central flue channel was 1.08m wide. The eastern extent of the structure had been truncated, but the central and western parts (Fig. 6.43) were well preserved, having been backfilled with loose, coarse granular industrial waste and demolition material after it went out of use. Platforms (134 and 135) were constructed from a mix of half and whole bricks, laid without a regular bonding pattern. The platforms featured a lining of yellow refractory bricks (132 and 133) along the sides of the central flue channel and around the two small side chambers. The refractory brick lining and the surface of the non-firebrick floor in the two side chambers at the western end of the boiler base, was badly degraded as a result of contact with intense heat. Clearance of backfill from within the central flue channel did

not locate any shaped refractory brick supports for the boiler, or tiles from above the side flues. A small number of the refractory bricks used in the floor (136) of the central flue channel featured the stamp 'SHRIGLEY' in their upper face, with two illegible marks, possibly capital letters, above.

At the western end of the boiler house, a narrow partition wall (130) built mainly of refractory bricks contained two small square openings (Fig. 6.44) which retained the corroded remains of metal frames, probably functioning as inspection hatches for the void spaces below the boiler. Wall 130 also incorporated an alcove to accommodate the blow down valve at the base of the boiler shell (Fig. 6.45).

Directly to the north-west of the boiler base, a narrow rectangular, brick built structure had been constructed against the south side of Wall 104 (Fig. 6.46). The internal space within the structure was 0.78m wide and 0.86m deep, with a concave base of bricks: the face of the brickwork was covered with black soot. A narrow opening in the north-west wall (182) was built at an angle to the line of the wall with a metal lintel supporting brickwork along the north edge of the wall. The eastern extent of the structure had been truncated by modern activity.

Later wall foundation 128

The western end of the open space between structures 3 and 4 had been closed off by the construction of a north-west to south-east aligned wall foundation (figs 5 and 6.47; 128). Foundation 128 respected the alignment of the existing south-western walls of the buildings sited either side of the former open space. Both ends of the foundation abutted the walls of the adjacent structures, with no sign of the foundation being keyed into the brickwork of the existing buildings.

Structure 6

A later addition had been made to the south-western end of Structure 5, in the form of a rectangular room with a floor surface constructed below ground level. (Fig. 6.48). The room had internal dimensions of 7.75m north-west to south-east by 4.45m north-east to south-west, and the floor was 0.61m below the adjacent surviving floor surfaces. The north-western and south-eastern walls of the structure (167 and 165) were built against, but not bonded into, the west face of Wall 121. The south-western wall of the room (165) appeared to have been modified by the later addition of a brick wall (166) along its eastern side, possibly as part of works to lower the floor level. Floor 169 had been built incorporating a series of sub-surface drains laid out on a grid system, but was modified at a later stage by the crude cutting of a surface channel across the south-eastern part of the floor, serving a ceramic pipe which had been inserted through the base of Wall 121. A rectangular area at the northern corner of the floor surface had been rendered (170), and a low platform capped by sandstone slabs had been built.

4. DISCUSSION

The evaluation revealed the presence of archaeological features in trenches 1, 2, 3 and 4, although in accordance with the aims set out in the WSI and communication with GMAAS, the remains encountered in trenches 1 and 2 were discounted as being of no further interest. Additional investigation was therefore carried out in a phase of excavation targeted specifically to further understand and record structures and deposits observed in trenches 3 and 4. See Figure 5 for the location of the numbered structures.

In June 2019 an excavation took place on the plot of land adjacent to the north-eastern part of the 257 Ordsall Lane development area. Personal communication with the supervising archaeologist, Mark Adams (RSK) identified a similar level of preservation to have been encountered across the eastern plot, with the outline of the main building ranges being visible. Internal floor surfaces had generally been lost, although several deeper structures survived intact. A base for the chimney serving the boiler identified in the CFA site may have been uncovered at the western limit of the RSK site; otherwise most of the structures recorded at 257 Ordsall Lane either terminated or were heavily truncated along the line of the modern boundary separating the two development areas. Extensive truncation of earlier structures was observed in the south-western corner of the RSK site.

Structure 1: Air raid shelter

The concrete lined, rubble filled features recorded in evaluation trenches 3 and 4 were identified as being part of the same structure, following removal of the concrete hardstanding from across the full extent of the excavation area. Clearance of backfill within the south-eastern and north-western extents of the structure revealed three staircases descending into corridors constructed below ground level. The walls and stairs were interpreted as belonging to an air raid shelter, constructed during the Second World War.

Information gained during the excavation enabled the reinterpretation of a brick and concrete lined structure observed at the south end of Trench 2 which had previously been classified as a modern intrusion of unknown function. The brick-built 'L' shaped wall and adjoining reinforced concrete panels were identical in layout and materials to those recorded in the excavation area, and therefore the structure was confirmed as being part of an air raid shelter. Additional observations of short lengths of concrete at the north end of Trench 2 and across the centre of Trench 1 are also likely to be parts of an air raid shelter. During machine clearance of obstructions (at the locations of future pile positions) in the northern part of the development area, brief unrecorded observations were made of further in-situ concrete panels, indicating the existence of additional air raid shelters.

Ordsall Lane chemical works were located at the heart of the Manchester Docks, as well as being only a short distance to the east of the manufacturing industries in the Trafford Park Industrial Estate and only 2km to the south-west of Manchester city centre. The risk of air raids targeting the area immediately surrounding the site was very high, and therefore the provision of sufficient air raid shelters would have been a necessity in order to offer protection to the large number of people living and working in this area of densely crowded residential streets and places of employment.

Maps dating to the first half of the 20th century show the plot of land immediately to the west of the chemical works to have been vacant since the clearance of Ordsall House at some point prior to 1909, therefore providing a useful site on which to construct air raid shelters. Buildings at the western extent of the chemical works were affected by the construction of the shelter; the north to south corridor and double staircase of the shelter cut through Structure 2, and the staircase to the eastern end of the east to west corridor was constructed through the south-eastern wall and floor of Structure 6. This indicated that both structures were out of use, and in the case of Structure 6, had been demolished and partly backfilled, by the time the shelter was constructed.

Boundary Wall

The westernmost surviving wall foundation in Trench 3 (021), appeared to closely match the location of the boundary wall marked on the 1894 Ordnance Survey Map, separating the chemical works to the east, from the grounds of Ordsall House to the west. The identification of this structure was confirmed during the excavation, with the double buttressed wall shown on mapping of 1891 surviving across the full width of site.

Structure 2: Cooperage

Very little evidence for the building labelled as 'Cooperage' on the Goad Insurance Plan of 1902 was observed in Trench 3, with only a brick pad (022) possibly relating to that structure. The description of the north-east elevation on the Goad plan is however given as 'WOOD BETWEEN BK (brick) PIERS' which might explain this lack of survival, in which case 022 possibly represented one of the pier bases. Clearance of modern overburden during the excavation revealed almost the entire plan outline of the building, with four brick piers identified along the line of the north-east elevation of the structure confirming the lightweight construction technique used along that side of the building. Evidence providing an indication of connection and interaction between the Cooperage and the adjacent building was provided by the timber conduit carrying cables and a buried lead pipe spanning the gap between the two buildings. The ground surface between the buildings comprised coarse gravels, suggesting the area was an open yard, hence the need to protect the lead pipe and cable run from passing traffic.

A drainage system between structures 2 (Cooperage) and 3 (Warehouse), had been modified over time by the addition of a large-diameter ceramic pipe and several bricklined inspection chambers. Although the excavation did not identify clear evidence as to how this drain system functioned, or which buildings it served, the alignment of the drain may suggest that it was connected to the reservoir which occupied the north-western quarter of the chemical works property, potentially acting as an overflow for, or a supply conduit from that structure.

Structure 3: Warehouse

The remains at the eastern end of Trench 3 corresponded well with the structure shown on the historic mapping to the east of the Cooperage, (labelled as 'Warehouse' on the Goad Plan). Wall 017 matched the location and alignment of the western exterior wall of that building and the cluster of walls and surfaces to the east of 017 most likely represented internal aspects of the 'Warehouse'.

Further information gained during the excavation was largely limited to the identification of the location and alignment of the south-west and south-east walls of this building, due to extensive truncation of the interior space by the concrete foundations for the modern warehouse vehicle ramp. The arc of brickwork recorded at the east end of evaluation trench 3 (013) was further exposed during the excavation, but had been truncated by later activity, and therefore it was not possible to identify the function of this feature.

Structure 4

In Trench 4, Wall 007 and the masonry features to the east of it closely matched the location of the alignment of the end wall of the structure shown on the 1894 Ordnance Survey Map at the west end of the chemical works, fronting onto the Ship Canal. Wall 009 and Surface 025 probably belonged to the extended western end of that same building, as shown on the Goad Plan of 1902, which may be supported by the use of hard, black ash mortar in the construction of Wall 009, a feature not present in the existing buildings. Despite the greater depth of truncation across the western half of Trench 4, the lack of buildings shown in this area on the historic mapping would indicate that major structural elements had not been lost during groundworks from the modern development of the site.

