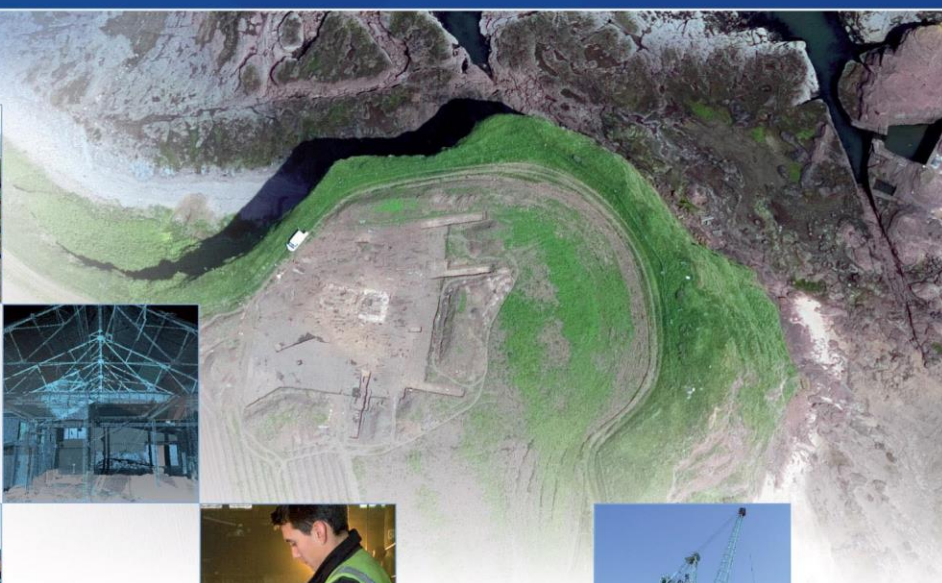
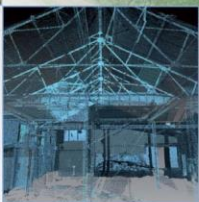
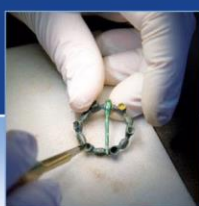


AOC Project No: 23686_AD
Date: 24th January 2024



Gasholder No 3, East Street, Epsom, Surrey:

Historic Building Recording Report

On Behalf of:	SGN 2 Woodstock Road Yarnton OX5 1NY
National Grid Reference (NGR):	TQ 21024 61208
AOC Project No:	23686_AD
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This document has been prepared in accordance with AOC standard operating procedures.

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Summary

AOC Archaeology Group was commissioned by SGN to undertake a survey of a redundant gasholder, Gasholder No 3 (also known as Gasholder No 6), at East Street in Epsom, Surrey. The work has been undertaken as part of a wider programme involving the decommissioning and dismantling of the remaining redundant gasholders in the UK owned by SGN.

The original gasworks associated with the Epsom works, which has long since been removed, was located to the south-west of the present gasholder compound, which was developed originally between 1896 – 1913 with the construction of Gasholder No 3. This was joined in the later 20th century by two additional gasholders, Nos 4 and 5, although only No 5 is still present today. Gasholder No 3, now also called Gasholder No 6 (implying a rebuild of the original) is very plain in styling with riveted standards with steel horizontal members adjoined to each standard and cross-braced between each lift and standard.

1 INTRODUCTION

1.1 Project Background

- 1.1.1 AOC Archaeology Group was commissioned by SGN to undertake a survey of a redundant gasholder at East Street in Epsom, Surrey. The work has been undertaken as part of a wider programme involving the decommissioning and dismantling of the remaining redundant gasholders in the UK owned by SGN.

1.2 Site Location

- 1.2.1 Gasholder No 3 is located within an irregularly-shaped compound with access to the south at East Street. The compound is bounded to the north-west by a railway line and to the north-east and south-west by large modern commercial sheds with a small car park to the south. It is centred on NGR: TQ 21024 61208 (Figure 1 & 2). To the south-east of the holder is a much later 20th century holder, Gasholder No 5.

1.3 Statutory Designations

- 1.3.1 Gasholder No 3 does not have any statutory designations.

2 OBJECTIVES

- 2.1 The objective of the historic building survey was to create a permanent record of the redundant gasholder, and any other structures on the site related to their former operation, prior to its removal through archive research, photographic, written and drawn (measured) survey.
- 2.2 A secondary objective was to place the gasholder and the former Epsom gasworks within its context by exploring its history and development of the gas industry of Epsom through time.

3 METHODOLOGY

3.1 Introduction

- 3.1.1 The survey was carried out prior to any contractors on site. Both were subject to the equivalent of a Level 1 historic building record as outlined in Historic England guidelines in their publication *Understanding Historic Buildings: A Guide to Good Recording Practice* (2016). This included a full photographic, written and drawn (measured survey) record.

3.2 Archive Research

- 3.2.1 A general map-regression exercise was undertaken to determine the general history and development of the site from its origins to the present day. All publicly accessible pre-Ordnance Survey maps and Ordnance Survey maps were viewed, and a selection have been included in this report in Section 5.
- 3.2.2 The following archives were consulted to identify early/original archives and drawings of the site/gasholder:
- Historic England Archives
 - No records (drawn or photographic) of the gasholder are known to exist in these archives.
 - National Archives at Kew
 - No records (drawn or photographic) of the gasholder are known to exist in these archives.
 - National Monuments Record (Swindon)
 - No records (drawn or photographic) of the gasholder are known to exist in these archives.
 - National Gas Archive, Warrington
 - Several archive sources were located and obtained in this archive, which are illustrated in Section 4. A selection of these have been reproduced in this report.

3.3 Photographic record

- 3.3.1 A general photographic survey was undertaken of the exterior of the gasholder and ancillary pipework in colour digital using a digital SLR camera in RAW format to a minimum 24 megapixel resolution. Photography

was carried out on 31st October 2023. In addition, detailed shots of features such as structural elements (standards and framework), pipework, stairs, guided rollers (where visible), knock-off switches, valves and other control equipment, other ancillary structures and pipework, were also taken. A discreetly placed 1m or 2m ranging pole was placed in all shots where access and health and safety allowed for scale. A register of photographs was taken on site and can be found in Appendix 3, together with a site plan showing the location and direction of each photograph (Appendix 4). The digital photographic record, excluding duplicate shots, has also been used as plates to illustrate this report (Appendix 2, Plates 1 – 28).

3.4 Written record

- 3.4.1 A written survey was undertaken of the gasholder using AOC *pro forma* recording sheets with comment on condition, construction, features, fixtures and fittings, modern interventions, evidence for phasing and function and anything else pertinent to the historic record.

3.5 Limitations

- 3.5.1 No access was possible to the crown or upper walkway of the gasholder due to health and safety reasons, hence some aspects such as features on the crown and the guided rollers could not be recorded in detail. Heavy vegetation also covered much of the site, although the general character and the detail of the structure could be recorded despite this.

4 GASWORKS AND GASHOLDERS: AN INTRODUCTION

4.1 An Introduction to the History of the Gas Industry

- 4.1.1 Dr John Clayton was the first man in England to describe that flammable gas could be produced from coal in 1684 and he even experimented with open retorts (sealed vessels) in which to produce it (Thomas 2020, 10). The results were later reported by his son in the early 19th century. However, William Murdoch is credited with pioneering coal gas production, a Scotsman who had started to develop experimental plants to manufacture gas from wood and coal (Thomas 2020, 1). He first lit his house and office in Redruth using this method in 1792 and built the first small gasworks at the Soho Factory of Messrs Boulton and Watt in Smethwick in 1798 (Thomas 2010). In 1805, Murdoch then started to develop and sell commercial gas (*ibid*). His philosophy was to build small gasworks that supported a single establishment, although as the 19th century progressed larger gasworks were built across the UK to run lighting for multiple mills, factories, streets and eventually homes. Fredrich Winsor was key to the concept of centralised gasworks providing mains delivery to users across large areas. He established the Gas Light and Coke Company in 1812 which lit the cities of London and Westminster and the borough of Southwark. Throughout much of the early-mid 19th century, the gas industry provided lighting in homes, street and in industry. However, after the invention of the Bunsen burner in Germany, it started to later be used for heating and cooking, which was an advantage at the time over its new rival in lighting: electricity. Coal was the primary source for the creation of gas, so was also hugely influential in the development of the coal industry. Gas lighting slowly improved the quality of workers' lives by the lighting of the new large textile factories (*ibid*). The gas industry also created a number of by-products which could also be used in other industries, such as fertiliser, creosote, dyes and drugs (*ibid*, 2).
- 4.1.2 Gasworks could be established by companies either in private, company or municipal ownership and required an Act of Parliament to supply and open streets to lay gas mains throughout towns and cities (Thomas 2020a, 2). Private gasworks were also constructed in large mills and factories in Britain until they were able to be supplied by the main town or city's larger gasworks (Thomas 2020a, 36). By the early 20th century there were many amalgamations of companies as they grew in size and gasworks expanded significantly as populations rose in urban areas.
- 4.1.3 After the Second World War, the gas industry was heavily restructured and nationalised and twelve regional gas boards were created in England. By the 1950s, there was a decline in the quality and quantity of gas-making coal, which led to the adoption of piping in natural gas from abroad; soon gas fields were located in

the North Sea in the late 1960s (Thomas 2020a, 4). Therefore, between 1967 – 1977, there was complete conversion from coal gas to natural gas in the UK, which led to the redundancy of nearly all coal-gas production buildings with the exception of the gasholders, which were still required to actually store the gas. The last coal gas gasworks to close was in Millport on the Isle of Cumbrae off the west coast of Scotland in 1981 (*ibid*, 125). Originally manned, it was not long before remote monitoring of these gasholders was put in place, further reducing the number of additional buildings on the sites. All gasholders in England have now been decommissioned.

