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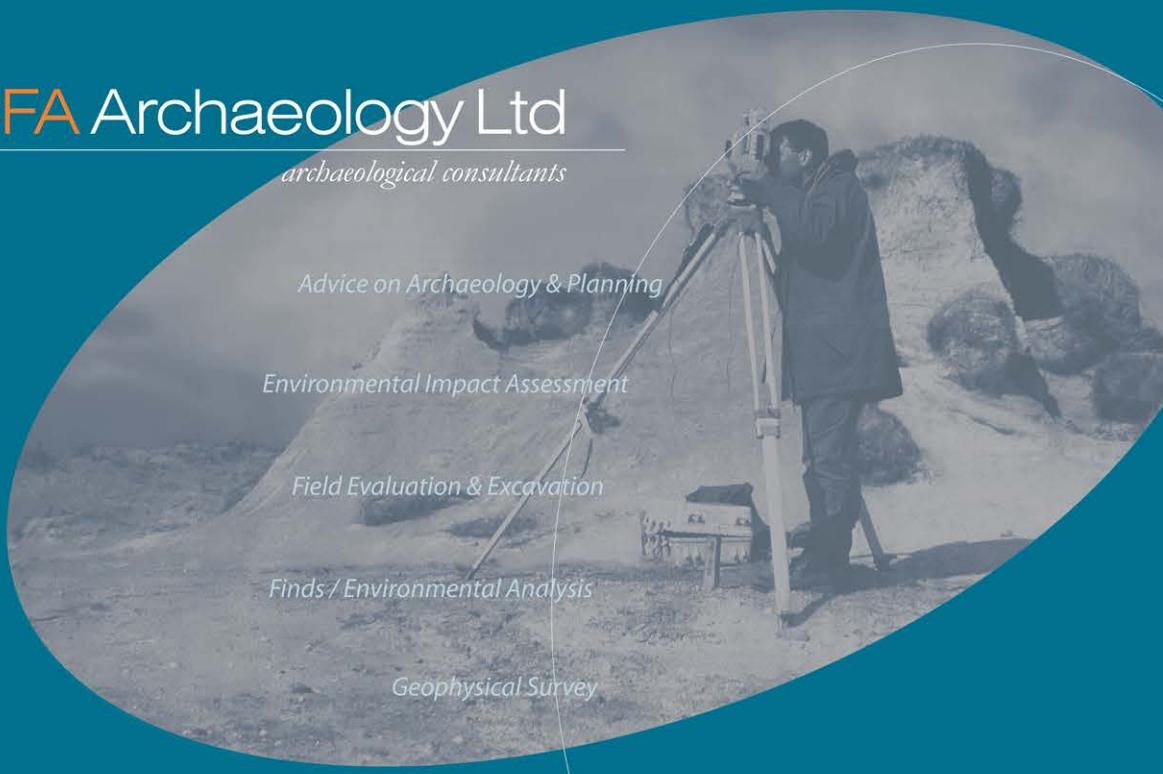

Advice on Archaeology & Planning

Environmental Impact Assessment

Field Evaluation & Excavation

Finds / Environmental Analysis

Geophysical Survey

Historic Building Recording

Site & Landscape Survey

Interpretation, Design & Display

Sovereign Street, Leeds, West Yorkshire.

Archaeological Evaluation

Report No. Y089/13

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Sovereign Street, Leeds, West Yorkshire.

Archaeological Evaluation

Report No. Y089/13

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An archaeological evaluation was undertaken by CFA Archaeology Ltd on land off Sovereign Street, Leeds, West Yorkshire during March and June 2013. The evaluation recorded the well-preserved sandstone walls of the former goit, one of several that ran through this area towards the River Aire. Other remains recorded included a former print works, gas stove works and the extensive remains of a former tram depot which were all known from a variety of sources to have occupied parts of the site. The remains were from four phases of activity between the mid-19th century and the mid-20th century. The earliest phase was the goit and the last was the tram depot. The periods in-between saw modifications to the existing goit, its subsequent in-fill and the construction of a gas stove works.

No evidence could be found of the goit's medieval origins and the remains that were recorded by the evaluation appear to be the pre-1850 post-medieval revetment works which culverted an already existing waterway.

1. INTRODUCTION

1.1 General

This report presents the results of an archaeological evaluation undertaken by CFA Archaeology Ltd (CFA) on behalf of Prospect Archaeology Ltd between 25 March and 14 June 2013, and . The CFA code and number for the project is SOVS/2103.

All work was undertaken in accordance with a specification (Appendix 3) requested by Nansi Rosenberg of Prospect Archaeology and produced by David Hunter of West Yorkshire Archaeology Advisory Service (WYAAS) on behalf of Leeds City Council in order to inform archaeological conditions covered by planning applications 12/04017LA and 12/04018FU.

1.2 Site Location and Description

The development site consists of an irregular parcel of land in an area that is currently used as a car park (Fig. 1. NGR SE 3008 3314). The site is located within the centre of Leeds and is bound by Neville Street to the west, Sovereign Street to the south and south-east, and Swinegate to the east. Pit Row partially bounds the site to the north with Leeds Railway Station and railway line also located to the north. The site was relatively flat and comprised hard standing and car parking bays delimited by re-used railway sleepers (Fig. 2)

The underlying solid geology is Pennine Lower Coal Measures consisting of mudstone, siltstone and sandstone. The superficial deposits are riverine and comprise clay, silt, sand and gravel (BGS 2013).

1.3 Previous Archaeological work and Historical Background

A desk based assessment was produced by Nansi Rosenberg of Prospect Archaeology Ltd (Rosenberg 2012. The DBA was able to show that the development site was

previously located in an area known as the Isle of Cinder. Water channels known as 'goits' supplied the local mills which proliferated in the area from the 18th century onwards. A map regression exercise showed that a goit orientated roughly north-west to south-east ran through the development site. It was first depicted on mapping in the late 18th century although the origin of the watercourse is believed to pre-date this.

The development site is situated to the south-west of the medieval core of Leeds. The goits formed a series of watercourses and channels which acted as mill races or lades. The goits are associated with the medieval manorial King's Mill, 16th century Flay Crow Mill and later Concordia Mill. Photographic evidence from the early 20th century shows the goits had been revetted by stone walls with some buildings built directly on top of the goit walls. Some images show ceramic drainage pipes within the disused goits. The purpose of the pipes would have been to use the pre-existing goit routes as a 'mains' to discharge into the River Aire to the south.

The goit that runs through the development area is still depicted until the Ordnance survey mapping of 1908, having presumably been filled in sometime prior to this date. At this time the only building close to the location of the evaluation trench is a printing works. By the 1921 Ordnance Survey map further buildings including a gas stove works and a tramway depot are depicted. By the 1953 edition, the tram depot had expanded and covered the area formerly occupied by the gas stove works. In the 1960s, the tram depot became The Queen's Hall Exhibition Centre and hosted music concerts and other events.

No other invasive archaeological works are known to have been carried out within this area of the development. Site investigation works recorded substantial deposits of made ground (up to 3m) and the remains of brick walls and concrete foundations which were interpreted as being the remains of the former Gas Stove Works and The Queen's Hall

1.4 Aims

The aims of the evaluation were:

> 'to gather sufficient information to establish the extent, condition, character, condition, and date (as far as circumstances permit) of any archaeological features and deposits within the area of interest' (Appendix 3).'

2. WORKING METHODS

2.1 General

All work was undertaken according to the Institute for Archaeologists' Code of Conduct, and relevant Standards and Guidance documents (IfA 1996, 2001), and the terms of the specification (Appendix 3).

All excavation and on-site recording was carried out according to standard CFA procedures, principally by drawing, photography and by completing standard CFA record forms.

The excavation of the trench was carried out under constant archaeological supervision. A mechanical excavator equipped with a smooth-bladed bucket was used wherever possible. A hydraulic breaker was used to remove concrete deposits after they had been quantified. All further excavation required was carried out by hand. Machine cut sondages were only excavated with the express permission of the WYASS. Due to the depth of the excavated trench, in excess of 3m deep, the sides were stepped on all sides for health and safety requirements and for the provision of access.

Trench positions were surveyed using industry standard electronic surveying equipment (Fig. 1). CFA monitored the backfilling of all excavated trenches on completion of the fieldwork.

2.2 Standards and Guidance

CFA Archaeology is a registered organisation (RO) with the Institute for Archaeologists (IfA). All work was conducted in accordance with relevant IfA Standards and Guidance documents (IfA 1996, 2001), English Heritage guidance (EH, 2006, 2008, and 2011), and CFA's standard methodology.

2.3 Archiving

The project archive, comprising all CFA records will be ordered according to the specification (Appendix 3) to nationally recognised standards (IfA 2001 and Brown 2011) and deposited with Leeds Museum. A summary of the results of the archaeological works will be submitted for inclusion in OASIS.

2.4 Monitoring

The trial trenching was monitored by David Hunter, Senior Archaeological Officer for WYAAS, who was informed in advance of the works taking place and visited the site on 4 April 2013.

3. RESULTS

Numbers in parentheses refer to contexts, a full description of which is contained in Appendix 1. A detailed plan of the Trench is shown on Fig 2a-b. Figures 3a-d show the recorded features superimposed on Ordnance Survey mapping. Fig. 4 is a scale drawing of the north-east part of the trench and shows the stratigraphy in conjunction with datum information.

3.1 General

The final dimensions of the excavated trench were 29m long, 6m wide, and a maximum of 3.75m deep (23.37m AOD), with a basal width of generally 2m. A second, smaller trench was subsequently excavated to determine the line and extent of

a surviving wall exposed during the original excavation. This trench measured 0.6m in width by 8m in length and was an extension of the south-eastern end of the original trench. The water table was located at a depth of 24.06m AOD. (Fig. 4, 5, 6). The existing ground surface was a car park and comprised deposits of cinder, gravel and crushed masonry, a layer of crushed concrete and a further layer of crushed sandstone with a combined thickness generally between 0.3m and 0.4m thick. Structural remains relating to the former tram depot were encountered at 26.66m AOD. The existing ground level was 27.12m AOD.

3.2 Phase 1 c. 1850

The Goit

The remains of the goit were uncovered following the removal of the overburden and the remains of the former tram depot. The width of the goit within the trench was 12.7m. The goit itself was formed by a revetment of sandstone constructed walls which tie in with the depiction of the goit on the Ordnance Survey map of 1850 (Fig.3a).

The north-east wall of the goit (028) was constructed as a revetment wall, with a faced elevation to the south-west (Fig. 7). A sondage to the north-east exposed a roughly hewn, although still brought to course, elevation. The wall was 1.42m in height and the base was only reached by a machine excavated sondage. The top of the goit was located at 25.10m AOD. The goit was aligned NW to SE.

A course of sandstone flag stones (027) had been mortared to the top of the goit's north-east wall. The flagstones had a narrow mortar scar which indicated further coursing. From the width of the scar this would probably have been a narrow brick wall. This structure using the goit wall as a foundation may have been a boundary wall. A 0.1m wide lip between the flagstones (027) and the goit wall (028) indicated a scarcement was present, which was weathered, and thus suggested this had, at least for a time, been the working level of the goit (Fig. 8).

The south-west wall of the goit (003, 007, 048) was constructed in sandstone although it was also partially obscured by later structures of early 20th century date and the internal north-east-facing elevation was entirely obscured by the concrete foundations (040) for the later tram depot (Fig. 9).

A 0.3m gap existed between walls 007 and 048 which was faced on both sides, and these walls were interpreted as being contemporary. A cast iron pipe (054) was situated within the gap, although it was unclear whether this was a later insertion.

The height of the south-west goit wall was further increased by a single course of large sandstone blocks (003). The south-west goit wall had been built over for the foundations of the later tram depot c. 1920s. It was partially covered by concrete and then by a north-west to south-east orientated brick wall (002).

The maximum excavated depth of the goit was 1.73m below 028 and was reached by machine excavation only. The basal deposit at the limit of excavation was observed as a deposit of orange sandy gravel which was covered by c. 0.4m of saturated black

sandy silt (055) with brick and rounded cobble inclusions as well as late 19th to early 20th century pottery. The deposit also contained oyster and mussel shell.

A large sandstone wall (016) orientated north-south and lying to the south-west of the goit may also belong to this phase. It was abutted by a brick wall (017) which was interpreted as a later structure (Fig. 10). The height of this wall was 2.7m and it was built directly onto sandstone gravels and cobbles which were interpreted as natural. The relationship with the surrounding deposits was unclear, but there was no visible foundation cut for this wall and the evidence in section suggested that an alluvial deposit (045) of very homogenous, light orange-brown sandy silt had probably been cut, and then the wall built directly against this deposit. Excess mortar which had been forced from the joints on the west-facing elevation appeared to strengthen this interpretation. The wall (016) may belong to buildings depicted on the 1850 town plan (Fig.3a), although subsequent excavation suggest it more likely related to buildings depicted as printing works on the 1891 Town Plan (Fig. 3b) immediately to the south-west of the goit.