The excavation revealed better levels of preservation in the area to the north of Trench 4, with earlier buildings at this location suggested by foundations (147/177). The western corner of the building at the south-east quarter of the excavation area was identified, with internal floor surfaces and structures indicating an evolution in use of this part of the building. Although floor surfaces had been lost across the southern two thirds of the building, foundation pads distributed across the area indicated the position of supports (possibly columns) for upper floors, which would suggest an open area of floor space at ground floor level within the building.

Two large stone bases sited within the footprint of the building, but cutting into one of the brick foundation pads, may have been installed following the demolition of the structure. Mapping dated to the early 1950s shows a clear plot of land formerly occupied by buildings at the south-west corner of the chemical works site, with a group of tanks located against the fence alongside the Ship Canal towpath; the stone bases may correspond to the position of the tanks.

Structure 5: Boiler Base

Another addition to the original chemical works buildings was the structure built to house a Lancashire boiler against the north-west wall of Structure 4. It is likely that this boiler had been added to the site by the latter part of the 19th century, as a rectangular structure depicted on mapping of this date at the location of the boiler base. The interior faces of the narrow rectangular structure to the north of the boiler were coated in soot, suggesting that it formed part of the flue system taking exhaust gases from the boiler furnaces up to a square chimney marked on the 1902 Goad Plan. The boiler appears to have played a smaller role in the processes taking place on site, in comparison with the three boilers served by a 120 foot tall chimney towards the north-east end of the chemical works (shown on the 1902 Goad Plan).

The 'SHRIGLEY' stamp observed on bricks used in the floor surface of the central flue suggests they came from Pott Shrigley, to the south-east of Manchester, between Hazel Grove and Macclesfield. Brickworks had been manufacturing products in that area since the early part of the 19th century, and by 1870 the company of Gardiner and Hammond were producing fireclay products. In 1886, William Hammond took over the business and at some point after, began making fire bricks, the company previously having been engaged in the manufacture of glazed bricks. It is possible that the floor surface of the flue was re-lined at a later date than the original construction: non-refractory bricks were present along the sides of the floor and in the two side chambers at the west end of the boiler, possibly indicating the 'SHRIGLEY' refractory bricks to be later replacements.

Structure 6

The later date attributed to Wall 009 identified in Trench 4 was confirmed during the excavation, where this brickwork was found to be part of an extension against the southwestern end of Structure 4. Although the extension was a later addition to the original buildings of the chemical works, it did not appear to have been in use for as long as the rest of the buildings, as mapping suggests that the structure was no longer standing by the mid 1930s.

5. CONCLUSION

Well preserved remains of a 19th century chemical works were revealed by the evaluation trenching and subsequent excavation on the site. In addition it was shown that modern development, in particular extensive groundworks and landscaping associated with the construction of the raised podium for the former warehouse appeared to have removed all traces of the late Georgian building known as 'Ordsall House'; the area targeted by trenches 1 and 2.

In the eastern part of site, trenches 3 and 4 revealed the well preserved remains of buildings belonging to the Ordsall Chemical Works, despite damage caused by later conversion of the site into a warehouse facility with delivery yard. The survival of structures observed in trenches 3 and 4, immediately below the modern concrete yard surface, formed the basis for a further phase of excavation targeting the buildings comprising the south-western extent of the chemical works.

The remains of buildings and structures shown on historic mapping were identified during the excavation, including: a former boundary wall defining the western extent of the chemical works, buildings identified as a 'Cooperage' and 'Warehouse' on the Goad insurance plan of the site; buildings forming the southern extent of the works and a formerly anonymous structure now identified as the setting for a Lancashire boiler. A previously unknown air raid shelter was recorded across the central part of the development area, with partial observations of other sections of the same or separate shelters made in the northern and western parts of site.

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APPENDIX 1: CONTEXT SUMMARY (EVALUATION)

Appendix 1: Context Summary (Evaluation)

Context	Trench	Туре	Length (m)	Width (m)	Depth (m)	Description
001	1,2,3,4	Concrete slab				Modern reinforced concrete slab and associated underlying aggregate bedding of yard area surrounding former warehouse.
002	1,2	Concrete slab				Modern reinforced concrete slab and associated underlying aggregate bedding of raised podium for former warehouse.
003	4	Layer	>2.80	>2.00		Deposit of black granular cinders with CBM inclusions spread across east extent of trench, cut by brick pads 004 and 005. Extended beyond the limits of the trench to the north, east and south.
004	4	Masonry	0.82	0.40	>0.20	Rectangular pad or base, aligned NW-SE, constructed of mid-orange unfrogged bricks bonded with light creamy grey lime mortar. The uppermost surviving course is capped with a layer of slate. Forms one of a pair with 005, 2.40m to the southwest.
005	4	Masonry	0.86	0.74		Rectangular pad or base, aligned NW-SE, constructed of mid-orange unfrogged bricks bonded with light creamy grey lime mortar. Forms one of a pair with 004, 2.40m to the NE.
006	4	Masonry	>1.15	0.36		Fragment of brick floor surface comprising a single layer of unfrogged bricks laid on edge on top of cinder deposit 023. The bricks are laid against the north-east face of wall 007. No mortar was used in the construction of the floor. Extends north beyond the limit of the trench.
007	4	Masonry	>1.80	0.36		NW-SE aligned brick wall constructed using midorange unfrogged bricks bonded with light creamy grey lime mortar. Same bricks and mortar as pads 004 and 005, suggesting that these three elements form part of the same structure. Three courses of brickwork were observed, but the base of the wall was not identified. Extends north and south beyond the limits of the trench.
008	4	Layer	5.15	>2.00	0.24	Black and mid-purple mixed debris including sand, ash, cinders and fragments of CBM glass, slate and sanitary ware, deliberately dumped between walls 007 and 009 to raise ground level. Extends north and south beyond the limits of the trench.
009	4	Masonry	>2.00	0.36	>0.22	NW-SE aligned brick wall constructed using midorange unfrogged bricks bonded with hard black ash mortar. Three courses of brickwork were observed but the base of the wall was not identified. Associated brick surface 025 abuts east face of 009. North extent possibly truncated at trench edge, 009 continues south beyond limit of trench.
010	4	Layer	>1.95	1.45	40mm	Dark brown and black mix of soft clayey fine sand and cinders, representing either a dump of material associated with the construction of the chemical works or an accumulation of debris from processes taking place within those buildings. Extends north and south beyond limits of trench.
011	3	Masonry	>1.98	0.58	80mm	Area of paving at the east end of the trench, comprising large rectangular slabs of fine grained mid-grey sandstone. Brick floor 012 abuts west edge of 011. Possibly a path or walkway. North extent

Context	Trench	Type	Length (m)	Width (m)	Depth (m)	Description
012	3	Masonry	>1.73	>0.72	0.11	truncated by modern intrusion, continues south beyond limits of the trench. Area of brick floor at the east end of the trench, comprising mid-orange, unfrogged bricks laid on edge, bonded with black ash mortar. 012 is laid up against the western edge of stone path 011. North extent truncated by modern intrusion, continues south beyond limits of the trench.
013	3	Masonry	>1.02	0.58		Curved brick structure at the east end of the trench. Built using a mix of mid-orange, unfrogged whole and half bricks, and three slightly curved radial bricks in the outermost (NW) face of the structure, bonded using light grey lime mortar with frequent flecks of unmixed lime. 013 continued below floor surface 012.
014	3	Masonry	1.00	0.23		NE-south-west aligned wall at the east end of the trench. Comprises mid-orange, unfrogged brick bonded with soft, light grey mortar with moderate lime and coal flecks. The east end of 014 abuts curved structure 013 and the south extent is truncated by a modern intrusion.
015	3	Layer	>2.00	1.35	0.16	preparation for brick floor 012.
016	3	Masonry	>0.86	>0.34	>0.15	Worked stone block of medium grained, mid-grey sandstone at east end of trench. Underlies brick floor 012, brick feature 030 abuts south-west edge of block. Extends north and east beyond limits of trench.
017	3	Masonry	>2.00	0.35		NW-SE aligned brick wall bonded with hard, light grey mortar with frequent lime flecks and moderate coal fragment inclusions. Six courses observed, base of wall not identified.
018	3	Fill	0.94	>1.00		Rubble fill dumped in inspection chamber 019, relating to abandonment or demolition of the chemical works.
019	3	Masonry	1.36	>1.15		Sub-rectangular brick built inspection chamber with two ceramic pipes feeding into the internal space. Ten courses of brickwork survive down to the concrete lined base of the chamber. The north-west and south-west walls are two bricks wide; the northeast wall is only one brick wide, as it was constructed against the west face of wall 017. 019 continued south beyond the limit of the trench.
020	3	Masonry	0.60	0.45		Rectangular buttress comprising unfrogged, pinkish orange bricks bonded with mid-greyish brown mortar. Abuts east face of wall 021.
021	3	Masonry	>2.00	0.36		NW-SE aligned brick wall towards west end of trench. Built using unfrogged, pinkish orange bricks bonded with mid-greyish brown mortar.
022	3	Masonry	0.71	0.49		Rectangular brick pad comprising unfrogged bricks bonded with dark grey mortar. The north-west extent of this feature was heavily truncated by a modern intrusion. 022 only survived to two or perhaps three courses deep.
023	4	Layer	0.60	0.40	80mm	Dump of black cinder and ash with CBM, mortar and slate fragment inclusions. 023 appears to have