4.2 The Process of Coal Gas and the Layout of Gasworks in the UK

- 4.2.1 Thomas (2010; 2020b) summarises the general running of a gasworks into several main structures as seen in Figure 3. Gas was produced by placing coal in buildings called retort houses (sealed vessels) by heating coal in an oxygen-free environment to drive off volatile components, leaving coke as a residue. Multiple retorts (1) were built in ‘retort benches’ and were originally horizontal, D-shaped, cast-iron structures. They were heated via an external furnace (2) which was controlled by a team of stokers. As gas practices improved, methods in later years included inclined and vertical retorts which could be made of silica.
- 4.2.2 The produced gas was passed from the retorts through water in the hydraulic main (3) to remove ammonia (Merriam 1913), then cooled in the condensers (4). Three types of condensers were common: atmospheric, annular and water tube, all of which worked to remove coal tars as they cooled the gas, draining it to a tar tank or well.
- 4.2.3 The quality of the gas produced during the gasification of coal varied, with the highest quality produced at the start of the process and the lowest quality at the end. The exhausters (5) were gas or steam driven pumps which controlled the movement of the gas from the retorts through to storage or use. The exhausters moderated the drawing of gas at different rates to keep the gas produced at the required standard.
- 4.2.4 Scrubbers (6) and washers removed ammonia and phenol from the gas via two different processes. Washers passed the gas through seals, perforated plate or weirs of liquor and scrubber towers sprayed the gas with water as it moved up the tower, thereby dissolving the ammonium and phenol to form ammoniacal liquor. Combined washers and scrubbers were designed in later years. Purification of the gas to remove hydrogen sulphide and hydrogen cyanide was carried out in the purifiers (7) via the chemical process of precipitation. Originally lime was used in the process, although was superseded by iron ore which facilitated the production of iron ferricyanides and iron sulphides in the precipitation process to purify the gas. The lime and iron ore could be regenerated a couple of times before their concentrations of cyanide or sulphur were too high. After two or three uses the lime was referred to as ‘foul’ and was used as fertilizer; the oxide was referred to as ‘spent’ and was used as weed killer. The purified gas was passed through a station meter (8) to monitor its quality and pressure before being stored in a gasholder (9). Larger gasworks had multiple gasholders which in later years held gas produced by different methods and at different pressures. Before going out to the local grid the pressure of the gas was monitored and modified via a pressure governor (10) to ensure it was at the correct pressure for users.
- 4.2.5 Underground tanks and wells stored tar and liquors produced in the different stages of the gasworks operations with liquor floating and tar sinking to the bottom. Solid tar was dug out when tanks were full, some stored above ground where it could be sent for refining elsewhere.
- 4.2.6 Other additional structures on a gasworks site included offices, workshops, dwellings, laboratories and stores as shown in Figure 4.

4.3 The Evolution, Function and Anatomy of a Gasholder

- 4.3.1 Gasholders were an essential element of all gasworks to store the resulting gas produced for distribution. The first holders – referred to as gasometers – were over-engineered and rectangular in shape, constructed of iron and surrounded by a timber frame (Thomas 2020b, 193). However, this inefficient design was replaced

by the cylindrical gasholder by the early 19th century, as they could hold a greater capacity (*ibid*). Early examples were also built within their own buildings due to safety concerns.

- 4.3.2 Gasholders are used to store gas to meet the daily demands of the local area. Storage capacity in the 19th century was worked out as approximately equal to the maximum consumption on a winter's day of the local area using the gas (Tucker 2000, 7).

4.3.3 *The Guide-Framed Holder*

The traditional guide-framed gasholder was the predominant type of holder constructed from the mid-19th century to the first decades of the 20th century. As detailed by Tucker (2000, 7–8) it is comprised of three main components: the tank, the bell and the guide-frame. The tank is the open-topped cylinder that houses the bell when it is empty of gas and can be built above or below ground. It is filled with water to provide a seal to stop gas escaping and sometimes has a rest frame built within it to support the crown of the bell when the holder is empty. The bell is the open-bottomed, sheet-metal cylinder which holds the gas. It rises and falls as the gas enters and exits the holder throughout the day. To economise on the depth of the tank some holders are telescopic, meaning the bell sides are split into sections known as lifts. The joint between each lift has a cup-and-grip water seal to stop gas escaping; non-telescopic bells have only a single lift. As the bell rises and falls it is kept in place by guide rollers mounted on carriages on the top of each lift which run against rails on the guide-frame. The guide-frame is a circular structure comprising columns (in this context called 'standards') which surround the tank. The standards are connected by horizontal girders and sometimes diagonal bracing which together secure the bell and tank from strong winds.

4.3.4 *Spiral-Guided Gasholders*

Whilst the first large commercial gasholders were guide-framed as described above, spiral-guided holders are a later-evolved type of gasholder first pioneered in the late 1880s, with the first being constructed in Norwich in Cheshire in 1890 (Thomas 2020a, 86). It was built by Clayton, Son & Co Ltd and achieved rigidity when rising up and down through internal supports as opposed to an external guide frame, rising through the use of spiral rails on an angle of 45°, rotating like a corkscrew. The popularity of this type expanded due to the relatively simpler nature of its construction, and by the early-mid 20th century, overtook the guide-framed type as the principal style.

4.3.5 *Flying Lifts*

The 1880s also saw the emergence of 'flying lifts' which was the addition of an inner lift which, instead of running within the guide rails, could extend above the guide frame without its guide wheels being attached to them (hence the name 'flying') (Thomas 2020b, 210). These were pioneered by George and Frank Livesey, the first flying lift added at the Rotherhithe Gasworks in 1887 – 1888 (*ibid*). They exerted extra stress on the guide framing and were a particular risk in high winds, as the guide wheel needed to engage with the guide rails when deflated (*ibid*, 211).

4.3.6 *Gasholders and Automation*

After the change from burning coal for the production of gas to using natural gas, the use of gasholders became more automated. A set amount of gas was provisioned for each area daily, which would start entering the gasholder in the early hours of the morning. The gasholders would rise as they filled with gas until residents began using it during the morning peak period, when they would lower in height. The gasholders would then remain at relatively the same level of fullness for the entire day until the second peak period of around dinnertime when the level would drop again.

5 HISTORICAL BACKGROUND

5.1 19th Century

- 5.1.1 In 1839 John Steele, John Bailey, William Butcher, William Chandler and George Bishop raised capital and subscriptions for the Epsom and Ewell Gasworks and trading commenced in 1840 (Montagu Evans 2017). Originally the coal was extracted and gas for supply for lamps, and meters were let on hire (*ibid*). By 1841 improvements were already planned as the works could not keep up with supply, although by the arrival of the railways logistics to the site had improved. In 1877 the co-partnership was disbanded and the Epsom and Ewell Gas Company was created (*ibid*).
- 5.1.2 The 1896 Ordnance Survey map shows no gasholders located within the location of the present gasholders, Nos 3 and 5, although to south of this is the site of three gasholders/tanks with the associated gasworks buildings to their south-east (Figure 5).

5.2 20th Century

- 5.2.1 In 1912 a bill was introduced which amalgamated the Wandsworth and Putney Gas Light & Coke Company, the Mitcham, and Wimbledon District Gas Light Company and the Epsom and Ewell Gas Company (Montagu Evans 2017). The Epsom and Ewell Gasworks were located on East Street to the north-east of the town of Epsom. The 1913 Ordnance Survey map shows a gasholder in place in the position of Gasholder No 3, with the gasworks located further to the south, annotated as the 'Epsom & Ewell Gas Works' (Figure 6). The gasworks itself still contains the three much smaller holders/tanks central to the much-expanded gasworks.
- 5.2.2 The Ordnance Survey map from 1935 shows very little change to the gasworks, although some additional sidings had been added, and Gasholder No 3 in place with some additional structures to its north-west adjacent to the boundary of the site with the railway (Figure 7). An archive plan from 1931 shows the gasworks and holders at this time, with No 3 in place and two of the original holders also present on the gasworks to the south-west (Figure 8). Here, Gasholder No 3 is noted as having a capacity of 334,000ft³ with the buildings depicted to the north-west as being a garage and a Power House. The other two holders are referred to as No 1 Holder (with a capacity of 83,000ft³) and No 2 Holder, a 'Tar Tank and Relief Holder'. The gasworks buildings are also shown in detail with a key depicting all the functions of the buildings (Figure 9).
- 5.2.3 An archive plan from 1964 shows the expansion of the gasholder compound with an additional much larger planned holder (No 5) with a capacity of 2,000,000ft³ and a smaller holder to its south, Gasholder No 4, with a capacity of 201,100ft³ (Figure 10). No 3 holder is annotated as having a capacity of 325,000ft³. A sectional elevation of all three holders is also depicted, with No 3 noted as the column-guided holder and Nos 4 and 5 as spiral-guided holders. A 1966 plan from the archives show the arrangement (albeit with slightly more exact capacities) together with the pipework going to and from all three gasholders controlled via a Governor House to the south-west (Figure 11). A later 1969 plan from the archives shows the site, and also that No 5 is also still a 'planned' holder; the Montagu Evans report notes Gasholder No 5 as being constructed in 1968 by Clayton & Sons.
- 5.2.4 The 1975 Ordnance Survey map shows all three gasholders in place with the gasworks now completely gone and a large car park in its place (Figure 12). They are still all present in the 1992 Ordnance Survey map (Figure 13), so Gasholder No 4 to the south-east must have been removed after this date. The large commercial units have also been erected to the north-east and south-west of the holders by the early 1990s.
- 5.2.5 Today, Gasholder Nos 3 and 5 are located in an irregularly-shaped compound aligned north-west/south-east and are surrounded on all sides quite closely by relatively modern structures and a railway line to the north-west (Plate 1). Therefore, it is not overly visible in the wider landscape, as many gasholder sites are, and can only really be viewed at a distance from the main entrance and car park to the south-west (Figure 2; Plate 1). The gasholder was quite overgrown at the time of survey, with only a narrow stretch between the holder and its security fencing adjacent to the railway line to the north-west.

6 RESULTS: GASHOLDER NO 3

- 6.1.1 Gasholder No 3, according to the Montagu Evans study (2017), is now called Gasholder No 6 and is ‘...a 20th century development on the shell principle most likely a Type 45 owing to the fabricated standards.’ (Montagu Evans 2017). The members were placed ‘...closely than previously, and braced by flat bars of steel, or round rods.’ (*ibid*). It is a three-lift holder with an above-ground tank.
- 6.1.2 The standards are ‘Type 45’ solid-webbed standards, of which there are 19 (Plates 2 – 6). The narrow standards rise above the tanks, with the lower two having riveted plates to add additional strength. It is cross-braced with plain steel horizontal steel bars and the whole structure is further strengthened by diagonal cross-bracing in the form of plain flat bars with central diamond-shaped riveted plated to each lift at each standard. The standards continue to surround the perimeter of the tank, which is comprised of riveted rectangular overlapping sheets and painted in a lime green, with signs of rusting in places (Plate 7). The cross-bracing between the standards is also visible here (Plates 8 – 12). There is no formal numbering of the standards, most having the number spray painted on (Plates 13 – 15).
- 6.1.3 Access to the upper lifts when the gasholder was inflated is provided by a steep single-person ladder with rounded rear safety bars on the north side (Plates 5 & 16). The lower stair, which provided access to the walkway, had been removed prior to survey due to health and safety concerns. The upper walkway was supported by an array of this vertical steel members in front of the tank with a wider plate riveted to the exterior perimeter with narrow uprights supporting two tiers of tubular safety railings (Plates 17 & 18). As there was no access to the upper walkway, the guided rollers were not visible up close, although could be viewed from a distance. They are radially-mounted guided rollers, on carriages, that run up and down within a guide rail on the inward-facing side of the standards (see Plate 18).
- 6.1.4 There are a number of knock-off switches present on the gasholder, including a pair of switches to the south-west side at Standard 4 (Plates 19 & 20). Another lone knock-off switch is visible to the north side of the gasholder (Plate 21). In the south side of the holder the covers for hosing was visible, although the hoses have long since been removed; electrical monitoring equipment was located below this (Plates 22 & 23).
- 6.1.5 Other structures associated with the gasholder include a small low square brick tank into which fed a horizontal pipe from the gasholder (Plate 24). In the NNW side of the holder is the main governor pipework (Plates 25 – 28). The Donkin governors, which are still in good condition with gauges intact, are set on concrete plinths with additional metal upright supports and a large concrete wall to the east side.

