

SGN Gasholder Heritage Review: Sea Street, Herne Bay

Historic Building Recording Report

On Behalf of:	Montagu Evans Fourth Floor Exchange Tower 19 Canning Street Edinburgh EH3 8EG
	On behalf of: SGN
National Grid Reference (NGR):	TR 16229 67340
AOC Project No:	23686
OASIS No:	282672
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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 Montagu Evans on behalf of SGN to undertake an historic buildings survey of the redundant gasholder at Sea Street, Herne Bay in Kent in advance of its decommissioning and demolition.

The gasholder was constructed in 1934 by the Newton Chambers Company. It is a three-lift spiral-guided gasholder in an above ground tank with the capacity of 50,000 feet.

1 INTRODUCTION

1.1 Project Background

1.1.1 AOC Archaeology Group was commissioned by Montagu Evans on behalf of SGN to undertake two surveys of redundant gasholders at Sea Street in Herne Bay and Brielle Way, Isle of Sheppey, both in Kent. 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 report concerns the gasholder at Sea Street in Herne Bay.

1.2 Site Location

1.2.1 The gasholder at Sea Street, Herne Bay is located at NGR: TR 16229 67340 (Figure 1). It is bounded to the north by Hampton Primary School, to the east by industrial units and to the south by the former London, Chatham and Dover railway.

2 OBJECTIVES

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

3 METHODOLOGY

3.1 Introduction

3.1.1 The work was undertaken to a brief provided by Montagu Evans (2017) and included an archive research for early or original plans and elevations of the gasholder and 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 gasholder. All publicly accessible pre-Ordnance Survey maps and Ordnance Survey maps were viewed, and a selection have been included in this report.

3.2.2 The following archives were consulted to identify early/original archives and drawings of the site/gasholder:

- Kentish Archives, Maidstone
 - no records (drawn or photographic) of the gasholder were known to exist in these archives
- The National Archives at Kew
 - no records (drawn or photographic) of the gasholder were known to exist in these archives
- National Gas Archive, Warrington
 - Three plans relating to the gasworks site were located within these archives and have been reproduced in this report as Figures 5 – 7.
- National Monuments Record, Swindon
 - no records (drawn or photographic) of the gasholder were known to exist in these archives

3.2.3 In addition, English Heritage surveys of the Gasholders of London, produced in 2000 and 2002, have been consulted to identify any results of previous results of investigations of the site. These have been included in the references section of the report in Section 6 below. Six photographs of the site were made as part of the site in 2002, including a detail shot of the riveted plates.

