

**AN ARCHAEOLOGICAL
EVALUATION AT
RUTLAND STREET, ILKESTON,
DERBYSHIRE (SITE A)**



Trent & Peak
ARCHAEOLOGY

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AT RUTLAND STREET, ILKESTON,
DERBYSHIRE (SITE A)**

by M. Hurford and R. Sheppard

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SUMMARY

- **Background:** Environmental test pitting was monitored on the 15th March and an archaeological evaluation undertaken between 16th March and 22nd March 2011 by Trent & Peak Archaeology on behalf of KFC Ltd.
- **Location and description:** The area covered by the archaeological evaluation is located on the site of the former gas works of Ilkeston, situated on the north side of Rutland Street and west of its junction with Belfield Street (centred at SK 4676 4255).
- **Archaeological context:** The Rutland Street Gas Works dates from 1869. The last remaining part of the Gas Works, a retort house dating from 1909-10, was demolished relatively recently.
- **Results:** Building remains relating to the former gas works survive beneath layers of modern demolition debris at depths of between 0.2m and 0.9m. The deposits predominantly relate to the last phase of building shown on the 1937 OS map including foundations and walls of the retort house constructed in 1909-10 and a well preserved brick and tile floor of a building located in the south-west of the site. Evidence of earlier structures was uncovered including a wall probably relating to the gas holding tank shown on the 1876 OS map and elements of the rail network. The features across the site were generally well preserved with stratified remains exceeding 2m in places.

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A Report on Trial Trenching 2011

by R. Sheppard and M. Hurford

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1. INTRODUCTION

The excavation of six environmental test pits by Crossfiled Consulting Ltd was monitored on the 15th March 2011, and archaeological evaluation undertaken between 16th March and 22nd March 2011 by Trent & Peak Archaeology, on the site of Rutland Street Gas Works, Ilkeston, Derbyshire (centred at SK 4676 4255) on behalf of KFC Ltd (Figure 1). This was in accordance with a planning application ERE/1209/00077 to Erewash Borough Council for redevelopment of the site.

2. SITE BACKGROUND

Rutland Street Gas Works, the former gasworks of Ilkeston, is located in the north-east part of the town, on the north side of Rutland Street and west of its junction with Belfield Street. The site has been vacant for several years and has no remaining structures on it (Plate 1). The site currently has two separate ownerships dividing the site into a western, Site A, and eastern half, Site B (Figure 2). Trent & Peak Archaeology was commissioned to carry out an archaeological site evaluation of the west part of the site (Site A).

The site lies on Pennine Middle Coal Measures formation comprising mudstone, siltstone and sandstone (British Geology Survey http://maps.bgs.ac.uk/geologyviewer_google_googleviewer.html) at an elevation of about 56 OD.

3. HISTORICAL BACKGROUND

The Derbyshire Extensive Urban Survey covering Ilkeston (Stroud 2003), states that the Gas Works dates from 1869, replacing an earlier one on a different site. The last remaining part of the Rutland Street Gas Works, a retort house dating from 1909-10 (SMR no. 21637), was demolished in recent times (Figures 2 and 3).

4. OBJECTIVES

The objectives of the fieldwork were to determine the presence or absence, significance of, depth of and state of preservation of any surviving archaeology within the overall site in accordance with the strategy agreed by the Derbyshire Control Archaeologist (acting on behalf of Erewash Borough Council), and outlined in the Written Scheme of Investigation provided by TPA.

5. METHODOLOGY

Test Pits Methodology (Figure 4)

The machine excavation of six environmental test pits, numbered 1-6, by Crossfield Consulting Ltd was monitored by an archaeologist. Digital photographs were taken of each test pit and representative sections drawn at a scale of either 1:20 or 1:50.

Test Pit 1 measured 3m in length and 1m in width and extended to a maximum depth of 2.20m. It was located in the north of the site adjacent to a gas holding tank present on all the OS maps since 1876.

Test Pit 2 measured 3m in length and 1m in width and extended to a maximum depth of 2.30m. It was located in the north-west corner of the site in an area where tar tanks were present in 1876-78.

Test Pit 3 measured 2m in length and 2.5m in width and extended to a maximum depth of 0.48m. It was located in the west of the site where there have been numerous building phases since the site first became a gas works.

Test Pit 4 measured 3m in length and 1m in width and extended to a maximum depth of 2.60m. It was located in the north of the site within a gas holding tank present since 1876.

Test Pit 5 measured 3m in length and 1m in width and extended to a maximum depth of 2.30m. It was located in the central part of the site and was situated in the vicinity of a railway tracks present on both the 1876-78 OS map and 1900 OS map.

Test Pit 6 measured 3m in length and 1m in width and extended to a maximum depth of 2.20m. It was located in the south-east part of the site and was situated within an area which has had a building present on it since 1900.

Trial Trenching Methodology (Figure 4)

Four trenches, Trench 01-04 were excavated by machine, under full archaeological supervision.

Trench 01 was north to south aligned and measured 18.5m in length and 2m in width and taken to a maximum depth of 1.2m. It was situated in the eastern part of the site. The northern half of the trench targeted a gas holding tank present on each of the OS maps from 1876 to 1937 and a railway line shown on each of the OS maps from 1900 to 1937 and the southern half of the

trench a building present on the 1900 OS map that was demolished by 1937 to make way for an extension to the rail network.

Trench 02 was initially east to west aligned measuring 15.5m in length and 3m in width and taken to a maximum depth of 1.2m at the west end. It was situated in the south west of the site targeting a number of buildings that were modified through the lifetime of the gas works. These include a coal store and retort house documented on the 1876 OS edition map in the western half of the trench and the 1909-10 retort house in the eastern half. A north to south aligned extension 10m in length and 3m in width was excavated at the east end of the trench due to uncertainty about the nature of the deposits encountered in the east to west aligned trench. The trench was also extended 2m to the east. This offered the opportunity to explore further the railway line expansion that is documented on the OS maps between 1915 and 1937 and the changes to buildings between the 1870s and 1930s.

Trench 03 was north to south aligned and measured 7.25m long by 3m in width and was taken to a maximum depth of 1m at the south end. It was situated in the north west of the site where four tar tanks are present on the 1876 and 1878 OS maps but absent from the later edition maps. By 1937 a building had been erected over the site of the tanks. A rectangular building is present on the 1900 OS map to the north of the tar tanks but had been demolished by the time that the 1937 edition was created.

Trench 04 was aligned north to south and measured 13m long by 2m in width and was taken to a maximum depth at the south end of 0.8m (where water appeared). This trench was constrained on its east side by a new road and on its west, north and south sides by modern drains. It was located in the south west of the site and targeted a retort house that had been present on the site, though modified over time, since the 1876 edition OS map.

After machine excavation the trenches were hand-cleaned. Plans and sections were drawn at 1:20 with the exception of a single section in Trench 02 that was recorded at 1:50. The trenches were photographed using both digital and 35mm black and white print mediums. All finds were located to context and actual find-spots.

All differing layers were given separate context numbers. The context numbers of features are highlighted in bold to help distinguish them from demolition and other layers.

6. RESULTS

Test Pits

Test Pit 01 (Plate 2)

In Test Pit 01 demolition deposits comprising mid brown hardcore within a matrix of sandy silt were encountered to a depth of 0.50m. Beneath the demolition deposits a brick surface was encountered abutting the remains of the brick gas holding tank which extended to a depth of over 2m. The underlying grey silty clay mudstone deposits were present outside the holding tank to the north.

Test Pit 02 (Plate 3)

In Test Pit 02 demolition deposits comprising mid brown hardcore within a matrix of sandy silt were encountered to a depth of 0.35m. Beneath the demolition deposits a layer of black tar and ash was encountered with a metal pipe running through it which may have been an entry / exit pipe to one of the tar tanks present on the 1876-78 OS map. The underlying grey silty clay mudstone deposits were present beneath the tar deposit at a depth of 1m.

Test Pit 03

In Test Pit 03 demolition deposits comprising crushed cream hardcore were encountered to a depth of 0.10m beneath which was a brick and concrete surface which was too solid for the machine to excavate through.

Test Pit 04 (Plate 4)

In Test Pit 04 demolition deposits of brick and concrete in a matrix of sandy silt were encountered to a depth of 0.88m beneath which were the underlying grey silty clay mudstone.

Test Pit 05 (Plate 5)

In Test Pit 05 hardcore demolition deposits were present to a depth of 0.60m beneath which was a layer of re-deposited grey silty clay up to 0.90m thick which was overlying, in the west facing section only, a concrete structure 0.60m thick. It is possible that this is the base for the elevated railway track shown on the 1876-78 and 1900 OS maps. Beneath the concrete, at a depth of 2.10m the underlying mudstone deposits were reached.

Test Pit 06 (Plate 6)

In Test Pit 06 hardcore demolition deposits were present to a depth of 0.60m beneath which loose bricks, suggestive of a backfilled cellar, were encountered extending to the base of the pit at 2.30m.