3.3 Phase 2 c. 1890

Printing works and goit modifications

The 1891 Town Plan (Fig. 3b) clearly shows the goit as open. The south-west bank is now occupied by a print works and a chimney is also depicted. Evidence for the print works was recorded as a north-south orientated wall constructed in red brick (017): this wall abutted an earlier wall (016) of sandstone construction (Fig. 9). A deposit of concrete (018) may have acted as a foundation for the brick wall. The wall was situated c. 0.2m under the existing ground level. At the southern end of the wall was a north-west to south-east return (025, 023) with a 0.46m gap that was filled by a deposit of concrete (024). This deposit had been poured to protect a ceramic pipe as it discharged into a brick constructed manhole (026).

The chimney was constructed in reused red brick, with some hand-made examples clearly visible. The dimension of the masonry was c. 1.8m x 1.8m. Two courses of reused sandstone blocks were used as the foundation. The surrounding alluvial sandy silt (043) had been cut (038) (Fig. 11) to insert the chimney's masonry and the foundations were built directly upon the natural sandy gravel substrate. The area was backfilled with granular debris (039), and a levelling deposit of redeposited natural silt (044) (Fig. 12). However, the natural in the base of the trench was variable, and a sondage exposed varying bands of shelving alluvial gravels and sands. The southern corner of the chimney was built onto soft sand and this had required the builders to construct a brick pad under the sandstone foundations to support this corner (042) (Fig. 12, 13).

Probably around this period the area was modified to gain access to the goit. A cut (012) was seen in the made ground around the chimney (044) to make further use of the existing gap between the south-east goit walls (007, 048), this was probably for drainage into the goit (Fig. 14). A ‘ring’ of roughly hewn sandstone (011) was constructed around the opening and flat, sandstone slabs were arranged sloping downwards towards the cast iron pipe (050). A surface of roughly hewn sandstone

slabs (010) were deposited over the drainage alteration and around the existing chimney (008).

Further modification could be seen to the south-east where the remains of a drainage duct or truncated culvert were recorded. The feature comprised a large basal slab of sandstone (006) and two further slabs of sandstone (004, 005) either side of a central, 0.64m wide, channel. It is difficult to precisely phase the feature; however, the south-east face of the goit wall (007) narrowed appreciably and appeared to have been cut (049) to allow the culvert to get as close as possible to the inside of the goit. A brick infill attached the culvert to the large, upper stones of the goit (003) and it is suggested the feature post-dates the goit but presumably pre-dates its infill (c. 1908) (Fig. 15).

3.4 Phase 3

Post Goit, Print Works and Gas Stove Works

Ordnance Survey mapping from c. 1921 (Fig. 3c) continues to show the print works within the footprint of the trench. However, the goit has been filled in by this date, and this was recorded in the evaluation as a deposit of mixed demolition material, predominantly brick. The depth of this infill was c. 1.1m deep (Fig. 4). The date for the backfilling of the goit based on the Ordnance Survey maps is sometime between 1894 and 1908: however, as photographic images exist of defunct goits around the Isle of Cinder in the early part of the 20th century, the activity can be tentatively attributed to the latter end of the above time frame.

A gas stove works was built on the site after the goit had been filled in. The only surviving evidence for this building was two parallel red brick walls (030, 035) (Fig. 3c). The remains of construction cuts (033, 051) through the goit infill for both walls were visible in section (Fig. 4). Wall 030 was 0.85m high which included a foundation of at least four courses of brick headers (Fig.16) and wall 035 was c. 1m high and had been constructed around an existing ceramic sewerage pipe (032) (Fig. 17). The cartographic evidence shows wall 030 was an external supporting wall; hence the requirement for more substantial foundations.

Photographic images exist from 1906 which show goits being used as the routes for sewers constructed from ceramic pipes (Leodis). The ceramic pipe (032), which was laid before the goit was filled, was still functioning when the wall of the Gas Stove Works was constructed. However, the orientation of the pipe was very similar to that of wall 030 (NE-SW), so it was diverted through a gap in the wall (036), and under a relieving arch (031) where it then continued on a slightly different tangent to the wall, continuing beyond the limit of excavation.

3.5 Phase 4

The Tram Depot (Later Queens Hall Exhibition Centre)

By the 1950s, the Leeds Corporation Tram Depot now occupied the Gas Stove Works (Fig. 3d). The evaluation recorded a north-west to south-east supporting brick wall (002), 0.1m below the existing ground level. Abutting this wall to the north-east was a

series of north-west to south-east orientated concrete bays uncovered between 0.45m and 0.5m below the car park surface (Fig. 4). The concrete was not reinforced and had been poured using wood shuttering. The modern deposits contained a high proportion of brick, sandstone and grey mortar fragments. These bays were interpreted as service pits for trams (Fig. 18). A screed of concrete provided a finished upper working surface within each bay. A shallow gutter was noted in the deeper bays to allow for the run off of liquids. The bays had been in filled with an assortment of made ground deposits including burnt shale, with occasional gravel lenses and demolition deposits more prominent to the south-west.

The concrete deposits that formed the bays continued beyond the limit of excavation in all directions, except where it was abutted by wall 003 on the north-east facing elevation. Evidence for roof supports of the tram depot were recorded as two substantial steel girders, 0.42m wide. The base of one girder (Fig. 19) to the north-east of wall 003 was bolted to three steel 'I' beams which were in turn fixed to steel rails. A hand mixed concrete deposit encased the steelwork and also continued beyond the base of the trench (c. 2.8m). Ceramic pipes, encased in weak concrete, were set vertically within the recess of the girders and were interpreted as down pipes for drainage. The remains of a 1m by 0.5m wide concrete service duct which contained several cast iron pipes was visible in both the south-east and the north-west sections of the trench. The service duct was also a remnant of the tram depot.

The Phase 4 features described above are all mid-20th century and were related to the area's former use as a tram depot. The evidence within the trench suggested the former exhibition centre surface was removed. The remaining stratigraphy comprised modern made ground deposits of cinder, gravel, shale and crushed masonry such as concrete, brick and sandstone.

3.6 Environmental Sampling

by Dr Mike Cressey

Bulk environmental samples were taken from the base of the trench from a suspected cut feature at the request of the Senior Archaeological Officer. Further excavation revealed that this feature this was not anthropogenic in origin but was geological. The underlying substrate was a product of alluvial deposition, overlying bands of gravel and sand. The natural deposit is unlikely to yield palaeonvironmental material and it is recommended that the samples are not retained.

5. DISCUSSION

An archaeological evaluation was undertaken by CFA Archaeology Ltd on land off Sovereign Street, Leeds, West Yorkshire during March and April 2013. The evaluation recorded the well-preserved sandstone walls of the former goit, one of several that ran through this area towards the River Aire. Other remains recorded included a former print works, gas stove works and the extensive remains of a former tram depot which were all known from a variety of sources to have occupied parts of the site. The remains were from four phases of activity between the mid-19th century and the mid-20th century. The earliest phase was the goit and the last was the tram

depot. The periods in-between saw modifications to the existing goit, its subsequent in-fill and the construction of a gas stove works.

No evidence could be found of the goit's medieval origins and the remains that were recorded by the evaluation appear to be the pre-1850 post-medieval revetment works which culverted an already existing waterway.

6. CONCLUSION

CFA successfully conducted an archaeological evaluation on land at Sovereign Street Car Park, Leeds. The excavation adds to the understanding of the construction and preservation of the goit and the wider development of the site from the mid-19th century until the mid-20th century. The evaluation was able to provide a chronology of use within this part of the site that could be attributed to four phases. The earliest remains recorded were the well-preserved remains of the goit. Other identifiable structures included the former print works and gas stove works. The evaluation also recorded extensive but modern remains of the former tram depot. These were seen as concrete service pits and steel and concrete foundations. No other feature or deposits of archaeological interest were recorded.

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APPENDICES

Appendix 1: Context Register

Context no.	Fill of	Type	Description
000		Deposit	Natural substrate; alluvial orangey-grey coarse sand and gravel, banding in places. Differential drying. Rising water at c. 2.8m.
001		Deposit	Overburden; made-ground modern car park and rubble deposits. Comprised burnt shale, crushed sandstone, brick and mortar. Ash and cinder.
002		Deposit	Red brick wall. >6m L x 0.47m W x 1.36m H. North-west to south-east orientation. Brick size 0.23 L x 0.10 W x 0.05 H. Very hard grey mortar.
003		Masonry	South-west wall of goit. >6m L x >0.35m W x >0.29m D. Under wall 002. North-east facing internal elevation. Constructed of large regular sized sandstone blocks.
004		Masonry	East side of stone channel/ duct. 0.65m L x 0.38m W x 0.5m H. Three courses of angular sandstone flagstones. Overlay sandstone base 006.
005		Masonry	West side of stone channel/duct. 0.77m L x 0.43m W x 0.22m H. Two course of angular sandstone flagstones. Firm mortar bonding. Overlay sandstone base 006.
006		Masonry	Sandstone base of channel/duct comprising a very large single piece of stone. >1.36m L x >1.30m W x 0.25m H.
007		Masonry	Goit wall abutting 003. >2.10m L 0.66m W 0.90m H. Only south facing elevation visible. Probably a continuation of 048, although separated by a gap in which cast iron pipe is situated.
008		Masonry	Brick wall of chimney structure. 1.75m sq. x 1.5m L x 0.52m W x 0.5m H. English garden wall bond. Constructed of irregular bricks c.0.25 L x 0.12 W x 0.06m H.
009	008	Deposit	Black silty-sand with frequent inclusions of brick, sandstone and charcoal fragments and flecks. 0.75m Diameter x 0.2m H. Deposit within internal recess of chimney/brick structure 008.
010		Masonry	Sandstone slab surface. 2.5m L x 1.04m W x 0.13m H. Truncated by wall 002 and wall 008.
011		Masonry	Sandstone culvert. 1m L x 1.1m W x 0.36m H. Sub circular deposit. Irregular sized sandstones. Contains sandstone slabs slanting towards iron drain 050. Overlies goit wall 007. Abuts goit wall 003.
012		Cut	Construction cut. >0.8m W x >1m D. Steep irregular sides. Underlies sandstone slab 010, culvert 011, goit wall 007 and sandstone channel 006.
013	012	Deposit	Firm dark brown sandy-silt deposit; containing brick fragments including one whole brick, charcoal fragments and sandstone fragments.
014		Cut	Cut of alluvial channel. Identified as a natural feature.
015		Deposit	Fill of alluvial channel. Homogenous pale-brown sandy-silt. Identified as a natural feature.
016		Masonry	Sandstone wall. 0.7m W x 2.7m H. North to south orientation. West-facing elevation showing mortar scars. East-facing elevation obscured by abutting wall 017. Brought to course. Evidence of tool marks. Later excavation revealed wall extended to at least 8m to the south of original trench area.
017		Masonry	Red brick wall. 0.56m W x >1.6m H. North to south orientation. West-facing elevation abuts sandstone wall 016. Consists of red rectangular frogged bricks 0.235 L x 0.075 H x 0.105 W. Firmly bonded with light grey lime rich mortar. Unclear bonding pattern.
018		Masonry	Concrete deposit. > 5m L x 0.6m W x > 3m H. North to south orientation. Indurated mixed pinkish grey concrete. Contains brick fragments and sub angular sandstones. Reinforces red brick wall 017. Overlays backfill deposit 020.