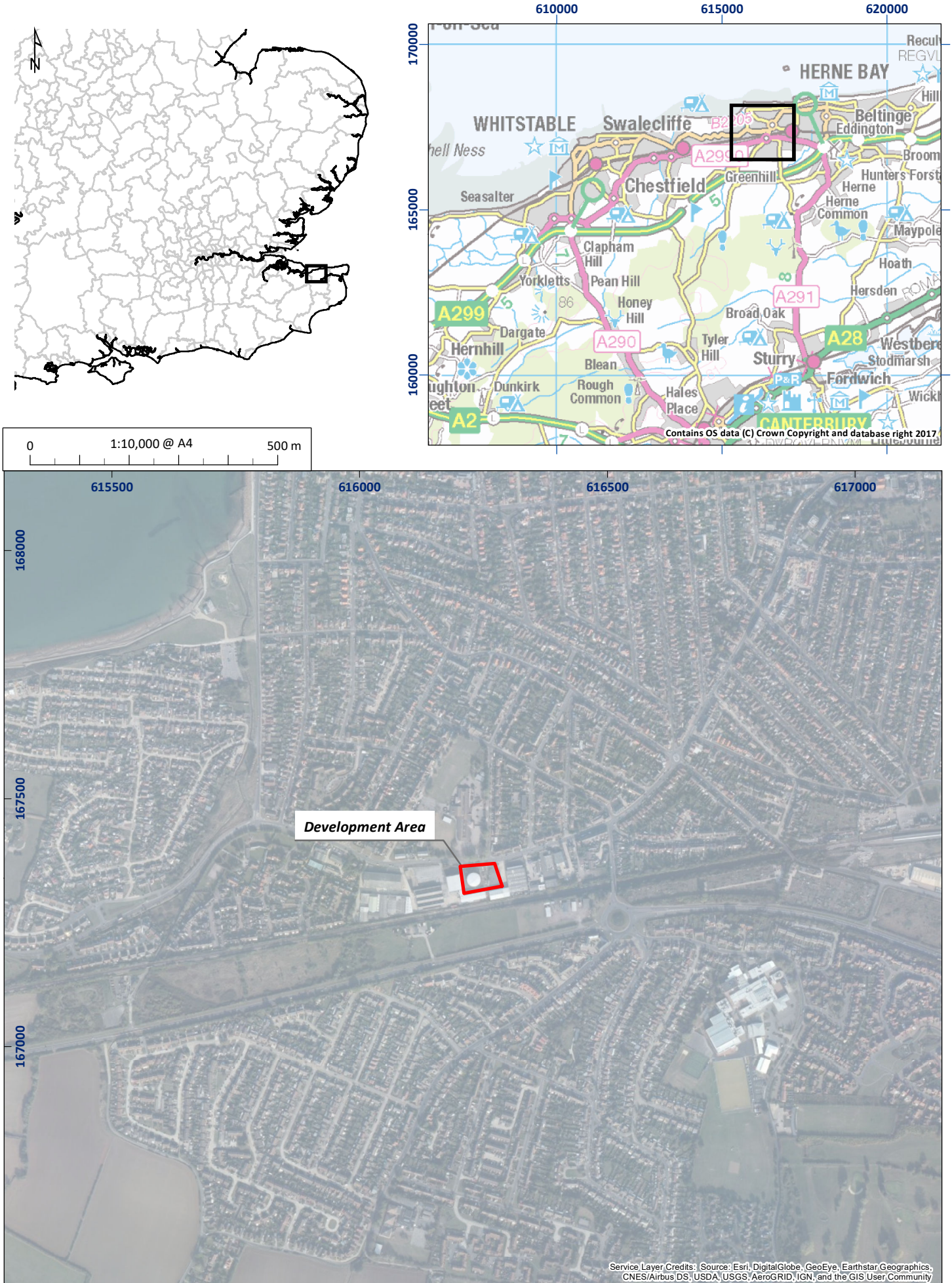


Figure 1: Site location plan

3.3 Photographic record

3.3.1 A general exterior photographic survey was undertaken of the structure in colour digital using a digital SLR camera. Photographs were taken of the gasholder and ancillary buildings associated with the gasworks. In addition to general shots of the structures, detail shots of features such as structural elements, pipework, stairs, 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, and a selection of digital photographs has been used as plates to illustrate this report.

3.4 Written record

3.4.1 A written survey was undertaken of the exterior of the gasholders 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.

4 RESULTS

4.1 Historical Background

4.1.1 The gasworks at the site in Sea Street are the second gasworks in Herne Bay, and the Gasholder there is referred to as 'No 3', as it is the third in the town overall. The original gasworks for the town was set up in the 19th century; the short-lived Herne Bay Gas Company was formed in 1839, and this was followed by the Herne Bay Gas and Coke Company in 1852. The original works were located between Park Road and Kings Road and eventually had two gasholders on the site, hence the reference 'No 3' for the Sea Street gasholder (Hills 2017).

4.1.2 In the later 19th century and into the 20th century, the demand for gas in Herne Bay increased with new housing developments being constructed in addition to the heightened demand for gas for other services such as cooking and heating. This led to the creation of the works at Sea Street in 1912 which had its own railway siding (Hills 2017). The gasholder came later in the 1934 and was constructed by the Newton & Chambers Company. Prior to this, the site was undeveloped, situated between two large farms, Greenhill and Westbrook, as is shown in the 1876 and 1908 maps (Figures 2 & 3). The latter 1908 map also shows the housing developments that had sprung up at the turn of the century, and which eventually led to the increase in demand for gas. The 1935 Ordnance Survey map then shows the gasworks and the later gasholder in place, to serve the ever growing population on the north coast of Kent (Figure 4). However, even the Sea Street works were soon struggling with demand, and the Dover Gas Works were rebuilt to accommodate this, connecting the East Kent towns (*ibid*). No gas has been produced at the Sea Street works since 1957; the gasholder has only stored gas (coming from Dover and then later the National Grid) to meet local demand. It has not been in use since 2015 and is now being removed.

4.1.3 Three plans for the gasholder were located in the National Gas Archive in Warrington dating from 1946, ca. 1954 and 1966 respectively (Figures 5, 6 & 7). These shows the gasholder in place with the gasworks to the east side with some minor expansion in the 1940s and 1950s.



