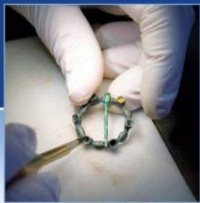


SGN Gasholder Heritage Review

Homesdale Road, Bromley, Greater London

Historic Building Recording Final Report

AOC 23686_G
5th February 2019



ARCHAEOLOGY

HERITAGE

CONSERVATION

SGN Gasholder Heritage Review: Homesdale Road, Bromley, Greater London

Historic Building Recording Final Report

On Behalf of: Montagu Evans
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On behalf of:
SGN

National Grid Reference (NGR): Gasholder No 4 - TQ 41434 68811
Gasholder No 5 - TQ 41498 68814

AOC Project No: 23686

OASIS No: 293332

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Date of Report: 5th February 2019

This document has been prepared in accordance with AOC standard operating procedures.

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Contents

Page

List of Figures	2
List of Plates	2
List of Appendices	3
<i>Summary</i>	1
1 INTRODUCTION	2
1.1 Project Background	2
1.2 Site Location	2
2 OBJECTIVES	2
3 METHODOLOGY	2
3.1 Introduction	2
3.2 Archive Research	2
3.3 Photographic record	2
3.4 Written record	3
4 RESULTS	4
4.1 Historical Background	4
4.2 The Gasholders	9
4.3 The Gasworks Buildings	9
5 CONCLUSIONS & FURTHER WORKS	10
6 REFERENCES	10
6.1 Bibliographical references	10
6.2 Cartographic references	10
6.3 National Gas Archive	10
APPENDIX 1: PHOTOGRAPHIC RECORD	11

List of Figures

Figure 1: Site location plan

Figure 2: Extract from Ordnance Survey map, 1871

Figure 3: Extract from Ordnance Survey map, 1898

Figure 4: Extract from Ordnance Survey map, 1909

Figure 5: Extract from Ordnance Survey map, 1919

Figure 6: Extract from Ordnance Survey map, 1945

Figure 7: Site plan of Bromley Gasworks, 1949

Figure 8: Aerial photograph of Bromley Gasworks, showing Gasholders No 4 and 5 in operation

Figure 9: Site plan of Bromley Gasworks, 1971

Figure 10: Site plan of Bromley Gasworks and Holding Station, 1979

Figure 11: Bromley Gasholders, detailed site plan

List of Plates

Plate 1: Gasholder No 5, general view from the south-west

Plate 2: Gasholder No 5, general view from the north-west

Plate 3: Gasholder No 5, detail of the guided frame from the south

Plate 4: Gasholder No 5, detail of the guided frame footing from the north-west

Plate 5: Gasholder No 5, detail of the guided rollers from the south

Plate 6: Gasholder No 5, general view of the crown of the gasholder from the south-east

Plate 7: Gasholder No 5, detail of the riveted panel on the crown of the gasholder, from the north-west

Plate 8: Gasholder No 5, detail of the hand rail to the south-east of the gasholder, from the south-east

Plate 9: Gasholder No 5, detail of knock-off switch adjacent to the south-east side of the gasholder, from the south-east

Plate 10: Gasholder No 5, general view of the gasholder after part-demolition, from the south

Plate 11: Gasholder No 5, general view of the gasholder after part-demolition, from the south

Plate 12: Gasholder No 5, general view of the gasholder after part-demolition, from the south-west

Plate 13: Gasholder No 5, detail of the guided rollers after part-demolition, from the south-west

Plate 14: Gasholder No 5, detail of the dumpling and crown framing support, from the SSW

Plate 15: Gasholder No 5, detail of the dumpling and crown framing support, from the south

Plate 16: Gasholder No 5, detail of the dumpling and crown framing support, from the SSE

Plate 17: Gasholder No 5, close detail of the dumpling and crown framing support, from the SSE

Plate 18: Gasholder No 5, close detail of the inlet/outlet gas pipe to the side of the tank, from the south

Plate 19: Gasholder No 5, detail of the inlet/outlet gas pipe adjacent to the inside of the exposed inner side of the lower lift, from the SSE

Plate 20: Gasholder No 5, detail of the exposed inner walls of the lower lift, from the SSW

Plate 21: Gasholder No 5, detail of the exposed inner walls of the lower lift, from the SSW

Plate 22: Gasholder No 5, close detail of the broken-away lifts from the SSE

Plate 23: Gasholder No 5, close detail of the exposed timber crown framing, from the south

Plate 24: Gasholder No 5, close detail of the exposed timber crown framing, from the south

Plate 25: Gasholder No 5, close detail of the exposed timber crown framing, from the south

Plate 26: Gasholder No 5, close detail of the exposed timber crown framing, from the SSE

Plate 27: Gasholder No 5, close detail of the exposed timber crown framing, from the south

Plate 28: Gasholder No 4, general view from the north

Plate 29: Gasholder No 4, general view of the crown of the gasholder from the south-east

Plate 30: Gasholder No 4, detail of rounded riveted panel on the crown of the gasholder from the south-east

Plate 31: Gasholder No 4, general view of the north-east side of the gasholder from the NNW

Plate 32: Gasholder No 4, general view of the east side of the gasholder from the SSW

Plate 33: Gasholder No 4, detail of the roller carriages on the north-east side of the gasholder from the east

Plate 34: Gasholder No 4, detail of outer roller carriage from the south-east

Plate 35: Gasholder No 4, detail of the broken-away lift and exposed tank after demolition, from the south

Plate 36: Gasholder No 4, detail of the broken-away lift and exposed tank after demolition, from the south-west

Plate 37: Gasholder No 4, detail of the broken-away lift and exposed tank after demolition, from the ENE

Plate 38: Gasholder No 4, detail of the broken-away lift and exposed tank after demolition (including guided rollers), from the south

Plate 39: Gasholder No 4, detail of the broken-away lift and exposed tank after demolition (including guided rollers), from the north-west

Plate 40: Building E, Booster House, general view of the south-west elevation from the south-west

Plate 41: Building E, Booster House, detail of the top of the gable of the south-west elevation, from the south-west

Plate 42: Building E, Booster House, general view of the south-east elevation from the east

Plate 43: Building E, Booster House, detail of window to the south-west side of the south-east elevation, from the south-east

Plate 44: Building E, Booster House, general view of the interior from the north-west

Plate 45: Building E, Booster House, general view of the interior from the south-east

Plate 46: Building E, Booster House, general view of interior showing pipework from the south-west

Plate 47: Building E, Booster House, general view of the interior north-east wall from the south-west

Plate 48: Building E, Booster House, detail of wall plaque on the interior north-east wall, from the south-west

Plate 49: Building C, general view of timber covers for pipework with Building B in the background, from the north-west

Plate 50: General view of the buildings to the north-east of the gasholder complex, from the SSE

Plate 51: Building D, general view from the north

Plate 52: General view of pipe and gantry structure to the south of the gasholder complex, from the north

List of Appendices

Appendix 1: Photographic Register

Summary

AOC Archaeology Group was commissioned by SGN to undertake an historic building survey of two redundant gasholders at Homesdale Road, Bromley in Greater London in advance of their demolition.

The two gasholders on the site are located in a locked compound between Homesdale Road and Liddon Road to the south-east of Bromley. The earlier gasholder, No 5, was constructed in the 1880s - 1890s as part of an original set of three gasholders for the gasworks at Homesdale Road. It is a frame-guided holder and, prior to its removal, was in a poor condition with no access to the main frame or walkway.

The second gasholder, No 4, is a much later 1960s below-ground gasholder, which was erected after the demolition of the other two late 19th century holders.

Two phases of works were required, including an initial survey prior to any demolition work, with a second stage undertaken during the demolition process to record the interior of the holders. This exposed the concrete tank in the earlier Gasholder No 5, identifying the dumping of the concrete tanks and the complex steel and timber framing for the crown support.

1 INTRODUCTION

1.1 Project Background

1.1.1 AOC Archaeology Group was commissioned by SGN to undertake a survey of two redundant gasholders at Homesdale Road in Bromley, Greater London. The work has been undertaken in advance of a wider programme involving the decommissioning and dismantling of the remaining redundant gasholders in the UK operated by SGN. This final report comprises the results of the Phase I and Phase II works, undertaken prior to (Phase I) and during (Phase II) demolition, consisting of a photographic and a written record.

1.2 Site Location

1.2.1 The gasholders at Homesdale Road are located at NGR: TQ 41434 68811 and TQ 41498 68814 (Figure 1). They are situated in a fenced-off compound to the west of a larger abandoned industrial site between Homesdale Road and Liddon Road. To the north of the site are a number of industrial units and to the south is a Tesco Superstore. To the west is a large greenfield site to the rear of Bickley Primary School.

2 OBJECTIVES

2.1 The objective of the historic building survey was to create a 'preservation by record' of the redundant gasholders prior to their decommissioning through archive research, written and photographic survey.

3 METHODOLOGY

3.1 Introduction

3.1.1 The historic building recording has been undertaken to a brief provided by Montagu Evans (2017) and included an archive research for early or original plans and elevations of the gasholders together with an on-site written and photographic record.

