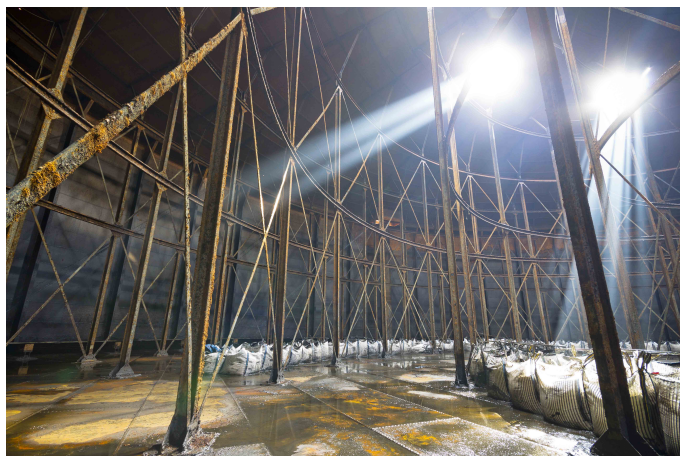


**FORMER GASWORKS AT AYLESTONE ROAD,
LEICESTER, LE2 7QJ**

**HISTORIC BUILDING RECORD
(ENGLISH HERITAGE LEVEL 2)**

NGR: 457800 302303



**Commissioned by
Montagu Evans**

**January 2016
Revised June 2016**



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**Commissioned by
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on behalf of National Grid**

**Site Code: ARG15
Project No. 7912
Report No. 2015449
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Prepared by:	Hannah Green BA, MA Seth Price BA	Archaeologist	
Reviewed and approved by:	Amy Williamson BA	Project Manager	
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**Archaeology South-East
Units 1 & 2
2 Chapel Place
Portslade
East Sussex
BN41 1DR**

SUMMARY

In November 2015 Archaeology South-East (a division of the Centre for Applied Archaeology, UCL) carried out a programme of historic building recording of the Former Gasworks at Aylestone Road in Leicester (NGR: 457800 302303; Figure 1). The work was commissioned by Montagu Evans LLP on behalf of National Grid, in relation to the proposed redevelopment of the gasworks site. Further recording work was undertaken during April and June 2016 during the demolition of the structures in order to record details of their internal construction; this information has been used to augment the initial report.

The site presently contains two gasholders, a series of operational and non-operational ancillary buildings, access routes, redundant gas pipelines and open storage areas. The site was purchased in 1875 and began production of coal gas by 1878. The gasworks continued to expand during the 19th century and by the beginning of the 20th century comprised four gasholders, erected in 1878, 1884, 1888 and 1902 respectively. None of these structures remain in-situ following the site's clearance beginning in 1972. The earliest in-situ gasholder (Gasholder No.5) is located within the site's southern compound and was built in 1930 by R & J Dempster Ltd. The structure comprises an early example of a four-lift spiral-guided holder with an above-ground tank of riveted construction. The Gasholder has an impressive internal structure – a framework of concentric steel structures which support the untrussed crown of the holder when depressed. Gasholder No. 7 is located within the northern part of the site and dates to 1965-66. The large capacity holder built by Newton Chambers Ltd, represents a late example of a typical four-lift spiral-guided design with an above-ground tank in a welded mild steel construction.

Gasholders No. 5 and 7 are based on a British spiral-guided design patented in 1887 by Gadd & Mason of Manchester. Their steel construction and use of above ground tanks reflect the continued advancements in gasholder innovation throughout the 20th century. Both gasholders, as part of the wider site were constructed in response to the need for increased gas storage capacity and manufacture not obtainable from the city's existing Belgrave Gate Works, to supply coal gas within and around Leicester.