Figure 2: Extract from the Ordnance Survey map, 1876

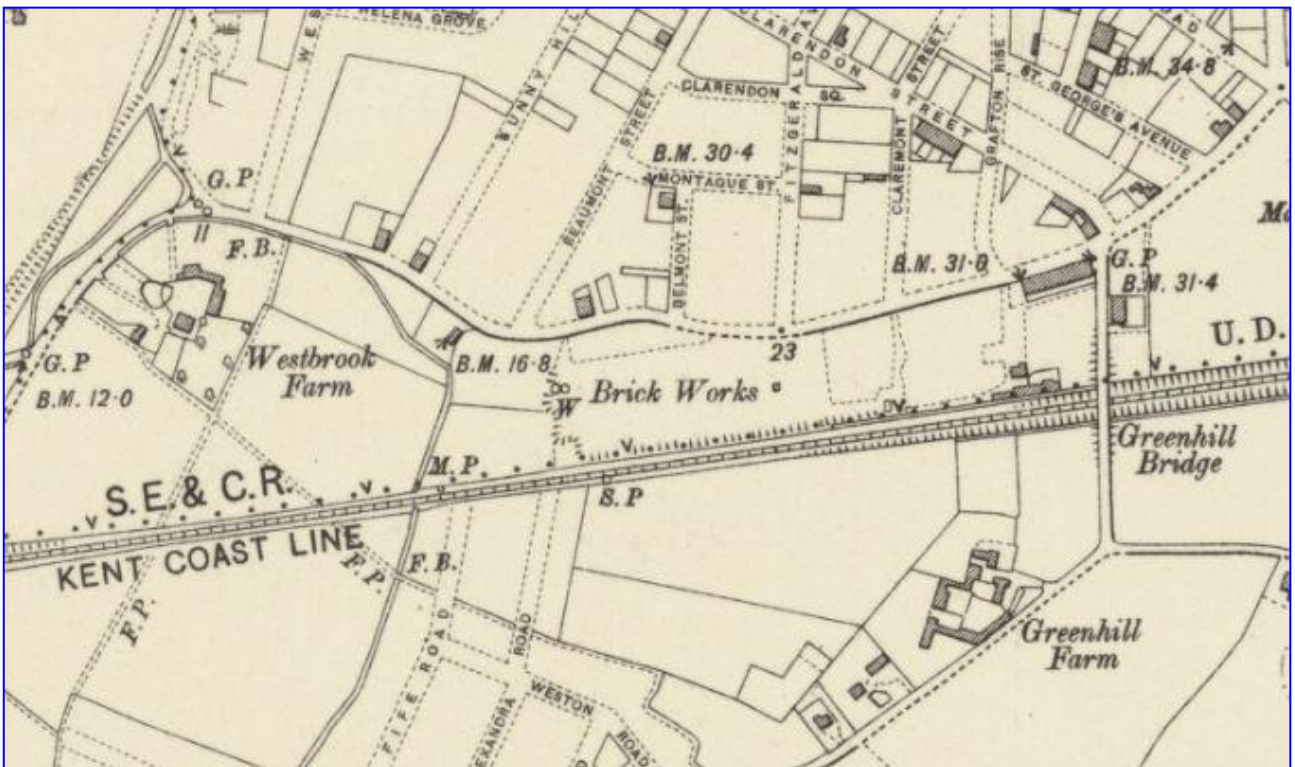


Figure 3: Extract from Ordnance Survey map, 1908

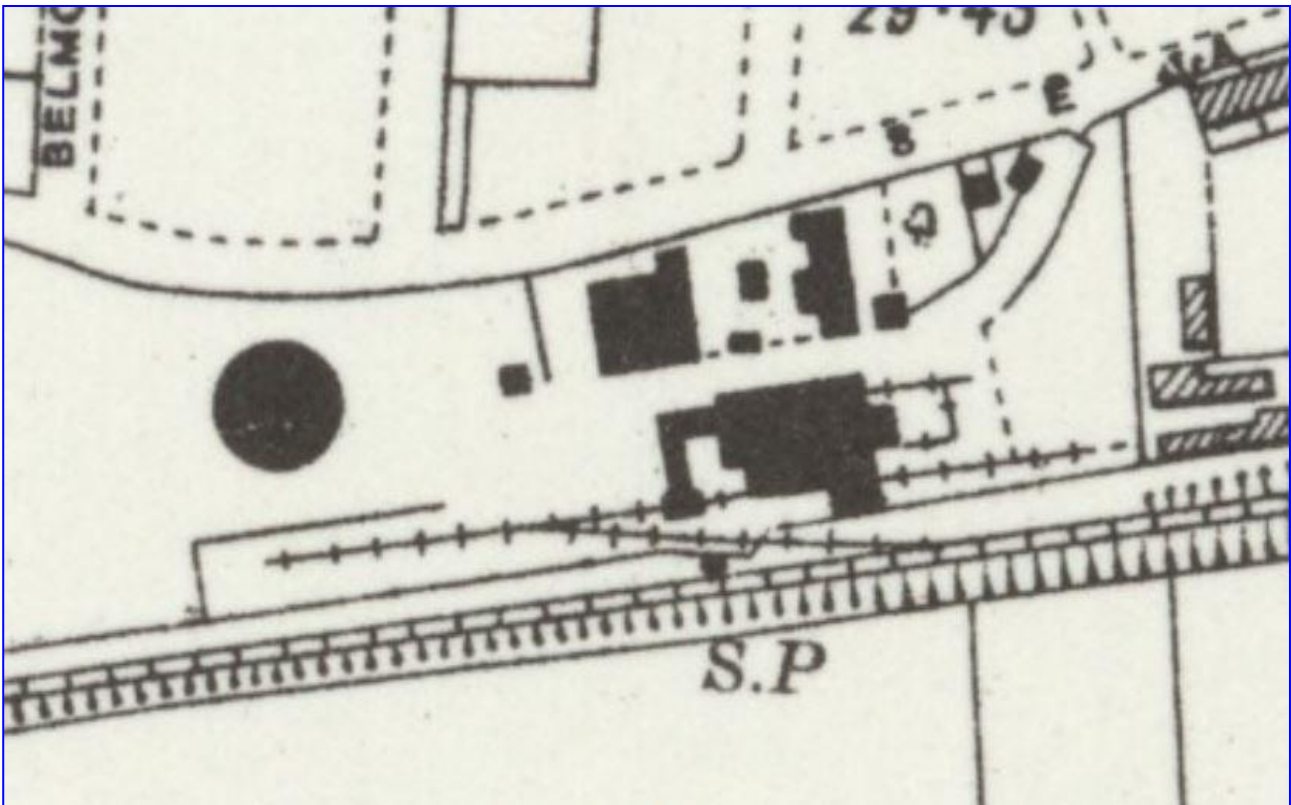


Figure 4: Extract from Ordnance Survey map, 1935

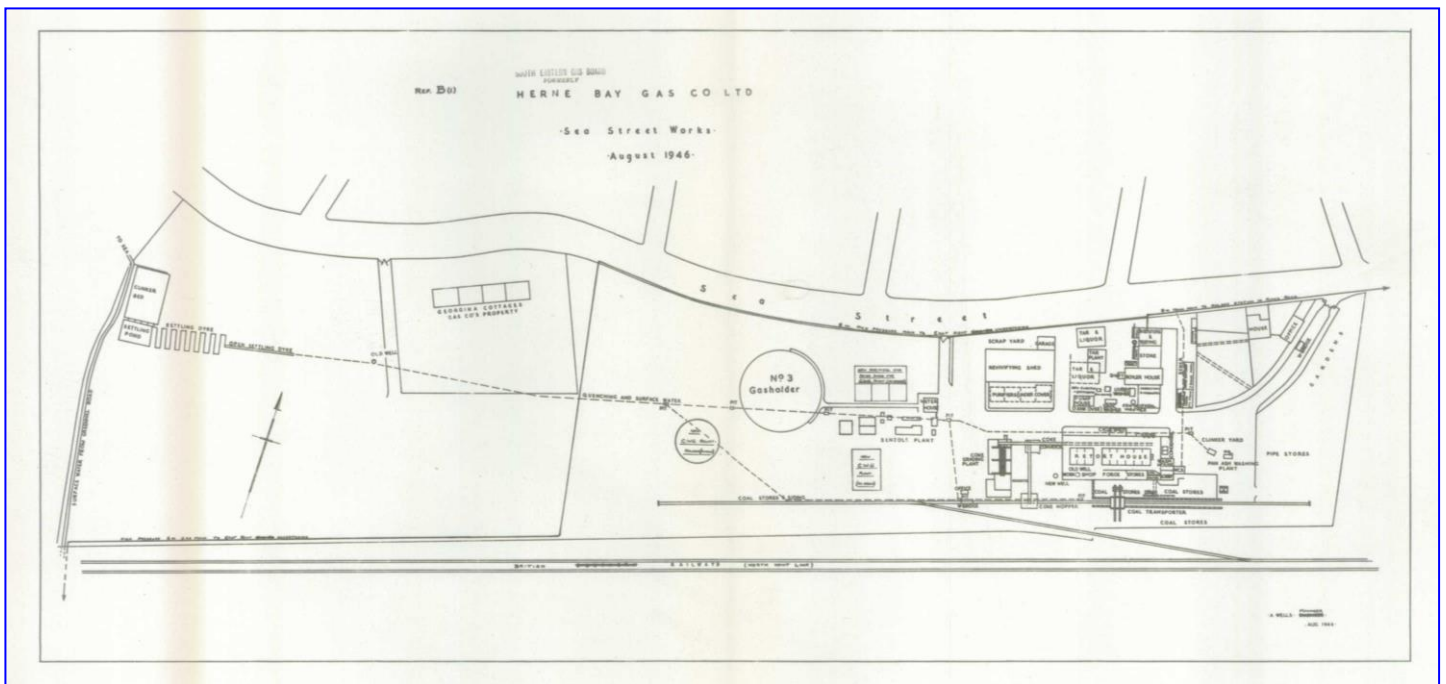


Figure 5: Archive plan of the Herne Bay gasworks, 1946

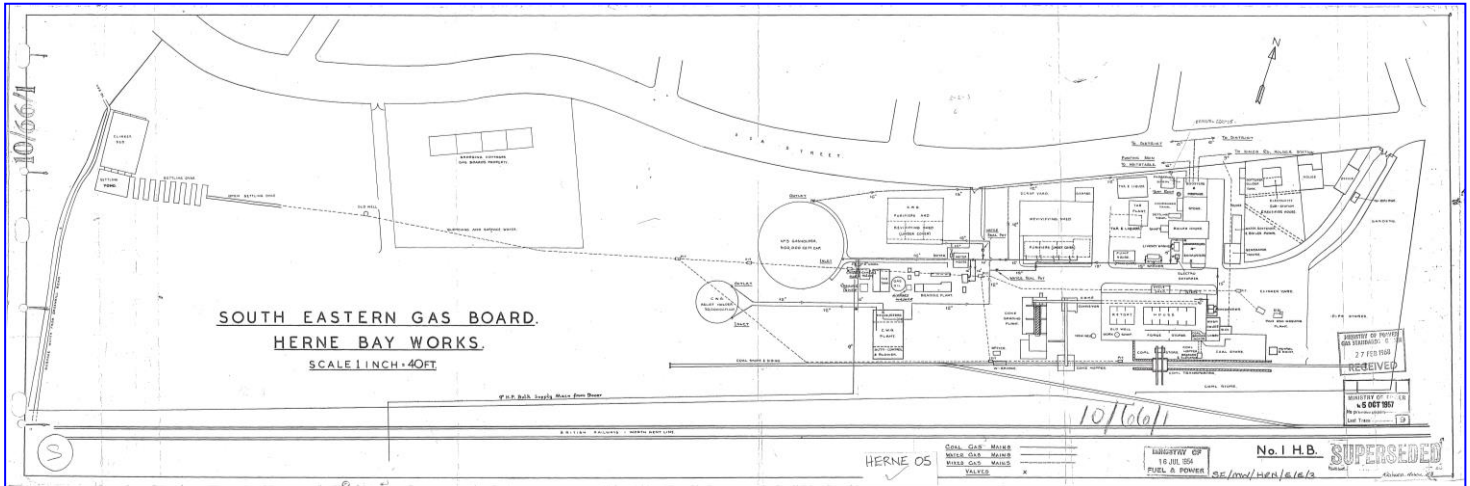


Figure 6: Archive plan of the Herne Bay gasworks, ca. 1954

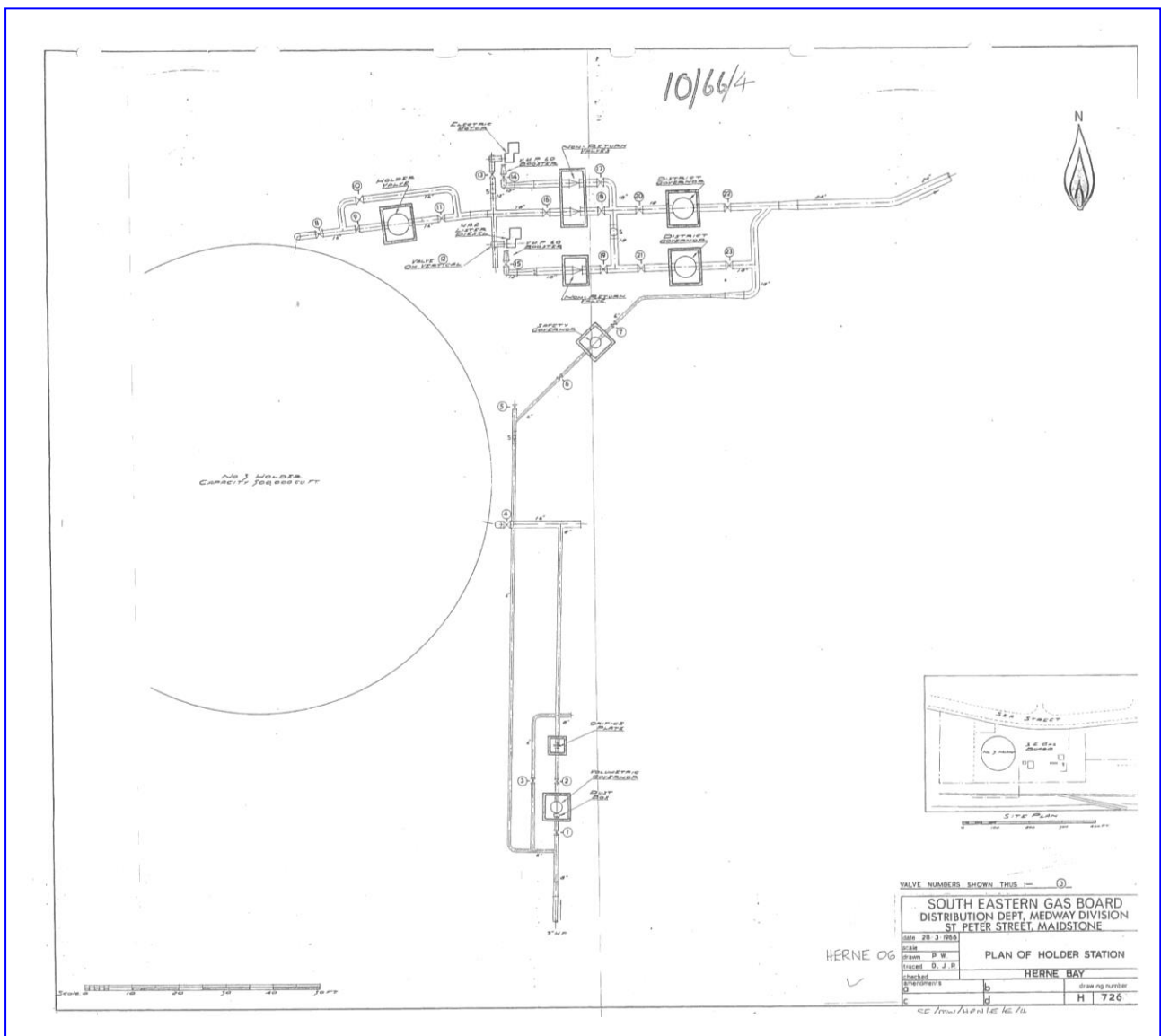


Figure 7: Detailed archive plan of gasholder and pipe network, 1966

4.2 The Gasholder

- 4.2.1 This gasholder at Sea Street, Herne Bay is a three-lift spiral gasholder located within a large fenced-off compound and was just at the start of the process of decommissioning at the