Trial Trenching

Trench 01 (Figures 5-7, Plate 7)

In Trench 01 demolition deposits were found to depth of around 0.75m. They comprised 0033, a modern layer of brick, concrete, and sand relating to the recent re-landscaping of the site below which were further layers of demolition material, 0034-0035 and 0041-0049, comprising principally of bricks and mortar. The deposits in the southern part of the trench 0043-0049

may relate alterations made to the site between 1915 and 1937 including the re-modelling of one building which included the levelling of a portion of its northern part to make way for an extension of the rail network. The loose nature of deposits 0044-0047 suggests that they are the backfill of a cellar belonging to this building. Below the demolition layers in the north of the trench was a 0.5m thick curving outer wall of a holding tank **0038** that was sealed on its outside by light grey clay 0040. This wall had been partly exposed during the environmental test-pitting and found to extend to a depth of at least 2m. The top of the wall had an infilled break of 0.40m where a supply / exit pipe had probably passed through it. Fragments of a brick wall **0037** were present 1m to the north of **0038**. It was not possible to establish with certainty whether this was the inner holding tank wall as it had been truncated by modern services and further work being undertaken was prevented by water entering the trench. The holding tank had been infilled with a layer of dark brown silty clay (0036). Providing that the holding tank was not replaced during the lifetime of the gas works, the walls represent the holding tank shown on the 1876 plan. A brick and stone surface **0108** was exposed to the south west of **0038**. It was 1.30m in width and did not extend across the whole trench suggesting that it may have been the base for a support bracket for an elevated railway track which was present from the maps of 1900 onwards. Further to the south, another hardened surface **0109** of compacted brick fragments concrete and mortar was probably the base of a later replacement railway track shown running east-west to a coal store on the 1937 Ordnance Survey map.

<i>Context</i>	<i>Thickness</i>	<i>Description</i>
0033	0.45m	Modern demolition rubble extends across whole trench
0034	0.15m	Early-mid 20 th re-modelling grey demolition rubble up
0035	0.30m	Modern demolition, red brick rubble and mortar
0036	0.20m	Dark brown silty clay overlying gas holding tank walls
0037	-	Inner holding tank wall, brick, 0.40m wide
0038	-	Outer holding tank wall, brick, 0.5m wide
0039	0.20m	Dark brown to black ash sealing holding tanks
0040	0.25m	Light grey clay sealing outer holding tank
0041	-	Demolition of ark brown to black clay with rubble
0042	0.15m	Early-mid 20 th re-modelling demolition rubble
0043	0.29m	Early-mid 20 th re-modelling demolition rubble
0044	0.85m	Early-mid 20 th re-modelling cellar fill dark brown silty clay
0045	0.15m	Early-mid 20 th re-modelling, cellar fill light grayish yellow clay
0046	0.85	Early-mid 20 th re-modelling, cellar fill dark brown silty clay and ash
0047	0.85m	Early-mid 20 th re-modelling, cellar fill layer of red brick and mortar
0048	0.10m	Early-mid 20 th re-modelling, red brick rubble lense
0049	0.35m	Early-mid 20 th re-modelling, rubble, mostly red brick,
0108	-	Support bracket foundation of brick and stone for

		elevated railway
0109	-	Railway foundation of compacted rubble
0120	-	Compacted rubble surface, brick, mortar and concrete,
0121	-	Dark blackish brown clayey silt, 20 th century re-modelling?

Trench 02 (Figures 5, 8-9 Plates 8 and 9)

The east to west aligned portion of Trench 02 established that modern demolition deposits 0008, 0009, and 0010, were present extending to a maximum depth of 0.62m. In the west end of the trench the demolition layers were cut by **0001**, a pit 0.68m in width and exceeding 0.82m in depth. It had steep, straight sides and was infilled with layers of clay, ash and brick rubble 0002-0007. To the east of **0001** at a depth of 0.90m was a concrete slab **0020**. It was orientated north to south and extended beneath both respective baulks. It was 0.52m in width and exceeded 0.10m in depth. It had been truncated by a modern service trench, one of three such services located in the west of the trench. **0020** was the foundation for brick wall **0021**. The wall was a single 0.23m (9 inches) brick in width, three courses of which survived. This was the east wall of a building shown on the 1937 OS map. A second brick wall **0019**, was found to the east of **0021**. It was 0.25m wide and was probably part of the rail network shown on the 1876-78 Ordnance Survey map. It was largely overlain by a hardened surface of brick and other rubble 0022, thought at first to be the base of a former tiled floor. This extended to the far east end of the trench. Because of some uncertainty about the nature of this surface a deep trench was excavated by machine at the east end of the trench revealing a brick, ash and clay layer 0114 to a depth of 1m beneath 0022. Further machining exposed a 0.3m (12 inch) thick brick wall **0111** running east-west, and another north-south **0112**, both still showing at a depth of 2m. Brick rubble 0114 between the two walls indicates likely cellar-infill. Similar brick infill had previously been exposed in Test Pit 06 located to the east.

Following this, a north-south extension 10m long and 3m wide was machine-dug. The hardened surface 0022 was found to extend the full length of this extension, with no sign of intervening walling. The west side of the trench was then taken deeper and this uncovered at a depth of 0.80m the west wall and a north-west corner **0116** of the last retort house on the site. The wall was 0.61m in width (24 inch) and had at least four courses surviving. To the east of the walls an infilled basement / cellar was uncovered 0117. A wall **0115** measuring 0.86m (34 inch) in width was excavated to the south and identified as part of the base of a former chimney. A metal pipe **0118** was also found that had been truncated by the retort house wall. Overlying the retort house wall was a later undocumented narrow brick wall **0119** measuring 0.23m in width (9 inch).

<u>Context</u>	<u>Thickness</u>	<u>Description</u>
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0001	-	Pit cutting demolition layers
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0002	0.44m	Fill of 0001 grey clay, 5% rounded stones, brick fragments present
0003	0.10m	Fill of 0001 black ash
0004	0.10m	Fill of 0001 light grey ash
0005	0.10m	Fill of 0001 black ash
0006	0.20m	Fill of 0001, mid greyish brown mortar with brick fragments present
0007	0.20m	Fill of 0001, brown clay, 25% grey clay patches
0008	0.38m	Demolition layer of brick and concrete
0009	0.10m	Modern demolition/levelling layer of crushed brick
0010	-	Modern demolition, compacted brick
0011	-	Natural blue grey clay / orange brown clay
0012	-	Service trench
0013	-	0012 fill, gritty, dark grey to black ash
0014	-	Re-deposited grey clay natural
0015	-	Service trench
0016	0.22m	Black ash with 15% brown rust coloured slag
0017	-	Service trench
0018	-	Fill of 0017 black ash
0019	-	Brick wall, N-S aligned, 0.23m thick
0020	-	Concrete base for wall 0021
0021	-	Eastern wall, N-S aligned
0022	-	Modern compacted demolition brick/stone
0023	-	Tarmac surface
0024	0.10m	Modern disturbed tarmac
0025	0.28m	Re-deposited natural, grey clay 15% brown ash
0026	-	Black ash
0027	-	Fill of 0015, black ash
0028	-	Pipe service trench cutting 0022
0029	-	Modern pipe cut that cuts pipe trench 0017
0030	-	Fill of 0029 orange sand and rounded pebbles
0031	-	Fill of pipe trench, yellow and blue grey and brick
0032	-	Modern disturbance, grey brown clay and rubble
0111	-	Yellow brick wall, E-W aligned, 12 inch thick
0112	-	Red brick wall, dimensions not established
0113	-	Same as 0114
0114	-	Brick, ash, clay
0115	-	Brick structure measuring W-E aligned, 34 inch in width the base of a former chimney
0116	-	N-W corner retort house, 0.61m in width (24 inch) and had at least four courses survive
0117	-	Rubble, cellar infill
0118	-	Metal pipe, E-W aligned, truncated by 0116
0119	-	Brick wall W-E aligned 9 inches wide (0.23m)

Trench 03 (Figures 5, 10-11 Plates 10 and 11)

Modern demolition deposits 0050, and 0052 and a modern compacted surface 0053 extended across the whole site to a depth of between 0.3 and 0.35m.

Beneath the modern deposits in the centre of the trench was a solidly mortared west to east aligned brick wall **0071**, abraded on its south edge and with stepped lower courses set on a concrete base (**0065**). Five brick courses survived and it exceeded 0.4m in width. This was probably the north wall of a building shown on the 1937 OS map in the north-west part of the site. On its internal south side there were found layers of silty clay and brick material 0056-61, 0065, 0068-70 and 0072-74 infilling a possible cellar or lower floor level of the building. Beneath these dumped layers natural bluish grey silty clay 0062 was encountered that had two potential features, **0080** and **0081** cutting it. Feature **0080** was west to east aligned and filled dark bluish grey soft clay. It could be the robbed out footings of a wall but could equally be the foundation trench for concrete base **0065**. It cut an earlier feature, 0081 which comprised two trenches, one aligned north to south, with a further trench extending to the west. The feature was up to 0.12m in width and infilled with mid bluish grey soft clay containing brick rubble. These could be the robbed out wall footings of the building present on the map of 1900. On the north side of **0071** there was a hardened rubble surface 0064 with a concrete kerb edge **0077**. This may have been the south edge to an earlier tank, infilled with rubble and a curious rectangular patch of tightly packed bricks set on edge **0075** found to be sealing a deposit of tar.