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1.0 INTRODUCTION

- 1.1 In November 2015, April 2016 and June 2016 Archaeology South-East (a division of the Centre for Applied Archaeology, University College London) carried out a programme of historic building recording of the two gasholders at the former gasworks on Aylestone Road, Leicester, LE2 7QJ (hereafter 'the site'; centred NGR: 457800 302303; Figure 1). The work was commissioned by Montagu Evans LLP on behalf of National Grid, in advance of the demolition of the structures on the site as part of a scheme to remediate the site ahead of redevelopment.
- 1.2 An application for a determination of whether the prior approval of Leicester City Council was required for the proposed demolition of two gasholders, associated pipes and buildings was submitted to the Council in August 2015. The Council determined that prior approval was required and subsequently granted approval for the proposed demolition of the two gasholders, associated pipes and buildings on 3rd September 2015 (Decision ref. 20151515). Although no conditions were attached to the approval requiring any historic building recording, National Grid commissioned the recording as a voluntary exercise as part of a broader commitment to the stewardship of the heritage assets within the property portfolio.
- 1.3 The Aylestone Road gasholders are not statutorily listed, locally listed, or situated within a conservation area. Gasholder No. 5 was recorded on the Leicester City Council Local List (Ref. LL/036) until January 2014 when it was removed following representations submitted on behalf of National Grid (Section 4.8). These representations included:
- A significant reduction in the structure's landmark quality due to its decommissioned status, as the structure no longer rises;
 - Retention on the list would be in conflict with the redevelopment of the site, which has been identified by the Council as a Potential Development Area (PDA).
- 1.4 The only heritage asset situated within the wider National Grid site compound comprises the Grade II listed Gasworks Gatehouse with Clock Tower (Ref. 492508; Appendix 1). The building was constructed in 1879 and extended in 1898, by Shenton and Baker and now forms the National Gas Museum. The building does not form part of this historic building report and does not form part of the site's redevelopment works; as a result only a basic photographic survey has been included of this building for contextual purposes. No designated or non-designated heritage assets (e.g. scheduled monuments or listed buildings) are located elsewhere on the site.

2.0 SCOPE & METHODOLOGY

- 2.1 The scope of work and methodology for the building recording is detailed in a brief produced for the work by Montagu Evans LLP, dated November 2015. The work was also carried out in accordance with the relevant ClfA standards and guidance.
- 2.2 Gasholder No. 5 was subjected to an enhanced Level II survey due to its former locally listed status and Gasholder No. 7 was subject to a basic Level 2 recording. The ancillary structures within the immediate vicinity of both gasholders were also subject to basic Level II recording. The recording levels are defined in Historic England guidance (English Heritage 2006) and a brief produced for the work

(Montagu Evans November 2015). A Level 2 record is essentially a descriptive record.

- 2.3 The descriptive section of this report uses the gasholder terminology provided in the *London Gasholders Survey* (English Heritage 2000, 7-8). Definitions for the main structural components have been summarised in a separate appendix at the back of this report (see Appendix 2).
- 2.4 The site was visited by Hannah Green and Christopher Curtis on the 20th November 2015, and again by Seth Price on the 29th April 2016 and 15th June 2016 to make additions to the record during the demolition of the structures. The visits entailed the compilation of written notes, the verification of existing measured survey drawings, and the production of a photographic record.
- 2.5 The drawn record comprises plans of the gasholders as existing to illustrate their layout. These plans were provided by Montagu Evans and have been verified for their accuracy and amended, where necessary, during the recording exercise. The measured survey drawings are included within the report as Figures 1, 2, 21 and 22.
- 2.6 A digital photographic record was made during the site visit. Within the report selected digital images have been reproduced as plates, together with a full index of the digital photography and location plots (Figures 21 and 22). A full catalogue of all photographs is included in the archive and included as an appendix at the back of this report (Appendix 4).
- 2.7 In drawing up this report, a variety of cartographic and documentary sources were consulted. Relevant sources were obtained from/sought from the National Gas Archive (NGA, Warrington), English Heritage Archive (EH, Swindon), the National Archives (NA, Kew) and the Leicester City Historic Environment Record. Additional sources held within the Archaeology South-East library were utilised, and appropriate on-line databases interrogated. A search was made of the aerial photographs held by the Historic England Archive, as well as the Britain from Above website (2015) and Google Earth website. Material from other sources has been referenced separately within the text where necessary. A full list of the cartographic sources used during this assessment can be seen at the end of this report (Section 7.0); the sources referred to within the text are reproduced as figures.