Context	Trench	Туре	Length (m)	Width (m)	Depth (m)	Description
						been laid down on top of brickwork 024, in
						preparation for construction of brick surface 006. NW corner of brick surface (or possible pad)
						constructed of unfrogged, mid-orange bricks bonded
024						with mid-grey sandy mortar with frequent charcoal
024	4	Masonry	>1.24	>1.18		fleck inclusions. Some bricks have remnants of
						lighter mortar across their upper surface, suggesting
						they were re-used or that there was additional masonry on top of the surviving remains.
						Brick surface abutting east face of wall 009,
						comprising mid-orange half bricks. The bricks
025	1	Masonry	>0.70	0.34		forming the eastern extent of 025 are raised 20-
023	4	Masonry	~0.70	0.34		30mm above the level of the others, suggesting this
						feature may be a surface drain in an external area.
						Continues to the south below dump 008.
						Dark grey and black deposit of redeposited soil, gravel, and general demolition material including
						brioks stone class and motel. This is a deliberate
026	1	Layer	4.60	>2.00	0.75	dump of material laid down in preparation for the
						construction of the raised podium for the former
						modern warehouse.
						Layer of black granular cinders across a wide area.
	1	Layer			0.22	This material is very homogenous, so probably
027			4.50	. 2 00		represents a single episode of deliberate deposition,
027			4.50	>2.00		
						dating the construction of the modern warehouse. Continues to north and south beyond the limits of
						the trench.
						Bricks laid neatly in rows, standing on end and
						pitched at a 45 degree angle (creating a ridged / saw
						tooth pattern across their upper surface) with an
						associated overlying layer of black, granular cinders
						which has been compacted to form a flat, level
028	1	Masonry	4.30	>2.00		surface. A variety of different coloured frogged and
		-				unfrogged bricks are used in the construction, and the around the edge of the feature the bricks are
						butted up to and resting on reinforced concrete
						edging strips. Of unknown function, but clearly
						post-dating the building known as Ordsall House.
						The same surface was present in trench 2.
						Bricks laid neatly in rows, standing on end and
						pitched at a 45 degree angle (creating a ridged / saw
						tooth pattern across their upper surface) with an associated overlying layer of black, granular cinders
						which has been compacted to form a flat, level
026		3.6	2.60		0.2-	surface A variety of different coloured fragged and
029	2	Masonry	3.60	>1.10	0.25	unfrogged bricks are used in the construction, and
						the around the edge of the feature the bricks are
						butted up to and resting on reinforced concrete
						edging strips. Of unknown function, but clearly
						post-dating the building known as Ordsall House.
						The same surface was present in trench 1. Limited observation of a small area of mid-orange
						bricks across base of modern intrusion at east end of
030	3	Masonry	0.60	>0.25		trench. Unclear if this forms part of a wall or floor,
						as 030 continued to the north beyond the limit of the
						trench and to the south below dump 015.

Context	Trench	Type	Length (m)	Width (m)	Depth (m)	Description
031	4	Magammy	>0.50	0.24		North to south orientated wall constructed of mid-
031	4	Masonry	>0.50	0.24		orange bricks. Base of wall not observed, bricks
						continue to the south beyond the limit of the trench. Mid-brown, slightly silty medium grain sand
						natural. The upper surface contained moderate
						charcoal flecks, presumably distributed by worm
						and root action. Observations of deeper excavation
032	1,2,3,4	Geology				into the natural (by the demolition contractor,
						elsewhere on site) indicated the natural sand to have
						a higher clay component at lower levels than
						encountered in the evaluation trenches.
						Coarse, black, granular cinders with pebble and
						CBM fragment inclusions. 033 forms the backfill
033	3	Fill	0.97	0.12		between brick pad 022 and its associated
000			0.57	0.12		construction cut 034. The north-west extent is
						heavily truncated by a modern intrusion.
						Rectangular construction cut for brick pad 022. The
034	3	Cut	0.97	0.72		north-west extent is heavily truncated by a modern
						intrusion.
						Black cinder, ash and rubble spread across the base
						of the eastern half of the trench. Clearly visible in
						section below the modern ground raising dump 026.
035	1	Layer	10.00	>2.00	0.25	Probably deposited after Ordsall House had been
						demolished, but during the active life of the adjacent
						chemical works, as a dump of construction debris or
						as a ground raising deposit.

APPENDIX 1: CONTEXT SUMMARY (EXCAVATION)

Appendix 2: Context Summary (Excavation)

Context	Type	Length (m)	Width (m)	Max Depth (m)	Description
100	Structure	>15	0.36	>0.26	North west/south east aligned west wall of rectangular building constructed of mid pink and mid orange unfrogged hand made bricks bonded with mid grey brittle mortar with moderate black and white flecks. Two integral buttresses project out from the east face. Southern end of 100 is bonded into wall 101.
101	Structure	8.85	0.62	>70mm	North-east to south-west aligned south wall of rectangular building, constructed of midorange and mid-pink unfrogged bricks set directly onto natural ground with no sign of mortar used in its construction. Eastern extent ends with a buttress/pier, western extent bonded into wall 100.
102	Structure	0.85	0.62	>0.14	Rectangular pier base constructed using mid orange unfrogged hand made bricks bonded with dark grey mortar. Western extent of 102 appears to truncate drain 151. One of four similar bases forming east side of the Cooperage.
103	Structure	>14.85	0.37	>0.50	North west/south east aligned west wall of building, constructed using bricks bonded with a white gritty mortar with black charcoal flecks. Southern end of 103 is bonded into wall 104.
104	Structure	>5.80	0.36	>0.35	North East to south west aligned wall constructed from bricks bonded with white gritty mortar. West end of 104 is bonded into wall 103.
105	Structure	>35.95	0.36	>0.36	North west to south east aligned wall forming westernmost property boundary of chemical works. Constructed suing mid pink and mid orange unfrogged bricks bonded with mid grey sandy mortar. Supported by paired brick buttresses along its east and west sides. Buttresses spaced 3.70m apart.
106	Surface	3.05	0.23	0.07	Bricks laid to form a covering to a pipe trench containing a lead pipe. No mortar used in construction. The easternmost bricks rest on bricks laid either side of the lead pipe.
107	Structure	2.00	>2.00	0.22	Large stone slab comprising a single worked block of fine grained pale yellow sandstone. The upper surface features a chamfered gully 0.10m in from the edge of the block. Southern extent of 107 continued beyond the LOE. Iron straps are fixed to the east and west sides of the slab.
108	Structure	0.45	0.65	0.23	Brick pad constructed using a mix of half and whole bricks bonded with sandy yellow mortar. Abuts north edge of stone slab 107.