<i>Context</i>	<i>Thickness</i>	<i>Description</i>
0050	0.18m	Demolition loose tarmac and loose black silt
0051	0.08m	Concrete, possible floor
0052	0.60m	Demolition mid brown friable silt with brick
0053	-	Compacted stone and silt
0054	0.10m	Demolition dark brown to black stone, and silt
0055	0.10m	Levelling, dark brown friable silt and stone
0056	0.20m	Dump/backfill dark brown silt and brick
0057	0.24m	Dump/backfill dark brown friable clayey silt and brick
0058	0.28m	Dump/backfill bluish grey clay and brick
0059	0.30m	Dump/backfill grey silty clay and brick
0060	0.08m	Dump/backfill loose black silt and coal
0061	0.12m	Dump/backfill mid brownish yellow soft clay
0062	-	Natural blue grey silty clay
0063	0.14m	Modern tarmac surface
0064	-	Levelling/infill layer, dark brown silt and rubble
0065	-	Concrete foundation for 0071/0079
0066	0.04m	Demolition lense of friable black silt
0067	0.26m	Demolition friable dark greyish brown clayey silt
0068	0.32m	Dump/backfill dark brown silt and rubble
0069	0.10m	Dump/backfill re-deposited soft bluish grey clay
0070	0.40m	Dump/backfill dark brown clay and brick rubble
0071	-	Red brick wall, N-S aligned, 5 courses
0072	0.28m	Dump/backfill brown clayey silt and brick rubble
0073	0.10m	Dump/backfill bluish grey-yellow silty clay
0074	-	Dump/backfill bluish grey to brownish silty clay

0075	-	Red brick surface
0076	-	Red brick linear, N-S aligned, 0.22m wide
0077	-	Concrete kerb, W-E aligned
0078	-	Dump/backfill brown clayey silt with brick rubble
0079		Same as 0071
0080	-	Robbed wall cut, W-E aligned, dark bluish grey clay
0081		Robbed wall cut, T-shaped, bluish grey and yellow clay, brick and stone present

Trench 04 (Figures 5, 12-13 Plate 12)

In Trench 04 modern demolition deposits made up predominantly of tarmac, brick, concrete and stone 0087, 0088, 0094-0095, 0097-98, and 0102-4 extended across the whole trench to a maximum depth of 0.28m. Beneath these layers in the north of the trench at a depth of only 0.2m a well preserved brick floor 0086 was encountered. It had been truncated to the south by a drain 0089 and to the north by modern demolition work 0087. In the south it was constructed on a foundation of concrete 0122 and in contrast to the north the bricks were bedded into sand 0090. A large concrete base 0123 was also encountered which again may have been support for the floor or alternatively a foundation for a wall. The concrete foundations 0122 and 0123 were probably required as the ground is not as stable to the south on account of there being evidence of earlier ground workings comprising a possible north to south aligned robber trench 0092 cutting re-deposited natural bluish grey clay 0091. A further possible robbed wall footing (0124) was observed in the east facing section. Unfortunately, water entering the trench prevented examination of these potentially earlier features. Abutting 0086 to the north was a 0.45m (17 ¾ inch) wide concrete and brick wall footing 0084 and 0085 beyond which was a cement floor base 0083 that overlies a red tile floor 0082. The floors and wall base probably belong to a building shown on the 1937 OS map. The potential robbed wall footings may relate to a house present on the site shown on the 1876-78 OS maps or alternatively to buildings on the 1900 and 1915 OS map.

<u>Context</u>	<u>Thickness</u>	<u>Description</u>
0082	-	Tile floor, 1.20 x 0.35m survives
0083	-	Concrete base for 0082, 1.50m x 0.80m survive
0084	-	Possible wall, originally 0.5m wide,
0085	-	Wall foundation for 0084
0086	0.12m	Floor surface made of blue bricks, 5.50m x 1.60m survives bonded by white concreted mortar
0087	-	Demolition, dark brown sandy silt and rubble
0088	-	Demolition, dark brown to black friable sandy silt
0089	0.16m	Drain, dark brown friable sandy silt rubble
0090	-	Bedding material for 0086, friable pinkish yellow sand, 10% brick rubble
0091	-	Redeposited natural soft to firm bluish grey clay
0092	-	Possible wall line, red brick and white mortar

0093	-	Rubble dump
0094	-	Demolition, mid brown silty clay and rubble
0095	-	Demolition, brown silty clay and rubble
0096	0.06m	Modern surface greyish black silt and stone
0097	-	Demolition lense, dark brown friable sandy silt
0098	-	Demolition lense, friable brownish white sandy silt
0099	0.10m	Same as 0090 bedding deposit for 0086
0100	0.14m	Foundation for 0090/0086 mid dark brown friable clayey silt with 30% brick and stone rubble
0101	-	Robbed wall line, E-W aligned brown silty clay
0102	0.26m	Demolition, mid brown friable silt with rubble
0103	0.06m	Demolition lense, mid brown friable silt and rubble
0104	-	Demolition, compacted angular stone, greyish black silt
0105	0.06m	Modern tarmac surface
0106	0.10m	Demolition or hardcore surface
0107	-	Demolition, dark brown friable clayey silt
0122	0.12m	Concrete foundation for floor 0086
0123	-	Concrete pillar? For demolished building cutting 0122
0124	-	Cut for robbed wall 0101

7. CONCLUSIONS

The archaeological work has demonstrated that building remains relating to the former gas works survive at varying depths, from only 0.2m on the west side of the site, 0.40m in the north-west corner and deeper, at 0.9m where the 1909-10 retort house and the gas holder formerly stood.

The features across the site are generally well preserved, in particular the floor of the south-west retort house. The gas holder survives to a depth of over 2m and there is likely to be similar preservation of the potential cellars / basements encountered.

Whilst most of the remains relate to the last phase of buildings as shown on the 1937 OS map, the various plans of the site show that there had been several stages of rebuilding and evidence for this was indeed found during the evaluation and can be expected to survive across the overall site.

Appendix 1

Context Summary

Trench 01

- 0033 Modern demolition rubble extends across whole trench, up to 0.45m thick see 0008
- 0034 Early-mid 20th re-modelling grey demolition rubble up to 0.15m thick, north end of site see 0008
- 0035 Modern demolition, red brick rubble layer with some mortar up to 0.30m thick, extends across whole north end of trench
- 0036 Dark brown silty clay overlying gas holding tank walls 0037-8, possibly deposited over the features to seal them, exceeds 0.15m thick
- 0037 Inner holding tank wall, not *in situ*, damaged by modern pipe service, bricks and mortar, bricks 23 x 8 x 8cm, 2 courses exposed in west facing section only, 0.40m wide, 0.20m thickness exposed
- 0038 Outer holding tank wall, 0.50m wide, curvilinear, exceeds 2.0m in depth, bricks 23 x 8 x 8cm, white mortar/concrete bond. Central gap 0.4m in wall for pipe?
- 0039 Dumped material, dark brown to black ash up to 0.20m thick, possible demolition or further material deposited to seal holding tank 0038
- 0040 Light grey clay sealing outer holding tank exceeds 0.25m thick, 0.50m wide
- 0041 Dark brown to black clay with some demolition rubble incl. red brick and mortar, up to 1m in width, depth thickness not established, possible demolition
- 0042 Early-mid 20th re-modelling demolition, same as 0034, 0.15m thick
- 0043 Early-mid 20th re-modelling, red brick rubble in centre of trench, up to 0.2m in thick
- 0044 Fill of cellar, early-mid 20th re-modelling dark brown silty clay with some demolition rubble, exceeds 0.85m in thickness
- 0045 Early-mid 20th re-modelling, cellar fill light greyish yellow clay, exceeds 0.15m in thickness
- 0046 Early-mid 20th re-modelling, cellar fill dark brown silty clay and ash exceeds 0.85m in thickness
- 0047 Early-mid 20th re-modelling, cellar fill layer of red brick and mortar, exceeds 0.85m in thickness
- 0048 Early-mid 20th re-modelling, red brick rubble lense up to 0.10m thick, same as 0034
- 0049 Early-mid 20th re-modelling, rubble, mostly red brick, exceeds 0.35m in thickness
- 0108 Support bracket foundation for elevated railway, 1.3m wide, doesn't extend across whole trench, angular stones up to 0.25m x 0.3m and bricks set in a very dark grey sandy clay with 30% stone frags <30cm in size, depth not established

- 0109 Compacted rubble surface, brick, mortar and concrete, on either side of 0120, up to 2.10m in width, thickness not established, extends across the trench, probably foundation for railway
- 0120 Compacted rubble surface, brick, mortar and concrete, surface undulating, 1m in width, thickness not established, extends across trench, surface between railway tracks
- 0121 Dark blackish brown friable clayey silt with 15% brick rubble at base of trench. Layer of 20th century re-modelling?