Context no.	Fill of	Type	Description
019		Cut	Construction cut for red brick wall 017. Between 0.2-1m W x >1m D. Steep irregular sides. Base not identified.
020	019	Deposit	Rubble backfill of construction cut 019; firm mixed grey rubble deposit comprising crushed brick, crushed sandstone fragments, ash and cinders.
021		Masonry	Sandstone foundation. >1.5m L x c.0.6m D. Foundation for chimney structure 008. Two courses of sandstone blocks. Bonded with coarse grey mortar. Roughly faced blocks showing tool marks. South and east elevations exposed. Overlaying backfill deposit 038.
022		Masonry	Queens Hall concrete slab. 1.7m W x 0.16m D. 1.4m Below EGL. Cast against south-east facing elevation of Queens Hall wall which is keyed into wall 002. Mortar scars of former walls were identified possibly denoting bays for lavatories. Deposited over made-ground.
023		Masonry	Brick wall return of wall 017. 0.7m L x 0.48m W x >0.14m. South-east facing elevation. No discernible bonding pattern. Forms a channel with wall 025, 0.48m wide within which concrete 024 was cast to protect a salt glazed drain.
024		Masonry	Concrete deposit. Cast between wall 023 and wall 025 to protect a salt glazed drain. Abuts brick built manhole 026.
025		Masonry	Stub of red brick wall. 0.7m L x 0.48m W x >1.3m H. Truncated continuation of wall 023. Forms a channel with wall 023, 0.48m wide within which concrete 024 was cast to protect a salt glazed drain.
026		Masonry	Brick built manhole. 0.95m L x 0.92m H. Red brick built north-facing elevation. Hard grey mortar bonding. Sandstone capping 0.10m H. Abuts concrete 024.
027		Masonry	Sandstone flags. > 3.9m L x 0.6m W. Laid on goit wall 028. Consisting of 0.62m L x 0.4m W x 0.06m slabs. South-east facing weathered elevation. Mortar scar on length of surface 0.21m W.
028		Masonry	North-east wall of goit. >3.9m L x c.0.93m W x 1.42m D. Faced south-west-facing elevation. Roughly hewn north-east elevation.
029		Cut	Cut of goit wall 028. >0.12m W x >0.20m D. Construction cut for goit wall 028. East to west orientation. Filled by made ground 047.
030		Masonry	North-east red brick wall within goit. 0.34m W x 1.05m D. North-west to south-east orientation. Hard grey mortar bonding. Pointed on both faces. Constructed of frogged bricks 0.23m L x 0.11m W x 0.08m H. No discernible bonding pattern. Contains archway 031 for pipe 032.
031		Masonry	Brick relieving archway within wall 030. 0.58m W x 0.32m H. Creates opening 036 to facilitate pipe 32.
032		Masonry	Salt glazed drainage pipe. 031m W x 0.23m Diam. Passes under archway 031 through wall 030. Continuation of pipe 037. SSE direction of flow.
033		Cut	Cut for salt glazed pipe 032. 0.66m W x >0.98m D. Very steep sided. Cut through goit infill 034. Base not identified.
034	033	Deposit	Backfill of cut 033. Mixed silty-sand deposit, with grey rounded pebbles, gravels, and very occasional brick and sandstone fragments.
035		Masonry	South-west red brick wall within goit. 0.36m W x 1.06m H. North-west to south-east orientation. Hard grey mortar bonding. Constructed of frogged bricks 0.23m L x 0.11m W x 0.08m H. No discernible bonding pattern. Has foundation of four courses of header bricks which overlay concrete footing 053.
036		Masonry	Opening in wall 030 for pipe 032. 0.37m W x 0.65m H. Created by archway 031.
037		Masonry	Salt glazed drainage pipe. 0.23m Diam. Continuation of pipe 032.
038		Cut	Construction cut for chimney foundation 021. >1.8m L x c.1m D. Irregular, near vertical sides. Flat base. Cut into alluvial silt deposits 044 and 043. Filled with backfill deposit 039.

Context no.	Fill of	Type	Description
039	038	Fill	Backfill deposit; firm orangish brown clayey-silt containing sub angular sandstone fragments, crushed brick, slate fragments, mortar and redeposited clay nodules.
040		Masonry	Concrete deposit. c.3m L x 0.8m H. Pinkish grey indurated deposit. Reinforcing for Queens Hall wall 002. Cast against goit wall 003. Acts as a support for steel stanchions.
041		Cut	Cut for masonry footing 042. 0.4m W x 0.4m D. Near vertical sides. Flat base. Cut into soft alluvial sandy-silt natural substrate 000.
042	041	Masonry	Masonry footing . 0.4m W x 0.4m D. Constructed of a number of brick cuts and a fire-brick fragment. Loosely bonded with a grey mortar. Structural support for sandstone slabs 021.
043		Deposit	Homogenous firm light greyish-brown sandy-silt. c.2m L x 0.8m D. Cut by construction cuts 019 and 038.
044		Deposit	Homogenous firm light greyish-brown sandy-silt. C.0.9m L x 1.1m D. Cut into by construction cuts 012 and 038.
045		Deposit	Homogenous firm light greyish-brown sandy-silt. 1.8m L x 1m D. Abuts wall 016.
046		Masonry	Brick and stone repair. 0.4m L x 0.25m W x 0.60m H. Abuts goit wall 003. Various brick and sandstone fragments. Including reused bricks. Firm light grey mortar bonding.
047		Deposit	Made ground to north-east of goit wall 028. >0.12W x >0.20m D. Backfill of construction cut 029. Consists of re-deposited bands of sandy natural including brick fragments, charcoal flecks and ash.
048		Masonry	Goit wall 048. >1.84m L x 0.65m W x >0.7m H. Probable continuation of goit wall 007, separated by a gap containing an iron pipe 050. Underlies sandstone slab 010 and abuts goit wall 003.
049		Cut	Cut between goit wall 007 and channel 006. 1.4m L. Construction cut between the two sandstone structures. Precise phasing is unclear.
050		Deposit	Cast iron drainage pipe. 0.2m Diameter. Between goit wall 007 and goit wall 048.
051		Cut	Construction cut for wall. 1m W x 1.1m D. Backfilled with deposit 052. Near vertical sides. Base not identified. Cut through goit backfill.
052		Deposit	Backfill of cut 051. Comprising firm brownish-grey sandy-clay that contains sandstone fragments, river washed cobbles, brick fragments, shale, crushed slate and ceramic fragments.
053		Masonry	Concrete footing for wall 035. Indurated deposit of sandstone fragments and bricks bonded with a very stiff dark grey mortar.
054		Deposit	Black saturated sandy-silt basal deposit within goit.
055		Deposit	Granular deposit over sandstone stone foundations (021) of chimney (008), covered by re-deposited natural (044).

Appendix 2: Digital Photographic Register

Digi No	Contexts/description	Taken from	Conditions
1	Shot of ground surface prior to trench excavation	South-west	Overcast
2	Shot of concrete ramp uncovered during initial machine excavation	East	Overcast
3	Shot of concrete ramp and features during initial machine excavation	North	Overcast
4	Internal shot of concrete service duct uncovered during machine excavation	South-east	-
5	Working shot of overburden removal after excavation with hydraulic hammer	North	Overcast

Digi No	Contexts/description	Taken from	Conditions
6	Shot of wall 028 after being uncovered by machine	South-west	Overcast
7	Shot of wall 028 after being uncovered by machine	South	Overcast
8	Oblique shot of features revealed during initial machine excavation	West	Overcast
9	Working shot of trench excavation	North-east	Overcast
10	Working shot of trench excavation with machine and hydraulic breaker	North-east	Overcast
11	South-facing section of chimney 008 and sandstone foundation 021	South	Overcast
12	South-facing elevation of chimney 008 and sandstone foundation 021	South	Overcast
13	Shot of south-facing section of chimney 008, sandstone foundations 021 and surrounding deposits	South	Overcast
14	Shot from above of chimney 008 and surrounding deposits	South	Overcast
15-16	Shot of south-east facing section of deposit 043, cut 038 and chimney 008	South-east	Overcast
17	Shot of natural sandy gravels (000) in base of the trench	Above	Overcast
18-20	General shot of trench after machine excavation and cleaning	South-west	Overcast
21-22	Shot of sandstone wall 016 and brick wall 017	South	Bright
23-24	Shot of sandstone wall 016 and brick wall 017	North	Bright
25-26	General shot of trench after machine excavation and cleaning	North-east	Bright
27	Oblique working shot of trench	North	Bright
28	Shot of masonry 027 and 028 and north-west facing section of trench	North-west	Clear
29	Shot of northern part of north-west section of trench and concrete deposits of the former Queens Hall	North-west	Bright
30	Shot of service bays of former Queens Hall in North-west facing section	North-west	Clear
31	Oblique shot of north-west facing section of tram service bays of former Queens Hall	West	Clear
32	Shot of brick and concrete service duct in north-west facing section of trench	North-west	Bright
33	Shot from above of masonry forming south-west goit wall	West	Bright
34	Shot of brickwork bays of probable toilet block in north-west facing section of trench	North-west	Bright
35	Oblique shot of concrete surface and brickwork bays of probable toilet block in north-west facing section of trench	West	Bright
36	Part shot of south-east facing section of trench to north-east of masonry 016 and 017	South-east	Clear
37	Oblique shot of south-east facing section of trench and chimney 008 in plan	East	Clear
38	Oblique shot of south-east facing section of trench and chimney 008 in plan	East	Bright
39	Shot of chimney 008, surface 010 and sloping stonework (011) forming drain channel	South-east	Clear
40-41	Shot of brick wall 002 and concrete deposits and foundations including steelwork relating to former Queens Hall	South-east	Bright
42	Shot of sloping masonry (011) of drain channel and masonry face (003) of south-west goit wall	South-east	Bright
43	Oblique shot of sloping masonry (011) of drain channel and masonry face (003) of south-west goit wall	East	Bright
44	Shot of masonry 011, masonry face (003) of south-west goit wall	North	Clear

Digi No	Contexts/description	Taken from	Conditions
	and stone constructed channel (004, 005, 006)		
45-46	Shot of trench and parallel brick walls 030 (foreground) and 035	East	Bright
47	Shot from trench step of parallel brick walls 030 and 035 and surrounding deposits	North	Clear
48	Working shot of north-east facing elevation of brick wall 030	North-east	Clear
49	Detailed shot of sloping masonry 011 and channel immediately to south-west of goit wall	North-west	Clear
50	Detailed shot of sloping masonry 011 and channel immediately to south-west of goit wall	South-west	Bright
51	Shot of variable natural geology in base of trench south-west of chimney 008	South-west	Overcast
52	Shot of variable natural geology in base of trench and chimney 008	South-west	Clear
53-54	Shot of cut 012 and masonry channel 011 from above	South	Clear
55	Shot of east-facing section and cut 012 through deposit 044	East	Clear
56	Shot of variable natural geology in base of trench south-west of chimney 008	North-east	Overcast
57	Shot of variable natural geology in base of trench south-west of chimney 008	North-west	Overcast
58	Shot of stone work channel 004-006 from above	South	Overcast
59	Shot of stone work channel 004-006 and goit wall 007 and brick work repair 046	West	Overcast
60	Pre-excavation shot of drain channel and sloping stone 011	South	Clear
61	Pre-excavation shot of drain channel and sloping stone 011 from above	-	Clear
62	Shot of west-facing elevation of sandstone wall 016 with excavated sondage to natural (000) at base	West	Clear
63	Shot of surface 010 and top of pre-excavated chimney 008	North	Clear
64	Shot of truncated surface 010 and brick wall 002	South	Clear
65	Shot of large south-west goit masonry blocks 003 and wall 007	South-west	Clear
66	Shot of former brickwork (002) and concrete9040) foundations of former Queens Hall over goit masonry 011	North-west	Clear
67	Shot of north-west facing section in sondage to north-east of goit wall 028	North-west	Clear
68	Oblique shot of south-west facing section of sondage to north-east of goit wall 027	South-west	Clear
69	Shot of concrete 024 between brick walls 023 and 025 with brick manhole 026 and sandstone wall 016 in background	North-east	Bright
70	Shot of goit wall 027 and capping flagstone 028 with north-east return and mortar scar	North-west	Clear
71	Shot of south-west facing elevation of goit wall 027 and capping 027	South-west	Bright
72-73	Shot of brick wall 030, pipe 032 through slapping 036 and relieving brick arch 031	East	Bright
74	Shot of pipe 037 and wall 030 with part of elevation chiselled away to make way for pipe installation	North	Bright
75	Shot of pipe 037 and wall 030 with part of elevation chiselled away to make way for pipe installation	North-west	Clear
76	Shot of south-east facing section of trench with cut (033) for pipe 032 either side of wall 030	South-east	Bright
77	Oblique shot of south-east facing section of trench and cut 033 for pipe 032	East	Bright
78	Shot of cut 033 for pipe 032 to the south-west of wall 030	South-east	Bright

Digi No	Contexts/description	Taken from	Conditions
79	Shot of east-facing section and surface 010, deposit 044 and cut and fill 012 and 013. Goit wall 011 in foreground	East	Clear
80	Shot of masonry and probable goit wall 011 after removal of overburden	South-east	Clear
81	Shot of south-west facing elevation of goit wall 011	South-west	Clear
82	Shot from above of goit wall 011 and cut 012 in plan	South	Clear
83	Shot from above of continuation of north-east goit wall after the removal of capping flagstone 028	-	Bright
84-85	Detailed shot of brickwork foundation pad 042 under chimney foundation 021	South	Clear
86	Shot of excavated chimney 008	North	Clear
87	Shot of goit wall continuation 048 (south-west facing elevation)	South-west	Clear
88	Shot of south-west goit walls 011 and 048	North-west	Clear
89	Shot of south-west goit walls 011 and 048. facing stones 003 and sondages	South-east	Clear
90	Shot of concretions visible after the excavation of cut 012 and the removal of fill 013	South-west	Overcast
91-92	General shot of exploratory excavation and removal of brick foundation pad 042 under chimney foundation 021	South	Overcast
93	Shot of foundation cut 051 for brick wall 035 in north-west facing section of trench	North-west	Overcast
94	Working shot of machine removal of goit deposits	South	Overcast
95	Shot of test sondage from above within goit	South	Overcast
96-97	Shot of test sondage from above within goit with sand and gravel visible at the base	South-east	Overcast
98-99	Working shots of recording the test sondage within the goit fill	South	Overcast
100-101	Shot of north-east goit wall and south-west facing elevation after removal of goit infill	South-west	Overcast
102	Shot of wall 016 within trench extension looking to the south	South	Overcast
103	Shot of wall 016 within trench extension looking to the north	North	Overcast