time of survey. It comprises steel panels riveted together with additional steel plates and brackets throughout (Plates 1 – 9). At the time of survey there was a section cut away on one side of the structure – which was made to enable the decommissioning process – which shows in detail that the holder was constructed from 4 sheets of steel with a large base plate (Plate 10).
- 4.2.2 The gasholder is currently in a moderate condition with some areas of rusting, particularly to the base of the gasholder and the rivet heads. Vertical stanchions riveted on the outer steel plate support the upper walkway of the gasholder, with addition angled brackets just below the walkway (Plates 11 - 14). This is accessed by a stair on the south side (Plates 15 - 17).
- 4.2.3 The section cut through the side of the gasholder also enabled a record to be made of the interior space, which was painted black and reflected the riveted construction seen to the exterior, and the angled 'lifts' within (Plates 18 & 19).
- 4.2.4 There are a number of additional structures associated with the former gasworks immediately prior to the decommissioning. These include:
- Instrument Room/Control Room, a small single-bay flat-roofed building in a roughcast render (Plate 20)
 - Electrical Switch Room, a two-bay flat-roofed brick building (Plate 21)
 - Isolator Tank (Plates 22 & 23)
 - Large pipe inlet/outlet set within a half-concrete compound (Plate 24)
 - Large square building in roughcast render and an adjacent temporary building (Plate 25)