Trench 02

- 0001 Pit cutting demolition layers, exceeds 0.80m depth, 0.86m wide, steep sides, slightly stepped to west, straight to east, base not found
- 0002 Upper fill of 0001 grey clay, 5% rounded stones up to 25mm in size <1% brick fragments, 0.44m thick
- 0003 Fill of 0001 black ash, 0.10m thick
- 0004 Fill of 0001 light grey ash 0.10m thick
- 0005 Fill of 0001 black ash 0.10m thick
- 0006 Fill of 0001, mid greyish brown mortar with brick fragment present, 0.20m thick
- 0007 Fill of 0001, brown clay, 25% grey clay patches, exceeds 0.20m thick
- 0008 Demolition layer sealing the entire trench, brick and concrete mix, bricks frags generally 120mm x 120mm, 10% rounded stones 30mm in size, 10% dark orange brown sand, up to 0.38m thick
- 0009 Modern demolition/levelling layer of crushed brick located beneath 0008 located at the west end of the trench, up to 0.10m thick
- 0010 Modern demolition layer of compacted demolition material brick, whole 23 x 8 x 8cm to tiny fragments, 10% mortar, 5% concrete, lying beneath 0008 and 0009 in the west of the trench, up to 0.62m thick
- 0011 Natural blue grey clay with 20% lenses orange brown clay at depth of 0.60m
- 0012 Service trench beneath demolition layer 0010 cutting 0011 and 0014
- 0013 Fill of service trench 0012, gritty, dark grey to black ash
- 0014 Re-deposited natural containing 2 brick fragments up to 12 x 8cm and 25% black ash mottles, exceeds 0.22m thick
- 0015 Service trench, vertical sides cutting 0016 but beneath the demolition layers
- 0016 Layer of black ash with 15% brown rust coloured slag, up to 0.22m thick,
- 0017 Service trench, vertical cut for pipe running diagonally across western part of trench
- 0018 Service trench fill of cut fill of 0017, black ash, 15% brown rust coloured slag, a blue grey lump of slag over 170mm x 90mm, brick and metal frags also present

- 0019 Brick fragments concreted together forming the western wall aligned north to south aligned in excess of 0.23m in width, in excess of 0.30m in depth, encountered at depth of 0.80m
- 0020 Concrete base for wall 0021, 0.52m in width, in excess of 0.10m in depth, north to south aligned, truncated by modern services, encountered at depth of 0.84m
- 0021 Eastern wall, north to south aligned, 3 courses survive, 1 course wide, bricks measure 23 x 8 x 8cm, white mortar inclusion free, encountered at depth of 0.62m
- 0022 Modern compacted demolition level overlying wall 0019, bricks whole to tiny fragments 80% (23 x 8 x 8 cm), 10% concrete fragments average 90x60x10, 10% stone fragments average 100mm x 100mm
- 0023 Tarmac surface at west end of trench beneath demolition layers
- 0024 Modern disturbed surface 0023 tarmac west end east facing section
- 0025 Re-deposited natural, grey clay 15% brown ash mottles
- 0026 Black ash beneath concrete and 0025
- 0027 Fill of 0015, black ash
- 0028 Pipe trench to the east of wall 0019 cutting 0022
- 0029 Modern pipe cut that cuts pipe trench 0017
- 0030 Modern pipe cut fill of orange sand and rounded pebbles
- 0031 Fill of pipe trench, yellow clay, 20% blue grey clay, 5% brick frags, 5% rounded stones up to 30mm in size, <1% pipe frags
- 0032 Area disturbed by modern services in west of trench, grey brown clay, 1% brick frags, 20% concrete frags, 5% black ash
- 0111 Yellow brick wall, east to west aligned, east end of trench, 12 inch thick (0.3m), encountered at depth of 0.55m, exceeds 1.80m
- 0112 Red brick wall encountered at depth of 0.55m, exceeds 1.80m, dimensions not established
- 0113 Same as 0114
- 0114 Brick, ash, clay extends at least 1m beneath 0022-water prevented full depth being established
- 0115 Brick structure measuring 0.86m (34 inch) in width, west to east aligned, located in south of trench extension, part of the base of a former chimney
- 0116 West wall and north-west corner of last retort house, 0.61m in width (24 inch) and had at least four courses surviving at a depth of 0.80m
- 0117 Rubble, cellar infill
- 0118 Metal pipe, east to west aligned, truncated by 0116, 5 inches wide
- 0119 Brick wall 9 inches wide (0.23m) west to east aligned overlying 0116

Trench 03

- 0050 Demolition loose tarmac surface of loose black angular stone <1cm with 20% friable loose black silt extends across whole trench up to 0.28m thick

- 0051 Concrete, 0.08m thick at north end of trench, 1.25 x 2m exposed, possible floor
- 0052 Demolition mid brown friable silt with 50% brick and stone rubble <7cm extending across much of the trench, up to 0.60m thick
- 0053 Compacted surface yellowish white compacted silt with 80% angular stone <5cm-modern hardcore, exceeds 0.10m thick
- 0054 Demolition Dark brown to black stone, <1cm with 10% dark brown to black friable silt, up to 0.10m thick
- 0055 Levelling layer, dark brown friable silt within 80% angular stone matrix <5cm exceeds 0.10m thick
- 0056 Dumped material/backfill dark brown friable silt with 30% brick rubble <7cm, 0.20m thick
- 0057 Dumped material/backfill dark brown friable clayey silt with 30% brick rubble <10cm, 0.24m thick
- 0058 Dumped material/backfill light bluish grey soft clay with 30% brownish grey clayey silt and 10% brick/stone rubble <5cm, 0.28m thick
- 0059 Dumped material/backfill mid brownish grey silty clay with 10% bluish grey clay, 20% brick/stone rubble <3cm, 0.30m thick
- 0060 Dumped material/backfill loose black silt with 30% angular coal, 0.08m thick
- 0061 Dumped material/backfill mid brownish yellow soft clay, 0.12m thick
- 0062 Natural blue grey silty clay encountered at a depth of 0.66m
- 0063 Modern tarmac surface, 0.16m thick
- 0064 Levelling/infill layer of early tank, dark brown friable silt within 60% angular stone matrix <30cm, 0.14m thick
- 0065 Concrete foundation for 0071/0079
- 0066 Demolition lense of friable black silt with 15% sub angular stones <1cm, 0.04m thick
- 0067 Demolition friable dark greyish brown clayey silt, 0.26m thick
- 0068 Dumped material/backfill dark brown friable silt 5% sub angular stone <40% brick/stone rubble <10cm, 0.32m thick
- 0069 Dumped material/backfill re-deposited natural soft bluish grey clay, 0.10m thick
- 0070 Dumped material/backfill mid dark brown friable to soft clay with 30% brick rubble, 0.40m thick
- 0071 Red brick wall remains with white 'concreted' mortar, north to south aligned, bricks 23cm x 11cm x 8cm, 5 courses high, rests on concrete foundation 0065, truncated to north so width not established
- 0072 Dumped material/backfill mid brown friable clayey silt with 30% brick rubble <5cm, 0.28m thick
- 0073 Dumped material/backfill mid bluish grey slity clay, soft, 30% yellow silty clay, 0.10m thick
- 0074 Dumped material/backfill mid bluish grey silty clay, soft, 20% brownish grey silty clay with 15% sub angular stones <1cm

- 0075 Red brick surface, bricks set on end at an angle creating a surface, bricks 11cm x 8cm x unknown bonded by yellow friable sand. It seals a deposit of liquid tar, surface measures 0.75m x 0.50m and is 1 brick thick
- 0076 Red brick linear, 0.22m wide and extending for 0.80m south from the northern trench edge set in yellow friable sand, N-S aligned
- 0077 Stone wall, west to east aligned, stones up to 0.5m x 0.1m x 0.12m deep, stones angular but rounded at the top with vertical sides
- 0078 Dumped material/backfill mid to dark brown clayey silt with 20% brick/stone rubble/concrete <50cm
- 0079 Same as 0071
- 0080 Robbed wall cut, west to east aligned to south of 0071, 0.50m in width cuts 0081, dark bluish grey soft clay
- 0081 Robbed wall cut, T shaped 1.44m in length exposed, up to 0.22m wide, depth not established, mid bluish grey soft clay with 10% yellow clay, 10% brick/stone fragments

Trench 04

- 0082 Tile floor, tiles 14cm x 6cm, set in concrete, 1.20 x 0.35m survives
- 0083 Concrete base for 0082, 1.50m x 0.80m survive
- 0084 Possible wall, originally 0.5m wide, intermittent single course survives, on a concrete foundation 0085, bricks 22 x 11 bonded by white concrete mortar
- 0085 Wall foundation for 0084
- 0086 Floor surface made of blue bricks 23 x 8 bonded by white concreted mortar, extending over much of the trench, 0.12m thick
- 0087 Demolition, dark brown friable sandy silt with 60% concrete/brick/stone rubble
- 0088 Demolition, dark brown to black friable sandy silt with 30% angular stone <2cm
- 0089 Drain, dark brown friable sandy silt with 40% brick/stone/rubble <10cm, deposit 0.16m thick
- 0090 Bedding material for 0086, friable pinkish yellow sand, 10% brick rubble in the northern half of the trench, depth not established
- 0091 Redeposited natural soft to firm bluish grey clay, 5% brick rubble (deposit underwater)
- 0092 Possible wall line, red brick and white mortar extends from middle of trench for 1.38m and is 0.23m wide (deposit underwater)
- 0093 Rubble dump (deposit underwater)
- 0094 Demolition, mid brown friable silty clay, 50% rubble of brick and stone
- 0095 Demolition, brown compacted silty clay, 50% rubble of brick and stone
- 0096 Modern surface, angular stone <1cm with 20% greyish black silt, 0.10m thick extends across whole trench, deposit 0.06m thick