Appendix 3: Drawing Register

Dwg No.	Sheet No.	Scale	Plan / Section	Description/contexts
1	1-3	1:20	Plan	Scale plan of trench
2	4	1:10	Section	South-east facing section of trench between north-south concrete 018 and chimney base 008
3	4	1:10	Section	South facing section of brick built chimney wall 008
4	4	1:20	Section	East facing section of construction cut 012 and sandstone slabs 010
5	5	1:10	Section	South-east facing section of brick wall 030, salt glazed drain 032 and construction cut 033
6	5	1:10	Section	North-west facing section of trench showing goit wall 028
7	6	1:10	Section	South-east facing section of alluvial silt 045 and sandstone wall 016
8	9	1:20	Plan	Overlay plan of trench showing sandstone culvert 011
9	7+8	1:20	Section	Profile of south-east facing trench face
10	9	1:10	Section	North-west facing section of trench showing brick wall 035 and construction cut 051
11	10	1:20	Plan	Plan of trench extension over wall 016

Appendix 4: B & W 35mm Photographic Register

Photo No	Contexts/description	Facing	Conditions
1	ID Shot		
2	Sandstone culvert 011	North	Overcast
3	Sandstone culvert 011, sandstone slabs 010 and brick built chimney wall 008	North-west	Overcast
4	Shot of goit wall 003 and sandstone channel 006	North-east	Overcast
5	Shot of goit wall 003, sandstone culvert 011, brick built chimney wall 008 and sandstone channel 006	North-west	Overcast
6	East-facing shot of sandstone channel 006	East	Overcast
7	South-west-facing elevation of goit wall 028	North	Overcast
8	South-west-facing elevation goit wall 028	North-west	Overcast
9	South-west-facing elevations of brick walls 035 and 030	North-east	Overcast
10	North-east-facing elevations of brick walls 035 and 030	South	Overcast
11	North facing shot of trench	North	Overcast
12	North-east facing shot of trench	North-east	Overcast
13	South-east facing shot of trench	South-east	Overcast
14	South-west facing shot of trench	South-west	Overcast
15	North facing shot of construction cut 012, sandstone wall 007 and goit wall 003	South	Overcast

FIGURES 1-19

Key:

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Fig. No:	Revision:
1	A

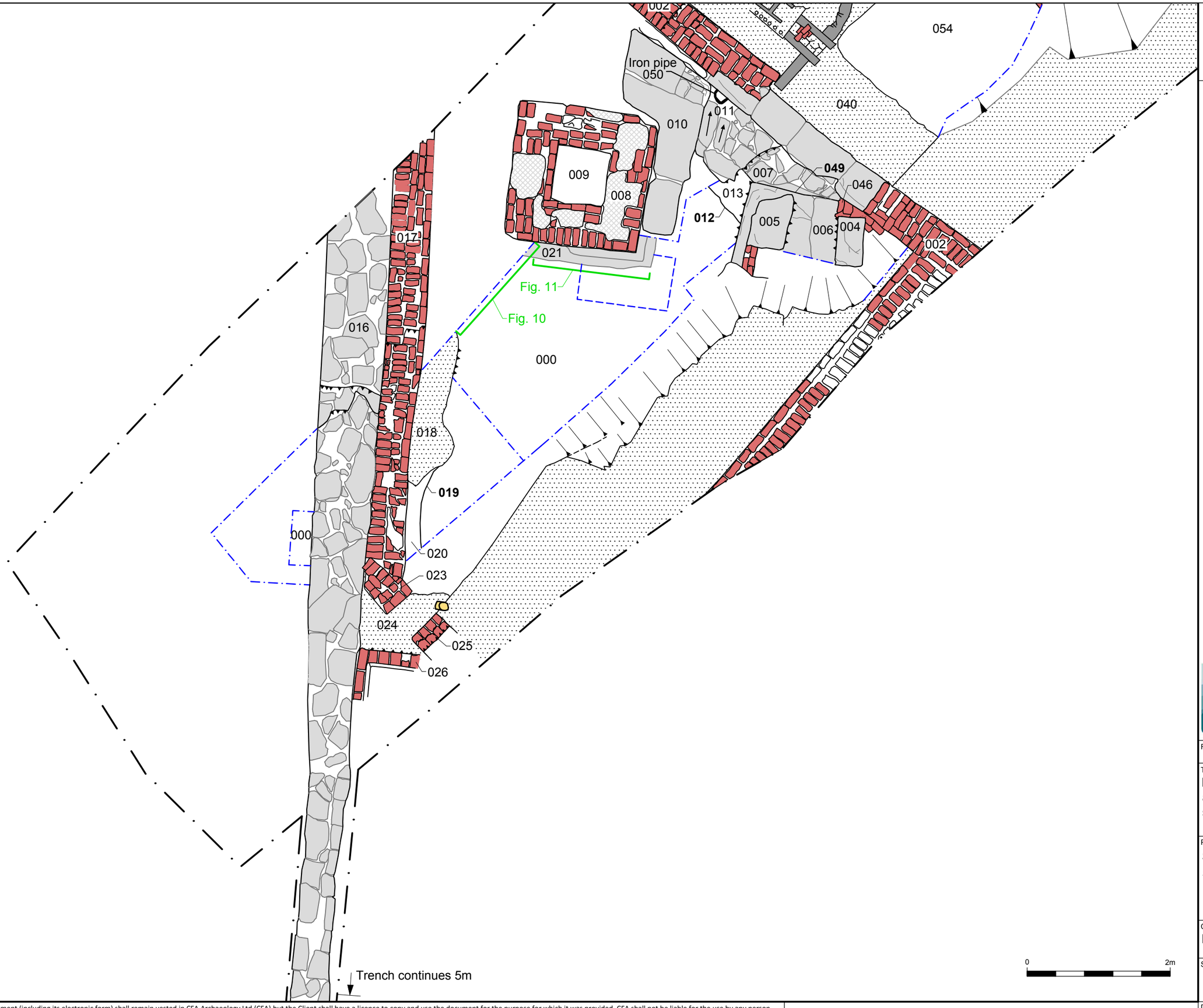
Title:
Site and trench location

Project:
Sovereign Street, Leeds - Archaeological Evaluation

Client:
Prospect Archaeology Ltd

Scale at A3:
1:400

Drawn by:	Checked:	Report No:
SW	PM	Y089/13



Key:

- Brick
- Ceramic Pipe
- Concrete
- Mortar
- Sandstone
- Downward slope of sandstone
- Steel

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Fig. No:	Revision:
2a	A

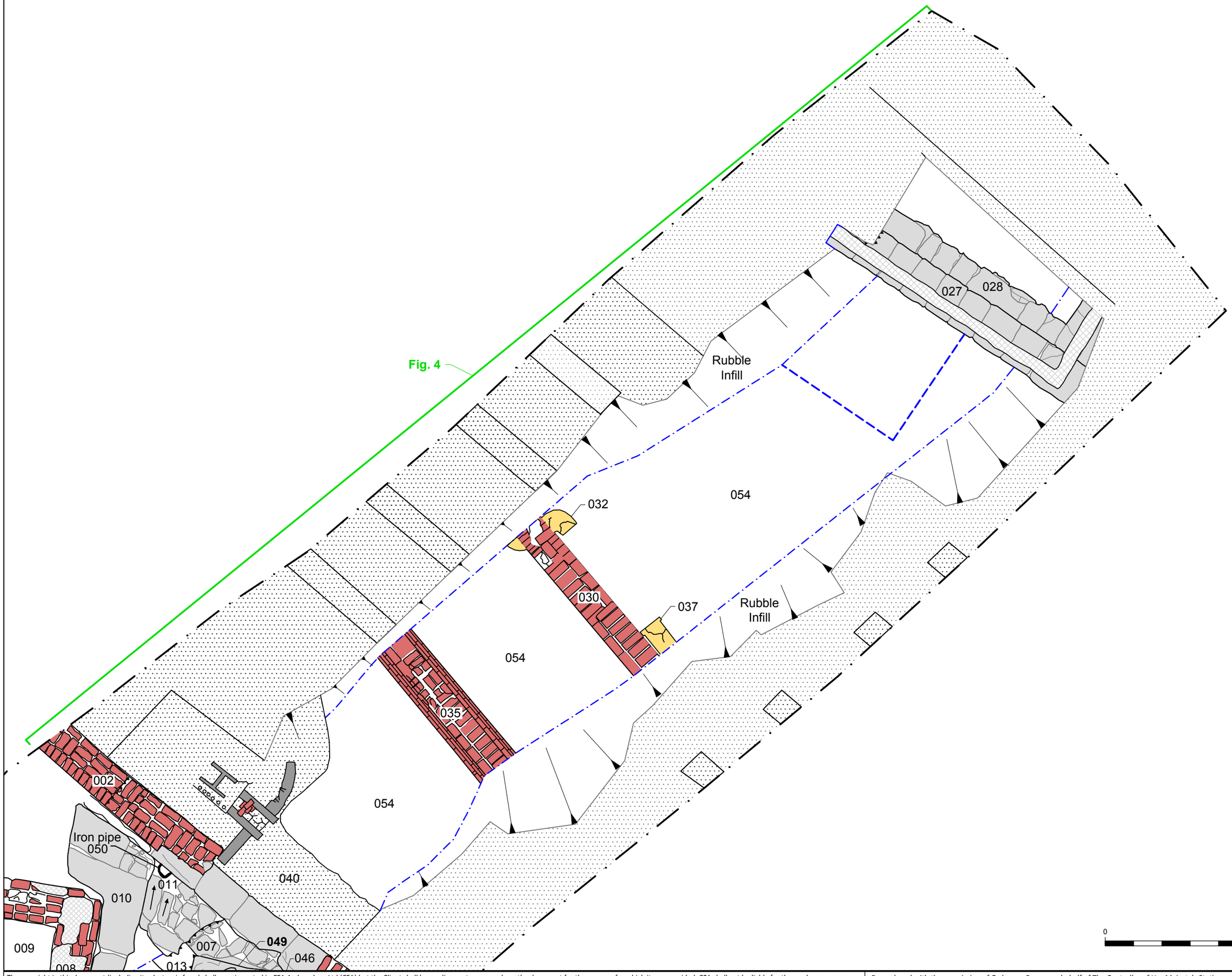
Title: Detailed plan of archaeological remains within south-west of trench

Project: Sovereign Street, Leeds - Archaeological Evaluation

Client: Prospect Archaeology Ltd

Scale at A3: 1:50

Drawn by:	Checked:	Report No:
SW	PM	Y089/13



Key:

- Brick
- Ceramic Pipe
- Concrete
- Mortar
- Sandstone
- Downward slope of sandstone
- Steel