3.2 Archive Research

3.2.1 A general map-regression exercise was undertaken on the site to determine the general history and development of the gasworks site. All publicly accessible pre-Ordnance Survey maps and Ordnance Survey maps were viewed, and a selection have been included in this report (Figures 2 – 6).

3.2.2 In addition, the following archives were consulted to identify early/original archives and drawings of the gasworks and gasholders:

- Historic England Archives (Aerofilm collection 1919 – 1953)
 - no aerial photos showing the gasholders 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
 - Various plans of the gasworks were uncovered in these archives, including site plans of the gasworks from the mid-late 20th century and an aerial photograph of the present gasholders in operation (Figures 7 – 10).

3.3 Photographic record

3.3.1 A general exterior photographic survey was undertaken of the gasholders and associated gasworks buildings in colour digital using a digital SLR camera in both .JPG and .RAW format. In addition to general shots of the structures, detail shots of features such as structural elements, pipework, guided rollers, etc, were also taken. A discreetly placed 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 1, together with a plan

showing the position and direction of each photograph for each phase. A selection of digital photographs has also been used as plates to illustrate this report (1 – 29).

3.4 Written record

- 3.4.1 A written survey was undertaken of the exterior of the gasholders and associated gasworks buildings 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.



Figure 1: Site location plan

01/23686/BROM/01/01

4 RESULTS

4.1 Historical Background

- 4.1.1 Little is known about the origins of the gasworks at Bromley, which was established between 1871 – 1898 (Figures 2 & 3). The 1871 Ordnance Survey map shows the area as open land to the north of the east/west London to Dover Railway. By the 1898 Ordnance Survey map, the area has been extensively developed, with a large gasworks site with three gasholders and a large complex of gasworks buildings and railway termini within (see Figure 3). Only one of these gasholders still remains today – Gasholder No 5 – which is the one located to the centre (circled in Figure 3).
- 4.1.2 In the early 20th century, the 1910, 1919 and 1945 Ordnance Survey maps show the development of the gasworks and the surrounding area (Figures 4 - 6). There have been a few additions to the gasworks buildings, although the gasholder layout has remained the same. An archive map from 1949 shows the gasworks by the middle of the 20th century with all three gasholders in place. The present Gasholder No 5 is here referred to as 'Gasholder No 2' (Figure 7).
- 4.1.3 Between 1960 - 1967, the north-west and south-east gasholders were demolished and another gasholder, No 4, was constructed to the north-west of Gasholder No 5 in 1969, designed by Clayton Son & Co Ltd (Montagu Evans 2017). The three gasholders are still seen on the 1960 Ordnance Survey map, although an aerial photograph from 1967 shows the present layout of gasholders. Two site plans of the gasworks from 1971 and 1979, have also been located in the National Gas Archive, and these show the two present gasholders on the site (Figures 8 – 10).

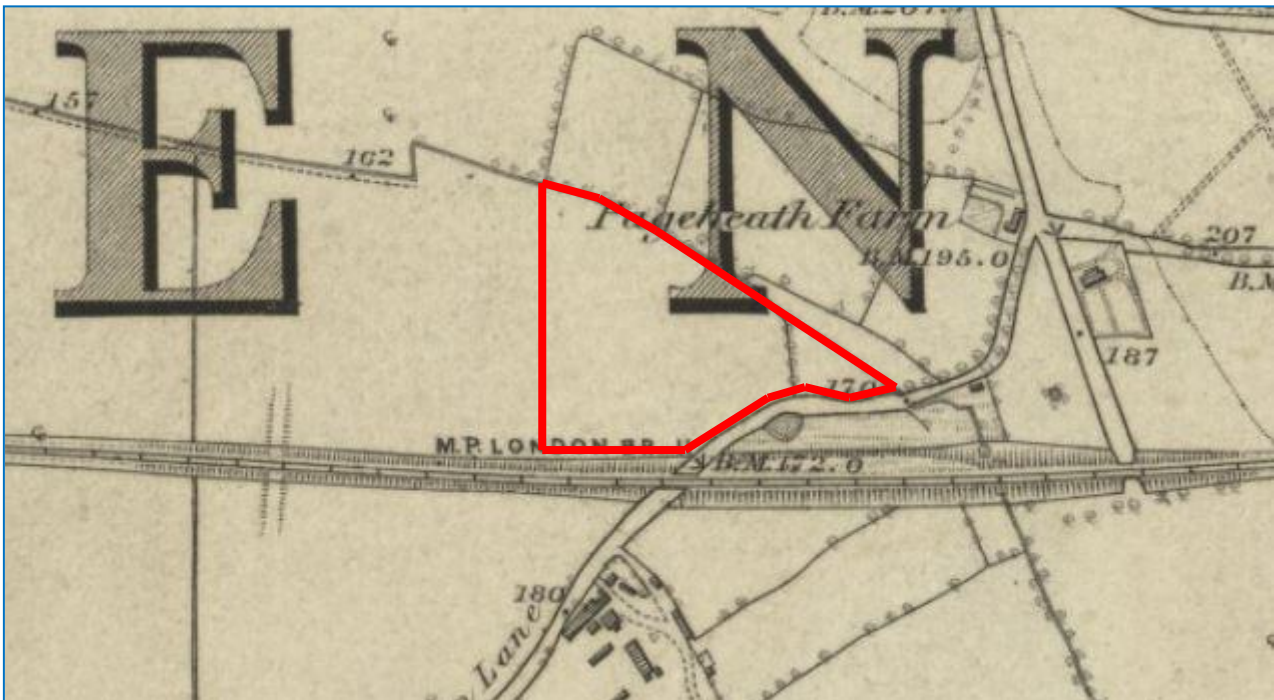


Figure 2: Extract from Ordnance Survey map, 1871 – the future site of the gasworks in outlined in red

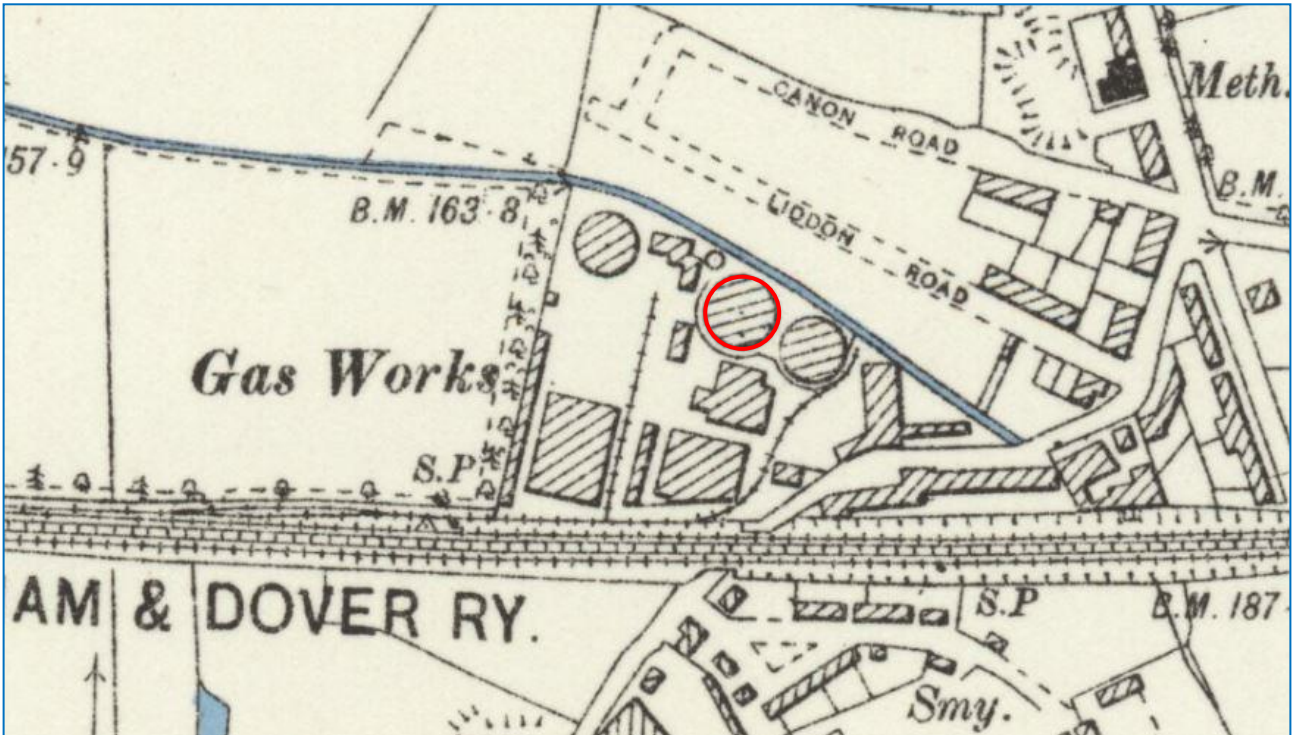


Figure 3: Extract from Ordnance Survey map, 1898 – the present Gasholder No 5 is circled in red, and the other two were demolished in the early 1960s