5 CONCLUSIONS

- 5.1 The structure is a three-lift gasholder which was a design invented by W Gadd, the first example built in 1888 (Thomas 2016). It is a typical example of gasholders of the region and period.
- 5.2 Although no access was permitted to the upper platforms of the gasholder as part of this survey on health and safety grounds, the operation of the rising lifts would have been identified the spiral guided rails which would have been fixed to the side of the tank. A detailed example of the type of operation that might be present was identified in a gasholder surveyed by MOLA in 2014 in Preston, Lancashire (Bassir & Clarke 2014).
- 5.3 Most gasholders today are the only remnants of former gasworks, and many were constantly being upgraded, enlarged and rebuilt throughout the late 19th and early years of the 20th century. The 1930s - 1950s appears to have been a boom time for the renewal of many gasholder projects, with technology allowing larger and more complex systems to be put in place to store the gas supply.



Plate 1: Sea Street, Herne Bay, general view of the gasholder from the SEE



Plate 2: Sea Street, Herne Bay, general view of the gasholder from the north-east



Plate 3: Sea Street, Herne Bay, general view of the gasholder from the east



Plate 4: Sea Street, Herne Bay, general view of the gasholder from the south-west



Plate 5: Sea Street, Herne Bay, general view of the gasholder from the south-east



Plate 6: Sea Street, Herne Bay, detail of the gasholder showing the riveted plates, from the SEE

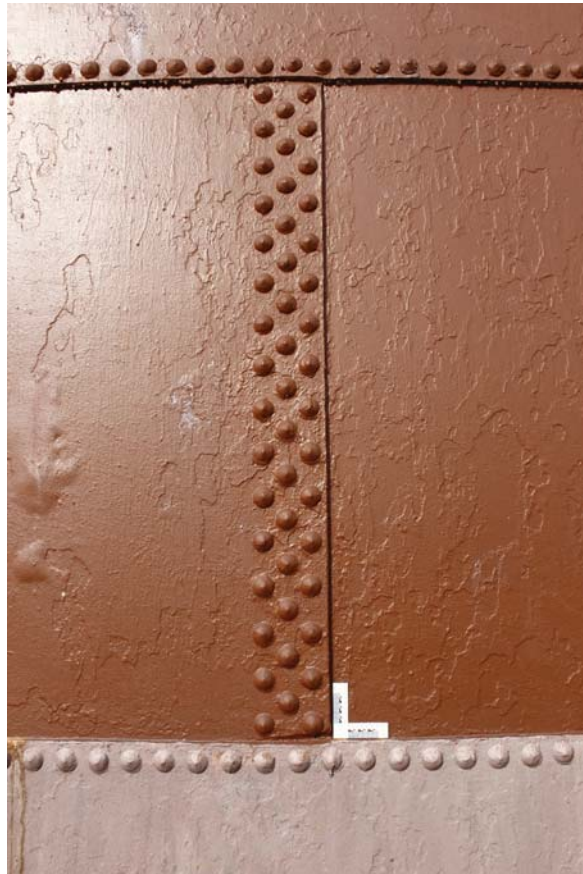


Plate 7: Sea Street, Herne Bay, close detail of the riveted plates from the east



Plate 8: Sea Street, Herne Bay, close detail of the riveted plates from the east



Plate 9: Sea Street, Herne Bay, close detail of the riveted bracket from the east



Plate 10: Sea Street, Herne Bay, detail of the section cut through the side of the gasholder from the NNW



Plate 11: Sea Street, Herne Bay, general view showing the stanchions supporting the upper walkway, from the east