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Fig. No:	Revision:
2b	A

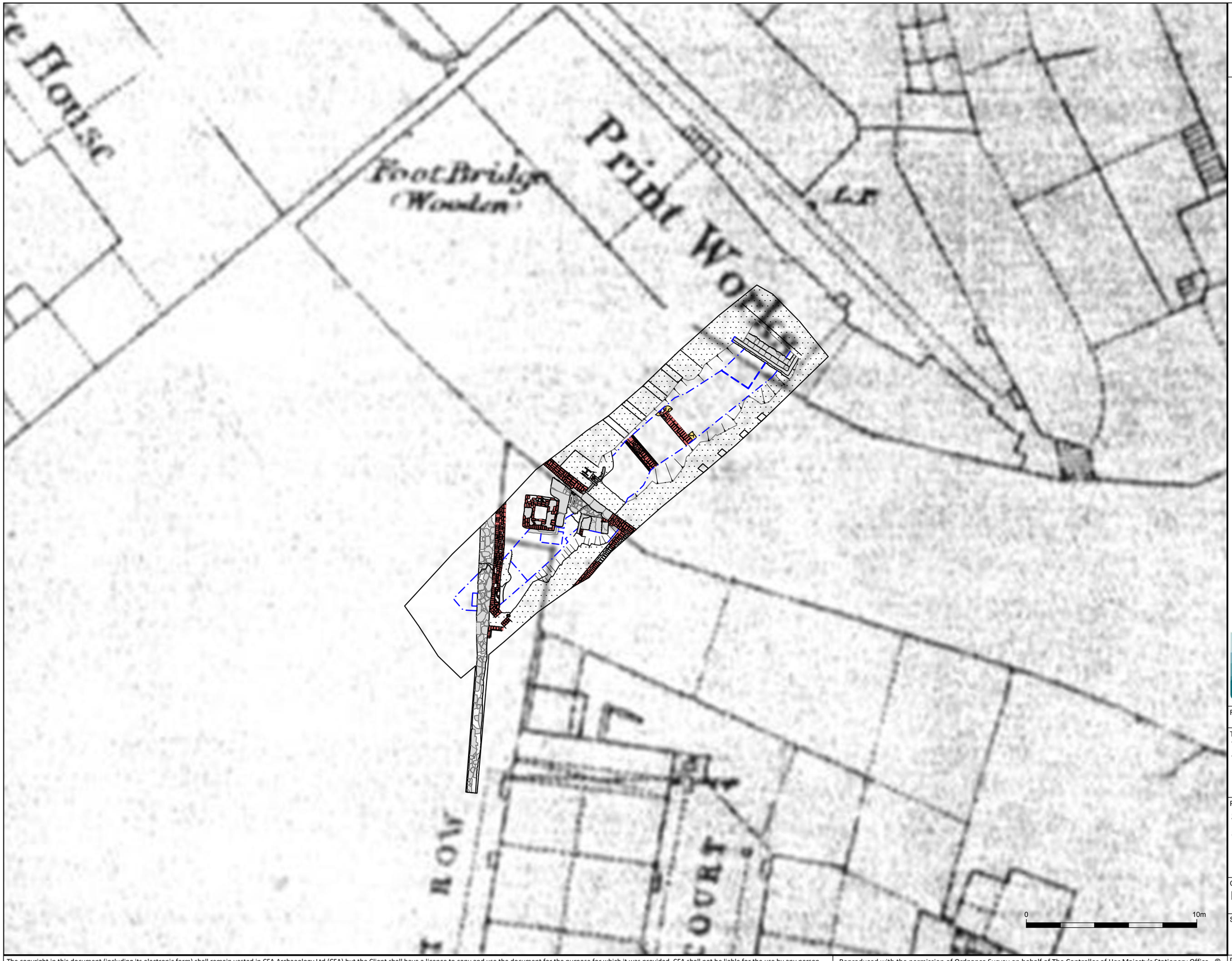
Title:
Detailed plan of archaeological remains with north-west of trench

Project:
Sovereign Street, Leeds - Archaeological Evaluation

Client:
Prospect Archaeology Ltd

Scale at A3:
1:50

Drawn by:	Checked:	Report No:
SW	PM	Y089/13



Key:

- Brick
- Ceramic Pipe
- Concrete
- Sandstone
- Downward slope of sandstone
- Steel

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Fig. No:	Revision:
3a	A

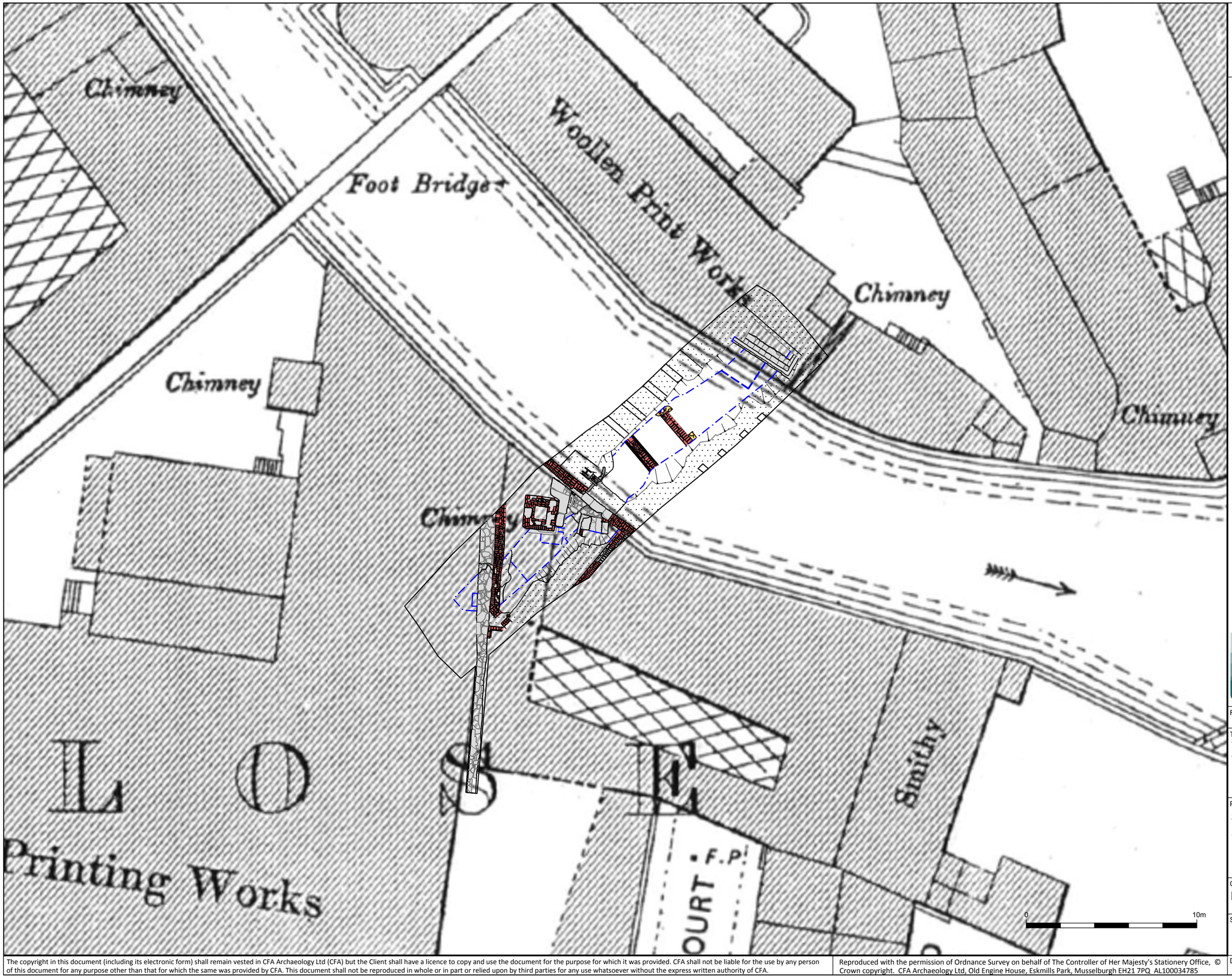
Title:
Trench plan overlaying 1850 Town Plan

Project:
Sovereign Street, Leeds - Archaeological Evaluation

Client:
Prospect Archaeology Ltd

Scale at A3:
1:200

Drawn by:	Checked:	Report No:
SW	PM	Y089/13



Key:

- Brick
- Ceramic Pipe
- Concrete
- Sandstone
- Downward slope of sandstone
- Steel

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Fig. No:	Revision:
3b	A

Title:
Trench plan overlaying 1891 Town Plan

Project:
Sovereign Street, Leeds - Archaeological Evaluation

Client:
Prospect Archaeology Ltd

Scale at A3:
1:200

Drawn by:	Checked:	Report No:
SW	PM	Y089/13

Key:

- Brick
- Ceramic Pipe
- Concrete
- Sandstone
- Downward slope of sandstone
- Steel

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Fig. No: 3c

Revision: A

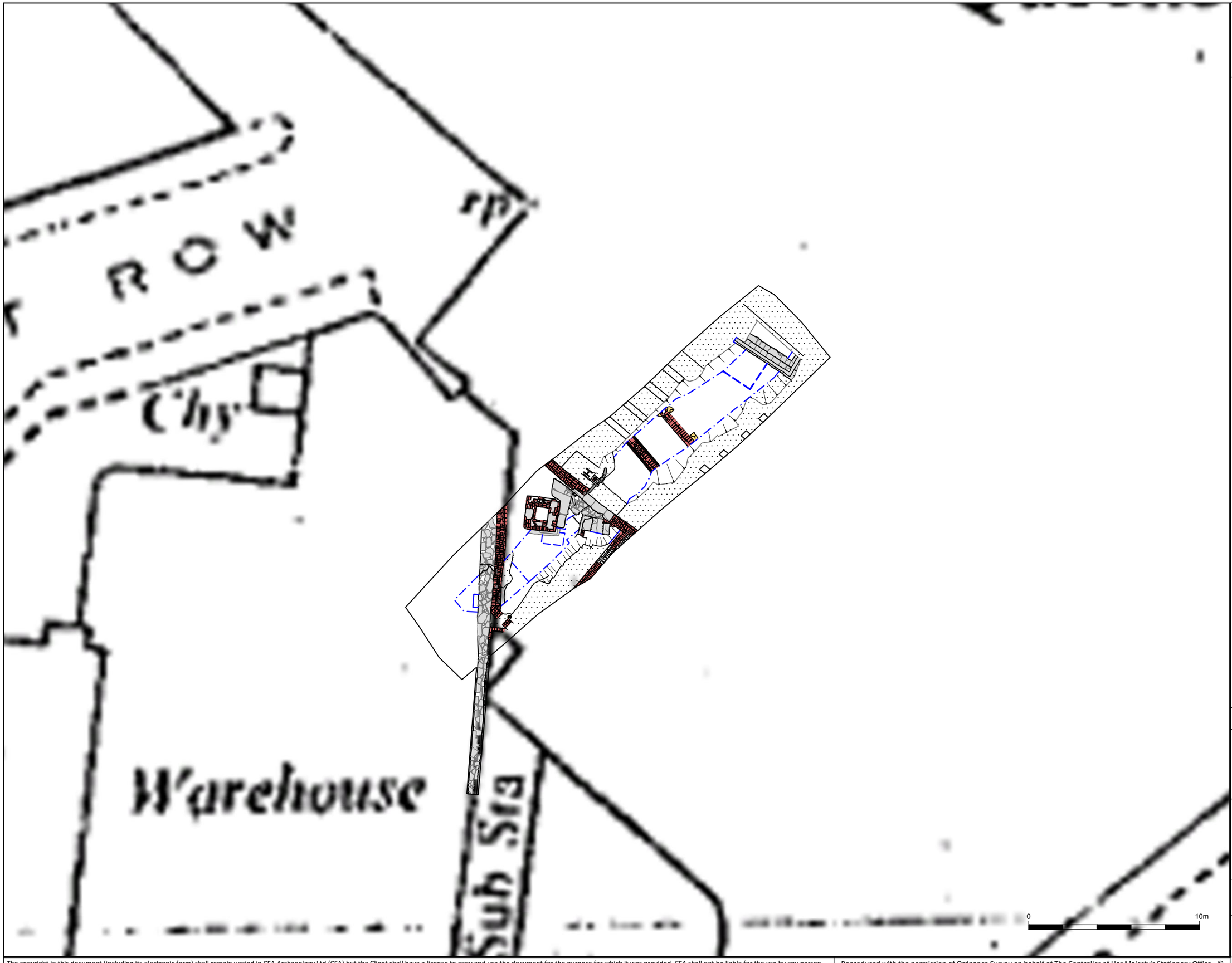
Title: Trench plan overlaying 1921 OS Map

Project: Sovereign Street, Leeds - Archaeological Evaluation

Client: Prospect Archaeology Ltd

Scale at A3: 1:200

Drawn by: SW | Checked: PM | Report No: Y089/13



Key:

- Brick
- Ceramic Pipe
- Concrete
- Sandstone
- Downward slope of sandstone
- Steel

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Fig. No:	Revision:
3d	A

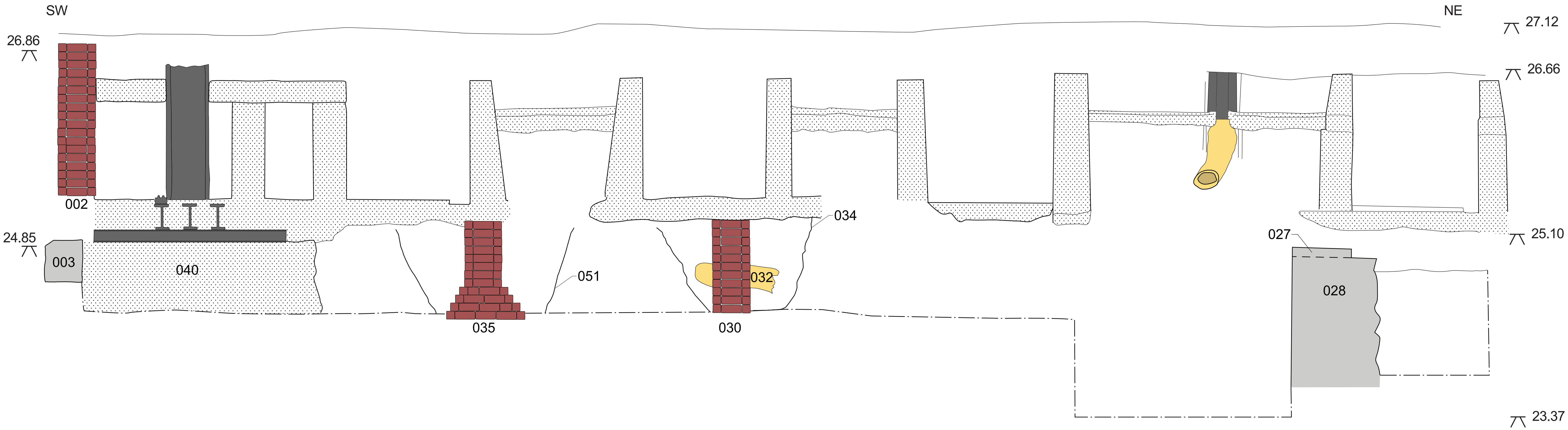
Title:
Trench plan overlaying 1977-1990 OS Map

Project:
Sovereign Street, Leeds - Archaeological Evaluation

Client:
Prospect Archaeology Ltd

Scale at A3:
1:200

Drawn by:	Checked:	Report No:
SW	PM	Y089/13



Key

Brick
Ceramic
Concrete
Steel
Sandstone

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Fig. No: 4	Revision A

Title

South-east-facing section of north-east half of evaluation trench

Project

Sovereign Street, Leeds: Archaeological Evaluation

Scale at A3

1:40

Client

Prospect Archaeology Ltd.