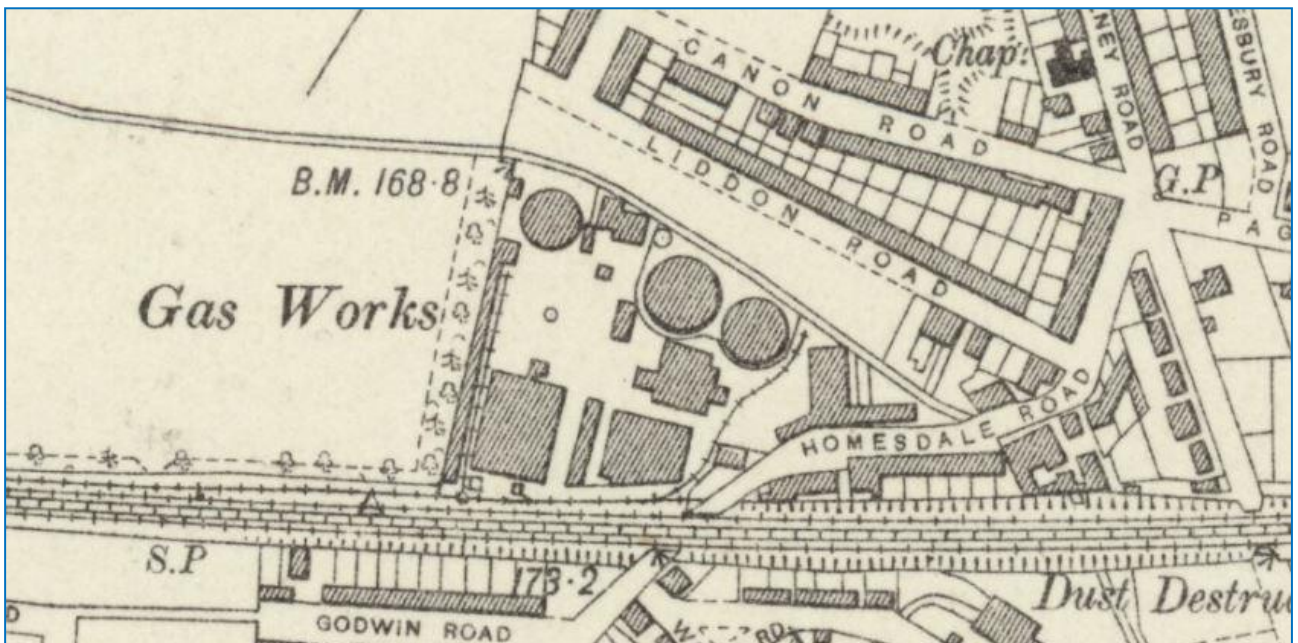


Figure 4: Extract from Ordnance Survey map, 1909

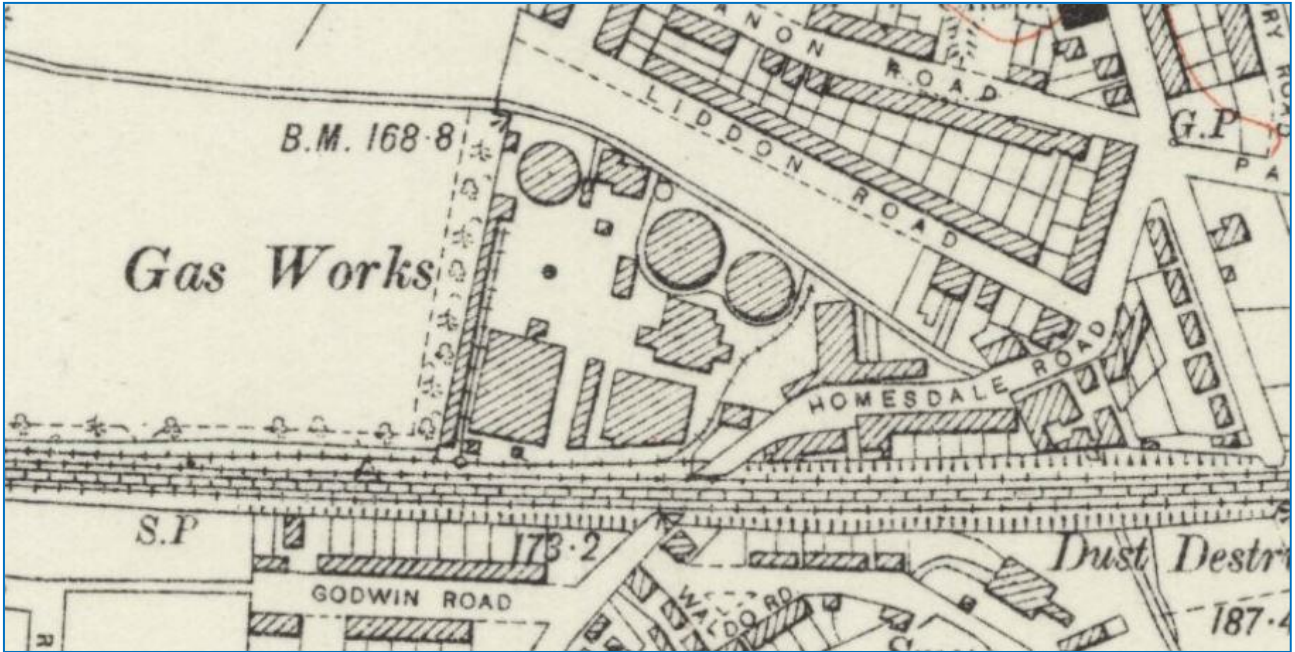


Figure 5: Extract from Ordnance Survey map, 1919

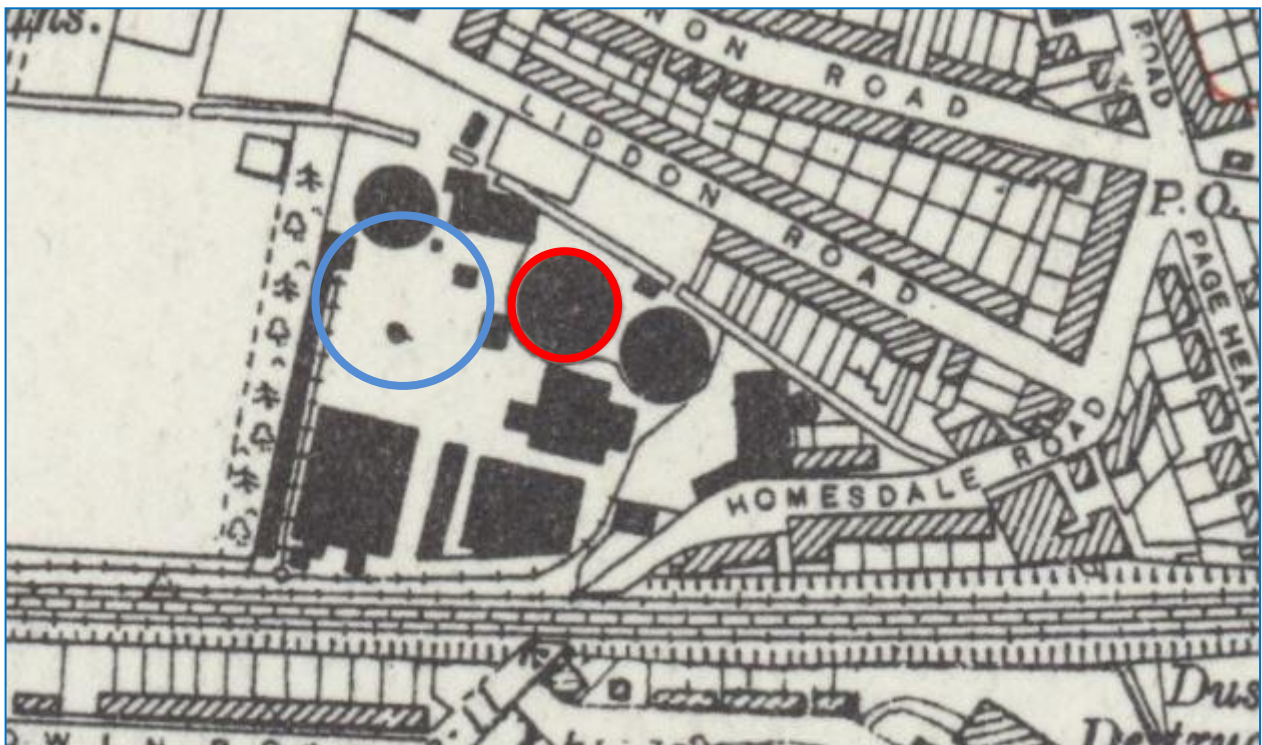


Figure 6: Extract from Ordnance Survey map, 1945 – the present Gasholder No 5 is circled in red, with the future position of Gasholder No 4 outlined in blue