7 DISCUSSION

- 7.1 The main gasworks and original gasholder at the East Street site at Epsom were located to the south-west of the present gasholder compound in the 19th century, with the Epsom and Ewell Gasworks established in the 1840s. A gasholder, Gasholder No 3, was constructed between 1896 – 1913 adjacent to the railway line which was further connected to and expanded in the early third of the 20th century with additional buildings also added to its south-east and north-west (adjacent to railway line). Two additional holders, Nos 4 and 5, were added from the late 1960s, with Gasholder No 4 demolished after the early 1990s.
- 7.2 Gasholder No 3, according to the Montagu Evans study (2017), is now called ‘Gasholder No 6’ and is ‘...a 20th century development on the shell principle most likely a Type 45 owing to the fabricated standards.’ (Montagu Evans 2017). The members were placed ‘...closely than previously, and braced by flat bars of steel, or round rods.’ (*ibid*). It is a three-lift holder with an above-ground tank and cross-braced standards. Therefore, it is implied that Gasholder No 3 was substantially rebuilt in the later 20th century.

8 CONCLUSIONS & ADDITIONAL WORKS

- 8.1 The original gasworks associated with the Epsom works, which has long since been removed, was located to the south-west of the present gasholder compound, which was developed originally between 1896 – 1913 with the construction of Gasholder No 3. This was joined in the later 20th century by two additional gasholders, Nos 4 and 5, although only No 5 is still present today. Gasholder No 3, now also called gasholder No 6 (implying a rebuild of the original) is very plain in styling with 19 riveted standards with steel horizontal members adjoined to each standard with cross-braced between each lift and standard.

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Thomas R 2020 *The Manufactured Gas Industry: Volume 1 History*. Historic England Research Report Series No: 182-2020 (Volume 1)

Tucker, M T 2000 *London Gasholders Survey: The Development of the Gasholder in London in the Later Nineteenth Century. Part A: General*. Grey Literature Report for Historic England/English Heritage

9.2 Cartographic references

Ordnance Survey:

- 1896 (1:2,500)
- 1913 (Surrey Sheet XIX.1)
- 1934 (Surrey Sheet XIX.1)
- 1975 (1:2,500)
- 1992 (1:10,000)

9.3 Archive references

<i>Ref_No</i>	<i>Title</i>	<i>Description</i>	<i>Date</i>
SE/SEG/WS/EPS/E/E/1	Epsom- Site Plan Of Holder Station	Site plan: Epsom holder station for planning application for gasholder also shows existing spiral guided gas holders.	1964
SE/SEG/WS/EPS/E/E/1A	Epsom- Plan Of Holder Station	Epsom Holder Station, Hook Street, East Street - plan showing holders with capacities, also references.	1968
SE/SEG/WS/EPS/E/E/2	Epsom- Site Plan Of Holder Station	Site plan: Epsom holder station showing land and boundaries also shows East Street.	1968
SE/WND/E/B/4	Epsom- Plan Of Works	Epsom Works, East Street-plan shows holders with capacity, tar tank, disused retort house, surrounding allotments.	1931