Drawn by: SW	Checked by: PM	Report No: Y089/13

Fig. 5 - South-west-facing shot of trench

Fig. 6 - North-east-facing shot of trench

Fig. 7 - South-west-facing elevation of goit wall 028

Fig. 8 - South-east-facing shot of stone slabs 027 and goit wall 028

Fig. No: 5-8		Revision: A	Project: Sovereign Street, Leeds: Archaeological Evaluation
Drawn by: SW	Checked: PM	Report No: Y089/13	Client: Prospect Archaeology Ltd.

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Fig. 9 - North-west-facing shot of south-west goit wall showing gap between sandstone walls 007 and 048

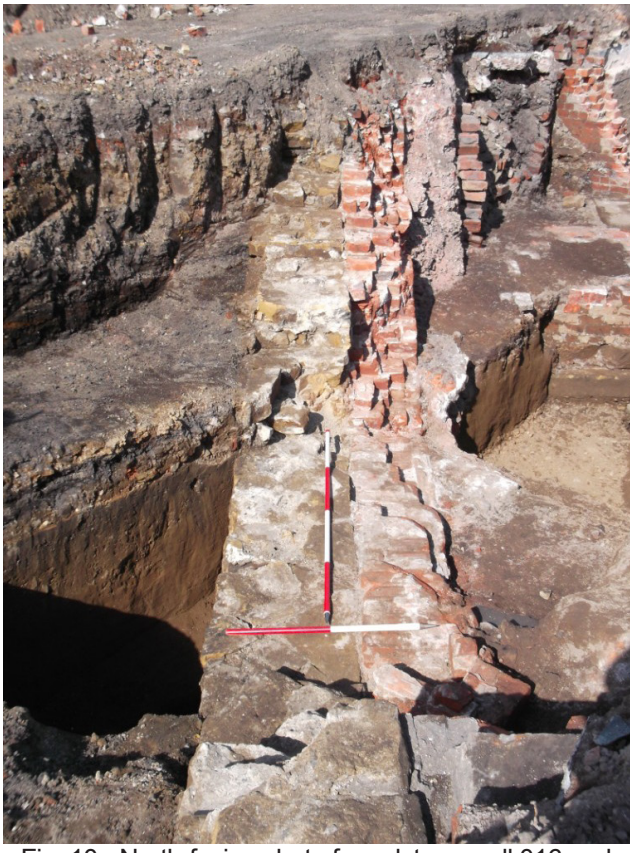

Fig. 10 - North-facing shot of sandstone wall 016 and brick wall 017

Fig. No: 9-10		Revision: A	Project: Sovereign Street, Leeds: Archaeological Evaluation		
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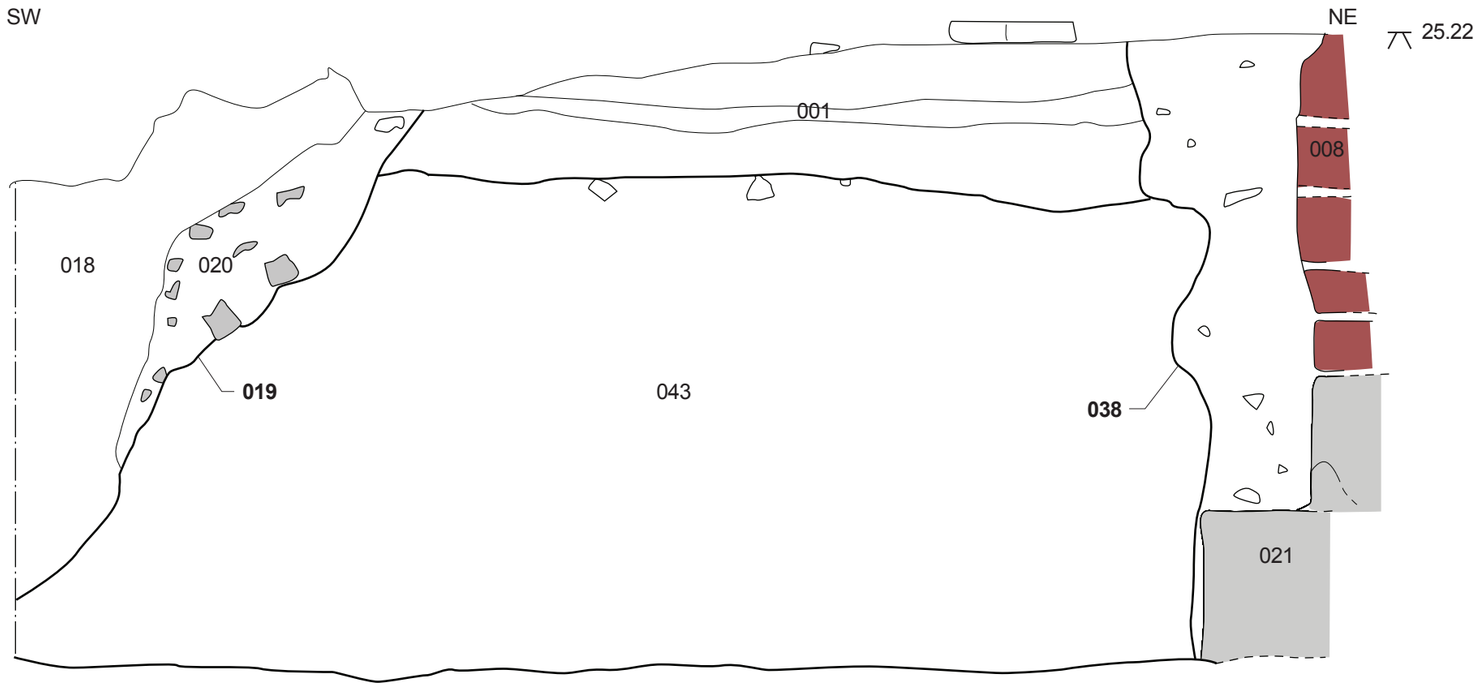

Fig. 11 - South-east-facing section of masonry 008 and 021 and surrounding deposits

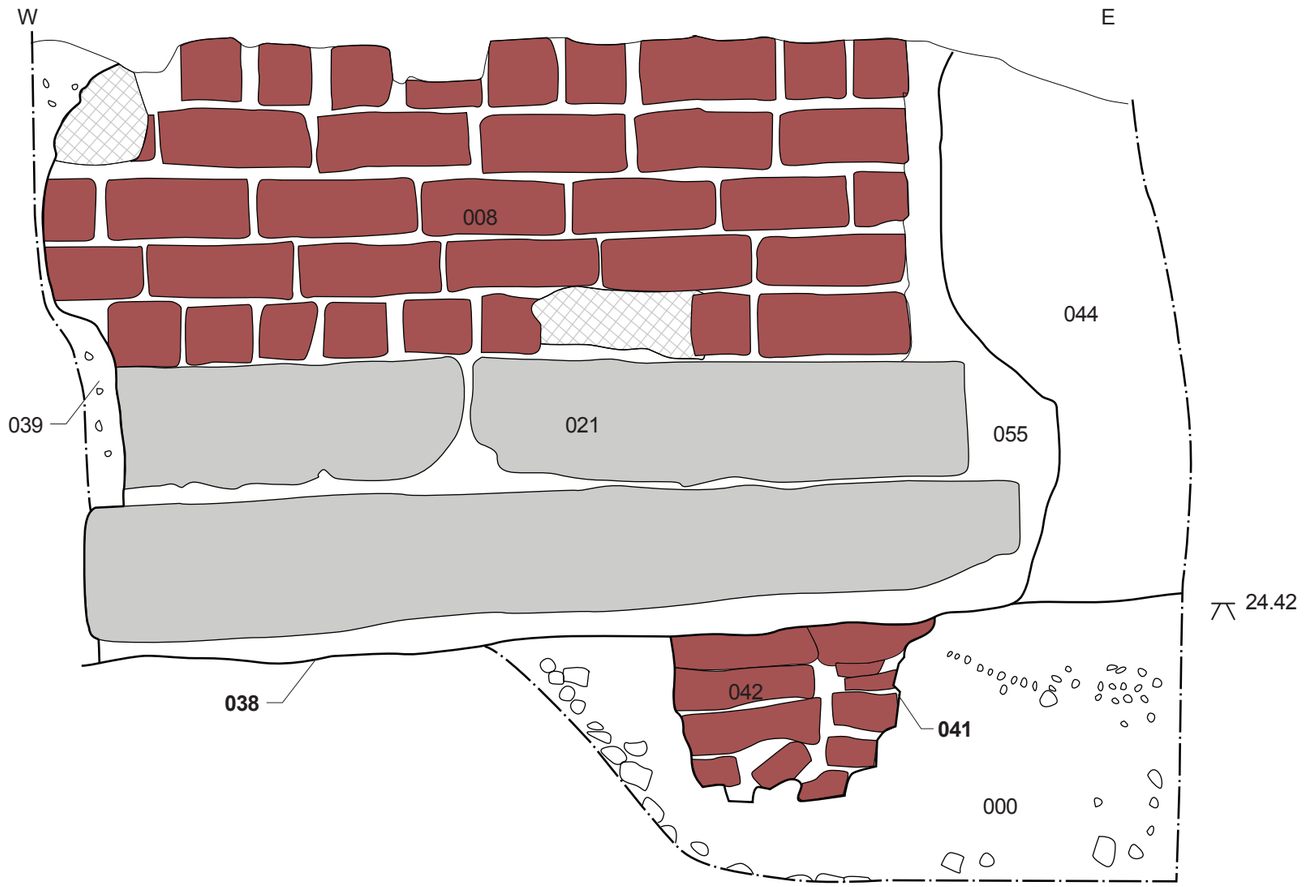

Fig. 12 - South-facing section of chimney base 008/021 and surrounding deposits

0 50cm

Key

- Brick
- Mortar
- Sandstone

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Fig. No:	Revision
11-12	A

Title: Sections

Project: Sovereign Street, Leeds: Archaeological Evaluation

Scale at A3: 1:10

Client: Prospect Archaeology Ltd.

Drawn by:	Checked by:	Report No:
SW	PM	Y089/13

Fig. 13 - South-facing elevation of chimney structure 008 and sandstone slabs 021

Fig. 14 - East-facing section of construction cut 012 showing sandstone culvert 011

Fig. 15 - East-facing shot of sandstone drain 006

Fig. 16 - Shot of wall 035 and foundation cut 051

Fig. No: 13-16		Revision: A	Project: Sovereign Street, Leeds: Archaeological Evaluation
Drawn by: SW	Checked: PM	Report No: Y089/13	Client: Prospect Archaeology Ltd.

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Fig. 17 - Shot of brick wall 030, arch 031 and ceramic pipe

Fig. 18 - Oblique shot of north-west-facing section of trench and concrete bays of former tram depot

Fig. 19 - North-west-facing shot showing Queens Hall concrete foundation 040 abutting brick wall 002

Fig. No: 17-19		Revision: A	Project: Sovereign Street, Leeds: Archaeological Evaluation
Drawn by: SW	Checked: PM	Report No: Y089/13	Client: Prospect Archaeology Ltd.

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Appendix 5: The Specification

WEST YORKSHIRE ARCHAEOLOGY ADVISORY SERVICE: SPECIFICATION FOR AN ARCHAEOLOGICAL EVALUATION BY TRIAL TRENCHING The GOIT, SOVEREIGN STREET, LEEDS (Planning Reference 12/04017/LA & 12/04018/FU)

SE30071 33129

Specification prepared Mr Robert Hardy (acting on behalf of the applicants) on behalf of Leeds City Council

1. Summary

1.1 A limited amount of archaeological work consisting of trial trenching is proposed to establish the archaeological significance of the above site. Any work arising from the results of the evaluation will be covered by a further specification.