- 0097 Demolition lense, dark brown friable sandy silt with 15% angular stones
- 0098 Demolition lense, friable brownish white sandy silt with 20% angular stone <1cm, remains of hardcore deposit
- 0099 Same as 0090 bedding deposit for 0086, deposit 0.10m thick
- 0100 Foundation for 0090/0086 mid dark brown friable clayey silt with 30% brick and stone rubble, deposit 0.14m thick
- 0101 Possible robbed wall line, up to 0.50m wide, 0.30m deep, east west aligned, beneath 0100/0099/0086 cutting 0091, mid to light brown silty clay, soft friable with 10% mortar and 20% red brick
- 0102 Demolition, mid brown friable silt with 40% brick/concrete rubble <40cm, deposit 0.236m thick
- 0003 Demolition lense, mid brown friable silt 35% brick rubble <4cm, deposit 0.06m thick
- 0104 Demolition, compacted angular stone with 10% friable greyish black silt
- 0105 Modern tarmac surface, 0.06m thick
- 0106 Demolition or hardcore surface, angular white stone <5cm with 40% friable light brownish white hardcore, deposit 0.10m thick
- 0107 Demolition, dark brown friable clayey silt with 10% brownish black patches, 10% angular stone <3cm
- 0122 Concrete foundation for floor 0086
- 0123 Concrete pillar? For demolished building cutting 0122, deposit 0.12m thick
- 0124 Cut for robbed wall 0101



Figure 1: Location of the evaluation site on the north side of Rutland Street, Ilkeston (indicated by arrow). Scale 1:20,000. Contains Ordnance Survey data. © Crown Copyright and database right 2011.

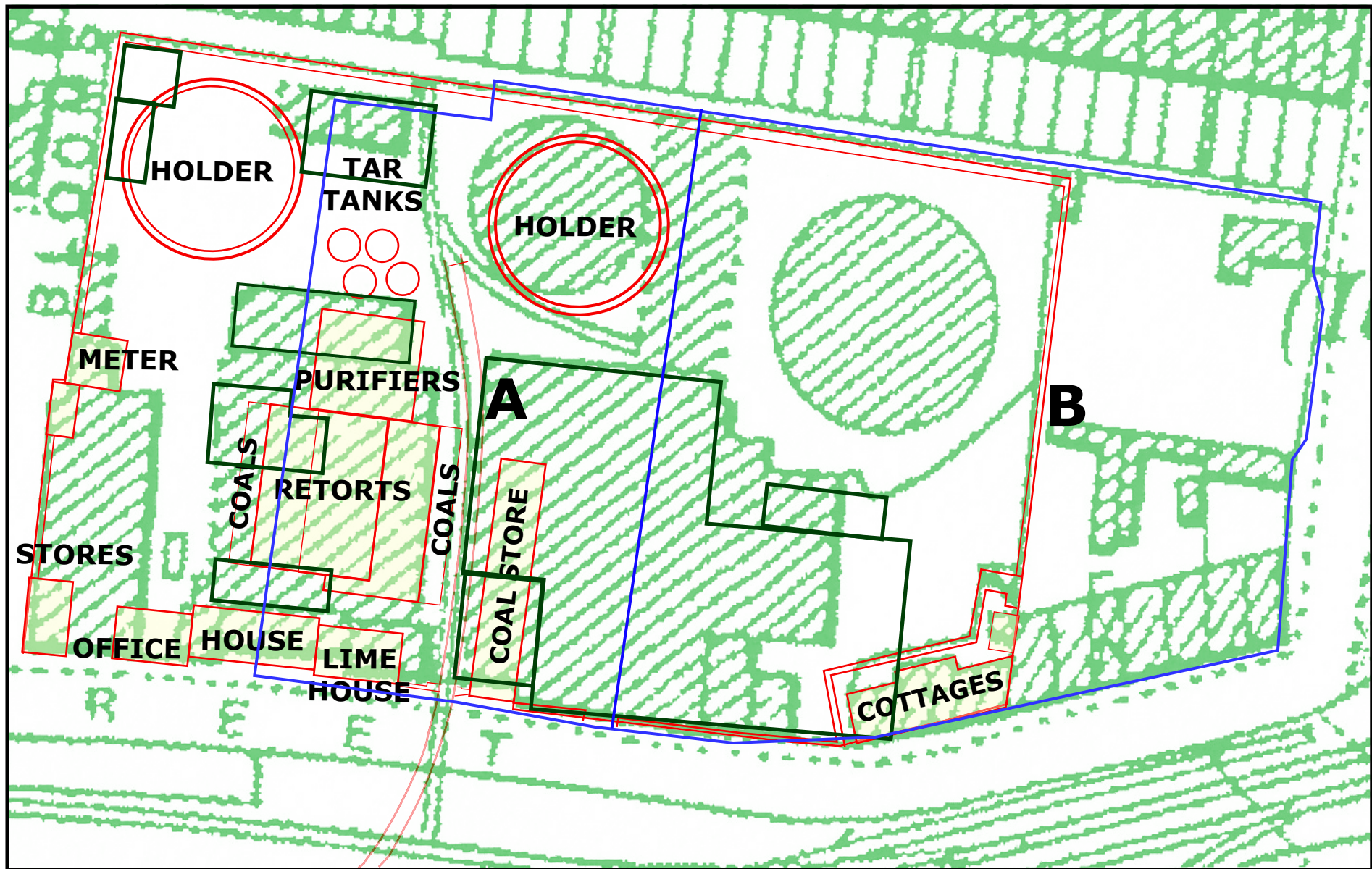


Figure 2: The Ilkeston Gas Company site in 1876-78 overlain in red on the site shown on the Ordnance Survey 25 inch scale map of 1900 (shown in green). Buildings shown differently on the 1915 map are shown with dark lines. Present site shown with blue border. Scale 1:500

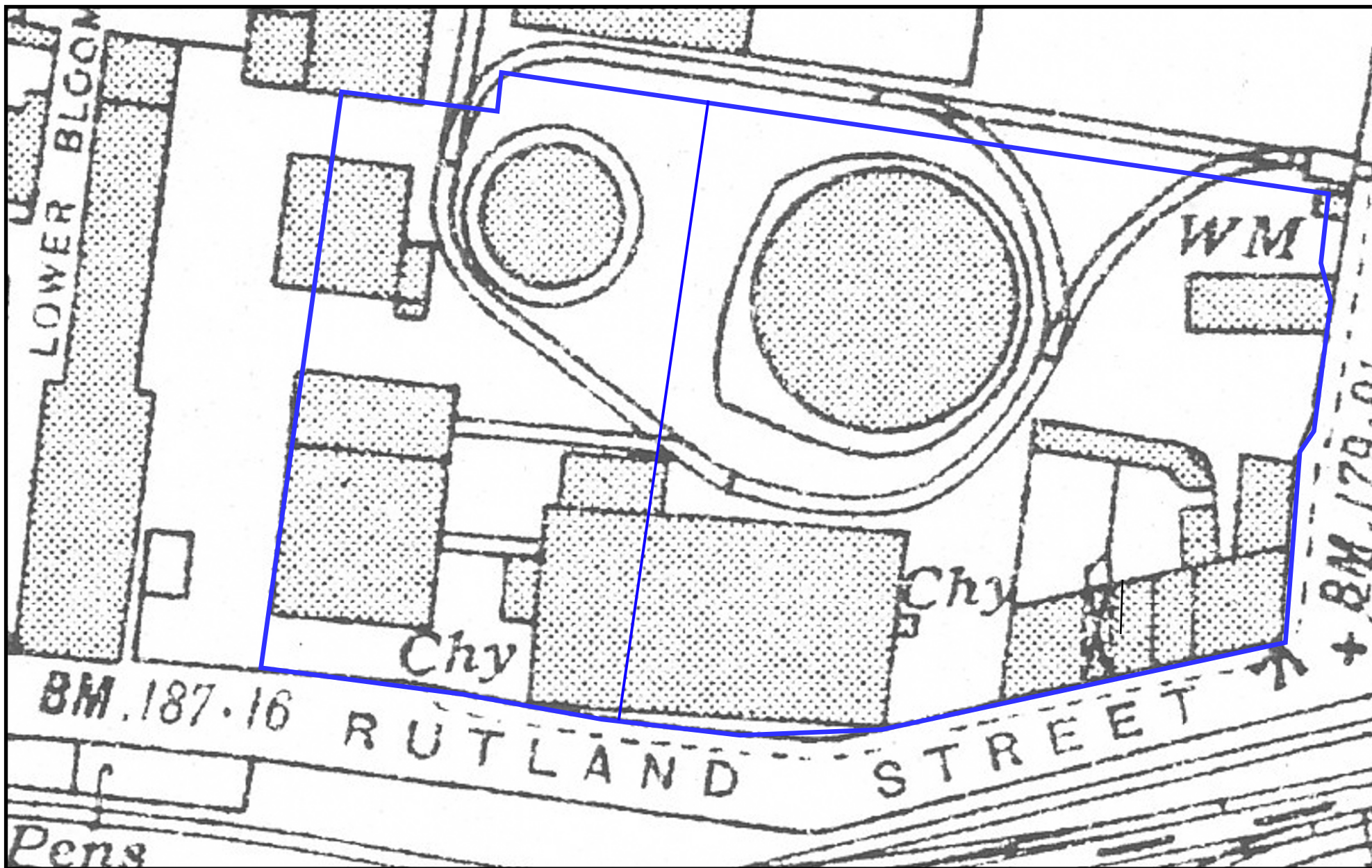


Figure 3: The Ilkeston Gas Company site as shown on the Ordnance Survey 25 inch scale map of 1937, overlain with the modern site boundary (blue line). Scale 1:500.