APPENDIX 1: FIGURES

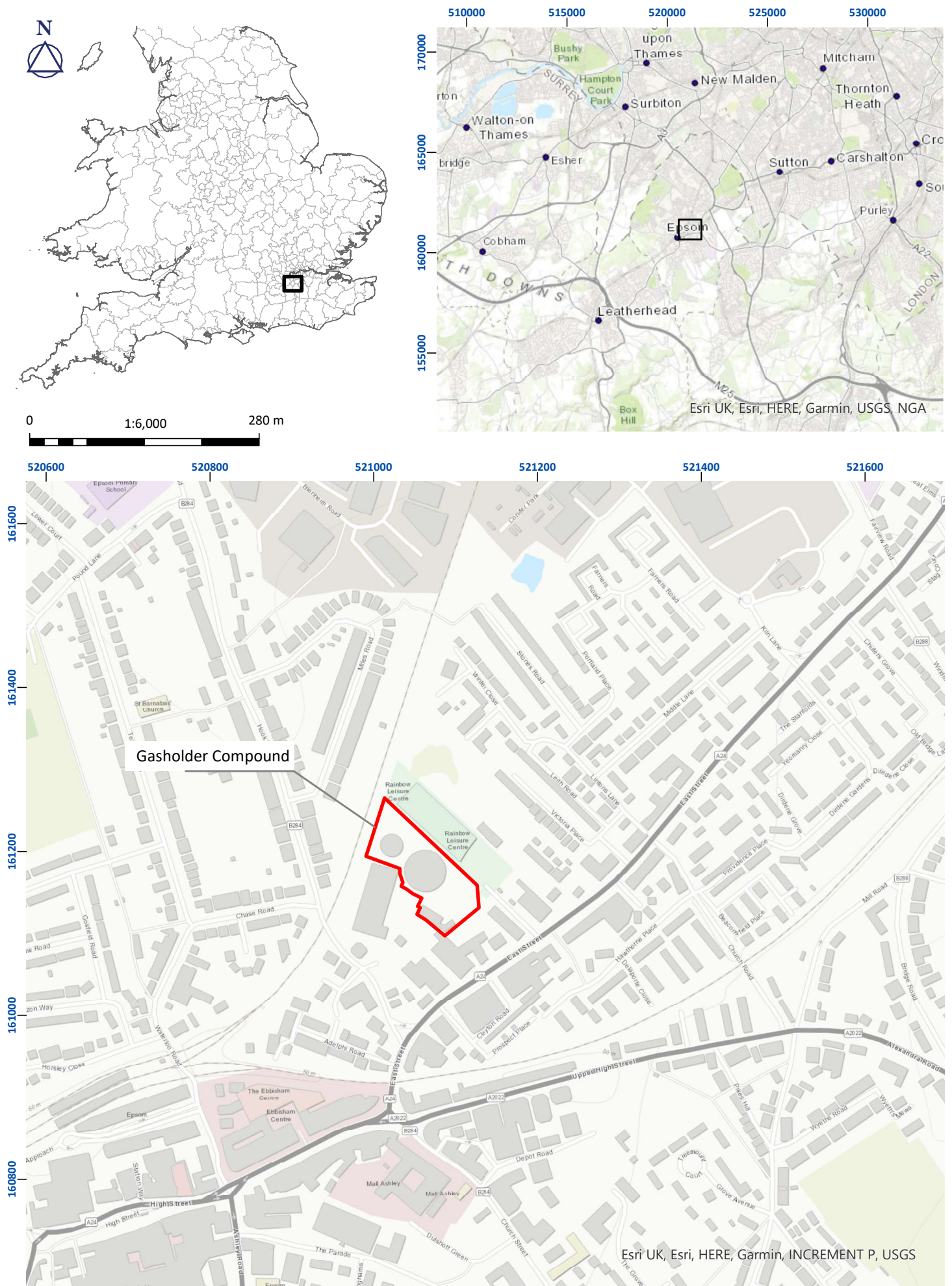


Figure 1: Site location plan

01/23686/REP/01/01

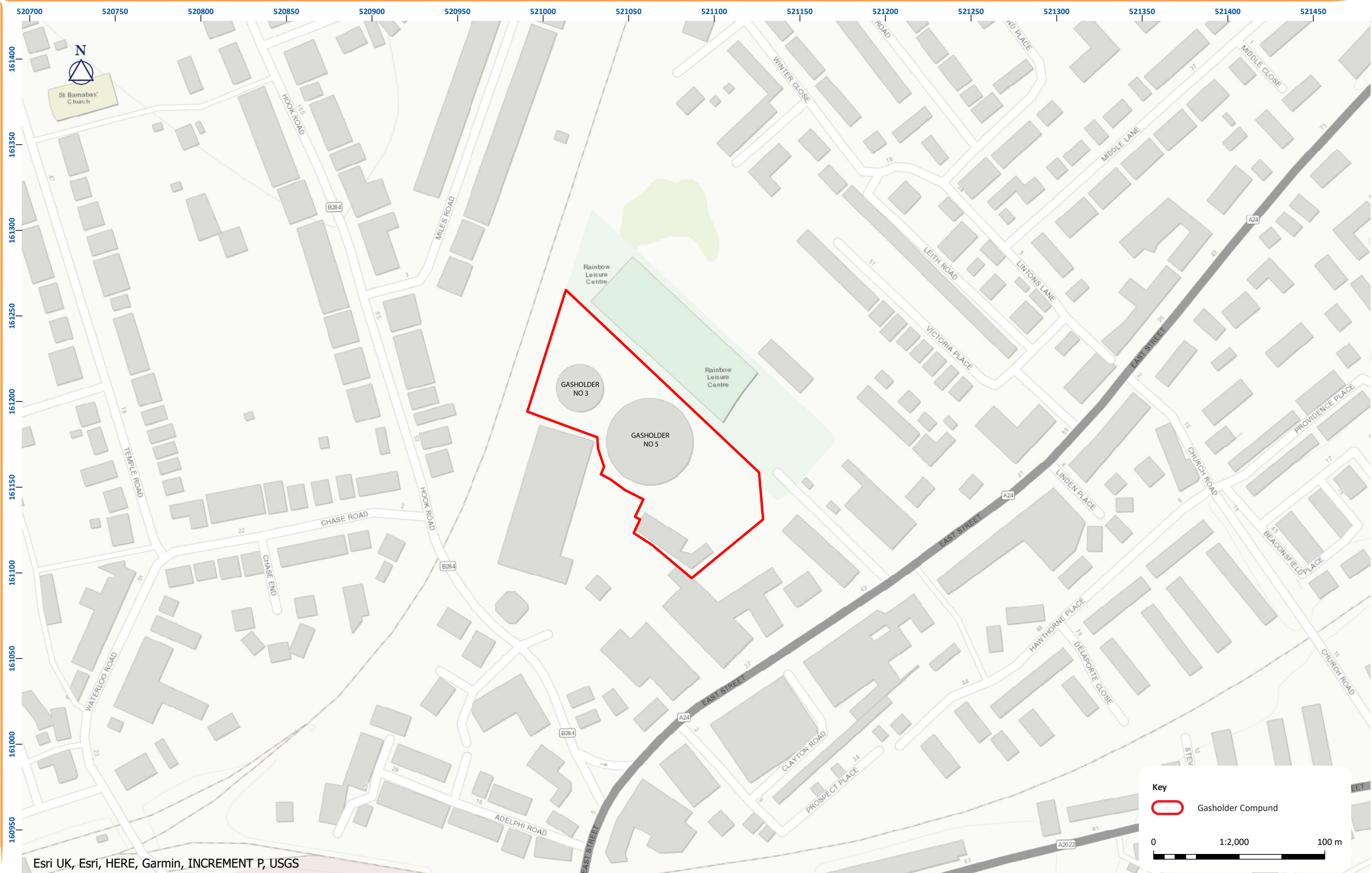


Figure 2: Site location plan

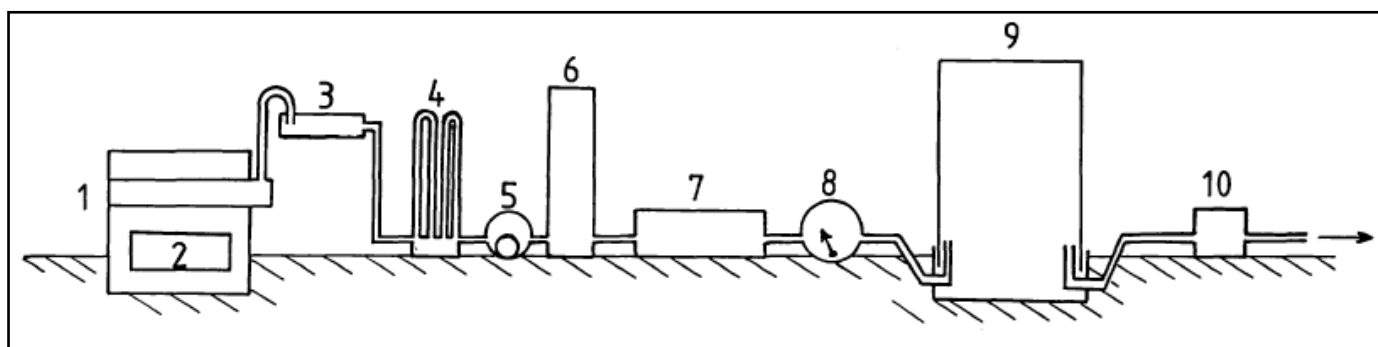


Figure 3: Schematic layout of a gasworks, after Thomas, 2010

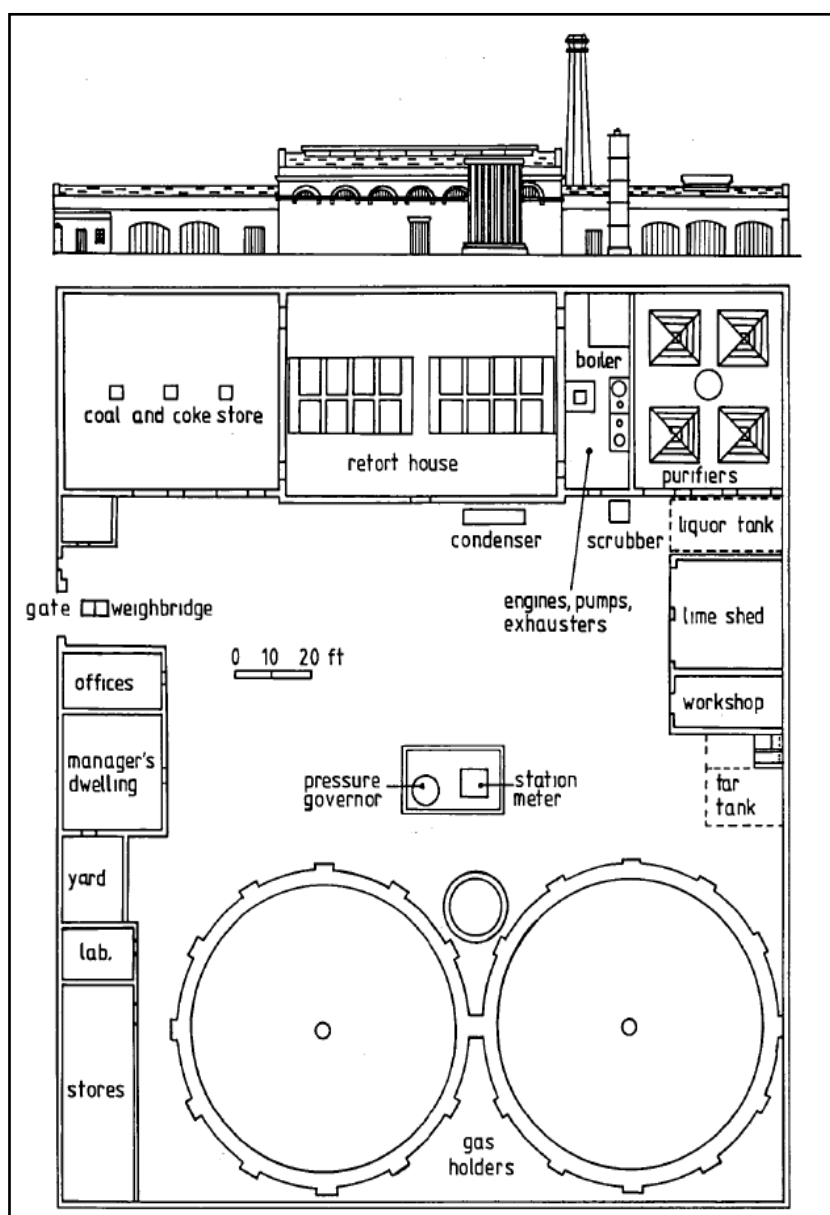


Figure 4: Typical layout of a gasworks site from the late 19th century after Newbigging 1897