Context	Type	Length (m)	Width (m)	Max Depth (m)	Description
109	Structure	2.00	>0.75	0.22	Large slab of fine grained pale yellow sandstone, featuring a chamfered gully 0.10m in from the edge of the slab. Southern extent continues beyond LOE. Iron strap located on west side of slab.
110	Cut	3.00	0.23	0.16	North east to south west aligned linear cut containing a lead pipe and capped by brickwork 106. The cut has vertical sides and a flat base.
111	Fill	3.00	0.23	0.16	Mid yellowish brown sandy clay containing small brick fragments. Fills cut 110. Back fill within pipe trench.
112	Fill	2.85	1.25	0.65	Mottled purple/grey loose cinders filling wooden tank 115.
113	Fill	>1.00	0.59	>0.22	Friable pale grey silty clay containing occasional brick flecks, used as backfill within pipe cut 114. 113 overlies and is packed around a nine inch (internal diameter) salt glazed ceramic pipe.
114	Cut	>1	0.59	>0.22	North west to south east aligned cut for insertion of ceramic pipe. Base of cut was not observed due to presence of in situ pipe. Poorly preserved remains of rectangular
115	Structure	3.00	1.36	0.65	wooden tank. Survives largely as a wooden stain, apart from a small number of larger intact timbers. Eight vertical iron bars/ support trusses were present, presumably part of the original frame for the tank.
116	Cut	3.00	1.36	0.70	Rectangular vertical sided construction cut for wooden tank 115. One of a pair of similar tanks located either side of brick inspection chamber 019.
117	Fixture	5.55	0.18	0.09	North east to south west aligned timber beam featuring a groove along its upper face in which cables covered in tar are contained. Roofing slates used to cover the beam. 117 runs parallel and to the north of lead pipe trench 110.
118	Barrel	n/a	n/a	>0.18	Remains of the base of a wooden barrel comprising timber staves and an iron hoop. Located between eastern extents of pipe trench 110 and cable beam 117.
119	Structure	0.85	0.72	>0.007	Rectangular pad constructed using mid reddish orange bricks bonded with pale yellow sandy mortar. Recorded as 005 in evaluation trench 4. Forms part of a group with similar brick pads 108 and 124.
120	Structure	1.22	1.07	>0.36	Brick built square inspection chamber featuring a ceramic pipe feeding into the central void. Constructed from bricks bonded with dark grey mortar with white flecks. North west to south east aligned wall
121	Structure	>11.55	0.37	>0.07	constructed from mid orange unfrogged hand made bricks bonded with light creamy sandy mortar with occasional lime flecks. North end of 121 is bonded into west end of contemporary wall 122.

Context	Type	Length (m)	Width (m)	Max Depth (m)	Description
122	Structure	>8.37	0.36	>0.80	North east to south west aligned wall constructed from mid orange unfrogged hand made bricks set in a light cream coloured sandy mortar. Ten courses observed base not identified.
123	Surface	3.05	1.02	0.07	Floor surface constructed of handmade bricks laid into a sand and mortar bedding layer. Rectangular brick pad constructed from a mix
124	Structure	0.84	0.72	0.22	of half and full bricks bonded with light yellow sandy mortar. The pad was capped by slates. Associated with similar brick pads 108 and 119. Recorded as 004 in evaluation trench 4.
125	Structure	1.08	0.84	>0.64	Rectangular brick built inspection chamber featuring a metal pipe entering the chamber at its south-west corner.
126	Structure	1.60	0.40	0.15	South-east/north-west aligned wall constructed mainly using half bricks bonded with grey sandy mortar. Appears to be constructed around east side of brick pad 124.
127	Structure	0.86	0.20	n/a	Brick lined drain constructed from orangey red bricks, some of which have mortar adhering to their surfaces, indicating their reuse. In very poor condition due to damage by later construction and demolition activity. Possibly originally stone capped.
128	Structure	6.80	0.35	n/a	North-west /south-east aligned wall foundation constructed of handmade red bricks bonded with black brittle, coarse mortar. North end abuts wall 104, south end abuts wall 122. A later infill of a former gap between buildings.
129	Structure	>8.80	3.32	0.33	Exterior wall of boiler base constructed from reddish orange unfrogged bricks bonded with course friable black mortar with occasional very small white flecks. Forms an integral part of the side wall of the boiler base along with brickwork 134 and 135.
130	Structure	2.90	0.20	0.25	Partition wall constructed from a single width of (mainly) refractory bricks, incorporating two openings which feature sandstone threshold blocks. 130 is constructed directly onto the underlying brick floor surface 131 and 136. The two openings contain remnants of corroded metal frames.
131	Surface	2.90	0.98	n/a	Brick floor surface constructed of machine made reddish orange unfrogged bricks bonded with friable black mortar. Forms the floor surface at the western extent of the boiler base, below the blow down valve.
132	Structure	>5.20	0.23	0.31	South facing elevation of central flue channel, lined with yellow refractory bricks keyed into brick core 134. 132 is constructed on top of floor surface 136. Face of bricks show extensive signs of heat damage.
133	Structure	5.20	0.23	0.31	North facing elevation of central flue channel lined with yellow refractory bricks keyed into brick core 135. 132 is constructed on top of floor surface 136. Face of bricks show extensive signs of heat damage.

Context	Type	Length (m)	Width (m)	Max Depth (m)	Description
134	Structure	>4.40	1.14	0.32	Brick core of north side of boiler base constructed of roughly laid bricks bonded with a course black mortar. 134 is keyed into facing bricks 132 and exterior wall 129.
135	Structure	>5.70	0.98	0.32	Brick core of south side of boiler base constructed of roughly laid bricks, some of which appear to be reused, bonded with a course black mortar. 135 is keyed into facing bricks 133 and exterior wall 129.
136	Surface	>4.30	>1.08	n/a	Floor surface of central flue channel of boiler base, constructed from refractory bricks bonded with sandy grey mortar. Floor surface widens out at west end of central flue, where the bricks feature heavy damage due to contact from extreme heat.
137	Structure	2.11	0.22	0.23	South-east wall of a four sided brick structure, constructed from bricks bonded with dark grey mortar. Keyed into walls 138 and 139.
138	Structure	2.32	0.23	0.23	North-east wall of a four sided brick structure constructed from bricks bonded with dark grey mortar. East end of 138 is bonded into wall 137; west end of 138 abuts east face of wall 122. 138 is built on top of floor 140 and truncates earlier wall foundation 147.
139	Structure	>2.45	0.21	n/a	South-west wall of a four sided brick structure constructed from bricks bonded with dark grey mortar. East end of 139 is bonded into wall 137. West end of 138 abuts east face of wall 122. 139 is built on top of the eastern end of earlier wall foundation 177 and on top of floor
140	Surface	2.13	1.50	n/a	Brick built floor surface to four sided structure comprising wall 137, 138, 139 and 122. The north extent of floor 140 abuts the south face of foundation 122.
141	Deposit	2.13	1.50	0.23	Light and dark grey demolition rubble used as infill within a four sided structure defined by walls 122, 137, 138 and 139.
142	Structure	2.86	0.22	0.23	Brick built wall running south-west/north-east with a 90 degree turn to the south-east at its north end.
143	Surface	1.90	0.38	0.10	Floor surface constructed of bricks laid on edge, bonded with friable black mortar. The eastern extent of 143 is truncated by wall 129. Incorporates brick lined drain 144.
144	Structure	0.78	0.36	0.15	Brick lined drain with a slate base forming part of floor 143. Continues west under wall 142, truncated by wall 129.
145	Surface	6.30	1.80	0.11	Floor surface constructed of bricks laid on edge on sandy bedding layer 146. Constructed on top of earlier foundation 147. The western continuation of this surface was recorded as 175.
146	Deposit	6.3	1.80	0.07	Yellowish brown friable clayey sand containing small fragments of brick, laid as bedding for brick floor surface 145.

Context	Type	Length (m)	Width (m)	Max Depth (m)	Description
147	Structure	>2.70	0.85	n/a	North-east/south-west aligned brick wall foundation, the bottom two courses of which were offset from the south face of the foundation. The western extent of 147 was truncated (and partly built over) by wall 138. Upper surface of 147 retains the impression of a linear channel running along the centre line of the foundation - possible drain or flue.
148	Structure	0.75	0.49	0.50	Rectangular pier base constructed from mid orange and mid pink unfrogged hand made bricks bonded with brittle dark grey sandy mortar. The bottom two courses of brickwork form a stepped offset base to the pier. One of four similar bases observed forming east side of the Cooperage.
149	Structure	0.74	0.48	>0.16	Rectangular pier base constructed from mid orange and mid pink handmade unfrogged bricks set in dark grey sandy mortar. One of four similar bases observed forming east side of Cooperage.
150	Structure	0.63	0.58	0.07	Small area of brickwork laid against west face of Cooperage pier 148, constructed from mid orange unfrogged hand made bricks set in dark grey to black hard fine sandy mortar. Only one course survives, but mortar across the top of the bricks indicates the former presence of additional structure above this level. 150 is clearly laid over the construction cut for brick pier 158, the western extent of 150 is truncated by the construction cut for the air raid shelter.
151	Structure	1.50	0.45	0.22	Short length of drain constructed with brick side walls resting on a slate base. Capstones have been lost; north end is truncated by brick pad 102. South end joins onto earlier drain 145.
152	Cut	1.50	0.45	0.27	Construction cut for drain 151, southern extent cuts earlier drain 154.
153	Fill	1.50	>0.40	0.25	Internal fill within drain 151. Mixed fill containing a large quantity of charcoal with occasional animal bones and a large quantity of demolition rubble.
154	Structure	3.00	0.35	0.17	East/west aligned drain constructed with brick side walls resting on a slate base, capped by sandstone slabs. West end is truncated by modern activity, east end truncated by later drain 154.
155	Structure	3.00	0.35	0.17	Construction cut for drain 154, gently curvilinear in plan. Cut into natural clay.
156	Layer	3.00	0.21	0.05	Internal fill within drain 154, composed of loose, dark grey silty clay with frequent charcoal inclusions and occasional oyster shells.
157	Surface	>4.20	1.80	0.11	North-east/south-west aligned floor / road surface laid alongside north side of wall foundation 171. Surface comprises a central line of rectangular paving stones flanked by areas of bricks set on edge. A remnant of the same floor is recorded as 172, to the west of 157. The north edge of 157 abuts brick paving 145.