3.0 SITE LOCATION

- 3.1 The site is located to the south of Leicester, approximately 1.5 miles south-west of the town centre. The site is formed by two National Grid sites; the northern area comprises Gasholder No. 7 and originally housed the former gas production works, the smaller compound to the south encompasses Gasholder No. 5. The two areas are separated by the River Soar and are linked via a footbridge. The area to the north occupies approximately c.15ha, within this area is a fenced compound holding Gasholder No. 7, this area measures 1.1ha. The site contains a mix of both operational and non-operational ancillary buildings with areas of open storage, access routes and modern offices. The separate southern compound occupies an area of wasteland (formerly a company sports ground) measuring 1.1ha and is set within Aylestone Meadows (Figures 1 & 2).
- 3.2 The site is bounded to the west by the River Soar and to the south by former employee housing on Boundary Road. A series of existing offices (National Grid and

others) and a Pressure Reduction System bound the site to the north and east, the East Midlands Railway runs adjacent the site's northern edge.

- 3.3 The fenced northern compound comprises a single decommissioned gasholder (Gasholder No. 7), in addition to a brick built Boiler House and an open storage area. The area is accessible via gated entrances to the north-east, north-west and south-east. The southern compound comprises an additional decommissioned gasholder (Gasholder No. 5), in addition to a Boiler House, Pump House and a Methyl Ethylene Glycol (MEG) Tank (a product used for industrial application in antifreeze systems). A series of substantial steel pipes (now redundant) run throughout the combined sites, connecting the two gasholders.

4.0 HISTORIC BACKGROUND

- 4.1 Coal gas was first produced at Leicester in 1821 at the Belgrave Gate works by the Leicester Gas Light and Coke Company (Montagu Evans 2015, 1). The works was located to the north of the city centre alongside the Leicester Canal (an extension of the Grand Union Canal) and comprised two gasholders, which supplied Leicester with gas street lighting by 1822 (http://www.irsociety.co.uk/Archives/52/Leics_Gas.htm).
- 4.2 In 1832 the Leicester and Swannington Railway (L&SR), engineered by Robert Stephenson, was opened for the purpose of transporting coal from the Leicestershire coalfield to the town. In 1846 the L&SR was absorbed by the Midland Railway (MR), and in 1849 a new connection was opened on the MR to join the L&SR line to Coalville (http://www.irsociety.co.uk/Archives/52/Leics_Gas.htm), thus providing the gas industry in Leicester with abundant coal resources throughout the region and ensuring continued expansion.
- 4.3 Due to the limited space for expansion within the Belgrave Gate works, the Leicester Gas Company sought land for an additional works. In 1875, a site comprised of 32 acres was purchased, 1 $\frac{3}{4}$ miles south-west of the town centre (Montagu Evans 2015, 1), with an additional 7 acres added later (Gas Journal 1931, 599). The new Aylestone Road works commenced production in 1878 (as marked by the foundation stone dated March 1878) and was bought by the Leicester Corporation (Gas Journal 1931, 599). The works were well positioned, bordered by the MR Burton branch, the Grand Union Canal and the main Leicester to Rugby road (now the A426). In addition there was plenty of adjacent land for future expansion. The Belgrave Gate works continued to produce gas during this expansion and served to compliment the coal gas production at the Aylestone Road site until its closure in March 1954.
- 4.4 The first edition Ordnance Survey map of 1886 (not reproduced) accords with a site plan of the gasworks dated 1889 (Figure 3), which comprises the earliest cartographic evidence showing the Aylestone Gas Works in detail. By this date only the northern part of the current site had been constructed, with the southern site comprising undeveloped pasture. This first section of works was planned by Mr. C. S. Robinson and Mr. G. A. Robinson, with assistance from Messrs. Shenton & Baker; the plant's productive capacity stood at 1 million cubic feet (c. ft.) of gas per year with a holding capacity of 1.5 million c. ft. (Gas Journal, 1931, 599). By the early 1880s the works doubled its productive capacity with the extension of the plant. As part of the works two gasholders were constructed in 1878 and 1884 respectively (Figure 4), to the east of the site, bringing the site's gas storage capacity to 10.5 million c. ft.