Plate 12: Sea Street, Herne Bay, detail of the upper walkway from the south-east



Plate 13: Sea Street, Herne Bay, detail of the upper walkway from the east

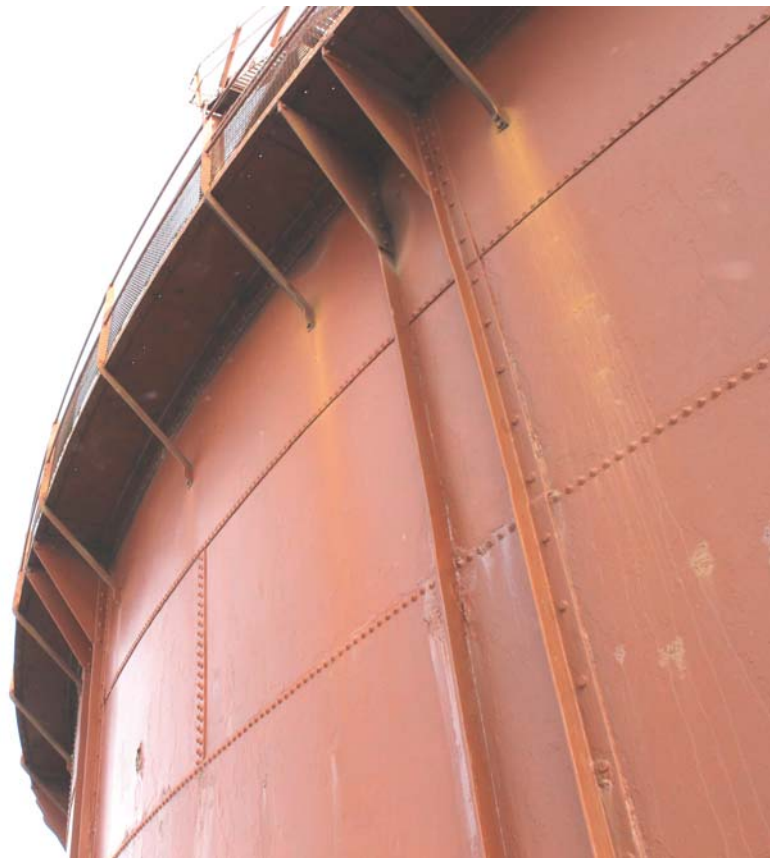


Plate 14: Sea Street, Herne Bay, detail of the upper walkway from the south-west



Plate 15: Sea Street, Herne Bay, detail of the stairs from the south-east



Plate 16: Sea Street, Herne Bay, detail of the stairs from the south



Plate 17: Sea Street, Herne Bay, detail of the stairs from the south-west



Plate 18: Sea Street, Herne Bay, general view of the interior of the gasholder from the south



Plate 19: Sea Street, Herne Bay, general view of the interior of the gasholder from the north



Plate 20: Sea Street, Herne Bay, general view of the Instrument Room/Control Room from the SWW



Plate 21: Sea Street, Herne Bay, general view of the Electrical Switch Room from the NNW



Plate 22: Sea Street, Herne Bay, general view of the isolator tank from the north-east



Plate 23: Sea Street, Herne Bay, general view of the isolator tank from the west



Plate 24: Sea Street, Herne Bay, general view of pipe inlet/outlet from the south



Plate 25: Sea Street, Herne Bay, general view of additional ancillary gasworks buildings to the north-west of the gasholder, from the south-west

6 REFERENCES

6.1 Bibliographical references

Bassir, A & Clarke, J 2014 'Historic Building Recording at Lostock Hall Gasholder Station, Preston, Lancashire', http://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-1804-1/dissemination/pdf/molanort1-192192_1.pdf, Accessed 1st February, 2016

English Heritage 2000a *London Gasholders Survey. The Development of the Gasholder in London in the Later 19th Century, Part A: General.*

English Heritage 2000b *London Gasholders Survey. The Development of the Gasholder in London in the Later 19th Century, Part B: Individual Sites.*

English Heritage 2002 *Gasholders Step 3 Report for Monuments Protection Programme.*

Hills, M 2017 'Herne Bay Gas', in *Herne Bay Historical Records Society, Quarterly Newsletter*, Winter 2017, p 2

Montagu Evans 2017 *SGN: (0549) Sea Street, Herne Bay & (0520) Brielle Way, Isle of Sheppey Historic Building Recording Brief.*

6.2 Cartographic references

1876 Ordnance Survey *Kent Sheet XXIII*

1908 Ordnance Survey *Kent Sheet XXIII.SE*

1935 Ordnance Survey *Kent Sheet XXIII.SE*

1946 Ordnance Survey *Kent Sheet XXIII.SE*

6.2 Archive references (National Gas Archive)

SE_DA_E_E_3_18

Archive plan of the Herne Bay gasworks, 1946

SE_MW_HRN_E_E_3

Archive plan of the gasworks, ca. 1954

SE_DA_E_E_3_4

Detailed archive plan of the No 3 gasholder and related pipe network, 1966

APPENDIX 1: PHOTOGRAPHIC RECORD

Colour Digital Film

Frame	Description	Taken From	Date
7952	General view of gasholder	SE	30/03/2017
7953	General view of gasholder	SE	30/03/2017
7954	General view of gasholder	E	30/03/2017
7955	General view of gasholder	E	30/03/2017
7956	General view of gasholder	E	30/03/2017
7957	General view of gasholder	NNE	30/03/2017
7958	General view of gasholder	SE	30/03/2017
7959	General view showing stairs	SE	30/03/2017
7960	General view showing stairs	S	30/03/2017
7961	Detail of upper stair and rail	S	30/03/2017
7962	Detail of upper stair and rail	E	30/03/2017
7963	General view showing stairs	E	30/03/2017
7964	General view showing stairs	SEE	30/03/2017
7965	Detail of steel riveted panel	SEE	30/03/2017
7966	Instrument Room	SEE	30/03/2017
7967	Instrument Room	SW	30/03/2017
7968	Electrical Switch Room	W	30/03/2017
7969	Electrical Switch Room	NW	30/03/2017
7970	Electrical Switch Room	NW	30/03/2017
7971	Electrical Switch Room	N	30/03/2017
7972	Electrical Switch Room	N	30/03/2017
7973	Electrical Switch Room (interior)	N	30/03/2017
7974	Electrical Switch Room (interior)	NE	30/03/2017
7975	General view of steel riveted panel	E	30/03/2017
7976	General view	E	30/03/2017
7977	General view	E	30/03/2017
7978	Detail of protruding stair	E	30/03/2017
7979	Detail of protruding stair	SE	30/03/2017
7980	Detail of protruding stair	SE	30/03/2017
7981	Close detail of additional steel riveted panel to hold side panels together	E	30/03/2017
7982	Close detail of additional steel riveted panel to hold side panels together	E	30/03/2017
7983	Detail of isolator tank	S	30/03/2017
7984	Detail of isolator tank	S	30/03/2017
7985	Detail of isolator tank	S	30/03/2017
7986	Detail of isolator tank	SE	30/03/2017
7987	Detail of isolator tank	SE	30/03/2017
7988	Detail of small building	S	30/03/2017
7989	Detail of small building	S	30/03/2017
7990	Detail of isolator tank	SW	30/03/2017
7991	Detail of isolator tank	SW	30/03/2017