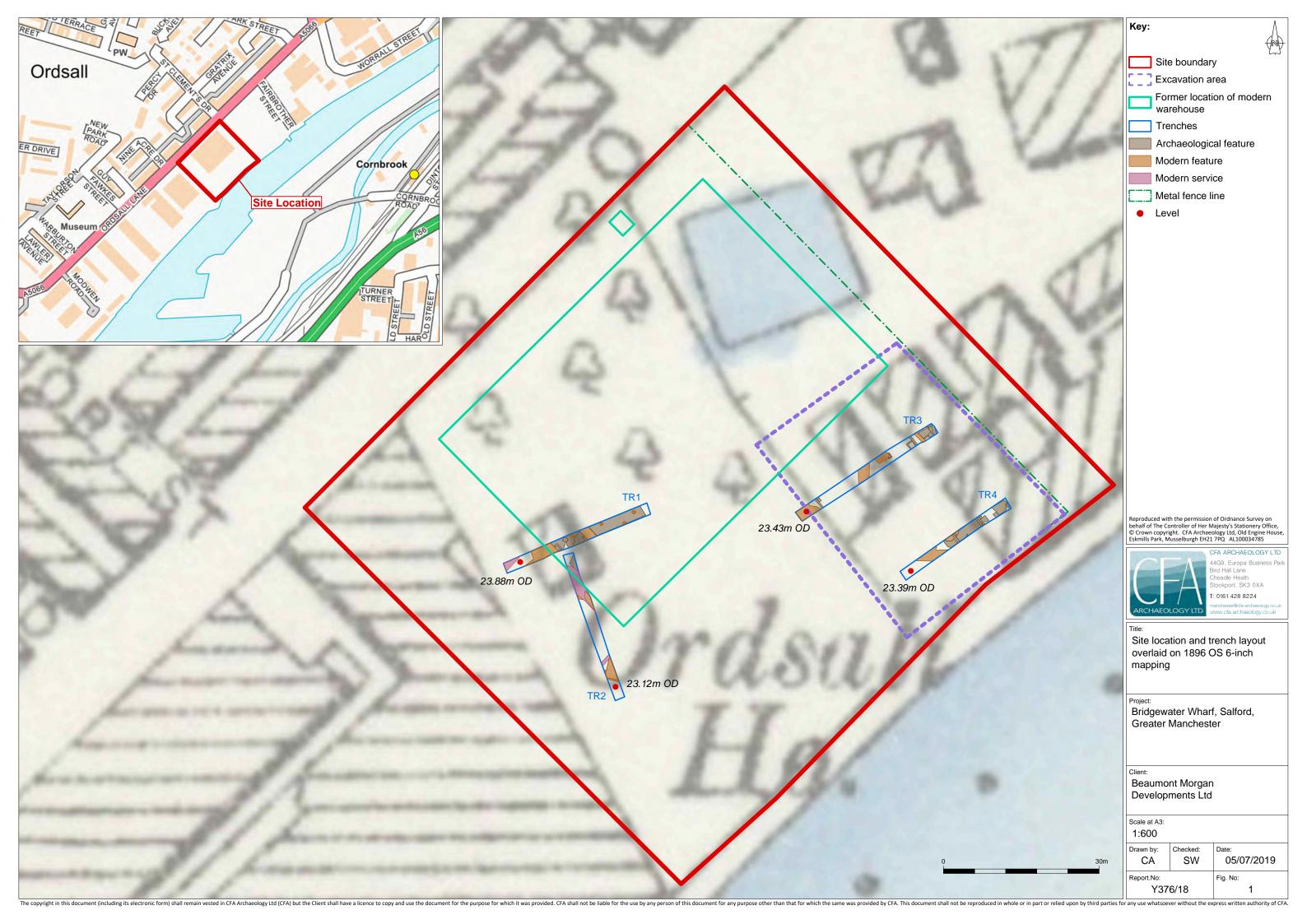
Context	Type	Length (m)	Width (m)	Max Depth (m)	Description
158	Structure	1.30	0.305	>0.60	Steps at north side of north-west entrance to air raid shelter. Each step is an individual pre-cast concrete element, built into the side walls of the staircase.
159	Structure	2.90	0.23	>0.32	Western wall at north side of north-west entrance to air raid shelter, constructed of midorange, unfrogged machine made bricks bonded with hard, light grey cement mortar. The south end of 159 features bricks with a rounded corner and abuts concrete wall panels 191.
160	Structure	8.00	0.23	n/a	Eastern wall of north-west entrance to air raid shelter, constructed of mid-orange, unfrogged machine made bricks bonded with hard, light grey cement mortar. Stairs 158 and 162 are built into the west face of 160.
161	Structure	2.30	0.23	n/a	Western wall at south side of north-west entrance to air raid shelter, constructed of midorange, unfrogged machine made bricks bonded with hard, light grey cement mortar. The north end of 161 features bricks with a rounded corner and abuts concrete wall panels 191.
162	Structure	1.30	0.305	>0.60	Steps at south side of north-west entrance to air raid shelter. Each step is an individual pre-cast concrete element, built into the side walls of the staircase.
163	Fill	>3.70	0.23	n/a	Backfill in void between construction cut and side walls of air raid shelter, composed of firm, light yellowish brown mixed material.
164	Cut	>3.70	0.23	n/a	Construction cut for air raid shelter. Only a short length of 164 was observed, parallel to the east side of staircase wall 160. Construction cut was recorded as 197 at the south-eastern entrance to the air raid shelter.
165	Structure	4.00	0.43	0.62	South-west and south-east brick walls of a rectangular structure with a lower floor level than the surrounding buildings.
166	Structure	6.00	0.38	0.47	North-west to south-east aligned brick wall constructed along east side of wall 165.
167	Structure	4.85	0.38	0.34	North-west wall of a rectangular structure with a lower floor level than the surrounding buildings. The brickwork has been partially rebuilt where two pipes pass through the western part of the wall. Eastern extent of 167 abuts wall 121.
168	Structure	1.50	0.35	0.47	Repair / alteration in north-west to south-east aligned wall 121. 168 comprises crudely laid bricks bonded with black mortar (121 bonded with pale yellow mortar).
169	Surface	6.00	4.85	n/a	Brick floor surface within rectangular structure at south eastern corner of excavation area. Original construction of the floor included a grid of integrated drains: a later addition to the drainage system was made by carving a crude channel into the floor surface.

Context	Type	Length (m)	Width (m)	Max Depth (m)	Description
170	Surface	3.00	2.25	n/a	Rectangular area of cement render over northern corner of brick floor 169. A low, raised plinth capped by sandstone paving slabs is built along the west extent of the surface.
171	Structure	>10.50	0.22	>0.23	North-east/south-west aligned wall foundation constructed from bricks bonded with pale grey mortar. A small buttress projects from the south side of the foundation: floor surface 157 is built against the north side.
172	Surface	2.53	1.78	0.11	Floor surface laid between foundation 173 to the north and 171 to the south, and up to the east side of wall 121. Constructed from bricks laid on edge, bedded on a layer of sandy material. Probably a continuation of floor surface 157 (to the north-east).
173	Structure	1.40	0.37	n/a	North-east/south-west aligned brick wall foundation. A small rectangular buttress (174) projects from the south side of the foundation into floor surface 172: floor surface 175 is built against the north side of 173.
174	Structure	0.62	0.39	n/a	Rectangular brick buttress adjacent south side of foundation 173. Floor surface 172 wraps around buttress 174.
175	Surface	1.16	1.12	0.07	Brick floor surface laid between foundation 121 and 173. 175 probably forms the western extent of floor surface 145.
176	Structure	0.62	0.71	n/a	Small patch of render with a curved impression in its upper surface possibly indicating presence of a flue or drain within the internal structure of foundation 177.
177	Structure	-	-	-	Brick built wall foundation featuring the remains of a patch of render across its upper surface, possibly representing part of a flue or drain. 177 is truncated at its eastern extent and partly built over by wall 139. 177 forms part of foundation 147 recorded to the north east of here.
178	Surface	2.00	1.50	0.11	Floor surface constructed of bricks set in greyish brown brittle sandy mortar. Floor surface is bedded into an ashy sand layer which overlies an earlier floor surface.
179	Fill	2.90	1.32	n/a	Dark grey and black loose fragments of clinker with occasional brick fragments dumped in wooden lined rectangular tank 180. Appears to represent back fill after the structure went out of use.
180	Structure	2.90	1.32	n/a	Rectangular timber lined tank with associated metal bolts and strapping. Observed only in plan, not excavated (see tank 115 for full excavation notes).
181	Cut	2.90	1.32	n/a	Construction cut for rectangular timber lined tank 180. One of pair of identical tanks located either side of inspection chamber 019.
182	Structure	2.92	0.29	0.75	North east/south west aligned brick built wall incorporating an angled aperture through the full width of the wall. Part of same structure as 183, 184 and 185.