(Gas Journal, 1931, 599). A chemical works, constructed a year earlier in 1885, is situated to the west of the holders and a terrace of residential properties borders the gasholders on their eastern side (http://www.irsociety.co.uk/Archives/52/Leics_Gas.htm). The northern area of the site is occupied by a Retort House and site entrance (Figure 5) which adjoins to the railway beyond, the north-west corner houses three relief tanks. The remaining south-western area of the site remains undeveloped and primarily occupied by an Indian Rubber Works (St. Marys Mills).

- 4.5 The view given in the Ordnance Survey map of 1904 (not reproduced) can be seen in the site plan of the gasworks completed in 1910 (Figure 6), which shows the continued expansion of the gasworks with the construction of two retort houses dated to 1887. This map also identifies the construction of a third gasholder to the west of the earlier holders. Gasholder No. 3 was completed in 1888, to supplement the existing No. 1 and No. 2 holders. An additional Retort House was erected and served a series of newly extended rail tracks that stretched across the northern part of the site, extending to a boiler house by this date. The site was supplied with coal by rail in this period, by over 20 collieries situated in the Derbyshire and South Yorkshire coalfields (http://www.irsociety.co.uk/Archives/52/Leics_Gas.htm). The site's expansion in 1899 is shown with the construction of a new relief tank to the north of the site, primarily used for storing water gas. Additionally a fourth gasholder was erected in 1902 alongside Gasholder No. 3. In addition, terraces of what are likely to have been workers' housing (Boundary Road) (Montagu Evans 2015, 2) were built in the southern part of the site, alongside a Boot and Shoe Factory.
- 4.6 Aerial photography taken in 1920 (Figure 7) shows the site relatively unaltered, with the exception of additional allotment gardens. The electricity generating plant marked to the north of the site (constructed in 1894) on the previous mapping, had led to the renaming of the whole site as the Leicester Gas & Electric Lighting Committee by this date. The generation of electricity ceased in 1928, after the new power station, on the opposite side of the Leicester to Burton branch, had been commissioned (http://www.irsociety.co.uk/Archives/52/Leics_Gas.htm). The buildings were subsequently used to house high pressure gas compressors. The far north-western edge of the site was also occupied by a meteorological station during this period. By the early 20th century (1914-15), the site had grown to form a much larger-scale gasworks with five gasholders with a complex of industrial buildings related to the production of gas. Additional housing was constructed to the south of Boundary Rd (Dartford Road) by 1914 and a series of significant industrial buildings appear adjacent to the River Soar to the south of the site comprising settling tanks and a Dye Works, on land formerly used as allotments. Further relief tanks had been erected the north-western part of the site.
- 4.7 The extension of the site by a third was agreed in 1921 and an additional 81 acres of land were brought to the south of the River Soar. The gasworks site plan dated July 1921 (Figure 8) does not show the proposed gasholder. Gasholder No. 5 was built in 1930 by R & J Dempster Ltd and formerly opened on 2nd September 1931 (Gas Journal 1931, 599). The structure comprises a telescopic four-lift spiral-guided holder with an above-ground tank, with its useable capacity starting at 4,200 c. ft. (Montagu Evans, 2015, 2). Aerial photography taken in 1931 (Figure 9) and in 1935 (Figure 10) identifies the newly constructed southern site compound, with the holder clearly identifiable. The construction of the holder brought the works' productive capacity up to 2,788,072,000 c. ft. of gas per year.