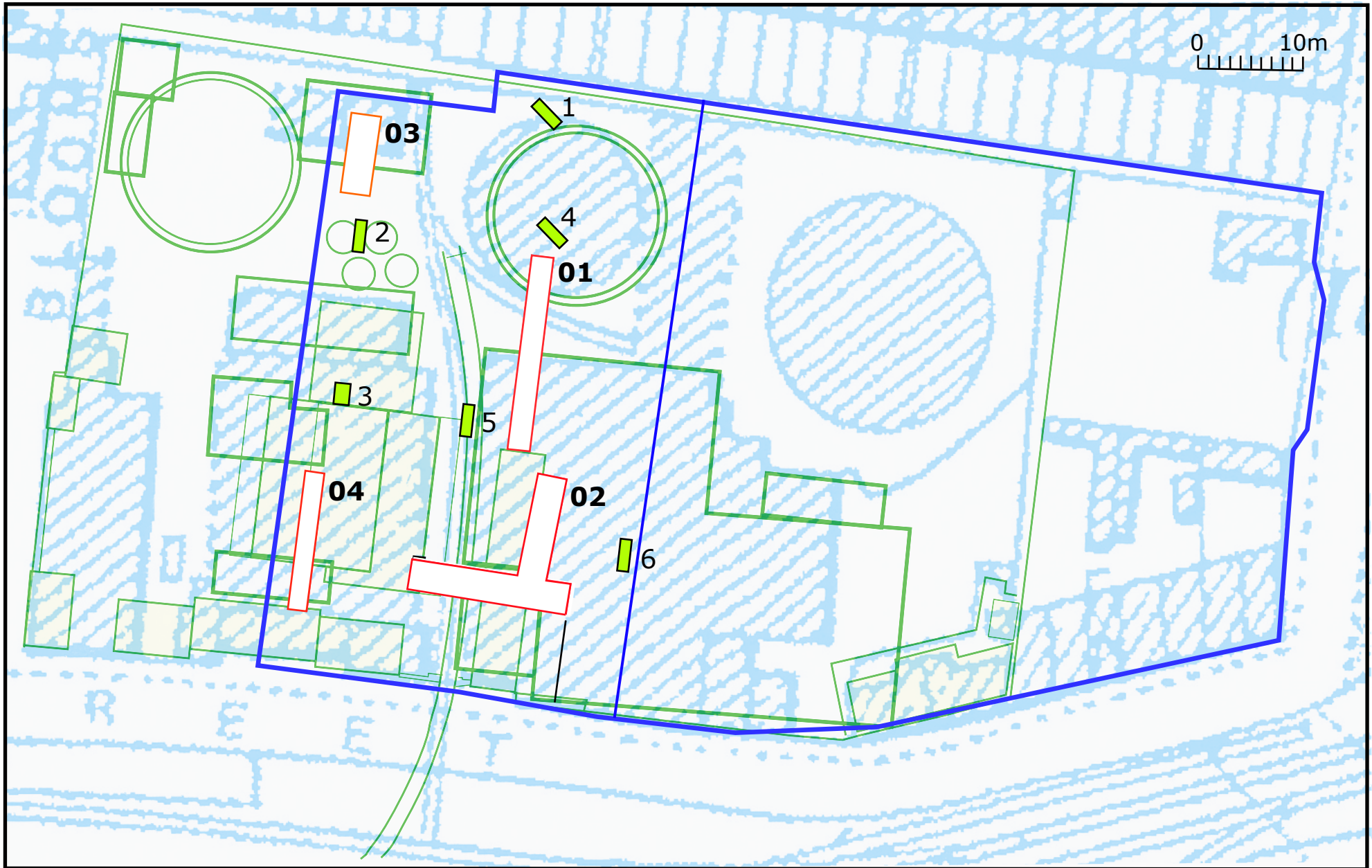


Figure 4: The Ilkeston Gas Company site in 1876-78 overlain with green lines on the site shown on the Ordnance Survey 25 inch scale map of 1900 (shown in blue). Plan shows the site boundary (thick blue line), environmental test-pits (bright green tone) and archaeological trenches 01-04 (red lines). Scale 1:500.

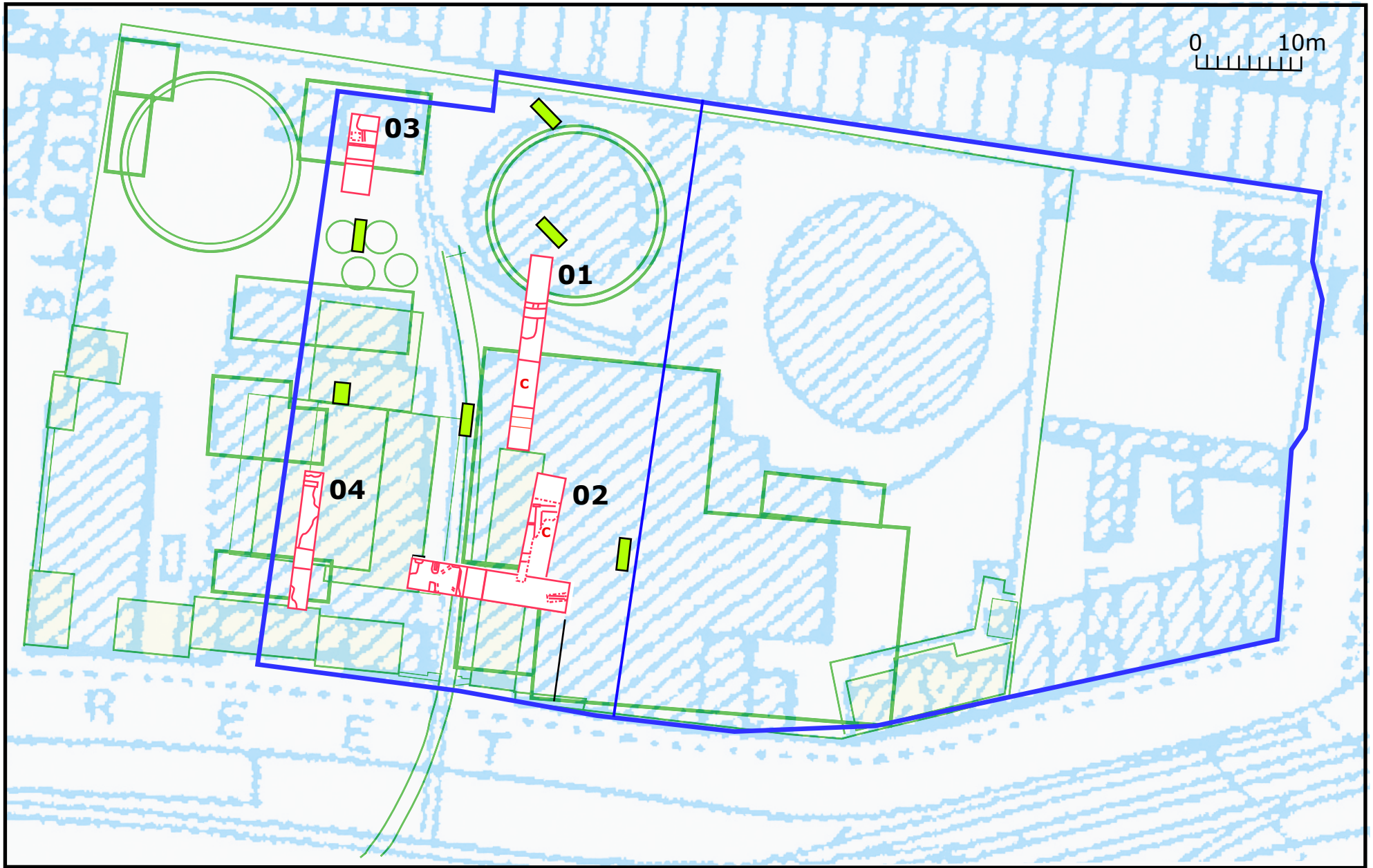


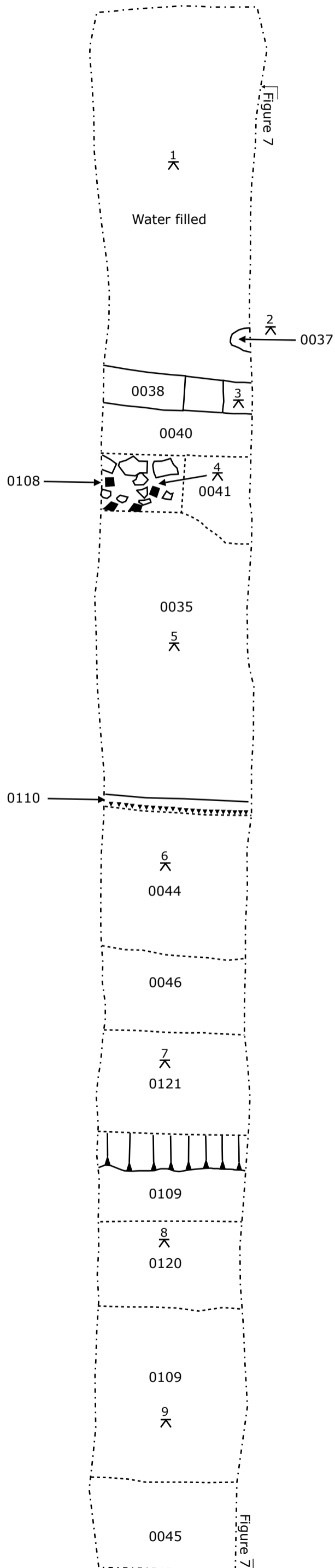
Figure 5: Archaeological features and trenches in relation to the Ilkeston Gas Company site in 1876-78 overlain with green lines on the site shown on the Ordnance Survey 25 inch scale map of 1900 (shown in blue). Plan shows the site boundary (thick blue line). Scale 1:500.