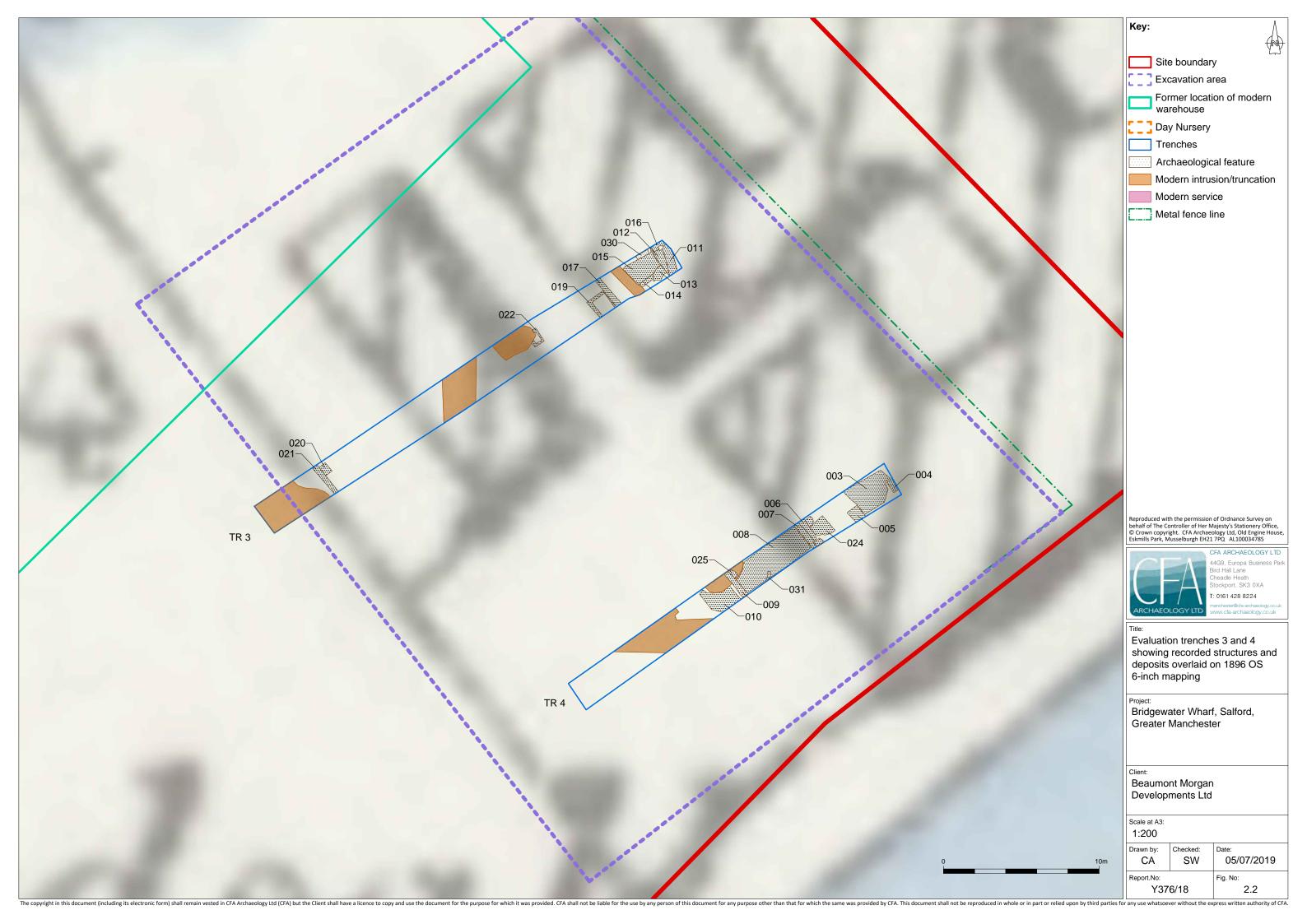
Context	Type	Length (m)	Width (m)	Max Depth (m)	Description
183	Structure	1.29	0.23	>0.86	North west/south east aligned brick wall forming western end of narrow rectangular structure. 183 is not keyed into adjacent wall 182 and 184. The interior face of 183 is blackened, possibly suggesting this structure formed part of a flue to the nearby boiler.
184	Structure	2.90	0.24	0.86	North east/ south west aligned brick wall forming the southern side of narrow rectangular structure. West end of 184 is not keyed into wall 183.
185	Surface	>2.63	0.75	n/a	Brick floor surface of narrow rectangular structure with a concave profile. Possible base to boiler flue.
186	Structure	2.94	0.23	1.76	North/south aligned brick wall forming western side to stairs leading down into the southern entrance of the air raid shelter. Constructed using mid pink and mid orange unfrogged machine made bricks bonded with hard light grey cement mortar. 1.07m wide gap between interior face of walls 186 and 188.
187	Structure	1.30	0.305	>0.54	Pre cast concrete steps providing access into south eastern end of air raid shelter. Uppermost surviving three steps were observed, each step is built into the brick side wall of the stair case. Stairs descend to the south.
188	Structure	5.40	0.23	1.76	North/south aligned brick wall forming eastern side to stairs leading down into the southern entrance of the air raid shelter (also includes the 1.60m east/west return at the south end of the north south element). Constructed using mid pink and mid orange unfrogged machine made bricks bonded with hard light grey cement mortar. Faint traces of white wash were visible across the face of the wall.
189	Surface	>20	1.97	n/a	Concrete floor of air raid shelter, only observed in limited area where excavator was able to clear rubble backfill. Light grey concrete colour poured and levelled although not very smooth.
190	Structure	0.455	0.102	>1.78	Precast reinforced concrete panels forming south wall of air raid shelter. Each panel is fixed to the next by two bolts fastened through pre existing holes in the sides of each panel. The narrow gap between each panel is filled with hard light grey mortar.
191	Structure	0.455	0.102	>1.78	Precast reinforced concrete panels forming north wall of air raid shelter. Each panel is fixed to the next by two bolts fastened through pre existing holes in the sides of each panel. The narrow gap between each panel is filled with hard light grey mortar.
192	Structure	1.80	0.59	0.23	Semi circular brick structure, originally identified in evaluation trench 3 and number as 013. Southern half of structure appears to have been truncated by inspection chamber 125. Function uncertain, possible base?
193	Structure	1.50	0.47	0.19	North east/south west aligned brick built drain, flush with floor surface 194.