- 4.8 Aerial photography taken in November 1945 (Figure 11) shows the site shortly before the Leicester Gas Department was taken over by the nationalised East Midlands Gas Board on 1st May 1949; by this date the site's gas output had reached approximately 7 billion c. ft p/a. The site's highest daily output record was recorded at 19 million c. ft (http://www.irsociety.co.uk/Archives/52/Leics_Gas.htm). Aerial photography of the site taken in June 1953 (Figure 12) shows a similar view as portrayed by the Ordnance Survey map of 1954 (not reproduced). Both show the site little changed, with three additional relief tanks situated to the southern edge of the northern site compound, alongside a series of industrial buildings, including; a Motor Building and Engineering Works, a Steel Shank Engineering Works, a Robot Sheet Metal Works and a Hosiery Works. The scale of this map allows for better interpretation of Gasholder No. 5 and identifies the *in-situ* connecting bridge over the River Soar and the holder's access stairs. A plan of the gasworks c.1954 (Figure 13) marks the position of the proposed Gasholder No. 7, in addition to labelling the chemical works as a former electricity works and identifies the two structures to the north of the site housing retorts one to four.
- 4.9 Aerial photography dated April 1965 (Figure 14) identifies the construction of Gasholder No. 7 with the bell sheeting not yet completed. Aerial photography taken a year later in April 1966 (Figure 15) identifies the completed structure and the *in-situ* Boiler House situated on the now demolished chemical works towards the southern extent of the northern compound. Gasholder No. 7 was built in 1965-66 by Newton Chambers Ltd as a four-lift spiral-guided holder with an above-ground tank in welded mild steel construction. A Compressor House was erected to the south of the main site access route (aligned east – west, accessed from the A426).
- 4.10 Gas production ceased on the site in May 1969 soon after the construction of Gasholder No. 7. Despite this the plant continued to be maintained for a further 12 months for use as standby if required. Demolition of the retort houses and the older gasholders commenced in the summer of 1972, evidence of the clearance works can be seen on aerial photography taken between August 1967 (Figure 16) and June 1976 (Figure 17) (http://www.irsociety.co.uk/Archives/52/Leics_Gas.htm). The site drastically reduced in size and the associated site clearance reflected the advent of natural gas suppliers which transformed the industry (Montagu Evans 2015, 2). Despite large scale site clearance within the northern compound, both Gasholder No. 5 and Gasholder No. 7 and their associated ancillary structures, remained *in-situ* as can be seen on aerial photography of the site taken in August 1987 (Figure 18). The two gasholders have been isolated from the network and purged of gas. The wider site remains in use as a National Grid depot with offices, constructed towards the end of the 20th century, as visible on aerial photography taken in July 1992 (Figure 19). To the east of the offices is an AGI Compound, used for the compression of North Sea gas for onward transmission to surrounding districts, as shown on aerial photography taken in October 2000 (Figure 20).

5.0 DESCRIPTION OF THE GASHOLDERS

5.1 Overview

5.1.1 Both gasholders represent examples of a steel water-sealed spiral-guided gasholder design with above-ground tank. Each is of four lifts and built to a developed design first patented in 1887 by Gadd & Mason of Manchester (English Heritage 2000, 41) (Appendix 3). The spiral-guided design features a series of rails arranged in a helical pattern set at 45 degrees around the entire circumference of the bell. This design produces a self-supporting structure eliminating the need for an external guide frame and resulting in a significant reduction in construction materials required. The economic design and easily maintainable construction increased its popularity, such that by the 1930s (Gasholder No. 5) the design was commonly used for the construction of new gasholders (English Heritage 2000, 42). Both gasholders are principally constructed using mild steel. The significantly higher tensile strength of steel, in comparison to iron, led to the construction of above-ground tanks as opposed to the earlier in-ground design that utilised the surrounding ground to oppose the outward compressive force generated by the structure (English Heritage 2000, 59).

Operation

5.1.2 During operation, when the gasholders were filled, the inner lift rose vertically and automatically engaged the annulus ring of the second lift. This process is known as 'cupping'. As the gasholder contents further increased, the second lift engaged the third lift, and the process repeated until the gasholder was full. When gas was extracted, the process worked in reverse with the outermost lift descending until it automatically disengaged or 'uncupped' from the next inner lift (National Grid 1999, 7-8).

Tabulated information of the Aylestone Road Gasholders

	Gasholder No. 5	Gasholder No. 7
Construction Date	1930	1965-66
Holder Capacity	4,200,000 million c. ft.	Not Known
Tank Diameter	66.23m (diameter)	80.15m (diameter)
Tank Construction	Above-ground riveted mild steel construction	Above-ground welded mild steel construction
Tank Height (Base - platform underside)	12.74m	12.70m
Number of Lifts	4 (telescopic)	4 (telescopic)
Contractor	R & J Dempster Ltd	Newton / Chambers Ltd

Table 1: Dimensional and Constructional Data for Gasholders No. 5 and No. 7.