- Stones
- Brick fragments

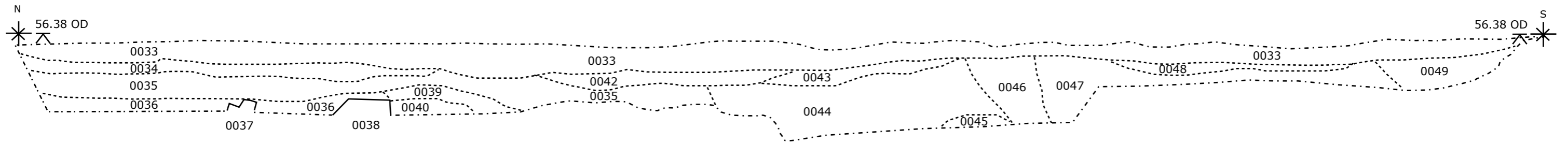
OD Height

- 1. 55.51
- 2. 55.28
- 3. 55.31
- 4. 55.36
- 5. 55.67
- 6. 55.13
- 7. 55.27
- 8. 55.76
- 9. 55.69



RSI Ilkeston Gas Works Evaluation
Figure 6 Trench 01 Plan
Scale at A3 1:50

1m



RSI Ilkeston Gas Works Evaluation
 Figure 7 Trench 01 West Facing Section
 Scale at A3 1:50

1m

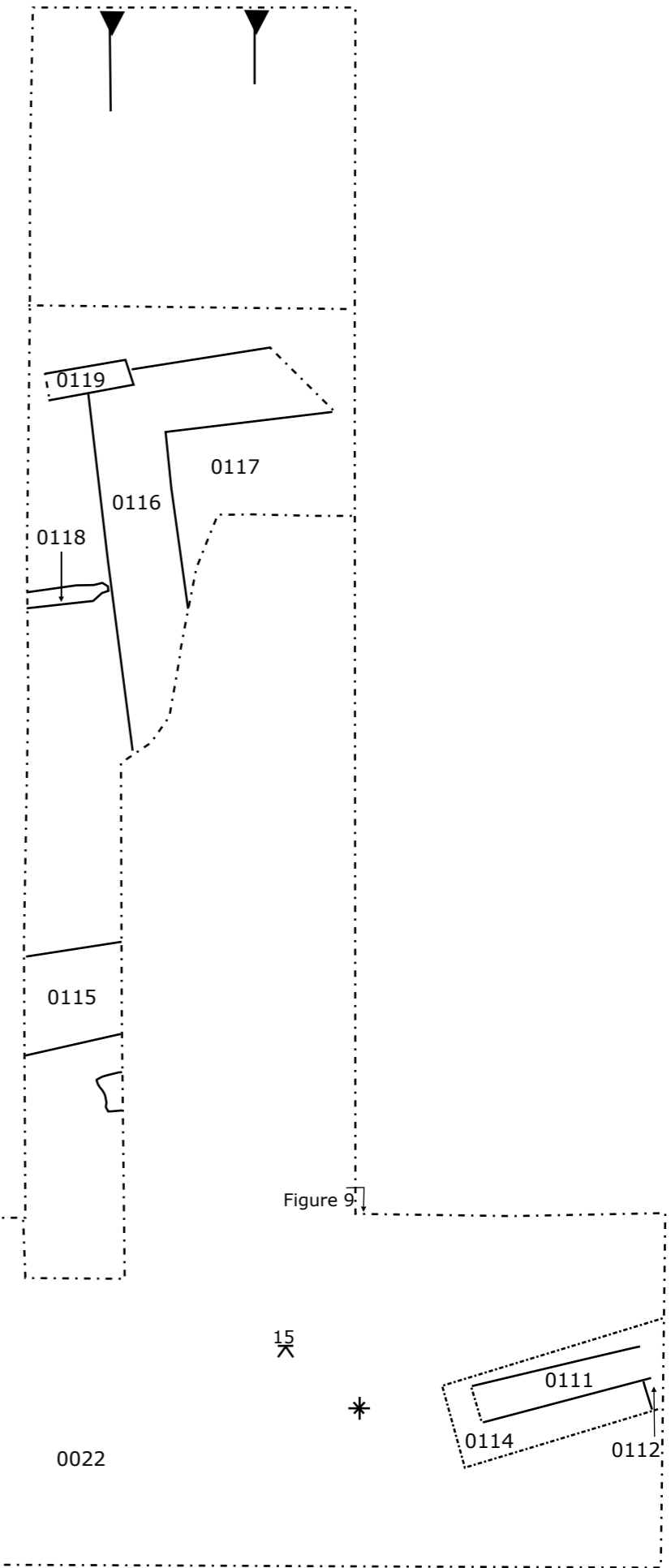
RSI Ilkeston Gas Works Evaluation
 Figure 8 Trench 02 Plan
 Scale at A3 1:50

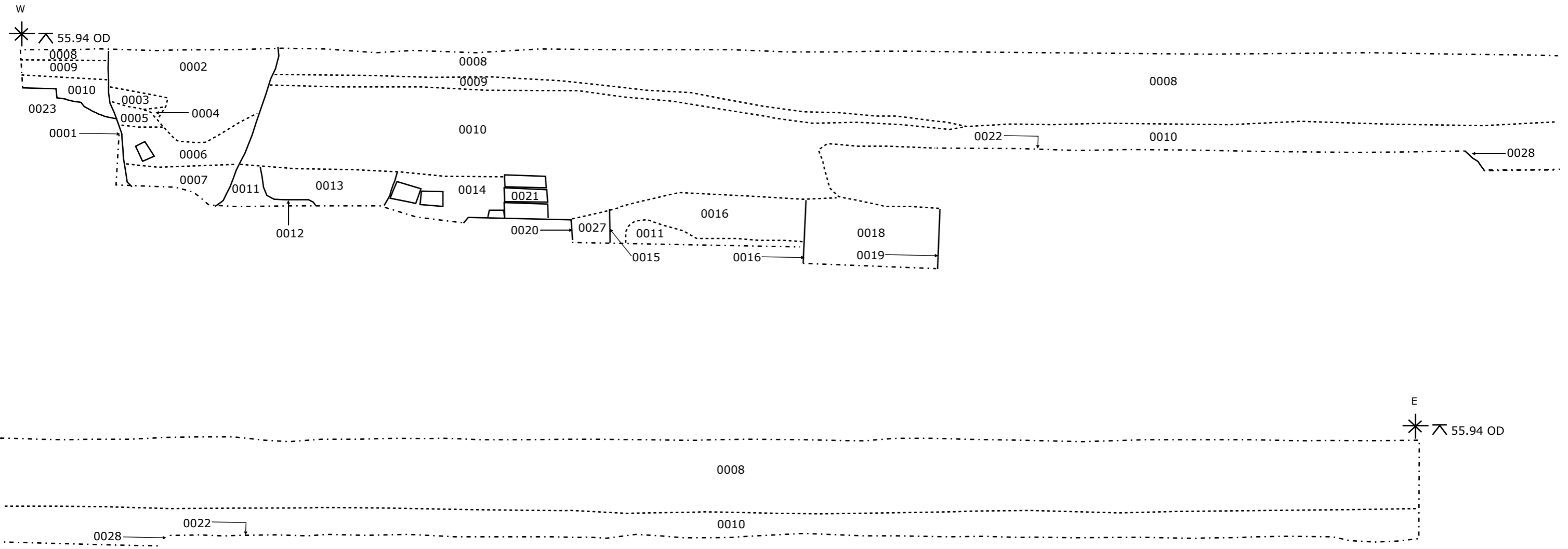
1m

Concrete

OD Height

1. 55.70
2. 55.18
3. 55.08
4. 55.08
5. 55.06
6. 55.24
7. 55.18
8. 55.01
9. 55.89
10. 54.80
11. 55.08
12. 55.38
13. 55.35
14. 55.39
15. 55.38