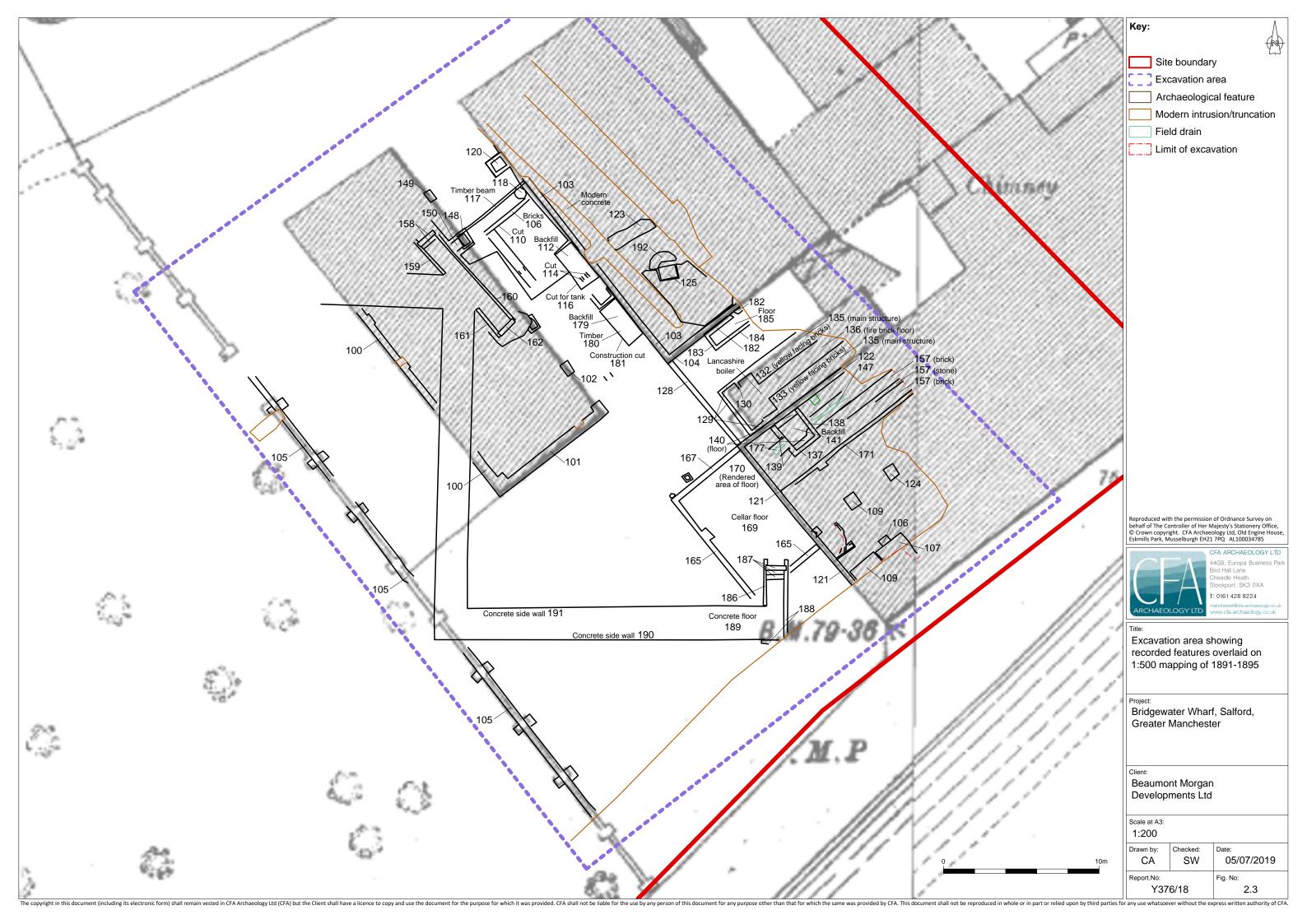
Context	Type	Length (m)	Width (m)	Max Depth (m)	Description
194	Surface	1.75	0.66	0.09	Poorly preserved floor surface constructed from a single course of bricks laid on black mortar.
195	Structure	2.20	0.40	0.09	Drain constructed of bricks capped with sandstone slabs. Forms a curving drain as a redirection of existing drain 193.
196	Fill	>19	0.30	>1.78	Backfill material filling void between the construction cut and the rear of the brick and concrete walls of the shelter.
197	Cut	>19	2.00	>1.78	Construction cut for air raid shelter. Probably excavated as part of a cut and cover operation.

FIGURES 1-6









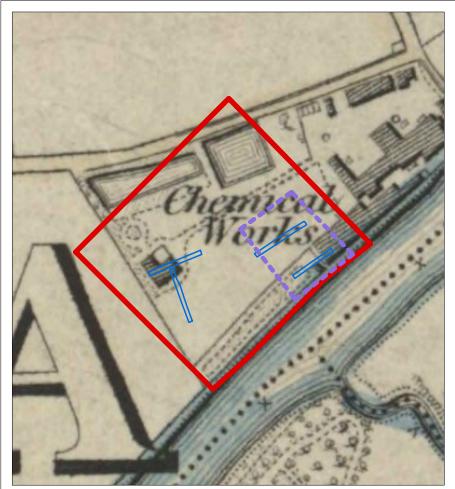


Fig. 3.1 - OS Six-inch to the mile map, Lancashire CIV, published 1848, showing areas of archaeological investigation

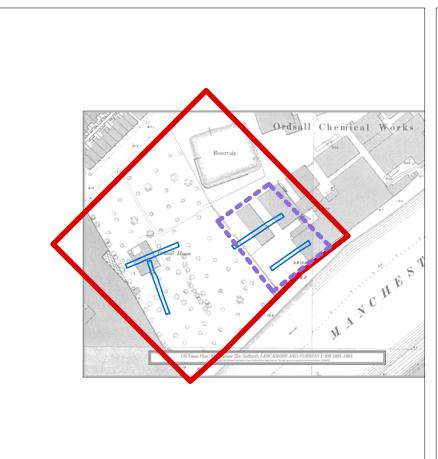


Fig. 3.2 - OS town Plan (1:500) 1891-1895: Manchester (including Salford) Lancashire and Furness, showing areas of archaeological investigation

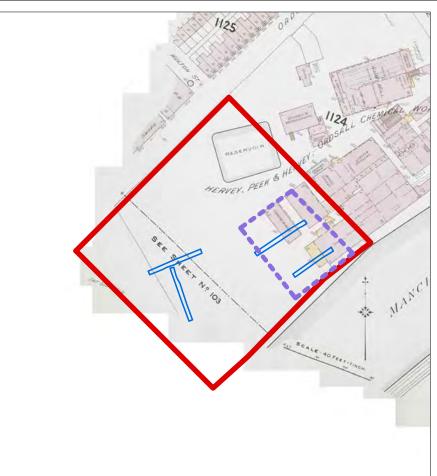


Fig. 3.3 - Insurance Plan of the City of Manchester Vol. IV: sheet 104,1902, showing areas of archaeological investigation
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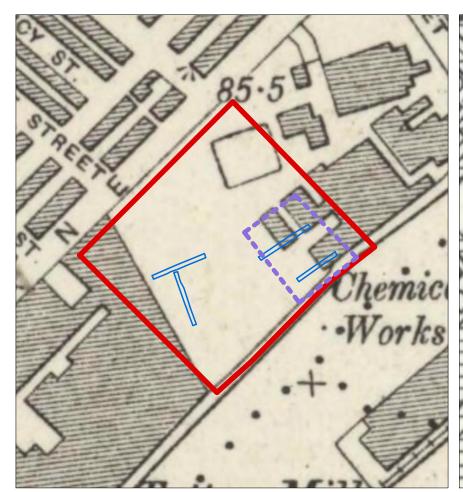


Fig. 3.4 - OS Six-inch to the mile map, Lancashire CIV.SW, published 1909, showing areas of archaeological investigation



Fig. 3.5 - OS 1:10,560 Sheet SJ 89 NW (Includes: Manchester; Salford; Stretford), published 1956, showing areas of archaeological investigation

0 100m

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Historic Mapping

Key:

Site boundary

Excavation area

Trenches

HAEOLOGY LTD manchester@cfa-arc
www.cfa-archaec

0161 428 8224

Project.

Bridgewater Wharf, Salford, Greater Manchester

Client:

Beaumont Morgan
Developments Ltd

Y376/18

Scale at A3: 1:2000

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Fig. 4.1 - Trench 1 looking north-east



Fig. 4.2 - Trench 2 looking south-east



44G9, Europa Business Park Bird Hall Lane

Beaumont Morgan Developments Ltd

Date: Drawn by: Checked: SW 04/07/19 CA Report No: Fig. No: Y376/18 4.1-4.2



Fig. 4.3 - Trench 3 looking north-east



Fig. 4.4 - Trench 4 looking south-west



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CA	SW	04/07/19
Report No:		Fig. No:
Y37	6/18	4.3-4.4



Fig. 4.5 - Trench 1; brick and cinder surface 028



Fig. 4.6 - Trench 2; brick and cinder surface 029



CFA ARCHAEOLOGY LTD
44G9, Europa Business Park
Bird Hall Lane

Client:

Beaumont Morgan Developments Ltd

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CA	SW	04/07/19
Report No:		Fig. No:
Y37	6/18	4.5-4.6