5.2 Gasholder No. 5

The General Design

- 5.2.1 Gasholder No. 5 (Plate 1; Figure 21), constructed in 1930 by Dempster & Sons Ltd, represents a relatively early example of a water-sealed spiral-guided gasholder design with above ground tank. The holder is of four lifts and built with a nominal capacity of 4,200,000 million c. ft. The gasholder is principally constructed using riveted mild steel, but also contains 3¼ miles of channel iron, 2 miles of angle iron and 1½ miles of guide rails (Gas Journal 1931, 598).

The Principal Elements

- 5.2.2 The bell is of four lifts with a convex crown (Plate 2) constructed using fourteen rings of staggered riveted mild steel plates, laid vertically from the centre outwards. The sheeting of the crown curb and the three outer rings are laid horizontally to provide additional tensile support. The crown occupies a surface area of c.5003.20 sq. m with a diameter of c.64.92m (measurements obtained from topographical information). Four circular access hatches (Plate 3) are located on the north-east, north-west, south-east and south-west edges of the bell; all are of riveted steel construction and project from the crown's second sheeting tier, providing inspection of the bell's interior. Following the draining and opening of the gasholder, the crown was observed to be reinforced internally by a framework of radial steels between concentric steel rings (Plates 4 and 5); the crown does not feature a truss system as so commonly seen in other gasholders. In its deflated state the crown rests atop a series of triangular supports, while the gas pressure ensures the crown's rigidity when full and extended. The triangular supports are formed of two angle-iron steels linked by an angle-iron steel above with chocks supporting the rings of the crown. The supports are bolted to the top of standards within a series of six concentric frameworks. The frameworks (Plates 6 and 7) are formed of two-tiers of standards supported horizontally by continuous ring girders. The standards and girders are all I-section steels. The standard bases measure 610mm x 390mm (Plate 8). The first (starting from the outermost ring), third, and fifth frameworks also feature cross bracing between panels. The bracing is of flat-iron steels bolted to triangular bolt-plates (Plate 9). The framework rises with the pitch of the crown to its apex (Plate 10), accentuated beautifully by the circular form of the steelwork. The form of the framework creates an almost temple-like aesthetic, a steel henge of sorts. Sections of rope, possibly pertaining to the construction of the gasholder, were seen descending from the framework in number of places (Plate 11).
- 5.2.3 The top of the lift walls (lift grips) measure 290mm in width. Each lift is separated by a water sealed channel (lute). The outermost lute measures 190mm in width (Plate 12). The inner lutes measure 150mm in width. Channels run across the top of each lift grip at intervals to accommodate overflows. Downpipes orientated at 45° were seen to descend between lifts, for managing overflow while extended. The lift cups (Plate 13) measure 321mm in width, being marginally wider than the lift grips. The lift cups are square sectioned with reinforced lips. The total width of the gasholder walls, from tank wall to the first lift, is c.2.00m. Internally the first lift was seen to be formed of a series of horizontal welded sheets supported by large vertical I-section steel ribs (Plate 14). The ribs rise to triangular brackets and a descending lip of substantial steelwork which runs the circumference of the crown, providing additional tensile support to its structure while under pressure. The outer lifts are also formed of horizontal sheets. When at rest the lift walls sit atop regularly spaced steel chocks

above the tank floor (Plate 15). The tank floor is formed of riveted steel sheets. When fully inflated the holder rises to a height of c.61m.