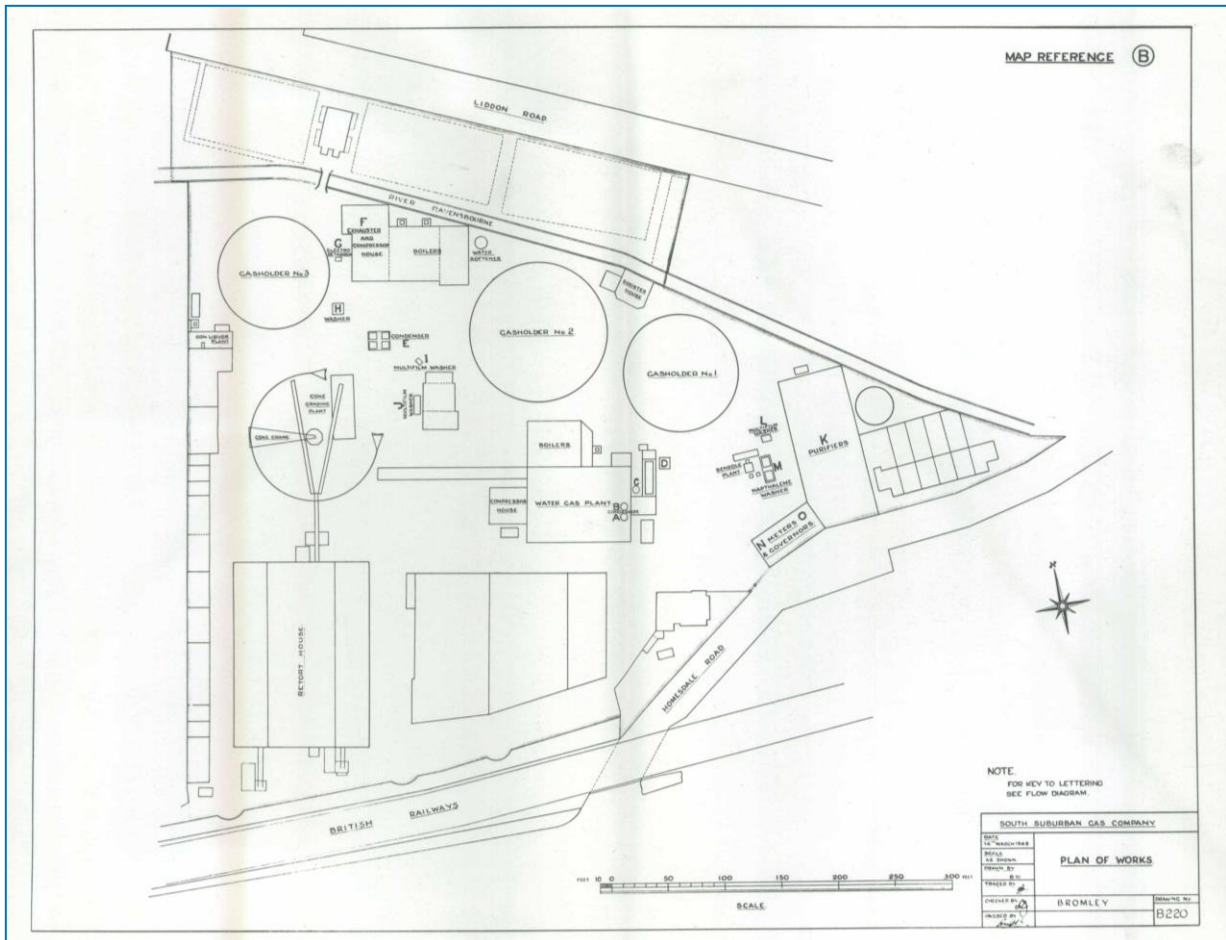


Figure 7: Site plan of Bromley Gasworks, 1949 – the Booster House, which was constructed in 1909, is shown to the north-east of Gasholder No 2 (which is now referred to as Gasholder No 5) and was still upstanding at the time of survey



Figure 8: Aerial photograph, 1969, taken from the north, showing Gasholders 4 (right) and 5 (left) in place and operational