Fig. 4.7 - Contexts at eastern end of Trench 3



Fig. 4.8 - Trench 3; north-west to south-east aligned wall 021 and buttress 020



Drawn by:	Checked:	Date:
CA	SW	04/07/19
Report No:		Fig. No:
Y37	6/18	4.7-4.8

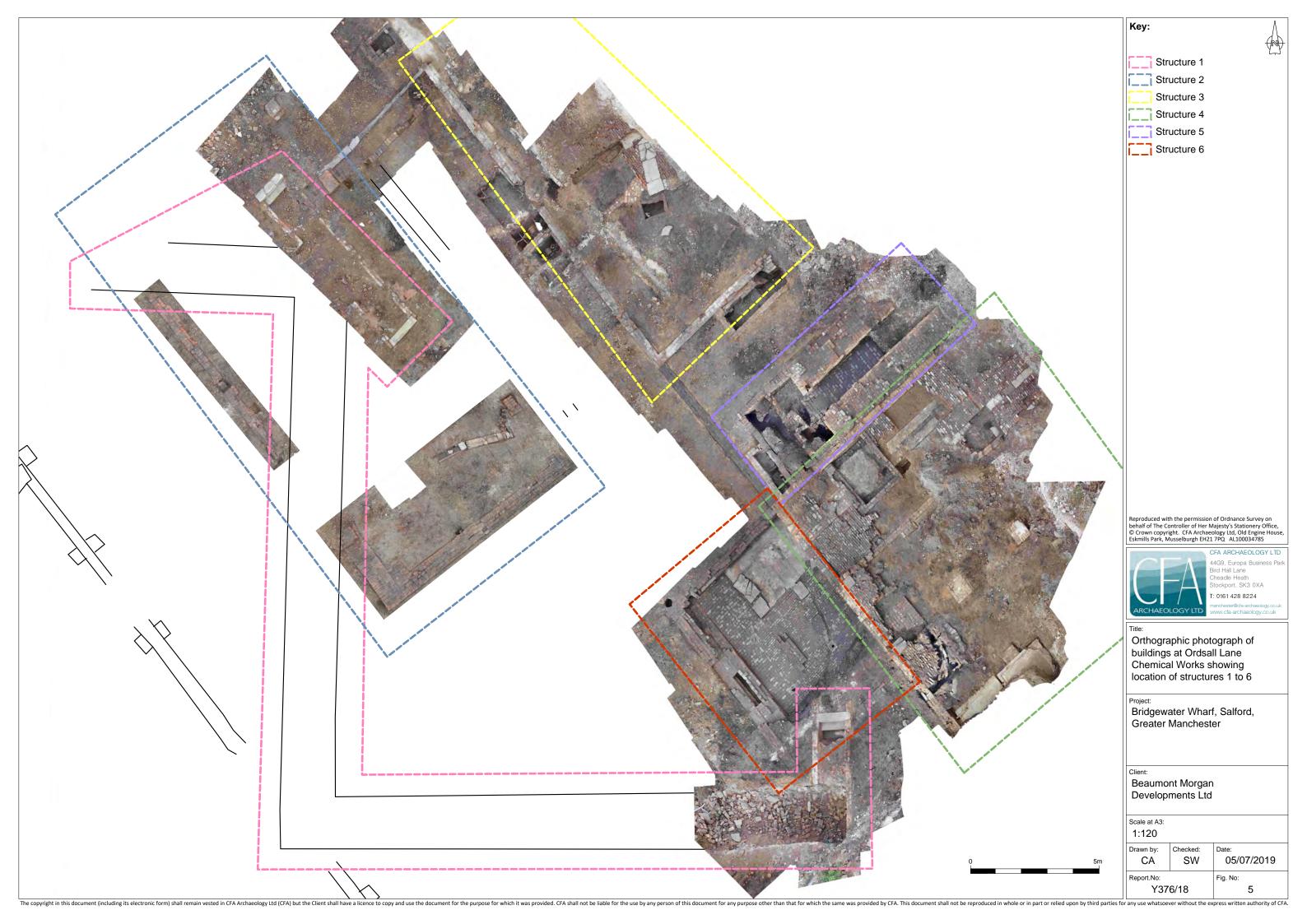




Fig. 6.1 - General view of site, looking west



Fig. 6.2 - General view of site, looking south-east



Drawn by:	Checked:	Date:
CA	SW	05/07/19
Report No:		Fig. No:
Y37	6/18	6.1-6.2



Fig. 6.3 - Entrance to south-eastern end of air raid shelter, looking north-east



Fig. 6.4 - Construction detail at base of steps at south-eastern entrance of air raid shelter, looking south



Drawn by:	Checked:	Date:
CA	SW	05/07/19
Report No:		Fig. No:
Y37	6/18	6.3-6.4



Fig. 6.5 - Construction cut 197 for air raid shelter side wall 191, truncating brick wall 165



Fig. 6.6 - Double entrance to north-western part of air raid shelter, looking south-east



Drawn by:	Checked:	Date:
CA	SW	05/07/19
Report No:		Fig. No:
Y37	6/18	6.5-6.6



Fig. 6.7 - Steps (158) at north-western entrance to air raid shelter, looking north-west



Fig. 6.8 - Detail of rounded corner on wall 083 at entrance to air raid shelter, looking west



Drawn by:	Checked:	Date:
CA	SW	05/07/19
Report No:		Fig. No:
Y37	6/18	6.7-6.8



Fig. 6.9 - View along boundary wall 105 looking south-east



Fig. 6.10 - Detail of double buttress along wall 105, looking north-east



Drawn by:	Checked:	Date:
CA	SW	05/07/19
Report No:		Fig. No:
Y37	6/18	6.9-6.10



Fig. 6.11 - Profile through buttress at west side of wall 105, looking north-west



Fig. 6.12 - Overall view of foundations to the Cooperage, looking north-west



44G9, Europa Business Park Bird Hall Lane Beaumont Morgan Developments Ltd

Drawn by:	Checked:	Date:
CA	SW	05/07/19
Report No:		Fig. No:
Y37	6/18	6.11-6.12



Fig. 6.13 - Detail of internal buttress to west wall 100 of the Cooperage



Fig. 6.14 - View along south wall 101 of the Cooperage, looking south-west



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Drawn by:	Checked:	Date:
CA	SW	05/07/19
Report No:		Fig. No:
Y376/18		6.13-6.14



Fig. 6.15 - Detail of brick pier base 148 forming part of east side of the Cooperage



Fig. 6.16 - Brick and stone built drain 154 within the Cooperage, looking east



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	CA	SW	05/07/19
	Report No:		Fig. No:
	Y376/18		6.15-6.16



Fig. 6.17 - Brick built inspection chamber 120, looking south-east



Fig. 6.18 - Two rectangular tanks flanking inspection chamber 019, looking north-west



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CA	SW	05/07/19
Report No:		Fig. No:
Y376/18		6.17-6.18



Fig. 6.19 - Brick inspection chamber 019 and timber lined tank 115, looking north-west



Fig. 6.20 - Timber lined tank 115 showing metal fixtures and ceramic pipe, looking south



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Fig. 6.21 - Brick capped pipe trench 110, barrel 118 and cable run 117, looking south-west



Fig. 6.22 - Brick capping 106, over lead pipe in trench 110



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Fig. 6.23 - Brick floor 123 with associated surfaces and structures, looking south-west



Fig. 6.24 - Brick built inspection chamber 125, looking south



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 Checked:
 Date:

 CA
 SW
 05/07/19

 Report No:
 Fig. No:

 Y376/18
 6.23-6.24



Fig. 6.25 - Semi-circular brick structure 192, looking south



Fig. 6.26 - Worked stone block 016, looking north-east



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Date: Drawn by: Checked: SW 05/07/19 CA Fig. No: Report No: Y376/18 6.25-6.26



Fig. 6.27 - Overall view of structures in the south-east corner of site, looking south



Fig. 6.28 - West wall 121 of structure at south-east corner of site, looking north-west



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	Report No:		Fig. No:

Y376/18

6.27-6.28



Fig. 6.29 - North wall 122 of structure at south-east corner of site, looking north-east



Fig. 6.30 - Detail of corner formed by walls 121 and 122 and relationship with later walls 128 and 167, looking north-east



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Fig. 6.31 - Overall view of features, including surface 157 (foreground) across south-east corner of site, looking west



Fig. 6.32 - Brick floor 172, forming the western extent of floor 157, looking south-west



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Fig. 6.33 - Brick floor surface 145, overlying foundation 147, looking north-east



Fig. 6.34 - Brick structure constructed against south face of wall 122, looking north-east



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CA	SW	05/07/19
Report No:		Fig. No:
Y376/18		6.33-6.34



Fig. 6.35 - Truncated west extent of foundation 147, looking north-west



Fig. 6.36 - Brick foundation 177 with integral channel, looking south-west



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CA	SW	05/07/19
Report No:		Fig. No:
Y376/18		6.35-6.36



Fig. 6.37 - Stone base 107 and brick pad 108, looking south-east



Fig. 6.38 - Stone base 109 with metal fixture, looking south-east



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Fig. 6.39 - Brick pad 124, looking south-west



Fig. 6.40 - Floor surface 178 overlying drain 195, looking south-west



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CA	SW	05/07/19
Report No:		Fig. No:
Y376/18		6.39-6.40



Fig. 6.41 - Wall 142 and brick floor surface 143, looking north-west



Fig. 6.42 - Overall view of western end of boiler base, looking south-east



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 Date:

 CA
 SW
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 Report No:
 Y376/18
 Fig. No:

 6.41-6.42
 6.41-6.42



Fig. 6.43 - Vertical shot of the western end of the boiler base



Fig. 6.44 - West end of the boiler base, looking south-west



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Fig. 6.45 - Wall 130 showing alcove for blow down valve, looking north-east



Fig. 6.46 - Rectangular brick structure built against foundation 104, looking north-west



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Fig. 6.47 - Foundation 128, to west of boiler base, looking north-west



Fig. 6.48 - Cellar floor 169, looking north



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