7992	Detail of isolator tank	SE	30/03/2017
7993	Detail of pipework	S	30/03/2017
7994	Detail of pipework	W	30/03/2017
7995	Detail of plaque	W	30/03/2017
7996	Unassigned	W	30/03/2017
7997	Detail of plaque	-	30/03/2017
7998	Detail of box	S	30/03/2017
7999	Detail of small pipework in front of the gasholder	NE	30/03/2017
8000	General view of small below-ground bunker	W	30/03/2017
8001	General view of small below-ground bunker	W	30/03/2017
8002	Detail of small building	W	30/03/2017
8003	Detail of small building	W	30/03/2017
8004	General view of small below-ground bunker	E	30/03/2017
8005	Detail of upper stairs and rails	N	30/03/2017
8006	Detail of upper stairs and rails	N	30/03/2017
8007	Detail of upper stairs and rails	N	30/03/2017
8008	Detail of upper stairs and rails	N	30/03/2017
8009	Detail of upper stairs and rails	N	30/03/2017
8010	Detail of panelled sheeting in area which has already been cut through showing section through the construction	NEE	30/03/2017
8011	Detail of panelled sheeting in area which has already been cut through showing section through the construction	NEE	30/03/2017
8012	Detail of panelled sheeting in area which has already been cut through showing section through the construction	NEE	30/03/2017
8013	Detail of panelled sheeting in area which has already been cut through showing section through the construction	NEE	30/03/2017
8014	Detail of panelled sheeting in area which has already been cut through showing section through the construction	NEE	30/03/2017
8015	Detail of panelled sheeting in area which has already been cut through showing section through the construction	N	30/03/2017
8016	General view of small building	S	30/03/2017
8017	General view of small building	SW	30/03/2017
8018	As shot 8017, detail of door	E	30/03/2017
8019	Detail of protruding steps in the top of the gasholder	SW	30/03/2017
8020	Detail of protruding steps in the top of the gasholder	SW	30/03/2017
8021	General view	SW	30/03/2017
8022	General view	SW	30/03/2017
8023	General view	SW	30/03/2017
8024	Detail of protruding steps in the top of the gasholder	S	30/03/2017
8025	Detail of panelled sheeting in area which has already been cut through showing section through the construction	SE	30/03/2017
8026	Detail of panelled sheeting in area which has already been cut through showing section through the construction	SE	30/03/2017
8027	Detail of panelled sheeting in area which has already been cut through showing section through the construction	SE	30/03/2017
8028	Detail of panelled sheeting in area which has already been cut through showing section through the construction	SE	30/03/2017

8029	Detail of panelled sheeting in area which has already been cut through showing section through the construction	SE	30/03/2017
8030	Detail of panelled sheeting in area which has already been cut through showing section through the construction	SE	30/03/2017
8031	Detail of panelled sheeting in area which has already been cut through showing section through the construction	SE	30/03/2017
8032	General view of interior	NE	30/03/2017
8033	General view of interior	NE	30/03/2017
8034	General view of interior	NE	30/03/2017
8035	General view of interior	NWW	30/03/2017
8036	General view of interior	NWW	30/03/2017
8037	General view of interior	W	30/03/2017
8038	General view of interior	W	30/03/2017
8039	General view of interior	S	30/03/2017
8040	General view of interior	S	30/03/2017
8041	General view of interior	NEE	30/03/2017
8042	General view of interior	NEE	30/03/2017
8043	General view of steps	SW	30/03/2017
8044	General view of steps	SW	30/03/2017
8045	General view of steps	SW	30/03/2017
8046	General view of steps	SW	30/03/2017
8047	General view of steps	SW	30/03/2017
8048	Detail of rising stanchion to the top of the gasholder	S	30/03/2017
8049	Detail of rising stanchion to the top of the gasholder	S	30/03/2017
8050	General view of steps	S	30/03/2017
8051	General view of steps	S	30/03/2017
8052	General view of steps	SSW	30/03/2017
8053	General view of steps	SSW	30/03/2017
8054	Detail to top of gasholder showing supported outer walkway	SSW	30/03/2017
8055	Detail to top of gasholder showing supported outer walkway	S	30/03/2017
8056	General view of ancillary buildings	SW	30/03/2017
8057	General view of ancillary buildings	SW	30/03/2017
8058	General view of ancillary buildings	SW	30/03/2017
8059	General view of ancillary buildings	SW	30/03/2017
8060	Detail to top of gasholder showing supported outer walkway	SSE	30/03/2017
8061	Detail to top of gasholder showing supported outer walkway	SSE	30/03/2017
8062	Detail showing riveted panel	SEE	30/03/2017
8063	Detail showing riveted panel	SEE	30/03/2017
8064	Close detail of riveted tie	SEE	30/03/2017
8065	Close detail of riveted tie	SEE	30/03/2017
8066	General view	SE	30/03/2017

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