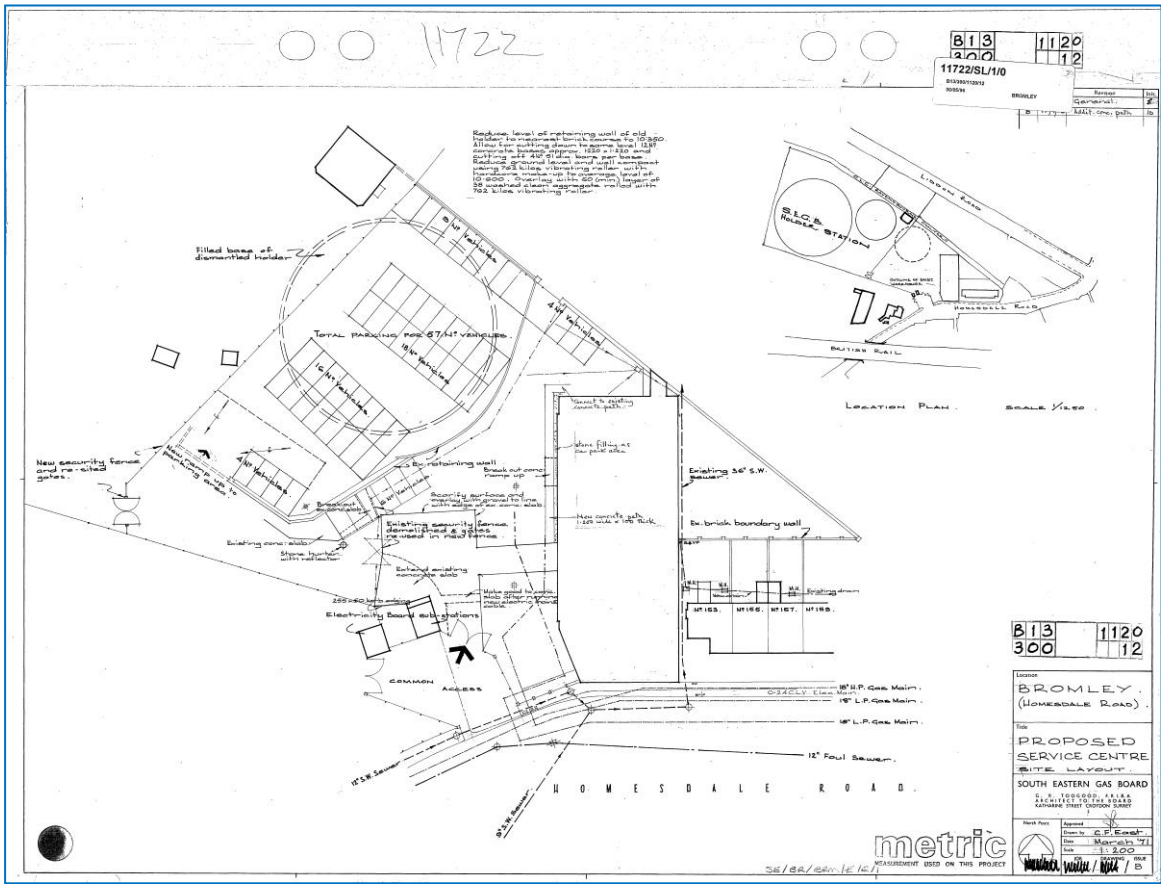


Figure 9: Site plan of Bromley Gasworks, 1971

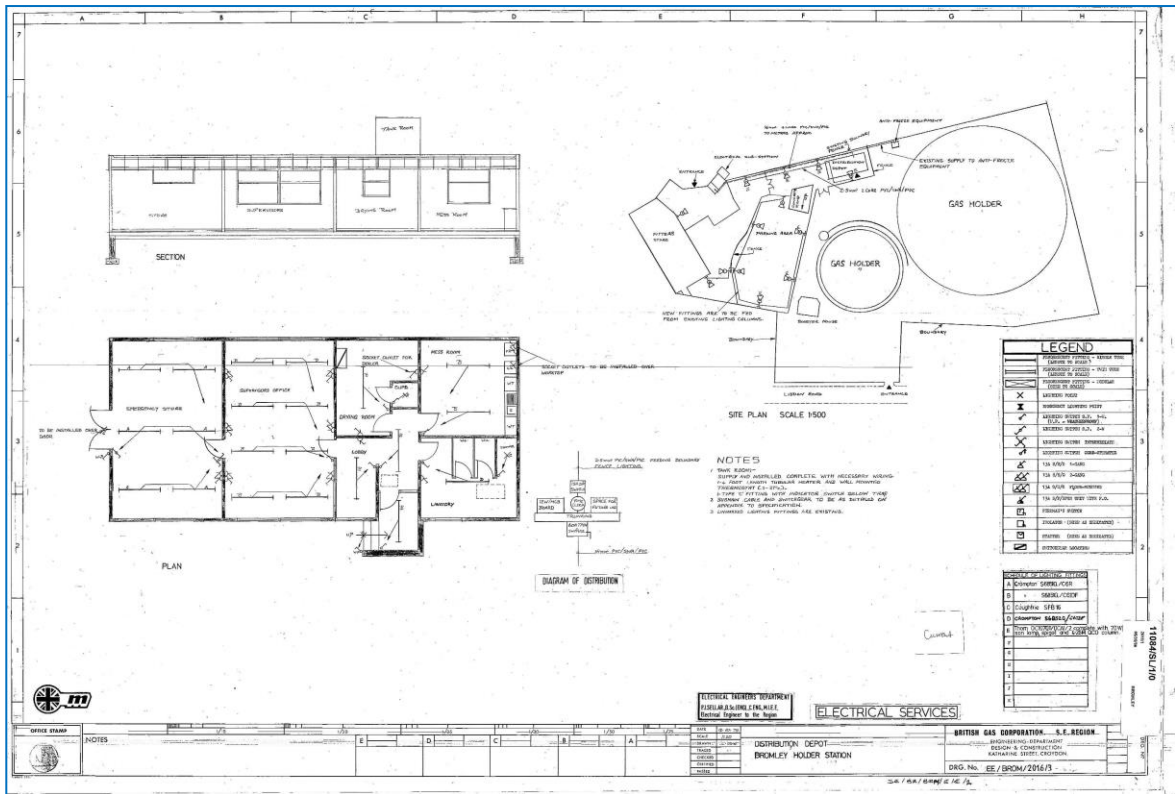


Figure 10: Site plan of Bromley Gasworks and its Holding Station, 1979

4.2 The Gasholders

4.2.1 *Gasholder No 5*

This gasholder was part of the original gasworks construction in the 1890s and is a frame-guided holder, which has been described by Heritage England (former English Heritage) in their 2000 study as a 'Type 30' holder (Tucker 2000; Montagu Evans 2017; Figure 11). It has wrought iron standards with lattice T-section and lattice box section girders, which are braced by diagonal bracing bars with circular tensioning rods (Plates 1 - 3). Painted in a cream colour, the ironwork is now extremely rusted and, as such, it was fenced-off and covered in a green mesh for health and safety reasons due to its unknown structural stability prior to its removal. However, some elements of the holder could be viewed as part of this initial survey, including the deep footings for the frame, and the guided rollers set behind each standard to operate the lifts (Plates 4 & 5).

The crown of the gasholder was constructed of riveted steel panels with a circular riveted patch to the north-west side (Plates 6 & 7). The tank was at below-ground level at the time of the Phase I survey and had a surviving walkway around its perimeter comprising a double rusted iron handrail between the concrete foundations and the crown (Plate 8). In the south-east side, there was a knock-off switch for the operation of the lifts set in the concrete foundation of the gasholder (Plate 9).

During the demolition of the gasholder, the opportunity was provided to look in more detail at the array of framing that supported the crown of the gasholder, as well as a slightly more detailed look at the framework and guided rollers, albeit with some restricted access given the poor structural condition of the frame (Plates 10 - 12). A much clearer view of the guided rollers was also possible, exposing three rollers, a typical design for this type of holder with a larger upper roller and smaller inner rollers with diagonal bracing (Plate 13). However, during the first Phase II visit, a clear view of the metal and timber framing to support the crown was visible. Firstly, the concrete tank and dumpling were visible with an array of concrete footings for vertical and angled steel uprights, three to each footing (Plates 14 - 17). The inlet and outlet pipes were then clearly visible after the removal of the sides of the lower lift to the south and west sides of the holder (Plates 18 & 19). The inside of the lower lift itself was visible to the inside of the tank, showing its riveted construction and vertical strengthening stanchions (Plates 20 - 22). Finally, the steel framing from the dumpling supported the timber crown framing and consisted of an umbrella-like array of curved and angled timber framing held in place and to the steel supports by bracing bolted onto each timber piece (Plates 23 - 27).

4.2.2 *Gasholder No 4*

This gasholder is a below-ground spiral-guided holder constructed in the late 1960s on a much larger scale than the previous late 19th century holders on the site, one of which was demolished to facilitate its construction. Painted in a sandy brown colour, the holder comprised a crown of riveted steel panels with pipe inlets (Figure 11; Plates 28 - 30). The walkway around the perimeter of the holder consisted of a double handrail between the two sets of identical roller carriages (Plates 31 - 33). These were double roller carriages with the outer carriages bolted to the upper side of the concrete foundations for the tank (Plate 34).

As a below-ground gasholder, there was little more exposed of the construction work, identifying the broken-away lifts inside the concrete tank and a closer view of the dual guided rollers (Plates 35 - 39).

4.3 The Gasworks Buildings

4.3.1 In addition to the gasholders themselves, there was a number of small ancillary buildings and pipework (A - D, see Figure 11) and a larger Booster House (E), which is located to the immediate north-east side of Gasholder No 5. Built in 1909 and constructed in brick, now whitewashed, the building is a three-by-one-bay double-height building with a pitched roof. The main entrance to the building is the south-west elevation with a central double doorway and flanking windows, all round-headed openings with a tall gable and blind oculus and datestone (Plates 40 & 41). The south-east elevation was also well-lit with two arched window bays to either side of a raised gantry (Plates 42 & 43). Internally, the building has retained much of its original character with decorative glazed tiling within and a fine set of wall plaques on the north-east wall (Plates 44 - 48).

- 4.3.2 The other buildings associated with the complex were much more modern in date built in the latter half of the 20th century and the construction of Gasholder No 4 and later. They do not appear in the 1949 archive plan of the site (see Figure 7). A small complex to the north-east of Gasholder No 5 contains three small brick-built structures with various other covers and shelters for pipework (Plates 49 - 51). There is also a gantry set over some pipework to the south-west of Gasholder No 5 (Plate 52).

5 CONCLUSIONS & FURTHER WORKS

- 5.1 Gasholder No 5 is a good example of a late 19th century gasholder (albeit in a poor condition) originating from the initial construction of the gasworks at Bromley in the 1890s. Gasholder No 4 is a much later 1960s below-ground gasholder with typical double roller carriages for two lifts, which was built to expand the gas storage capabilities for the town and saw the demolition of the other two original gasholders which were most probably also (although this cannot be confirmed) frame-guided gasholders.

6 REFERENCES

6.1 Bibliographical references

Historic England 2016 'Understanding Historic Buildings: A Guide to Good Recording Practice', <https://content.historicengland.org.uk/images-books/publications/understanding-historic-buildings/heag099-understanding-historic-buildings.pdf/>, Accessed 9th August 2017

Meade, A 1921 (2nd Edition) *Modern Gasworks Practice*. Ben Brothers Ltd: London, Chapter XIX 'The Storage of Gas', pp 621 - 688

Montagu Evans 2017 *Gasholder Sites at Marsh Lane, Salisbury & Homesdale Road, Bromley: Historic Building Recording Brief*.

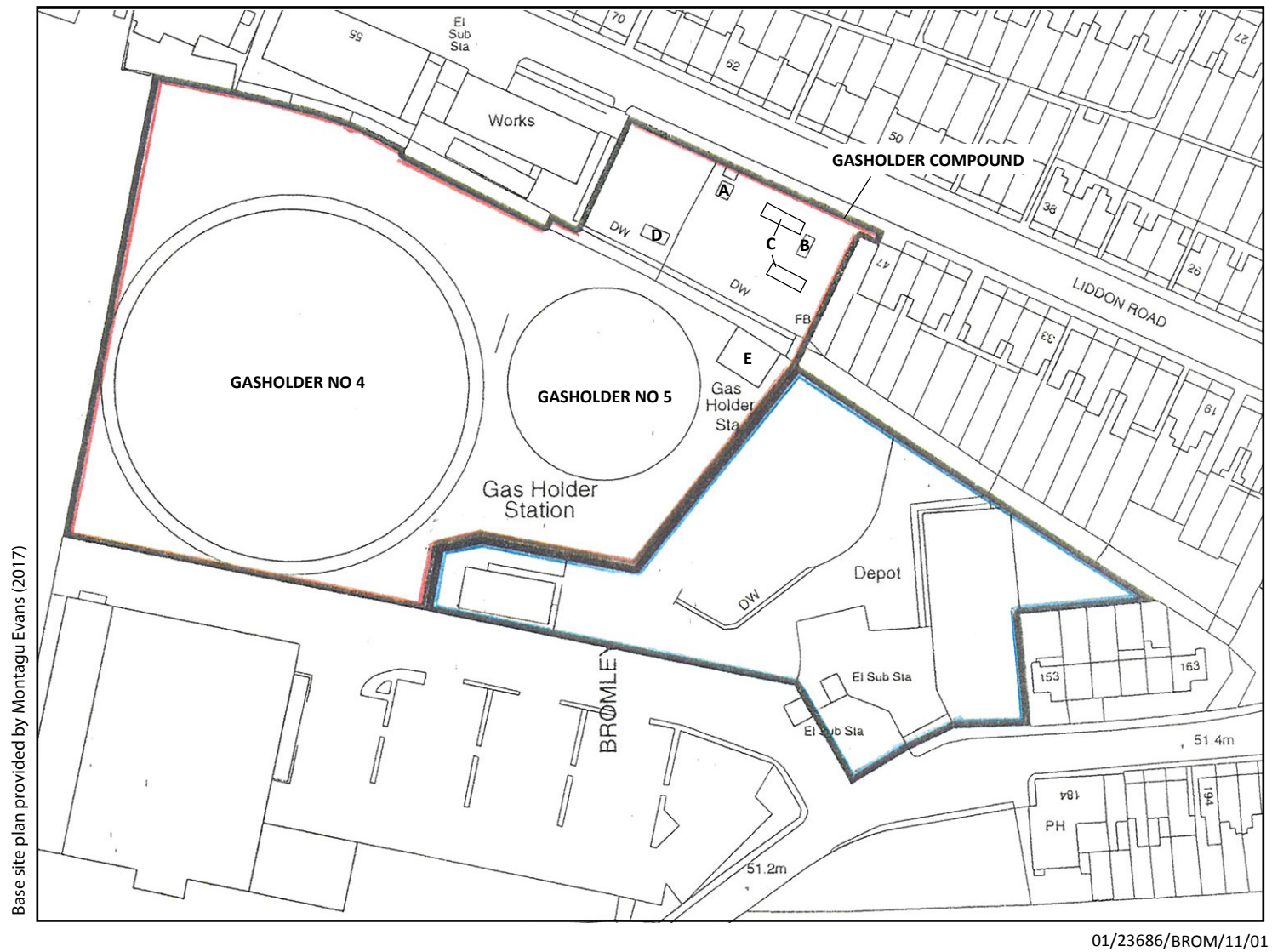
Tucker, M 2000 *London Gasholders Survey: Part A: General*. Unpublished grey literature report for Historic England (then English Heritage).