1.2 This specification has been prepared by the West Yorkshire Archaeology Advisory Service, the holders of the WY Historic Environment Record. Please note that a specification for a desk based assessment has also been prepared and that this desk based assessment should be carried out before trial trenching commences.

NOTE: The requirements detailed in paragraphs 6.3, 6.4, 6.5, 6.6 and 8.1 are to be met by the archaeological contractor **prior** to the commencement of fieldwork by completing and returning the attached form to the WY Archaeology Advisory Service.

2. Site Location & Description

Grid Reference: centred at SE30071 33129 (please see attached plan)

2.1 The development site consists of an irregular parcel of land that is bounded to the north by the railway line and Leeds City Station, to the west by Neville Street, to the south by Sovereign Street and to the east by Swinegate. The site is currently empty of buildings and is used as a car park with a hard standing surface. The solid geology consists of Pennine Lower Coal Measures which is overlain by Alluvium.

2.2 The site is located in the District of Leeds and the historic township of Leeds.

3.0 Planning Background

3.1 This specification is targeted on one area of the overall site covered by planning applications 12/04017/LA & 12/04018/FU for public realm improvements and a 4 storey office development with basement car park. Site investigation works to identify the culverted course of the medieval goit system are to be undertaken in the centre of the development site. It has been agreed to undertake an archaeological evaluation at the same time.

This evaluation aims to establish if important archaeological remains will be affected by the proposed development and to establish the degree of archaeological recording that is necessary. This will form part of the overall archaeological evaluation of the site

3.3 This specification has been prepared by the WYAAS at the request of Ms Nansi Rosenberg (Prospect Archaeology, Prospect House, Garden Lane Sherburn-in-Elmet, LS25 6AT Tel.: 1977 681885), acting on behalf of is Sovereign Leeds Ltd, to detail what is required for the evaluation.

4. Archaeological Interest

4.1 The application site lies to the south-west of Leeds' medieval core (West Yorkshire Historic Environment Record PRN 6023). Millraces and overflow channels, known locally as goits, are located within the development boundary. These goits are associated with the medieval manorial Kings Mill, sixteenth century fulling mill at Flay Crow Mill (first documented 1679) and later Concordia Mill. Photographs from the early 20th century show that the goits had stone walls.

In 1996, a trench was excavated within the overall development site as part of the evaluation and excavation of the King's Mill. Undated remains of a weir and goit were encountered 2.4m below the current ground level. Below these remains there were well preserved timbers laid out in a grid which may have formed the footings of an earlier weir.

As currently understood the goits originate in the medieval period and could potentially predate the Norman Conquest of 1066. The goits were filled or culverted by 1908.

The importance of woollen cloth finishing in this part of Leeds is attested to from an early date by the street name Tenter Lane and the fulling mill at Flay Crow Mill (both to the north-east of the evaluation trench). Associated trades continued into the 19th century when the goit was bordered by a dye works, pattern shop, woollen printing works and press shop. A print works was located to the south-west of the goit from the later 19th century

Only the southern goit channel will be evaluated by the work outlined in this specification.

5. Aim of the Evaluation

5.1 The aim of the evaluation is to gather sufficient information to establish the extent, condition, character and date (as far as circumstances permit) of any archaeological features and deposits within the area of interest.

6. General Instructions

6.1 Health and Safety

6.1.1 The archaeologist on site will naturally operate with due regard for Health and Safety regulations. Where archaeological work is carried out at the same time as the work of other contractors, regard should also be taken of any reasonable additional constraints that these contractors may impose. This work may require the preparation of a Risk Assessment of the site, in accordance with the Health and Safety at Work Regulations. The West Yorkshire Archaeology Advisory Service and

its officers cannot be held responsible for any accidents or injuries that may occur to outside contractors while attempting to conform to this specification.

6.2 Confirmation of Adherence to Specification

6.2.1 Prior to the commencement of *any work,* the archaeological contractor must confirm adherence to this specification in writing to the WYAAS, or state (with reasons) any proposals to vary the specification. Should the contractor wish to vary the specification, then written confirmation of the agreement of the WYAAS to any variations is required prior to work commencing. Unauthorised variations are made at the sole risk of the contractor. **Modifications presented in the form of a re-written specification/project design will not be considered by the WYAAS.** Any technical queries arising from the specification detailed below should be addressed to the WYAAS *without delay*.

6.3 Confirmation of Timetable and Contractors' Qualifications

6.3.1 Prior to the commencement of *any work*, the archaeological contractor **must** provide WYAAS **in writing** with:

- a projected timetable for the site work;
- details of the staff structure and numbers;
- names and *CVs* of key project members (the project manager, site supervisor, any proposed specialists, sub-contractors *etc.*),

6.3.2 All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of WYAAS.

6.4 Notification

6.4.1 The project will be monitored as necessary and practicable by the WYAAS, in its role as "curator" of the region's archaeology. The WYAAS should receive as much notice as possible, and certainly one week, of the intention to start fieldwork. This notification is to be supplied **in writing**, and copied to the relevant District Museum (see para. 9.1 below). As a courtesy, English Heritage's Regional Science Adviser Dr Andy Hammon should also be notified of the intention to commence fieldwork (contact : tel. 01904 601983; email andy.hammon@english-heritage.org.uk). A copy of the contractor's risk assessment should accompany notification of intention to commence work.

7. Fieldwork Methodology

7.1 Trench Size and Placement (Fig. 1)

7.1.1 The work will involve the excavation of one 29m x 6m trench which will be 2m wide at the base of excavation. The trench can be machine-opened. The contractor should also allow for a contingency amount of 18 square metres. The use of the contingency will depend upon the results obtained in the initial trial trenching. The use of the contingency will be at the decision of the WYAAS, whose decision will be issued in writing, if necessary in retrospect after site discussions. The proposed trench location is shown on Figure 1.

7.2 Method of Excavation

7.2.1 The trial trenches may be opened and recent overburden removed down to the first significant archaeological horizon in successive level spits of a **maximum** 0.2m. thickness, by the use of an appropriate machine using a wide toothless ditching blade. **Under no circumstances should the machine be used to cut arbitrary trenches down to natural deposits.** All machine work must be carried out under direct archaeological supervision and the machine halted if significant archaeological deposits are encountered. The top of the first significant archaeological horizon may be exposed by the machine, but must then be cleaned by hand and inspected for features and then dug by hand.

7.2.2 No archaeological deposits should be entirely removed unless this is unavoidable in achieving the objectives of this evaluation, although **all** features identified are expected to be half-sectioned and the **full** depth of archaeological deposits must be assessed. All trenches are to be the stated dimensions at their base.

7.2.3 All artefacts are to be retained for processing and analysis except for unstratified 20th-century material, which may be noted and discarded. Finds will be stored in secure, appropriate conditions following the guidelines in First Aid for Finds (3rd edition).

7.3 Method of Recording

7.3.1 The trenches are to be recorded according to the normal principles of stratigraphic excavation. The stratigraphy of each trial trench is to be recorded even where no archaeological deposits have been identified.

7.3.2 The actual areas of trenching and any features of possible archaeological concern noted within the trenches should be accurately located on a site plan and recorded by photographs, summary scale drawings and written descriptions sufficient to permit the preparation of a report on the material. The site grid is to be accurately tied into the National Grid and located on the largest scale map available of the area (either 1:2500 or 1:1250).

7.3.3 Except where otherwise requested, black and white photography using orthodox monochrome chemical development should be used. Film should be no faster than ISO400. Slower films should be used where possible as their smaller grain size yields higher definition images. Technical Pan (ISO 25), Pan-F (ISO50), FP4 (ISO125) and HP5 (ISO400) are recommended. The use of dye-based films such as Ilford XP2 and Kodak T40CN is unacceptable due to poor archiving qualities. Black and white photography should be supplemented by colour photography; this should be in transparency format (i.e. slides or digital photography as an acceptable alternative, see paragraph 7.3.4 below).

7.3.4 Digital photography: as an alternative to colour slide photography, good quality digital photography may be supplied, using cameras with a minimum resolution of 4 megapixels. Note that conventional black and white print photography is still required and constitutes the permanent record. Digital images will only be acceptable as an alternative to colour slide photography if each image is supplied in

three file formats (as a RAW data file, a DNG file and as a JPEG file). The contractor must include metadata embedded in the DNG file. The metadata must include the following: the commonly used name for the site being photographed, the relevant centred OS grid coordinates for the site to at least six figures, the relevant township name, the date of photograph, the subject of the photograph, the trench number, the direction of shot and the name of the organisation taking the photograph. Images are to be supplied to WYAAS on gold CDs by the archaeological contractor accompanying the hard copy of the report.

7.4 Use of Metal Detectors on Site

7.4.1 Spoil heaps are to be scanned for both ferrous and non-ferrous metal artefacts using a metal detector capable of making this discrimination, operated by an experienced metal detector user (if necessary, operating under the supervision of the contracting archaeologist). Modern artefacts are to be noted but not retained (19th-century material and earlier should be retained.)

7.4.2 If a non-professional archaeologist is to be used to carry out the metal-detecting, a formal agreement of their position as a sub-contractor working under direction must be agreed in advance of their use on site. This formal agreement will apply whether they are paid or not. To avoid financial claims under the Treasure Act a suggested wording for this formal agreement with the metal detectorist is: "In the process of working on the archaeological investigation at [*location of site*] between the dates of [*insert dates*], [*name of person contributing to project*] is working under direction or permission of [*name of archaeological organisation*] and hereby waives all rights to rewards for objects discovered that could otherwise be payable under the Treasure Act 1996."

7.5 Environmental Sampling Strategy

7.5.1 Bulk samples must be taken from **all** securely stratified deposits using the methodologies outlined by English Heritage in the Centre for Archaeology Guidelines no.1 (2002), “Environmental Archaeology. A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation”.

7.5.2 Samples for specialist environmental analysis and scientific dating (soil profiles, archaeomagnetic dating, dendrochrology etc.) should be taken if suitable material is encountered during the excavation. The English Heritage Regional Science Advisor should be consulted (Dr Andy Hammon, tel.: 01904 601983, email: andy.hammon@english-heritage.org.uk) and provision should be made for an appropriate specialist(s) to visit the site, take samples and discuss the sampling strategy, if necessary.

7.6 Conservation Strategy

7.6.1 A conservation strategy must be developed in collaboration with a recognised laboratory. All finds must be assessed in order to recover information that will contribute to an understanding of their deterioration and hence preservation potential, as well as identifying potential for further investigation. Furthermore, all finds must be stabilised and packaged in accordance with the requirements of the receiving museum. As a guiding principle only artefacts of a “displayable” quality would warrant full conservation, but metalwork and coinage from stratified contexts

would be expected to be X-rayed if necessary, and conservation costs should also be included as a contingency.

7.7 Location of Services, etc.

7.7.1 The archaeological contractors will be responsible for locating any drainage pipes, service pipes, cables *etc*. which may cross any of the trench lines, and for taking the necessary measures to avoid disturbing such services.

7.8 Human Remains

7.8.1 Any human remains that are discovered must initially be left *in-situ*, covered and protected. WYAAS will be notified at the earliest opportunity. If removal is necessary the remains must be excavated archaeologically in accordance with the *Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England* published by English Heritage (2005), a valid Ministry of Justice licence and any local environmental health regulations.

7.9 Treasure Act

7.9.1 The terms of the Treasure Act 1996 must be followed with regard to any finds that might fall within its purview. Any finds must be removed to a safe place and reported to the local coroner as required by the procedures as laid down in the "Code of Practice". Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

8. Monitoring

8.1 The representative of the WYAAS will be afforded access to the site at any reasonable time. It is usual practice that the visit is arranged in advance, but this is not always feasible. The WYAAS' representative will be provided with a site tour and an overview of the site by the senior archaeologist present and should be afforded the opportunity to view all trenches, any finds made that are still on site, and any records not in immediate use. It is anticipated that the records of an exemplar context that has previously been fully recorded will be examined. Any observed deficiencies during the site visit are to be made good to the satisfaction of the Advisory Service's representative, by the next agreed site meeting. Access is also to be afforded at any reasonable time to English Heritage's Regional Archaeological Science Advisor.

8.2 Please note that WYAAS now make a charge for site monitoring visits. An invoice will be raised on the archaeological contractor. One monitoring visit will be charged for this project. Please contact us for the current charge.

9. Archive Deposition

9.1 Before commencing any fieldwork, the archaeological contractor must contact the relevant District museum archaeological curator in writing (copied to WYAAS) to determine the museum's requirements for the deposition of an excavation archive. In this case the contact is: Katherine Baxter, Leeds City Museum, Millennium Square Leeds, LS2 8BH (Tel.:0113 2305492; email: katherine.baxter@leeds.gov.uk).

9.2 It is the policy of the Leeds Museum to accept complete excavation archives, including primary site records and research archives and finds, from all excavations carried out in the District, which it serves.