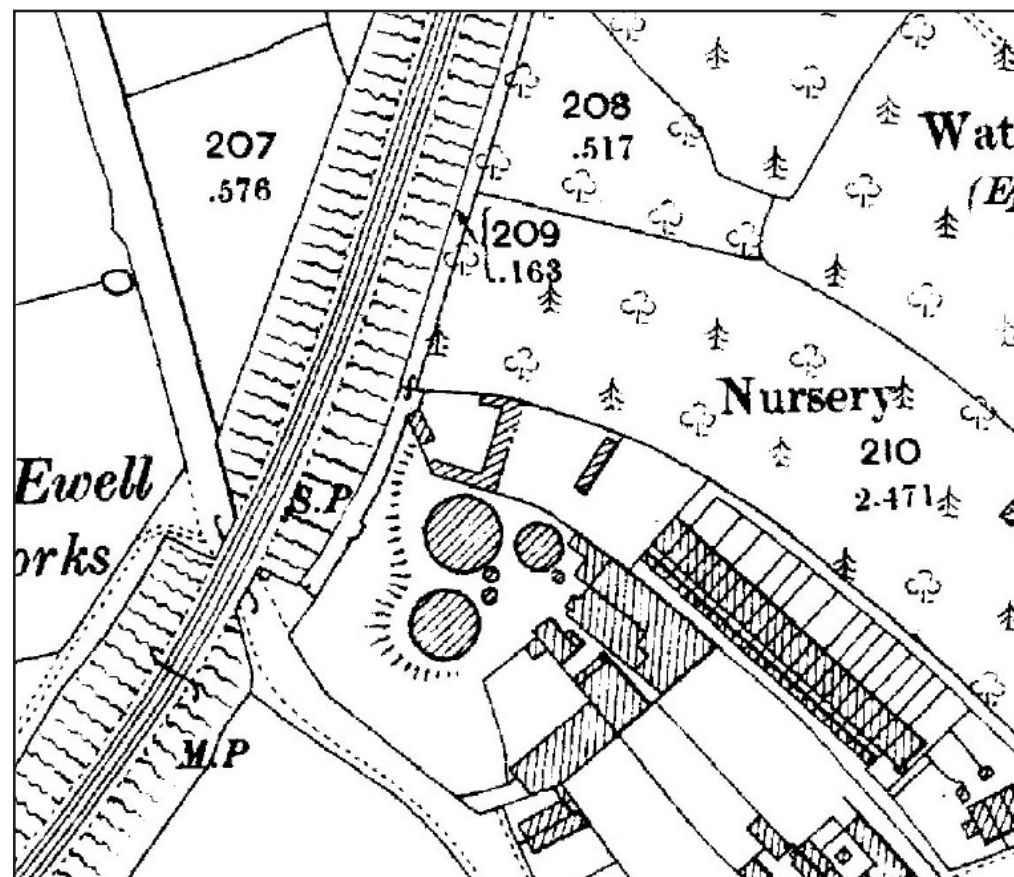


Figure 5: Extract from Ordnance Survey map, 1896

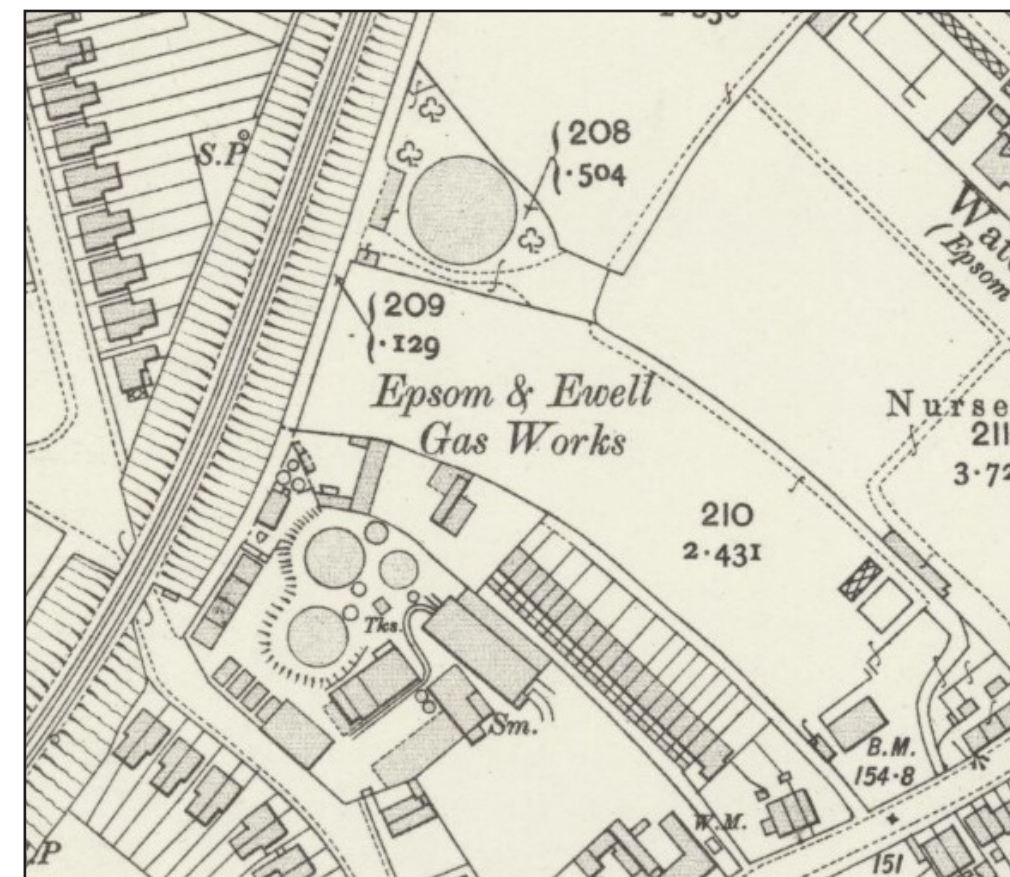


Figure 6: Extract from Ordnance Survey map, 1913
(reproduced by kind permission of the National Map Library of Scotland)

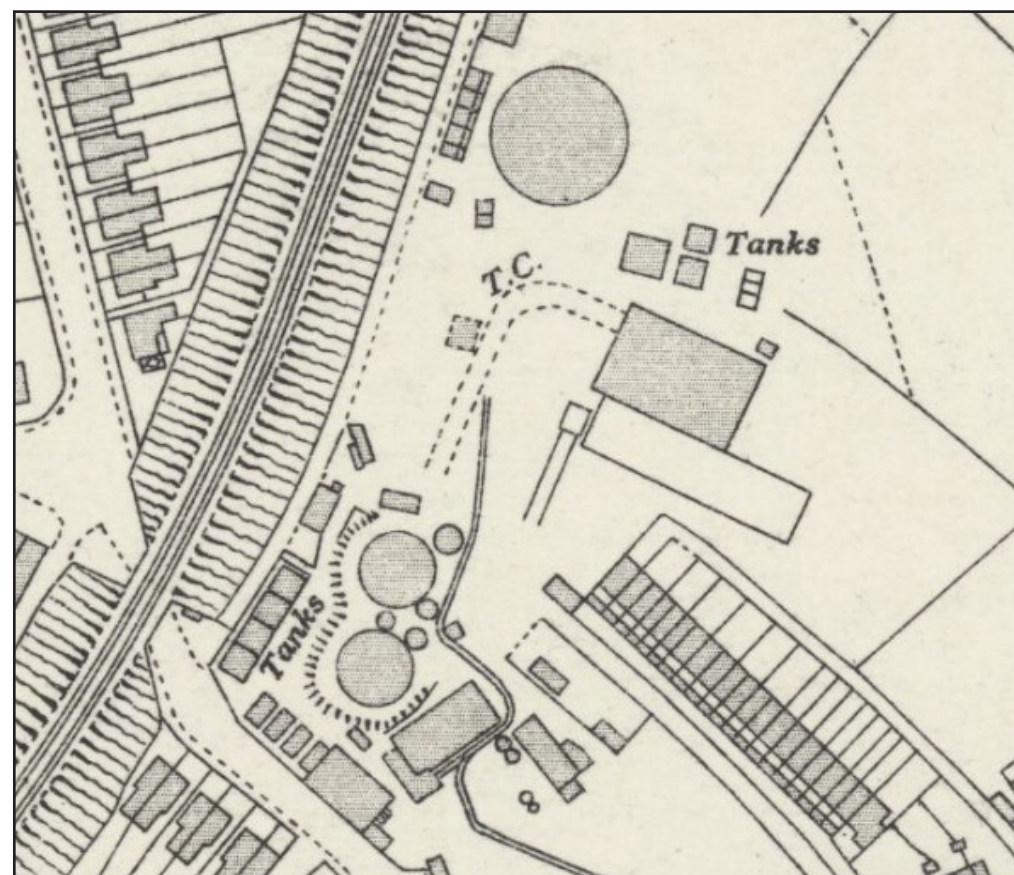
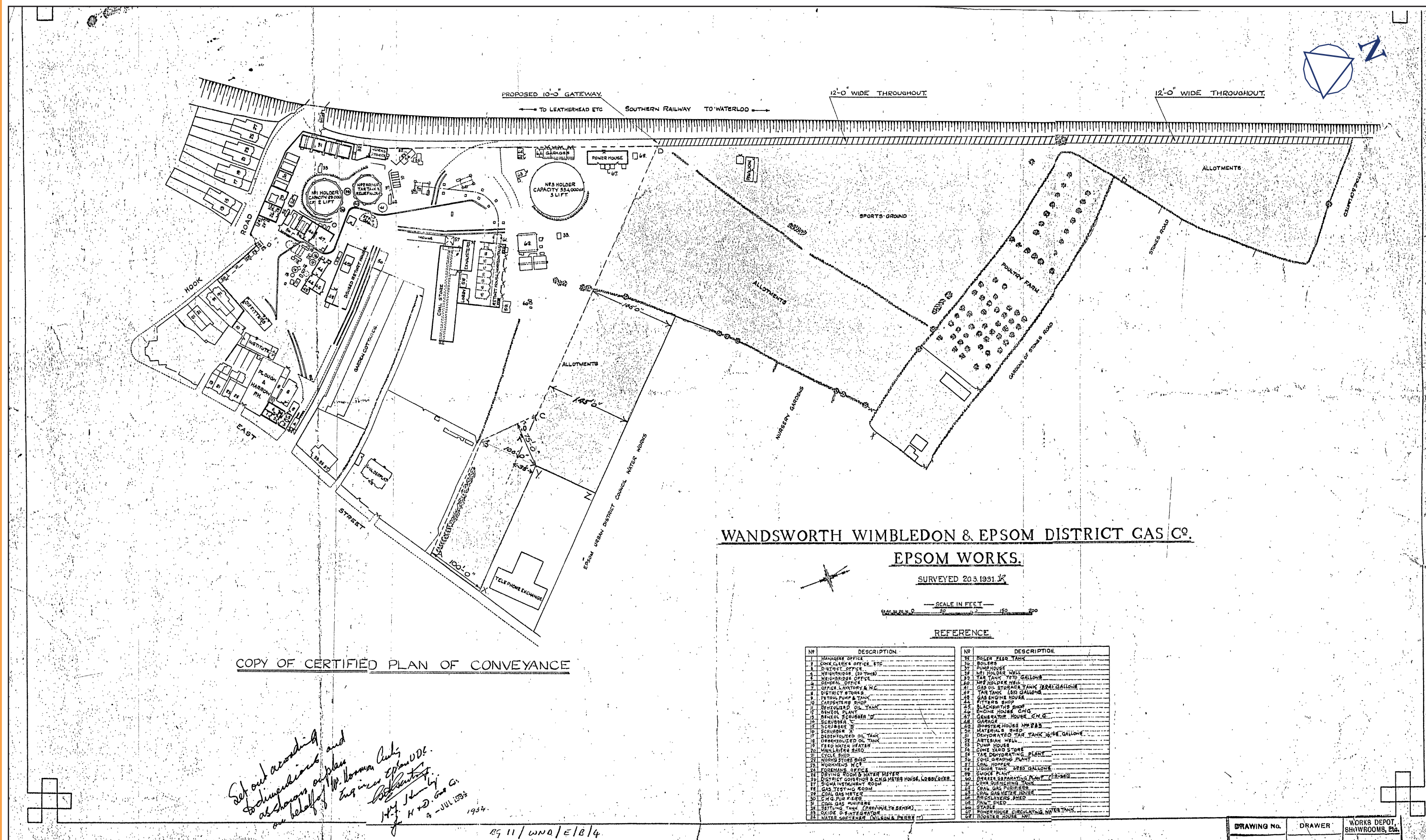


Figure 7: Extract from Ordnance Survey map, 1935
(reproduced by kind permission of the National Map Library of Scotland)

Figure 8: Archive plan of the Gasworks, 1931 (Archive Ref: SEWND_E_B_4)