6.2 Cartographic references

1871	Ordnance Survey	<i>Kent Sheet XVI</i>
1898	Ordnance Survey	<i>Kent Sheet XVI.NW</i>
1910	Ordnance Survey	<i>Kent Sheet XVI.NW</i>
1919	Ordnance Survey	<i>London Sheet T</i>
1945	Ordnance Survey	<i>Kent Sheet XVI.NW</i>

6.3 National Gas Archive

SE/SEG/AAQ/DA/E/E/3/30	Plan of Bromley Gasworks (1949)
SE/SEG/KS/BRM/E/F/2	Aerial photograph (1967)
SE/SEG/KS/BRM/E/E/1	Plan of Bromley Gasworks (1971)
SE/SEG/KS/BRM/E/E/2	Plan of Bromley Gasworks (1971)



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Figure 11: Homesdale Road, Bromley, detailed site plan



Plate 1: Gasholder No 5, general view from the south-west



Plate 2: Gasholder No 5, general view from the north-west



Plate 3: Gasholder No 5, detail of the guided frame from the south



Plate 4: Gasholder No 5, detail of the guided frame footing from the north-west



Plate 5: Gasholder No 5, detail of the guided rollers from the south



Plate 6: Gasholder No 5, general view of the crown of the gasholder from the south-east



Plate 7: Gasholder No 5, detail of the riveted panel on the crown of the gasholder, from the north-west



Plate 8: Gasholder No 5, detail of the hand rail to the south-east of the gasholder, from the south-east



Plate 9: Gasholder No 5, detail of knock-off switch adjacent to the south-east side of the gasholder, from the south-east



Plate 10: Gasholder No 5, general view of the gasholder after part-demolition, from the south



Plate 11: Gasholder No 5, general view of the gasholder after part-demolition, from the south



Plate 12: Gasholder No 5, general view of the gasholder after part-demolition, from the south-west



Plate 13: Gasholder No 5, detail of the guided rollers after part-demolition, from the south-west



Plate 14: Gasholder No 5, detail of the dumping and crown framing support, from the SSW



Plate 15: Gasholder No 5, detail of the dumping and crown framing support, from the south



Plate 16: Gasholder No 5, detail of the dumping and crown framing support, from the SSE



Plate 17: Gasholder No 5, close detail of the dumping and crown framing support, from the SSE



Plate 18: Gasholder No 5, close detail of the inlet/outlet gas pipe to the side of the tank, from the south



Plate 19: Gasholder No 5, detail of the inlet/outlet gas pipe adjacent to the inside of the exposed inner side of the lower lift, from the SSE



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Plate 21: Gasholder No 5, detail of the exposed inner walls of the lower lift, from the SSW



Plate 22: Gasholder No 5, close detail of the broken-away lifts from the SSE



Plate 23: Gasholder No 5, close detail of the exposed timber crown framing, from the south



Plate 24: Gasholder No 5, close detail of the exposed timber crown framing, from the south



Plate 25: Gasholder No 5, close detail of the exposed timber crown framing, from the south



Plate 26: Gasholder No 5, close detail of the exposed timber crown framing, from the SSE



Plate 27: Gasholder No 5, close detail of the exposed timber crown framing, from the south



Plate 28: Gasholder No 4, general view from the north



Plate 29: Gasholder No 4, general view of the crown of the gasholder from the south-east



Plate 30: Gasholder No 4, detail of rounded riveted panel on the crown of the gasholder from the south-east



Plate 31: Gasholder No 4, general view of the north-east side of the gasholder from the NNW



Plate 32: Gasholder No 4, general view of the east side of the gasholder from the SSW



Plate 33: Gasholder No 4, detail of the roller carriages on the north-east side of the gasholder from the east



Plate 34: Gasholder No 4, detail of outer roller carriage from the south-east



Plate 35: Gasholder No 4, detail of the broken-away lift and exposed tank after demolition, from the south



Plate 36: Gasholder No 4, detail of the broken-away lift and exposed tank after demolition, from the south-west



Plate 37: Gasholder No 4, detail of the broken-away lift and exposed tank after demolition, from the ENE



Plate 38: Gasholder No 4, detail of the broken-away lift and exposed tank after demolition (including guided rollers), from the south



Plate 39: Gasholder No 4, detail of the broken-away lift and exposed tank after demolition (including guided rollers), from the north-west



Plate 40: Building E, Booster House, general view of the south-west elevation from the south-west



Plate 41: Building E, Booster House, detail of the top of the gable of the south-west elevation, from the south-west



Plate 42: Building E, Booster House, general view of the south-east elevation from the east



Plate 43: Building E, Booster House, detail of window to the south-west side of the south-east elevation, from the south-east



Plate 44: Building E, Booster House, general view of the interior from the north-west



Plate 45: Building E, Booster House, general view of the interior from the south-east



Plate 46: Building E, Booster House, general view of interior showing pipework from the south-west



Plate 47: Building E, Booster House, general view of the interior north-east wall from the south-west

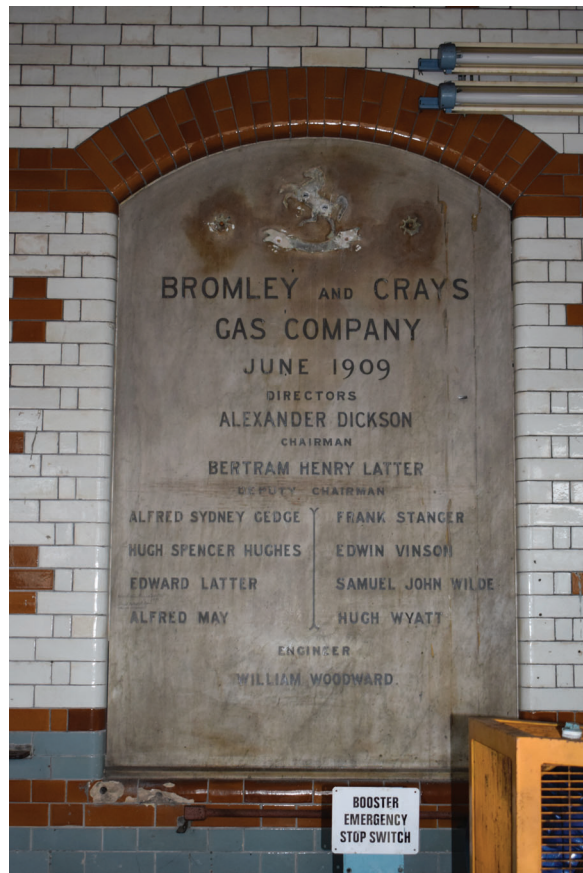


Plate 48: Building E, Booster House, detail of wall plaque on the interior north-east wall, from the south-west



Plate 49: Building C, general view of timber covers for pipework with Building B in the background, from the north-west



Plate 50: General view of the buildings to the north-east of the gasholder complex, from the SSE



Plate 51: Building D, general view from the north



Plate 52: General view of pipe and gantry structure to the south of the gasholder complex, from the north