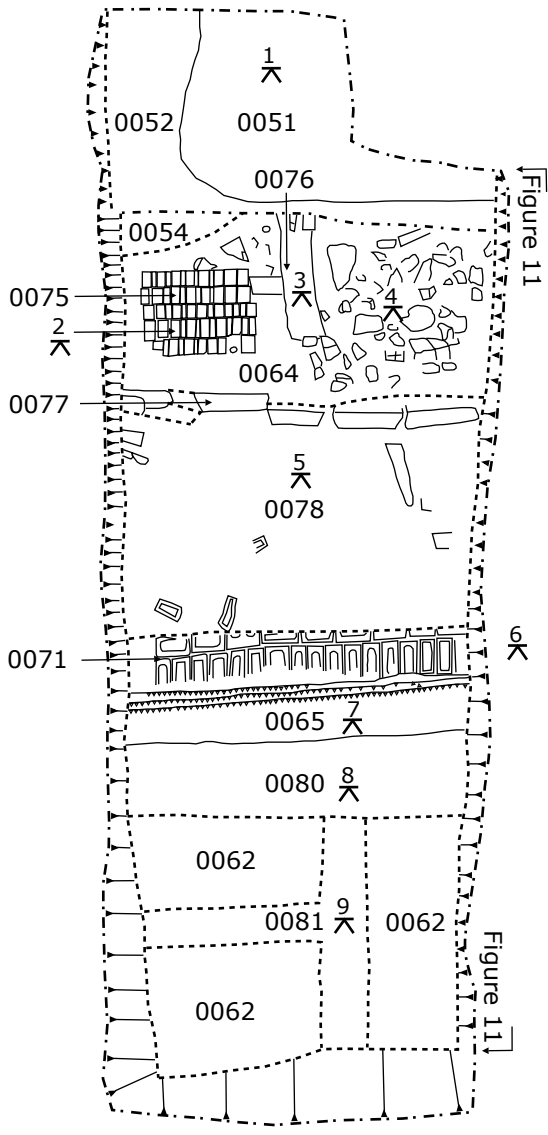
RSI Ilkeston Gas Works Evaluation
 Figure 9 Trench 02 South Facing Section
 Scale at A3 1:20

1m



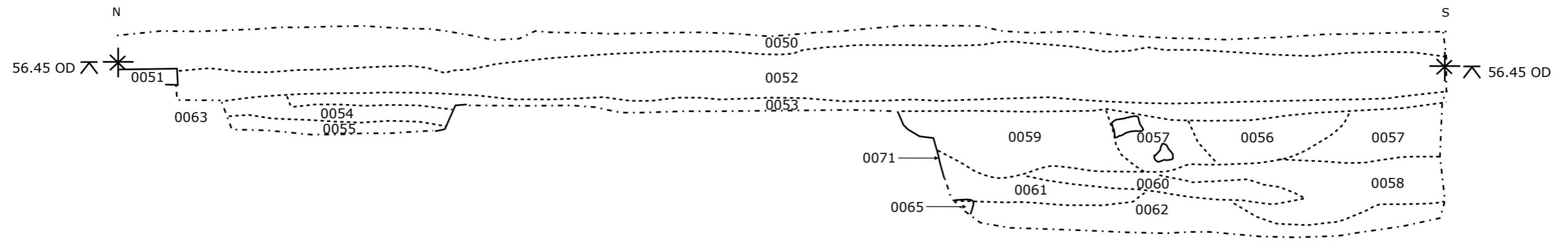
OD Height

- 1. 56.47
- 2. 56.06
- 3. 56.26
- 4. 56.13
- 5. 56.23
- 6. 56.26
- 7. 56.12
- 8. 55.71
- 9. 55.66

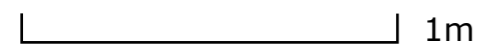


RSI Ilkeston Gas Works Evaluation
Figure 10 Trench 03 Plan
Scale at A4 1:50





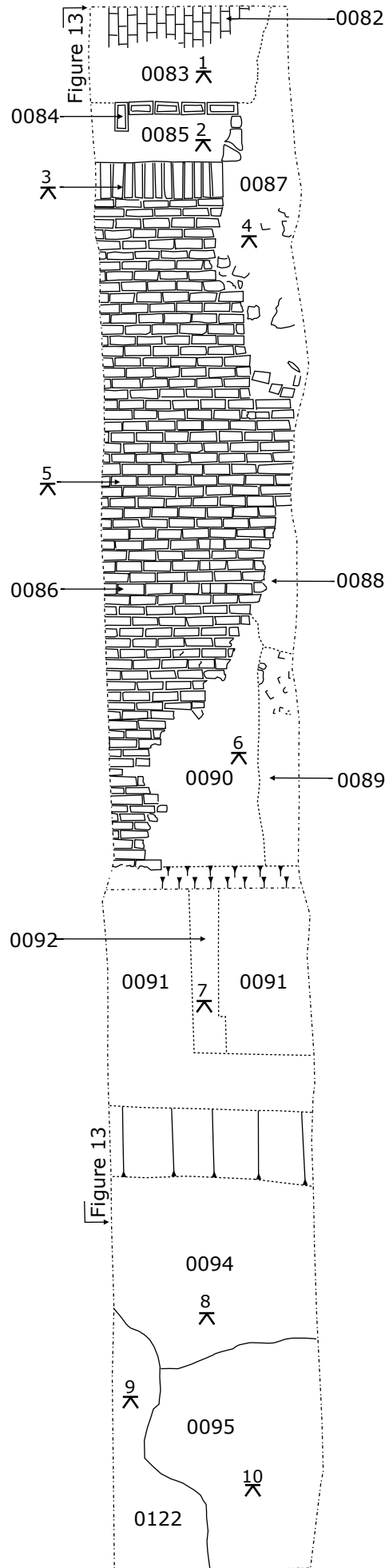
RSI Ilkeston Gas Works Evaluation
 Figure 11 Trench 03 West Facing Section
 Scale at A3 1:20





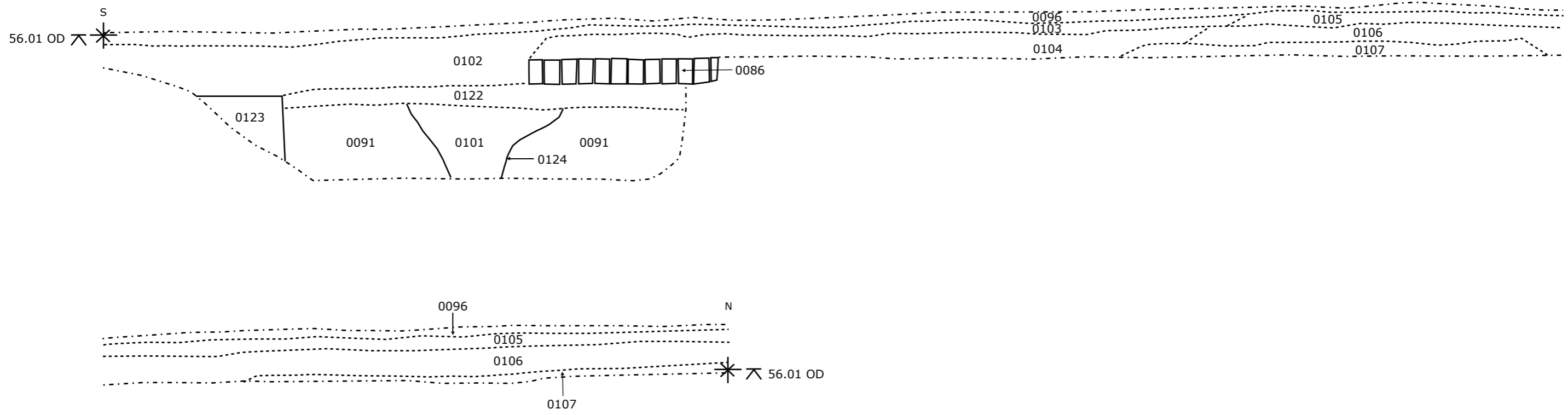
OD Height

- 1. 55.96
- 2. 55.93
- 3. 55.92
- 4. 55.90
- 5. 55.90
- 6. 55.86
- 7. 55.27
- 8. 55.84
- 9. 55.80
- 10. 55.82



RSI Ilkeston Gas Works Evaluation
 Figure 12 Trench 04 Plan
 Scale at A4 1:50

1m



RSI Ilkeston Gas Works Evaluation
 Figure 13 Trench 04 East Facing Section
 Scale at A3 1:20

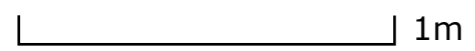




Plate 1: The site prior to evaluation taken from the south-east corner, viewed looking north-west



Plate 2: Test Pit 01 north-east facing section showing the walling of the gas holder, viewed looking south-west



Plate 3: Test Pit 02 west facing section showing a metal pipe possibly associated with a tar tank, viewed looking north-east



Plate 4: Test Pit 04 south-west facing section, viewed looking east



Plate 5: Test Pit 05 west facing section with concrete footing, potentially for the railway, towards the base, viewed looking south-east



Plate 6: Test Pit 06 west facing section showing potential brick infilled cellar beneath demolition deposits, viewed looking north-east



Plate 07: Trench 01 outer holding tank wall 0038, viewed looking north east



Plate 08: Trench 02 wall 0021 and railway structure 0019, viewed looking north



Plate 9: Trench 02 brick walling of former retort house and wall of chimney in the background, viewed looking south



Plate 10: Trench 03 general view from the south, viewed looking north



Plate 11: Trench 03 concrete kerb 0077 and rubble infill including bricks set on edge 0075 sealing a tar deposit, viewed looking east



Plate 12: Trench 04 brick floors and walls 0082-0086, viewed looking south-west