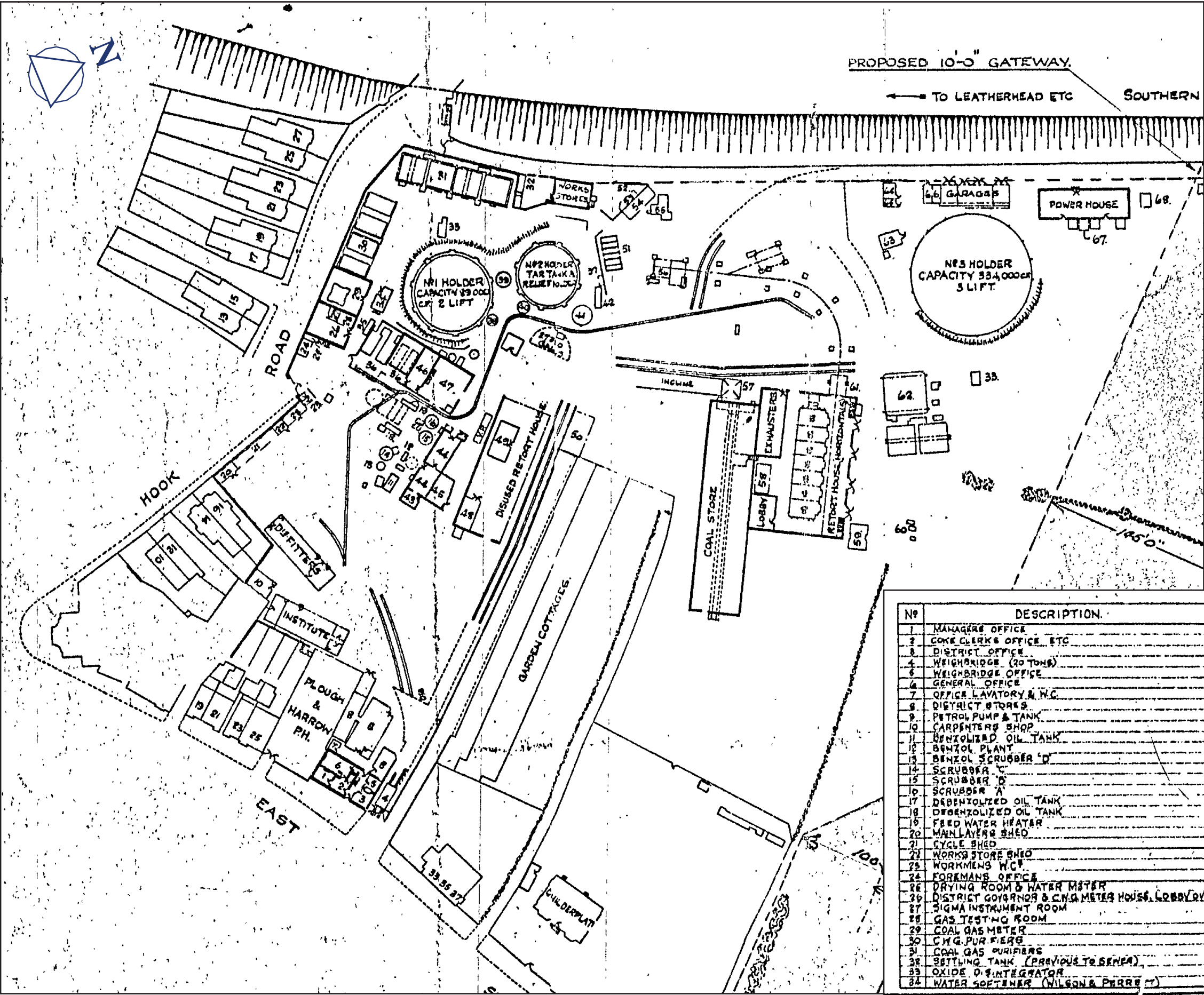


Figure 9: Archive plan of the Gasworks, 1931, identifying functions of the gasworks buildings
(Archive Ref: SEWND_E_B_4)

No	DESCRIPTION
1	MANAGERS OFFICE
2	COKE CLERKS OFFICE ETC
3	DISTRICT OFFICE
4	WEIGHBRIDGE (20 TONS)
5	WEIGHBRIDGE OFFICE
6	GENERAL OFFICE
7	OFFICE LAVATORY & W.C.
8	DISTRICT STORES
9	PETROL PUMP & TANK
10	CARPENTERS SHOP
11	BENZOLIZED OIL TANK
12	BENZOL PLANT
13	BENZOL SCRUBBER 'D'
14	SCRUBBER 'C'
15	SCRUBBER 'B'
16	SCRUBBER 'A'
17	DEBENZOLIZED OIL TANK
18	DEBENZOLIZED OIL TANK
19	FEED WATER HEATER
20	MAINLAYERS SHED
21	CYCLE SHED
22	WORKS STORE SHED
23	WORKMENS W.C.
24	FOREMANS OFFICE
25	DRYING ROOM & WATER METER
26	DISTRICT GOVERNORS & C.M.G. METERS HOUSES, LOBBY OVER
27	SIGMA INSTRUMENT ROOM
28	GAS TESTING ROOM
29	COAL GAS METER
30	C.M.G. PURIFIERS
31	COAL GAS PURIFIERS
32	SETTLING TANK (PREVIOUS TO SENPA)
33	OXIDE DISINTEGRATOR
34	WATER SOFTENER (WILSON & PHIPPS)

No	DESCRIPTION
35	BOILER FEED TANK
36	BOILERS
37	PUMP HOUSE
38	NO. 1 HOLDER WELL
39	TAR TANK 7870 GALLONS
40	NO. 2 HOLDER WELL
41	GAS OIL STORAGE TANK 18,245 GALLONS
42	TAR TANK 1810 GALLONS
43	GAS ENGINE HOUSE
44	FITTERS SHOP
45	BLACKSMITHS SHOP
46	ENGINE HOUSE C.W.G.
47	GENERATOR HOUSE C.W.G.
48	GARAGE
49	BOOSTER HOUSE NO. 2 & 3
50	MATERIALS SHED
51	DEHYDRATED TAR TANK 16,000 GALLONS
52	ARTESIAN WELL
53	PUMP HOUSE
54	COKE YARD STORE
55	TAR DEHYDRATING PLANT
56	COKE GRADING PLANT
57	COAL HOPPER
58	LIQUOR TANK 6750 GALLONS
59	SMOKE PLANT
60	GREASE SEPARATING PLANT (2 BUDD)
61	COKE QUENCHING TANK
62	COAL GAS PURIFIERS
63	COAL GAS METER HOUSE
64	BRICKLAYERS SHED
65	PAINT SHED
66	STABLE
67	POWERHOUSE CIRCULATING WATER TANK
68	BOOSTER HOUSE NO. 1

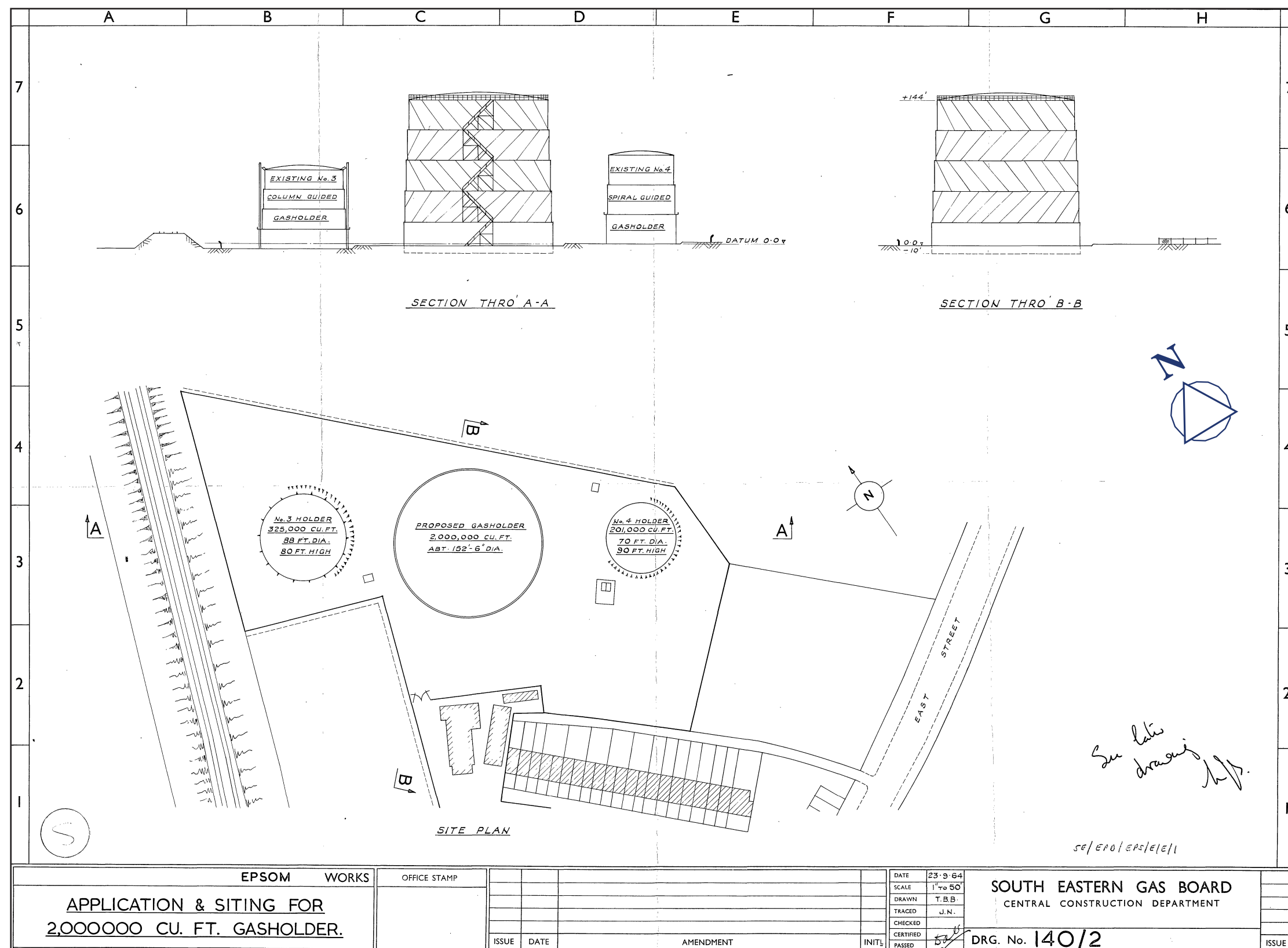


Figure 10: Archive plan of the Gasworks with elevations of the gasholders, 1964 (Archive Ref: SE_EPD_EPS_E_E_1)