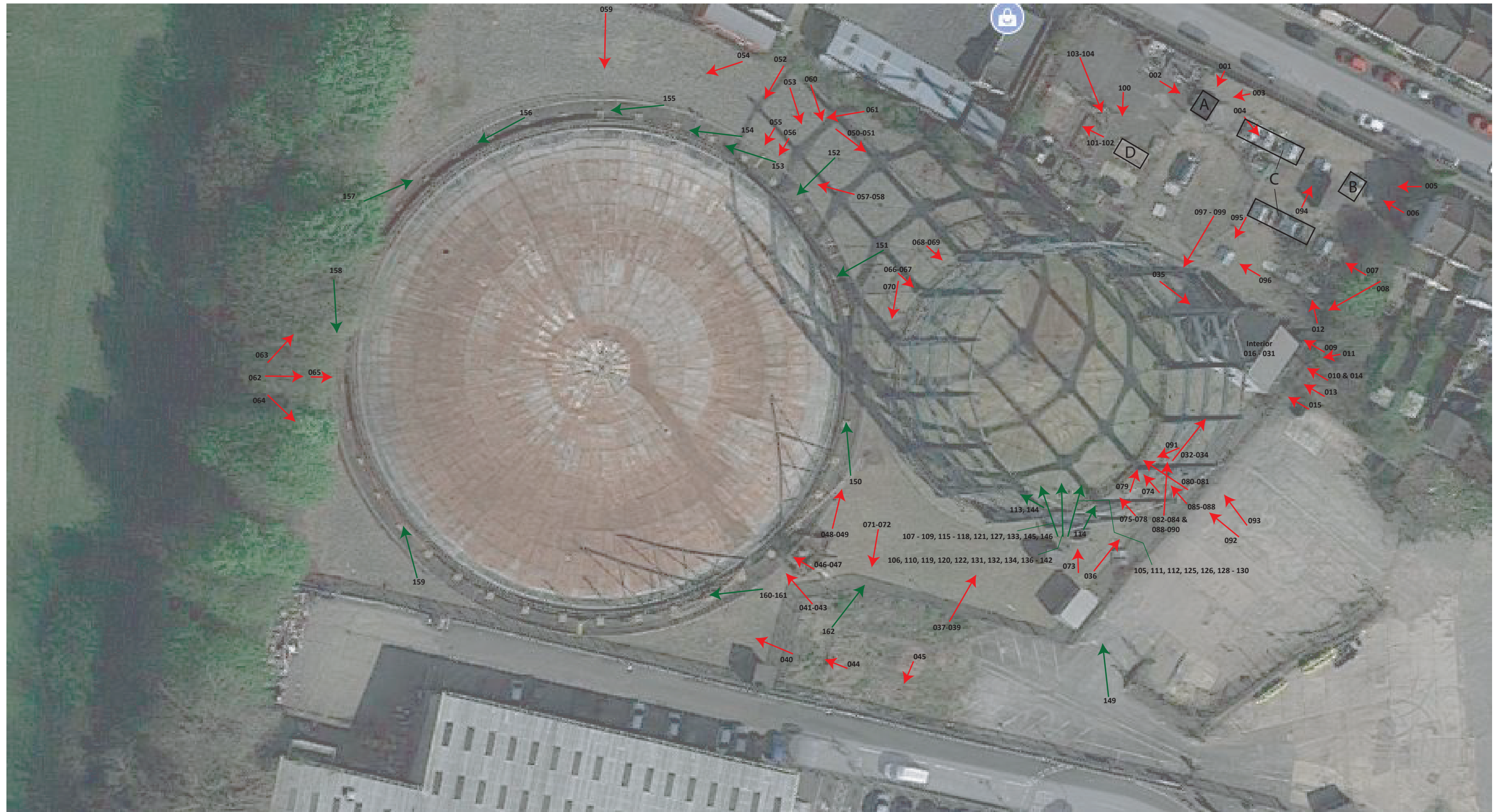
APPENDIX 1: PHOTOGRAPHIC RECORD

Ref	Gasholder/ Building	Description	Taken From	Date
BRO_001	A	General view of the NE Elevation	NE	17/08/2017
BRO_002	A	General view of the NW Elevation	NW	17/08/2017
BRO_003	A	General view	E	17/08/2017
BRO_004	B	General view	NW	17/08/2017
BRO_005	B	General view	E	17/08/2017
BRO_006	B	General view	SE	17/08/2017
BRO_007	C	General view of timber hatches	SE	17/08/2017
BRO_008	Gasholder No 5	General view (Building E in the foreground)	NE	17/08/2017
BRO_009	E	Detail of pipework in front of the NE Elevation	SE	17/08/2017
BRO_010	E	Detail of the N side of the SE Elevation	SE	17/08/2017
BRO_011	E	General view of the SE Elevation showing window and gantry	E	17/08/2017
BRO_012	B & C	General view	SSE	17/08/2017
BRO_013	E	Detail of gantry on the SE Elevation	SE	17/08/2017
BRO_014	E	Detail of window in the N side of the SE Elevation	SE	17/08/2017
BRO_015	E	Detail of window in the S side of the SE Elevation	SE	17/08/2017
BRO_016	E (Interior)	General view of the NE Wall	SW	17/08/2017
BRO_017	E (Interior)	Detail of plaque on the NE Wall	SW	17/08/2017
BRO_018	E (Interior)	General view of the SE wall	NW	17/08/2017
BRO_019	E (Interior)	General view of the NW wall showing main entrance	SE	17/08/2017
BRO_020	E (Interior)	Detail of pipework	S	17/08/2017
BRO_021	E (Interior)	Detail of pipework	S	17/08/2017
BRO_022	E (Interior)	Detail of pipework	NW	17/08/2017
BRO_023	E (Interior)	Detail of pipework on the wall	SW	17/08/2017
BRO_024	E (Interior)	Detail of door in the NW wall	SE	17/08/2017
BRO_025	E (Interior)	Looking up at the ceiling of the Booster house	S	17/08/2017
BRO_026 - 027	E (Interior)	Looking up at the ceiling of the Booster house	W	17/08/2017
BRO_028	E (Interior)	Detail of pipework	SW	17/08/2017
BRO_029	E (Interior)	Detail of doorway and window in the SW wall	NE	17/08/2017
BRO_030	E (Interior)	Detail of doorway and window in the SW wall	N	17/08/2017
BRO_031	E (Interior)	Detail of pipework	SE	17/08/2017
BRO_032	E	General view of the SW Elevation	SW	17/08/2017
BRO_033	E	Detail of the top of the gable of the SW Elevation	SW	17/08/2017
BRO_034	E	General view of the SW Elevation	SW	17/08/2017
BRO_035	E	General view of the NW Elevation	NW	17/08/2017
BRO_036	Gasholder No 5	Detail of small brick building to the SE of the gasholder	SW	17/08/2017
BRO_037	Gasholder No 5	General view	SW	17/08/2017
BRO_038	Gasholder No 5	General view looking up at gasholder	SW	17/08/2017
BRO_039	Gasholder No 5	General view	SW	17/08/2017
BRO_040	Gasholder No 4	Detail of the S side of the gasholder showing the lift mechanism	ESE	17/08/2017
BRO_041 - 042	Gasholder No 4	General view of the crown of the gasholder	SE	17/08/2017
BRO_043	Gasholder No 4	Detail of hatch on the crown of the gasholder (SE side)	SE	17/08/2017
BRO_044	Gasholder No 4	Detail of pipework on the gantry to the SE of the gasholder	SE	17/08/2017
BRO_045	Gasholder No 4	Detail of pump wheel on the S side of the gantry to the SE of the gasholder	NE	17/08/2017
BRO_046	Gasholder No 4	Detail of outer roller carriage on the SE side of the gasholder	SE	17/08/2017
BRO_047	Gasholder No 4	Detail of the crown of the gasholder	SE	17/08/2017
BRO_048 - 049	Gasholder No 4	General view of the walkway and roller carriages to the E side of the gasholder	SSW	17/08/2017
BRO_050 - 051	Gasholder No 5	General view	NW	17/08/2017