9.3 It is the responsibility of the archaeological contractor to endeavour to obtain consent of the landowner, in writing, to the deposition of finds with the Leeds Museum.

9.4 It is the responsibility of the archaeological contractor to meet the Leeds Museum's requirements with regard to the preparation of fieldwork archives for deposition.

10. Unexpectedly Significant or Complex Discoveries

10.1 Should there be unexpectedly significant or complex discoveries made that warrant, in the professional judgement of the archaeologist on site, more detailed recording than is appropriate within the terms of this specification, then the archaeological contractor should urgently contact the WYAAS with the relevant information to enable them to resolve the matter with the developer.

11. Post-Excavation Analysis and Reporting

11.1 Finds and Samples

11.1.1 On completion of the fieldwork, any samples taken shall be processed and any finds shall be cleaned, identified, assessed/analysed, dated (if possible), marked (if appropriate) and properly packed and stored in accordance with the requirements of national guidelines.

11.1.2 Samples should be processed for the recovery of artefactual material, animal/fish/human bones, industrial residues, shell, molluscs, charcoal and mineralised plant remains as a minimum. 'Specialist' samples (e.g. monoliths, cores, plant/invertebrate macrofossils) should be processed separately as appropriate.

11.1.3 Material suitable for scientific dating (e.g. charcoal) should be identified to species and assessed for suitability by an environmental specialist prior to submission to a dating laboratory. Any human remains submitted for C14 dating should also have carbon (delta 13C) and nitrogen isotope analysis carried out by the radiocarbon laboratory.

11.1.4 All finds and biological material must be analysed by a qualified and experienced specialist.

11.1.5 Following identification, finds of 20th-century date should be noted, quantified and summarily described, but can then be discarded if appropriate. All finds which are of 19th century or earlier date should be retained and archived.

11.2 Field Archive

11.2.1 A fully indexed field archive shall be compiled consisting of all primary written documents, plans, sections, photographic negatives and a complete set of labelled photographic prints/slides. Standards for archive compilation and transfer should conform to those outlined in Archaeological Archives – a guide to best practice in

creation, compilation, transfer and curation (Archaeological Archives Forum, 2007). An index to the field archive is to be deposited with the West Yorkshire Archaeology Advisory Service (preferably as an appendix in the report).

11.2.2 Prints may be executed digitally from scanned versions of the film negatives, and may be manipulated to improve print quality (but **not** in a manner which alters detail or perspective). All digital prints must be made on paper and with inks which are certified against fading or other deterioration for a period of 75 years or more when used in combination. If digital printing is employed, the contractor must supply details of the paper/inks used in writing to the WY Archaeology Advisory Service, with supporting documentation indicating their archival stability/durability. Written confirmation that the materials are acceptable must have been received from the WYAAS prior to the commencement of work on site.

11.2.3 The original archive is to accompany the deposition of any finds, providing the landowner agrees to the deposition of finds in a publicly accessible archive (see para. 8.4 above). In the absence of this agreement the field archive (less finds) is to be deposited with the West Yorkshire Archaeology Advisory Service.

11.3 Report Format and Content

11.3.1 A report should be produced, which should include background information on the need for the project, a description of the methodology employed, and a full description and interpretation of results produced. It is not envisaged that the report is likely to be published, but it should be produced with sufficient care and attention to detail to be of academic use to future researchers.

11.3.2 Location plans should be produced at a scale which enables easy site identification and which depicts the full extent of the site investigated (a scale of 1:50,000 is not regarded as appropriate unless accompanied by a more detailed plan or plans). Site plans should be at an appropriate scale showing trench layout (as dug), features located and, where possible, predicted archaeological deposits. Upon completion of each evaluation trench all sections containing archaeological features will be drawn. Section drawings (at a minimum scale of 1:20) must include heights O.D. Plans (at a minimum scale of 1:50) must include O.D. spot heights for all principal strata and any features. Where no archaeological deposits are encountered at least one long section of each trench will be drawn.

11.3.3 Artefact analysis is to include the production of a descriptive catalogue, quantification by context and discussion/interpretation if warranted, with finds critical for dating and interpretation illustrated.

11.3.4 Environmental analysis is to include identification of the remains, quantification by context, discussion/interpretation if warranted, and a description of the processing methodology. Radiocarbon results must be presented in full (laboratory sample number, conventional radiocarbon age, delta C13 value, calibration programme). Copies of the laboratory-issued dating certificates must be included as an appendix to the report.

11.3.5 Details of the style and format of the report are to be determined by the archaeological contractor, but should include a full bibliography, a quantified index to the site archive, and as an appendix, a copy of this specification.

11.4 Summary for Publication

11.4.1 The attached summary sheet should be completed and submitted to the WYAAS for inclusion in the summary of archaeological work in West Yorkshire published on WYAAS' website.

11.5 Publicity

11.5.1 If the project is to be publicised in any way (including media releases, publications etc.), then it is expected that the WYAAS will be given the opportunity to consider whether it wishes its collaborative role to be acknowledged, and if so, the form of words used will be at the WYAAS' discretion.

11.6 Consideration of Appropriate Mitigation Strategy

11.6.1 The report should not give a judgement on whether preservation or further investigation is considered appropriate, but should provide an interpretation of results, placing them in a local and regional, and if appropriate, national context. However, a client may wish to separately commission the contractor's view as to an appropriate treatment of the resource identified.

11.7 Report Submission and Deposition with the WY HER

11.7.1 A copy of the report is to be supplied **directly** to the WYAAS within a period of **two months** following completion of fieldwork, unless specialist reports are awaited. In the latter case a revised date should be agreed with the WYAAS. Completion of this project and advice from WYAAS on an appropriate mitigation strategy are dependant upon receipt by WYAAS of a satisfactory report which has been prepared in accordance with this specification. Any comments made by WYAAS in response to the submission of an unsatisfactory report will be taken into account and will result in the reissue of a suitably edited report to all parties, within a timescale which has been agreed with WYAAS.

11.7.2 The report will be supplied on the understanding that it will be added to the West Yorkshire Historic Environment Record where it will be publicly accessible once deposited with the WYAAS unless confidentiality is explicitly requested, in which case it will become publicly accessible six months after deposition.

11.7.3 A copy of the final report (in .pdf format) shall also be supplied to English Heritage's Regional Science Advisor (Andy Hammon, English Heritage, 37 Tanner Row, York Y01 6WP).

11.7.4 Copyright - Please note that by depositing this report, the contractor gives permission for the material presented within the document to be used by the WYAAS, in perpetuity, although The Contractor retains the right to be identified as the author of all project documentation and reports as specified in the *Copyright, Designs and Patents Act* 1988 (chapter IV, section 79). The permission will allow the WYAAS to reproduce material, including for non-commercial use by third parties, with the copyright owner suitably acknowledged.

11.7.5 The West Yorkshire HER supports the Online Access to Index of Archaeological Investigations (OASIS) project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork. The archaeological contractor must therefore complete the online OASIS form at http://ads.ahds.ac.uk/project/oasis/. Contractors are advised to contact the West Yorkshire HER officer prior to completing the form. Once a report has become a public document by submission to or incorporation into the HER, the West Yorkshire HER may place the information on a web-site. Please ensure that you and your client agree to this procedure in writing as part of the process of submitting the report to the case officer at the West Yorkshire HER.

12. General Considerations

12.1 Authorised Alterations to Specification by Contractor

12.1.1 It should be noted that this specification is based upon records available in the West Yorkshire Historic Environment Record and on a brief examination of the site by the WYAAS. Archaeological contractors submitting tenders should carry out an inspection of the site prior to submission. If, on first visiting the site or at any time during the course of the recording exercise, it appears in the archaeologist's professional judgement that:

i) a part or the whole of the site is not amenable to evaluation as detailed above, and/or
ii) an alternative approach may be more appropriate or likely to produce more informative results,

then it is expected that the archaeologist will contact the WYAAS as a matter of urgency. If contractors have not yet been appointed, any variations which the WYAAS considers to be justifiable on archaeological grounds will be incorporated into a revised specification, which will then be re-issued to the developer for redistribution to the tendering contractors. If an appointment has already been made and site work is ongoing, the WYAAS will resolve the matter in liaison with the developer and the Local Planning Authority.

12. 2 Unauthorised Alterations to Specification by Contractor

12.2.1 It is the archaeological contractor's responsibility to ensure that they have obtained the WYAAS' consent in writing to any variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in the WYAAS being unable to recommend determination of the planning application to the Local Planning Officer based on the archaeological information available and are therefore made solely at the risk of the contractor.

12.3 Technical Queries

12.3.1 Similarly, any technical queries arising from the specification detailed above, should be addressed to the WYAAS without delay.

12.4 Valid Period of Specification

12.4.1 This specification is valid for a period of one year from date of issue. After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

David Hunter **March 2013**
West Yorkshire Archaeology Advisory Service

WY Historic Environment record
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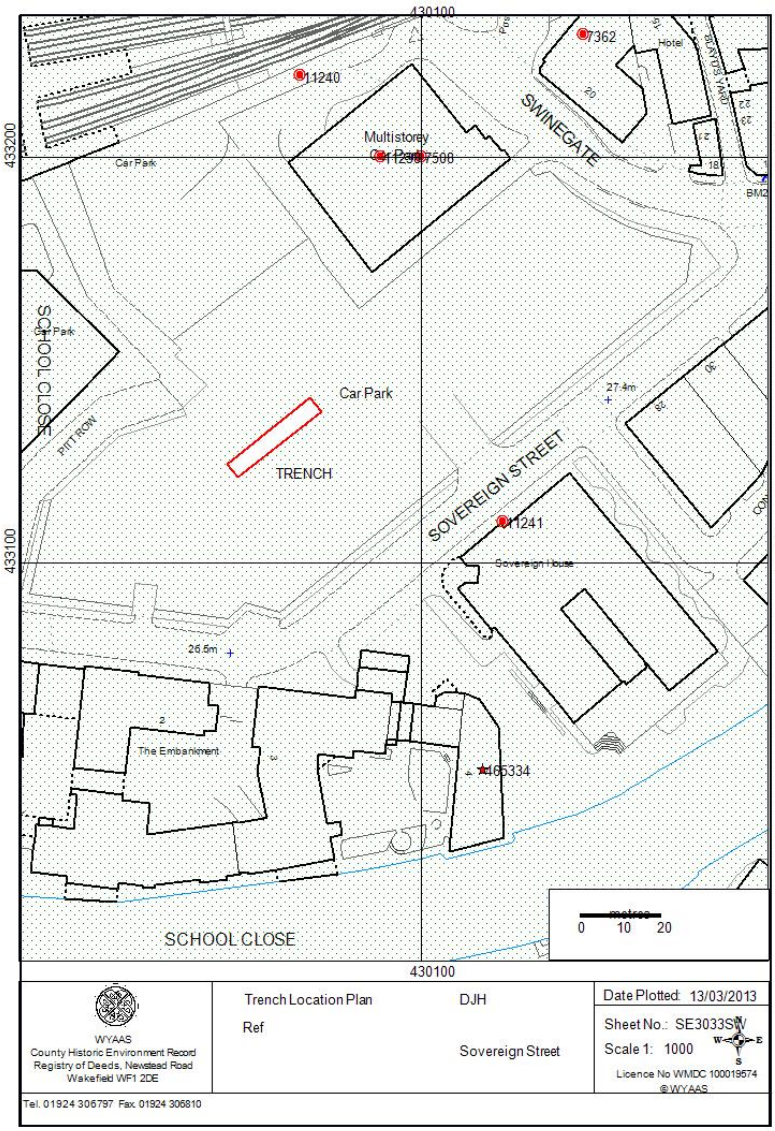

Figure 1 Trench Location Plan

Site name/ Address: Sovereign Street, Leeds	
Township: Leeds	**District:** Leeds
National Grid Reference: SE 3008 3314	
Contractor: CFA Archaeology	
Date of Work: March- April 2012	
Title of Report: Sovereign Street, Leeds: Archaeological Evaluation	
Date of Report: 29/04/2013	

SUMMARY OF FIELDWORK RESULTS:

An archaeological evaluation was undertaken by CFA Archaeology Ltd on land off Sovereign Street, Leeds, West Yorkshire during March and April 2013. The evaluation recorded the well-preserved sandstone walls of the former goit, one of several that ran through this area towards the River Aire. Other remains recorded included a former print works, gas stove works and the extensive remains of a former tram depot which were all known from a variety of sources to have occupied parts of the site. The remains were from four phases of activity between the mid-19th century and the mid-20th century. The earliest phase was the goit and the last was the tram depot. The periods in-between saw modifications to the existing goit, its subsequent in-fill and the construction of a gas stove works.

No evidence could be found of the goit's medieval origins and the remains that were recorded by the evaluation appear to be the pre-1850 post-medieval revetment works which culverted an already existing waterway.

Author of summary: Phil Moore	**Date of summary:** 29/04/2013