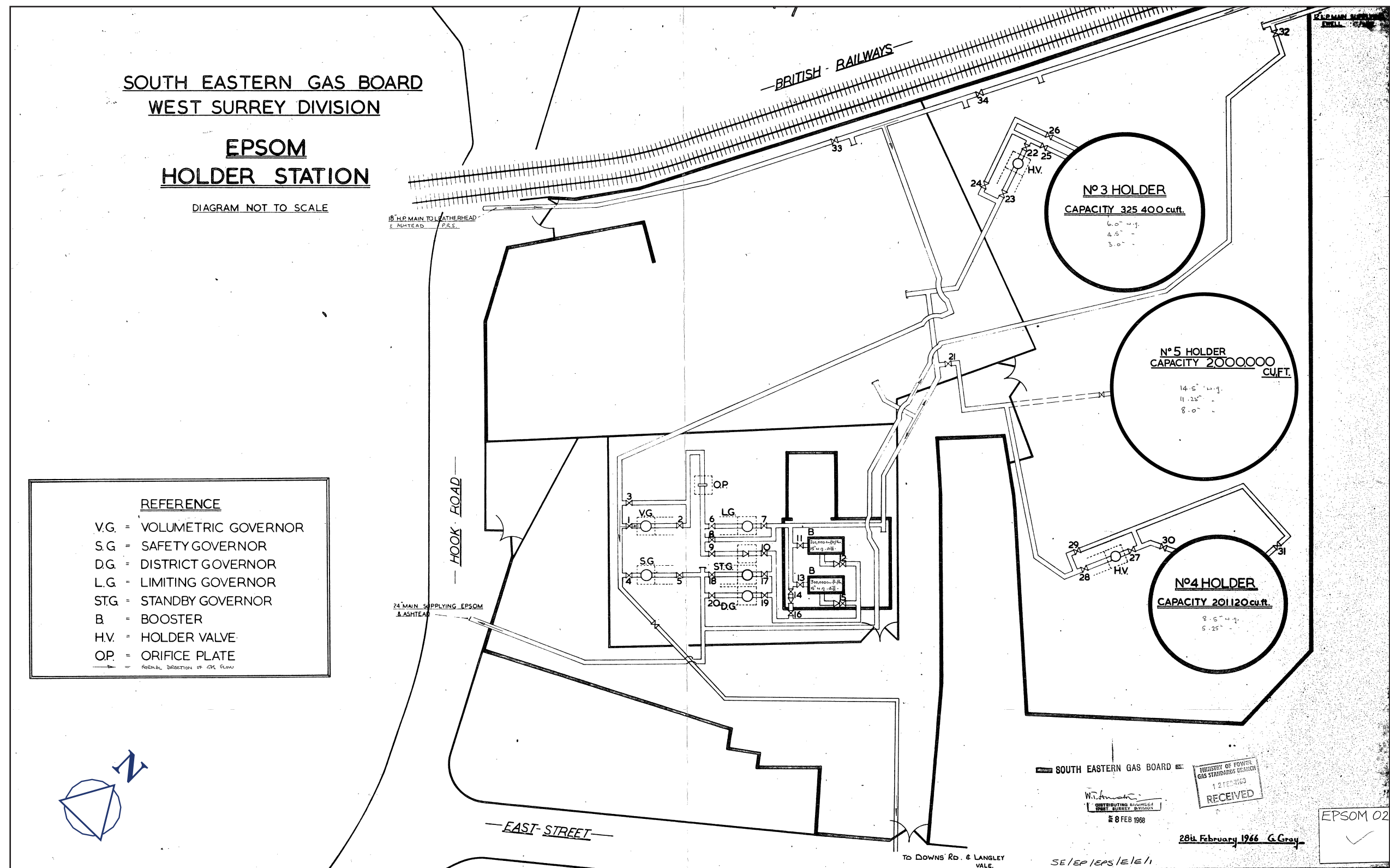


Figure 11: Archive plan of the Gasworks 1966 (Archive Ref: SE_EP_EPS_E_E_1)

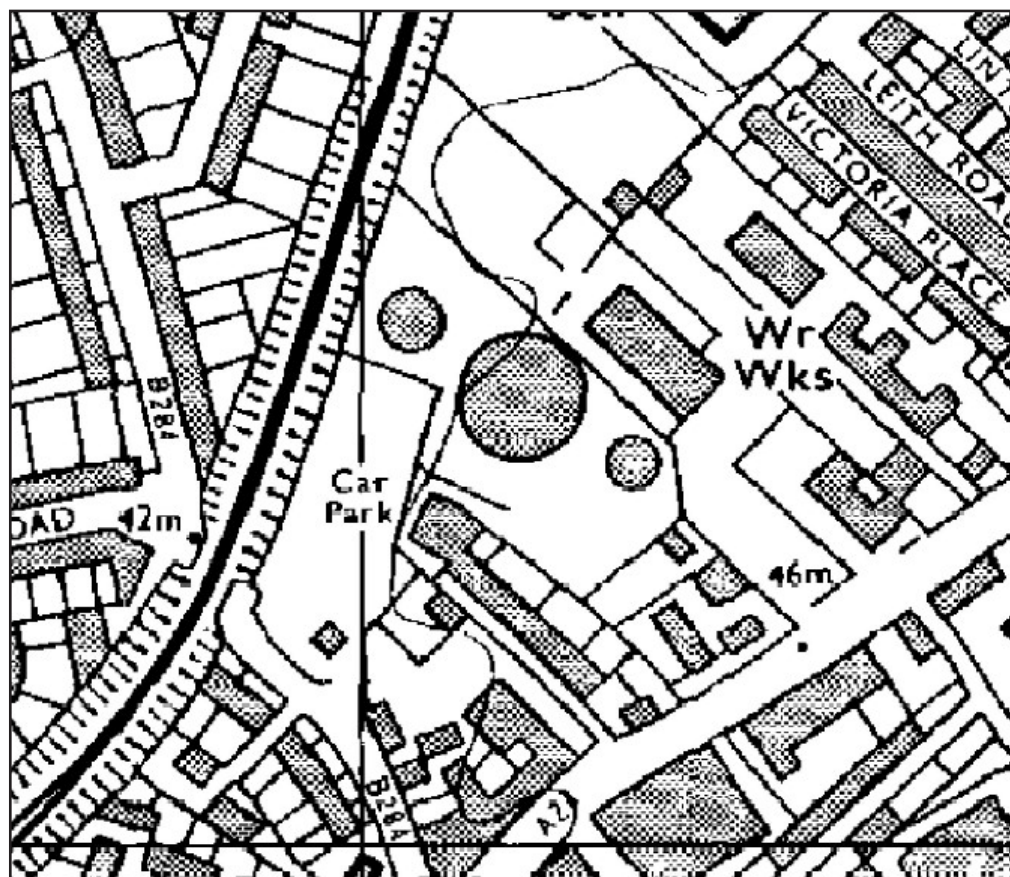


Figure 12: Extract from Ordnance Survey map, 1975

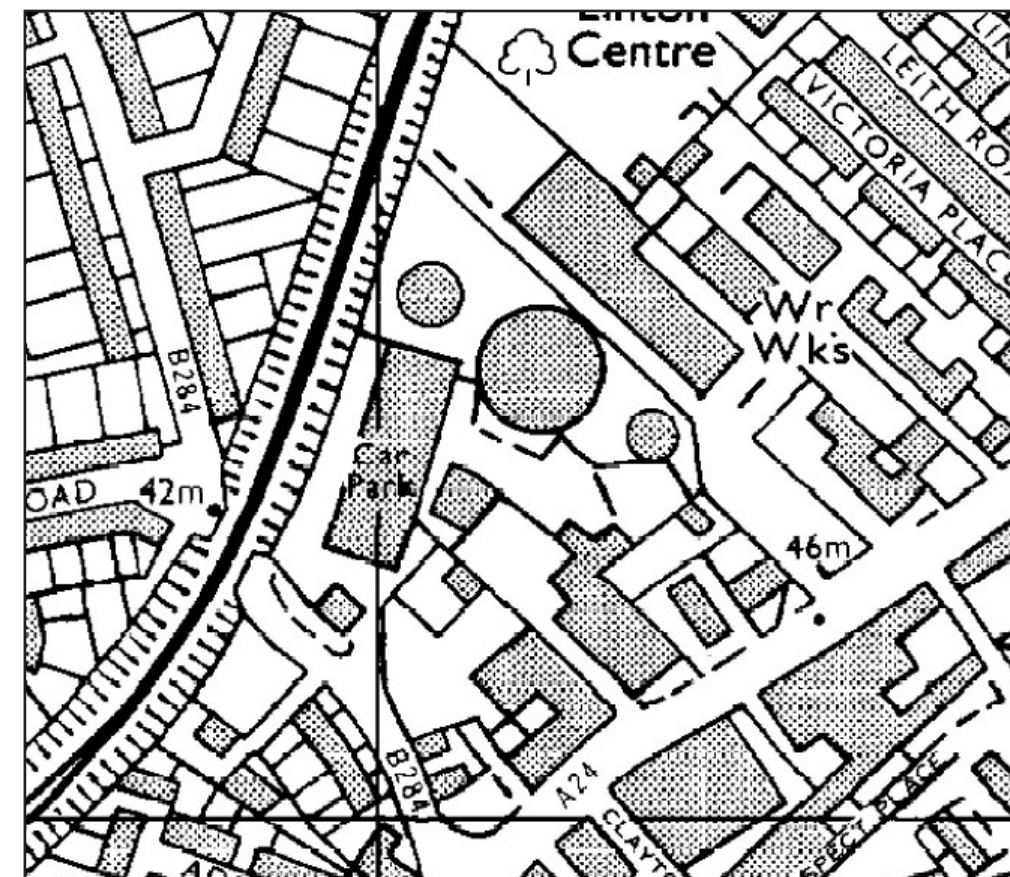


Figure 13: Extract from Ordnance Survey map, 1992

APPENDIX 2: PLATES



Plate 1: Gasholder Nos 3 & 5, general view of the gasholders in their setting from the south



Plate 2: Gasholder No 3, general view from the east



Plate 3: Gasholder No 3, general view of guide framing from the east



Plate 4: Gasholder No 3, general view of guide framing from the south-east



Plate 5: Gasholder No 3, general view from the north-east



Plate 6: Gasholder No 3, general view of guide framing from the south-west



Plate 7: Gasholder No 3, general view from the south-west



Plate 8: Gasholder No 3, general view at the location of Standard 4 (note the two knock-off switches to either side of the standard), from the west



Plate 9: Gasholder No 3, detail of tank at Standard 17 from the south-west



Plate 10: Gasholder No 3, detail of tank from the ESE



Plate 11: Gasholder No 3, detail of tank at Standard 5 from the SSE



Plate 12: Gasholder No 3, detail of side of lower standard from the ENE



Plate 13: Gasholder No 3, detail of Standard 17 from the south-east



Plate 14: Gasholder No 3, detail of Standard 3 from the SSW



Plate 15: Gasholder No 3, detail of Standard 4 from the south-west

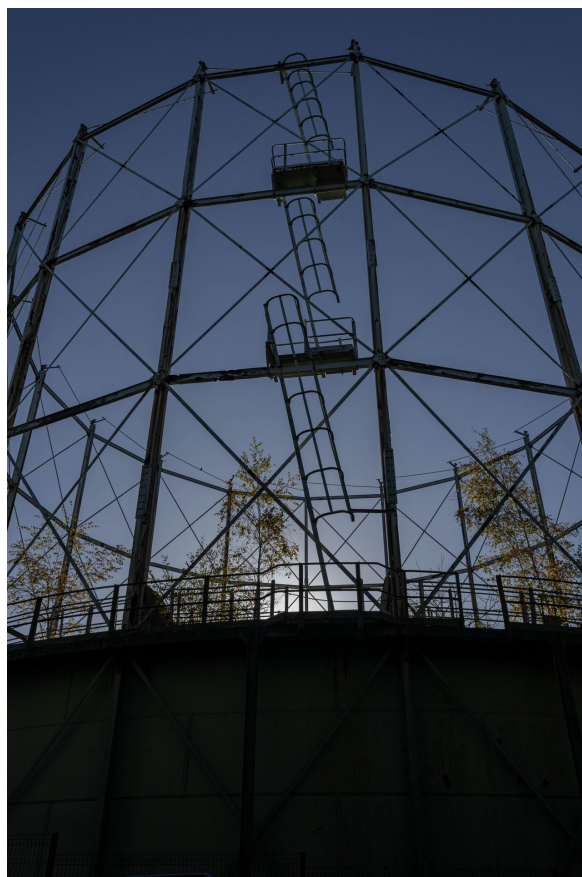


Plate 16: Gasholder No 3, detail of access ladder to the north of the gasholder from the north