BRO_052	Gasholder No 4	General view of the NE side of the gasholder	NE	17/08/2017
BRO_053	Gasholder No 4	General view of the NE side of the gasholder	NNW	17/08/2017
BRO_054	Gasholder No 4	General view of the N and NNW side of the gasholder	NE	17/08/2017
BRO_055	Gasholder No 4	Detail of guide roller mechanism to the NNE side of the gasholder	NNE	17/08/2017
BRO_056	Gasholder No 4	Close detail of riveting and steel construction to the NNE side of the gasholder	NNE	17/08/2017
BRO_057	Gasholder No 4	General view of the N side of the gasholder	SE	17/08/2017
BRO_058	Gasholder No 4	Detail of the roller carriages in the N side of the gasholder	SE	17/08/2017
BRO_059	Gasholder No 4	General view	N	17/08/2017
BRO_060	Gasholder No 4	General view of the NE side of the gasholder	NW	17/08/2017
BRO_061	Gasholder No 4	General view of the N side of the gasholder	E	17/08/2017
BRO_062	Gasholder No 4	General view of the crown of the gasholder (Gasholder No 5 in background)	W	17/08/2017
BRO_063	Gasholder No 4	General view of the NW side of the gasholder	SW	17/08/2017
BRO_064	Gasholder No 4	General view of the SW side of the gasholder	NW	17/08/2017
BRO_065	Gasholder No 4	Detail of the hand rail for the walkway and structural section in the W side of the gasholder	W	17/08/2017
BRO_066 - 067	Gasholder No 5	Detail of footing to the frame	NW	17/08/2017
BRO_068	Gasholder No 5	Detail of the handrail around the base of the gasholder on the W side	NW	17/08/2017
BRO_069	Gasholder No 5	Detail of the crown of the gasholder	NW	17/08/2017
BRO_070	Gasholder No 5	General view of the W side of the gasholder	NNE	17/08/2017
BRO_071 - 072	-	Detail of pipework to the S of Gasholder No 5 (with gantry over)	N	17/08/2017
BRO_073	Gasholder No 5	Detail of manhole in front of the gasholder on the S side	S	17/08/2017
BRO_074	Gasholder No 5	Detail of footing of frame in the SE side of the gasholder	SE	17/08/2017
BRO_075	Gasholder No 5	Detail of guide mechanism in the SE side of the gasholder	SE	17/08/2017
BRO_076	Gasholder No 5	Detail of guide mechanism attached to frame in the SE side of the gasholder	SE	17/08/2017
BRO_077 - 078	Gasholder No 5	Detail of footing of the frame to the SE side of the gasholder	SE	17/08/2017
BRO_079	Gasholder No 5	Detail of roller carriage to the SE side of the gasholder	SW	17/08/2017
BRO_080 - 081	Gasholder No 5	General view of frame (looking up) showing the construction details	SE	17/08/2017
BRO_082 - 084	Gasholder No 5	General view of the E side of the gasholder	S	17/08/2017
BRO_085 - 088	Gasholder No 5	General view of the SE side of the gasholder	SE	17/08/2017
BRO_089 - 90	Gasholder No 5	General view of frame (looking up) showing the construction details	S	17/08/2017
BRO_091	Gasholder No 5	General view of the SE side of the gasholder	NE	17/08/2017
BRO_092	Gasholder No 5	General view of the crown of the gasholder	SE	17/08/2017
BRO_093	Gasholder No 5	General view of the crown of the gasholder	SSE	17/08/2017
BRO_094	-	Detail of gas pressure apparatus to the far NE side of the compound	SSW	17/08/2017
BRO_095	-	Detail of tank	NE	17/08/2017
BRO_096	-	Detail of tank	SE	17/08/2017
BRO_097 - 098	Gasholder No 5	General view	NE	17/08/2017
BRO_098 - 99	Gasholder No 5	General view of crown of gasholder	NE	17/08/2017
BRO_100	D	General view of small brick building	N	17/08/2017
BRO_101 - 102	-	Detail of small concrete compound to the NE side of the gasholder complex against the NW boundary	SE	17/08/2017
BRO_103 - 104	D	General view with Booster house and Gasholder No 5 in the background	NW	17/08/2017
BRO_105	Gasholder No 5	General view of the bell and framing	SSW	19/10/2018
BRO_106	Gasholder No 5	General view of the bell and framing	S	19/10/2018
BRO_107	Gasholder No 5	General view of the bell and framing	SSE	19/10/2018
BRO_108	Gasholder No 5	General view of the bell and framing	S	19/10/2018
BRO_109	Gasholder No 5	General view of the bell and framing	SSW	19/10/2018
BRO_110	Gasholder No 5	General view of the bell and framing	S	19/10/2018

BRO_111	Gasholder No 5	General view of the bell and framing	SE	19/10/2018
BRO_112	Gasholder No 5	Close detail of the concrete supports for the framing	SE	19/10/2018
BRO_113	Gasholder No 5	Detail of the broken-away tank	SE	19/10/2018
BRO_114	Gasholder No 5	Close detail of the rusted guided rollers	SW	19/10/2018
BRO_115	Gasholder No 5	Close detail of metal framing supporting the timber frame of the crown	SE	19/10/2018
BRO_116	Gasholder No 5	Close detail of the metal framing and the inside of the tank	SW	19/10/2018
BRO_117	Gasholder No 5	Detail of the inside of the tank and the guided rollers	SW	19/10/2018
BRO_118	Gasholder No 5	Close detail of the inside of the tank	SE	19/10/2018
BRO_119	Gasholder No 5	General view of the bell and framing	S	19/10/2018
BRO_120	Gasholder No 5	Detail of the upper timber framing of the crown	S	19/10/2018
BRO_121	Gasholder No 5	Detail of the upper timber framing of the crown	SW	19/10/2018
BRO_122	Gasholder No 5	Detail of the upper timber framing of the crown	S	19/10/2018
BRO_123	Gasholder No 5	Detail of the upper timber framing of the crown	SW	19/10/2018
BRO_124	Gasholder No 5	Close detail of the upper timber framing of the crown	SW	19/10/2018
BRO_125	Gasholder No 5	Close detail of the upper timber framing of the crown	SE	19/10/2018
BRO_126	Gasholder No 5	Detail of tank and inside of the concrete tank	SE	19/10/2018
BRO_127	Gasholder No 5	Close detail of the upper timber framing of the crown	SW	19/10/2018
BRO_128	Gasholder No 5	Close detail of the fixings jointing together the metal framing	SE	19/10/2018
BRO_129	Gasholder No 5	Close detail of the upper timber framing of the crown	SW	19/10/2018
BRO_130	Gasholder No 5	Close detail of the upper timber framing of the crown	SE	19/10/2018
BRO_131	Gasholder No 5	Close detail of the concrete supports for the framing	S	19/10/2018
BRO_132	Gasholder No 5	Detail of the upper timber framing of the crown	S	19/10/2018
BRO_133	Gasholder No 5	General view of the bell and framing	SW	19/10/2018
BRO_134	Gasholder No 5	General view of the bell and framing and timber framing	S	19/10/2018
BRO_135	Gasholder No 5	Detail of the guide frame	SSW	19/10/2018
BRO_136	Gasholder No 5	General view of the bell and framing and timber framing	SE	19/10/2018
BRO_137	Gasholder No 5	Detail of pipes on the edge of the tank	S	19/10/2018
BRO_138	Gasholder No 5	General view of the pipes at the edge of the tank, the farming and the guide frame	S	19/10/2018
BRO_139	Gasholder No 5	Close detail of one of the iron joints to the timber framing for the crown	SSE	19/10/2018
BRO_140	Gasholder No 5	Close detail of one of the iron joints to the timber framing for the crown	S	19/10/2018
BRO_141	Gasholder No 5	Detail of the upper timber framing of the crown	S	19/10/2018
BRO_142	Gasholder No 5	Detail of the upper timber framing of the crown	S	19/10/2018
BRO_143	Gasholder No 5	Detail of the inside of the tank	SW	19/10/2018
BRO_144	Gasholder No 5	Close detail of the cut-away of the metal tank	SSE	19/10/2018
BRO_145	Gasholder No 5	Close detail of the inside of the tank	SSW	19/10/2018
BRO_146	Gasholder No 5	Detail of the inside of the tank	SSW	19/10/2018
BRO_147	Gasholder No 5		SW	19/10/2018
BRO_148	Gasholder No 5	General view of the guide frame after the removal of the crown	S	19/10/2018
BRO_149	Gasholder No 5	General view of the guide frame after the removal of the crown (wide shot)	S	19/10/2018
BRO_150	Gasholder No 4	Detail of the cut away tank	S	15/01/2019
BRO_151	Gasholder No 4	Detail of the exposed guided rollers on the E side of the holder	E	15/01/2019
BRO_152	Gasholder No 4	Detail of the exposed guided rollers on the E side of the holder	ENE	15/01/2019
BRO_153	Gasholder No 4	General view of the E side of the holder	S	15/01/2019
BRO_154	Gasholder No 4	Detail of the guided rollers to the E side of the holder	S	15/01/2019
BRO_155	Gasholder No 4	General view of the NE side of the holder	SSE	15/01/2019
BRO_156	Gasholder No 4	General view of the NE side of the holder	SSE	15/01/2019

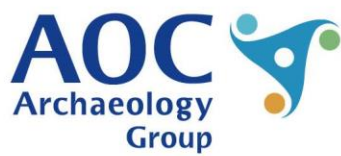
BRO_157	Gasholder No 4	General view of the NW side of the gasholder (Gasholder No 5 in the background)	NW	15/01/2019
BRO_158	Gasholder No 4	General view of the NW side of the gasholder	NNW	15/01/2019
BRO_159	Gasholder No 4	General view of the W side of the gasholder	SW	15/01/2019
BRO_160	Gasholder No 4	Detail looking down in the exposed tank	SW	15/01/2019
BRO_161	Gasholder No 4	Detail looking down in the exposed tank	SW	15/01/2019
BRO_162	Gasholder No 5	General view of the holder during the second Phase II visit (access limited as the site was fenced off)	SSW	15/01/2019



 Phase I Photos  Phase II Photos

NOT TO SCALE
(C) Google Maps

Site plan showing position and direction of digital photo record



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