Plate 17: Gasholder No 3, detail of upper walkway from the ENE



Plate 18: Gasholder No 3, detail of upper walkway from the ENE



Plate 19: Gasholder No 3, detail of knock-off switches to the south-west of the holder from the south-west



Plate 20: Gasholder No 3, detail of knock-off switches to the south-west of the holder from the south-west



Plate 21: Gasholder No 3, detail of knock-off switch to the north of the holder from the NNW



Plate 22: Gasholder No 3, detail of hose supports to the south side of the holder, from the south



Plate 23: Gasholder No 3, detail of hose supports to the south side of the holder, from the south



Plate 24: Gasholder No 3, detail of brick tank to the SSE side of the holder from the west



Plate 25: Gasholder No 3, detail of pipework from the north-west



Plate 26: Gasholder No 3, detail of pipework from the SSW



Plate 27: Gasholder No 3, detail of pipework from the SSW



Plate 28: Gasholder No 3, detail of pipework from the NNW

APPENDIX 3: DIGITAL PHOTOGRAPHIC REGISTER

Photo Ref	Structure	Description	Taken From	Date
ESP 01	Gasholder No 3	General view	E	31/10/2023
ESP 02	Gasholder No 3	General view of guide-framing	E	31/10/2023
ESP 03	Gasholder No 3	General view of guide framing	SE	31/10/2023
ESP 04	Gasholder No 3	General view	NE	31/10/2023
ESP 05	Gasholder No 3	Detail of Standard 17	SE	31/10/2023
ESP 06	Gasholder No 3	Detail of Standard 17 and tank	SW	31/10/2023
ESP 07	Gasholder No 3	Detail of tank	ESE	31/10/2023
ESP 08	Gasholder No 3	Detail of tank	ESE	31/10/2023
ESP 09	Gasholder No 3	Detail of lower side of standard	ENE	31/10/2023
ESP 10	-	Detail of brick tank to the SSE side of the gasholder	W	31/10/2023
ESP 11	Gasholder No 3	Detail of upper walkway showing hose supports	S	31/10/2023
ESP 12	Gasholder No 3	Detail of Standard 3	SSW	31/10/2023
ESP 13	Gasholder No 3	Detail of Standard 4	SSW	31/10/2023
ESP 14	Gasholder No 3	Detail of knock-off switches to either side of Standard 4	SSW	31/10/2023
ESP 15	Gasholder No 3	Detail of Standard 5 and tank	SSE	31/10/2023
ESP 16	Gasholder No 3	Detail of upper walkway showing hose supports	S	31/10/2023
ESP 17	Gasholder No 3	Detail of knock-off switches to either side of Standard 4	SSW	31/10/2023
ESP 18	Gasholder No 3	General view of tank to S side of the gasholder	W	31/10/2023
ESP 19	Gasholder No 3	General view of guide framing	SW	31/10/2023
ESP 20	Gasholder No 3	General view	SW	31/10/2023
ESP 21	-	Detail of pipework to NW side of gasholder	SSW	31/10/2023
ESP 22	-	Detail of pipework to NW side of gasholder	WNW	31/10/2023
ESP 23	-	Detail of pipework to NW side of gasholder	SSW	31/10/2023
ESP 24	-	Detail of pipework to NW side of gasholder	NW	31/10/2023
ESP 25	Gasholder No 3	Detail of stair to N side of the gasholder	N	31/10/2023
ESP 26	Gasholder No 3	Detail of stair to N side of the gasholder	N	31/10/2023
ESP 27	Gasholder No 3	Detail of knock off switch	NW	31/10/2023
ESP 28	Gasholder No 3	Detail of upper walkway	NE	31/10/2023
ESP 29	Gasholder No 3	Detail of knock off switch and upper walkway	NE	31/10/2023
ESP 30	Gasholder No 3	General view of gasholder in its setting	S	31/10/2023

APPENDIX 4: SITE PLAN SHOWING POSITION AND DIRECTION OF PHOTOGRAPHS & PLATES

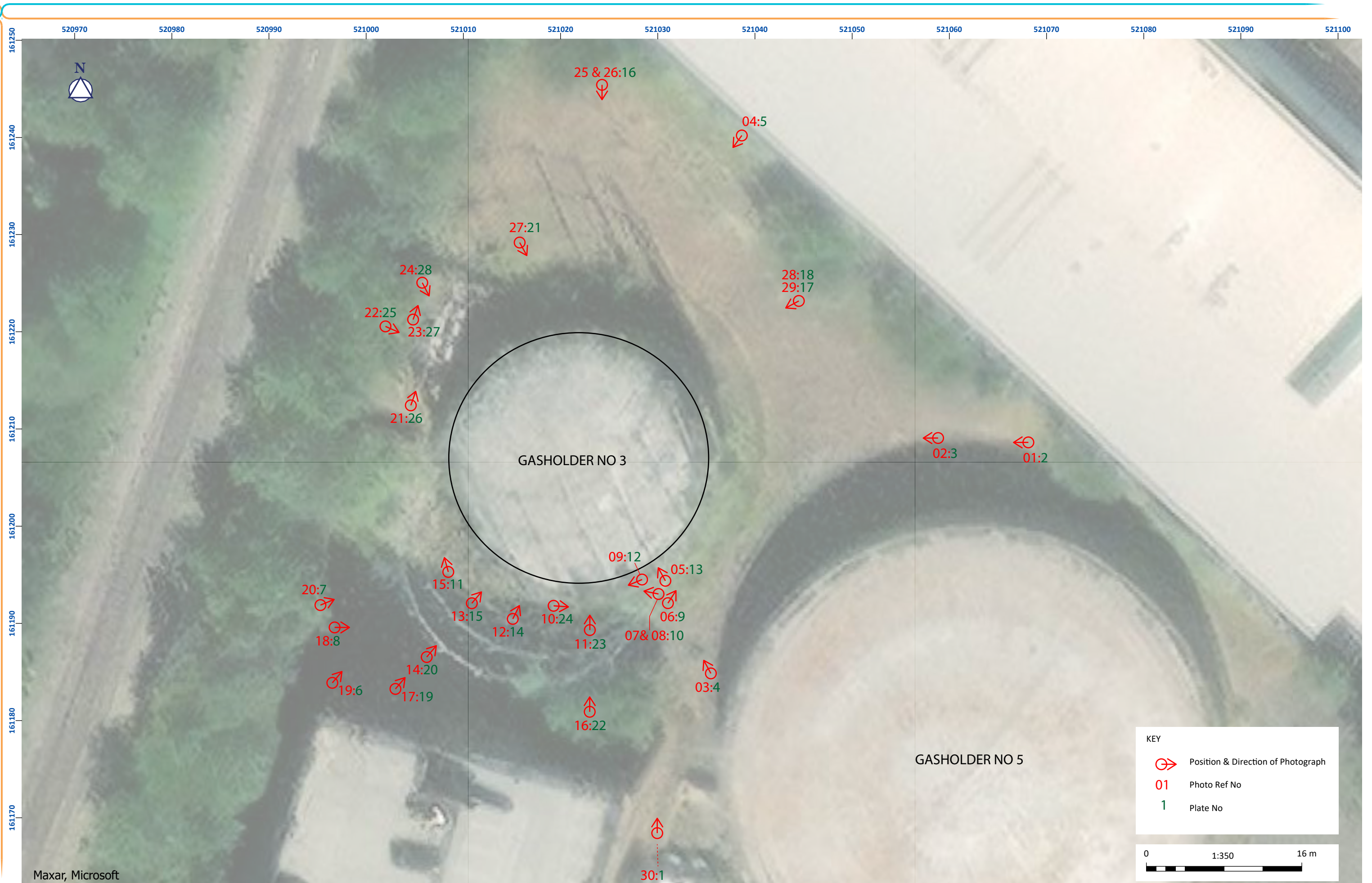


Figure A1: Gasholder No 3, Photo Plan

APPENDIX 5: COPY OF OASIS ENTRY

OASIS ID (UID): aocarcha1-522353

Project Name: Visual Buildings Record (Level 1) at Gasholder No 3, East Street, Epsom

Activity type: Visual Buildings Record (Level 1)

Sitecode(s): 23686_AD

Project Identifier(s): 23686_AD

Planning Id: [no data]

Reason for Investigation: Heritage management

Organisation Responsible for work: AOC Archaeology Group

Project Dates: 31-Oct-2023 - 31-Oct-2023

HER: Surrey HER

HER Identifiers: [no data]

Project Methodology: The survey was carried out prior to any contractors on site. Both were subject to the equivalent of a Level 1/2 historic building record as outlined in Historic England guidelines in their publication Understanding Historic Buildings: A Guide to Good Recording Practice (2016). This included a full photographic, written and drawn (measured survey) record.

Project Results: AOC Archaeology Group was commissioned by SGN to undertake a survey of a redundant gasholder, Gasholder No 3, at East Street in Epsom, Surrey. The work has been undertaken as part of a wider programme involving the decommissioning and dismantling of the remaining redundant gasholders in the UK operated by SGN, and also as a condition of planning consent on the demolition of the holders. The original gasworks associated with the Epsom works, which has long since been removed, was located to the south-west of the present gasholder compound, which was developed originally between 1896 – 1913 with the construction of Gasholder No 3. This was joined in the later 20th century by two additional gasholders, Nos 4 and 5, although only No 5 is still present today. Gasholder No 3, now also called Gasholder No 6 (implying a rebuild of the original) is very plain in styling with riveted standards with steel horizontal members adjoined to each standard and cross-braced between each lift and standard.

Keywords:

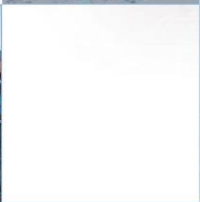
Subject/Period: Gas Holder: 20TH CENTURY

FISH Thesaurus of Monument Types

Archive:

Reports in OASIS:

Sproat, D., (2024). Gasholder No 3, East Street, Epsom: Historic Building Recording Report. Edinburgh: AOC Archaeology Group. 23686_AD.



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