- 5.2.4 The gasholder is fitted with Craig & Derricott Ltd I-grab Grabwire emergency switches (Plate 16), monitoring equipment to provide warning for low water levels, and pressure monitoring alarm systems. Accompanying this equipment is a self-monitoring electrical modular heating pump system supplied by the MEG Tank, whose aim is to prevent cup water from freezing between the individual lifts and the tank which would inhibit the holder from rising. An electrical anti-freeze system works in conjunction with water circulating pumps to regulate the water temperature between 0.6 degrees Celsius and 1.1 degrees Celsius. Hose cables for filling under-filled lutes (with water and anti-freeze), are also present. Cables and hoses associated with the aforementioned systems are guided by three sets of steel guide masts as the holder extends (Plate 17) – ensuring hoses are not over-strained, caught, or tangled. The hose guides are serviced by caged ladders. The pressure monitoring alarm systems are part of a graduated pressure warning and venting system to prevent over pressurisation of the tank. Tank oil monitoring apparatus is fixed to the top of the inner lift (Plate 18). Hoses run up the side of the tank from a ring main (Plate 19). Associated switch boxes are located at ground level to the north-western edge of the tank.
- 5.2.5 A series of slender guide carriages of paired-wheel type are located at regular intervals around the perimeter of each lift (Plates 20 and 21). The guide carriages serving the inner lifts are mounted to the top of the corresponding lift wall (lift grip). The guide carriages serving the outer lift are fixed to the inner edge of the tank platform on a raised paired steel plate (measuring 860mm x 700mm) supported by triangular brackets below, set over the width of the outer channel. All guide carriages are secured with a bolted footplate. The outer carriages measure 860mm x 255mm, while the inner carriages measure 850mm x 255mm. Each guide carriage is individually identified with a number: the numbers being assigned in a clockwise direction. There are 12 carriages to the first (inner) lift, 24 to the second lift, 36 to the third lift, and 48 to the fourth (outer) lift.
- 5.2.6 Each guide carriage houses its respective 'I' section guide stay which is inclined at 45 degrees, and gripped between the paired carriage wheels and fixed to the sides of the individual lifts (see Appendix 3). The first spiral-guided designs originally housed the guide rails internally but they were later housed externally for ease of maintenance, giving significant operational advantages over column-guided holders (English Heritage 2000, 42). The lifts alternate in their operational rotation, starting in an anti-clockwise direction from the outer lift inwards. The guide rails are bolted to the outside of each lift, and sealed with rivets internally.
- 5.2.7 A steel guard rail (1.07m in height) is erected around the external edge of the tank platform perimeter and comprises a series of cast tubular components comprising angled uprights with combined bottom, mid- and top tier tubular rails (Plate 22). Additionally, the outer edge of each lift is served by runs of bolted-on guard rails of a similar construction as elsewhere except for the inclusion of flat steel plates secured around the base of the rail's inner edges.
- 5.2.8 When extended, each lift is served by a narrow steel staircase (Plates 23 and 24). The staircases feature slotted grooves along their inner edges, which are accommodated by inversely mounted guide carriages of the upper lifts as they rise. The direction and form of the stairs curves to match the form and rotation of the gasholder. At the base of each inner stair is a passing platform, serving as a small

landing of sorts, measuring 2.50m x 0.29m. The stairs are formed of textured steel treads (280mm x 265mm) with open risers between flat-iron strings (215mm wide) supported by angle-iron stanchions braced by flat and angle-iron diagonal and horizontal members.

- 5.2.9 The above-ground tank (Plate 25) is constructed using riveted mild steel and measures 66.23m in diameter and has a holding capacity of 9 million gallons of water (Gas Journal 1931, 598). The tank is constructed using 7750 riveted mild steel sheets arranged horizontally over 11 tiers, each coated with acrylic paint covering to minimise corrosion and secured together with 2.25 million rivets (Gas Journal 1931, 598). The first tier of sheeting extends 1.12m in height and measures 5.70m in length, with the second tier of sheeting measuring 1.05m (height) by 5.70m (length); each sheet varies in thickness from 3.18mm to 38.1mm (Gas Journal 1931, 598) and every other alternating tier is recessed by 0.04m.
- 5.2.10 The bottom nine tiers are strengthened at regular intervals by riveted steel plates. The riveted plates of the bottom tier are roughly diamond shaped (Plate 26) and measure 1.43m in height by 1.12m in width. The plates of the second tier are representative of the plates situated from the fourth tier upwards and form a flattened lozenge shape (Plate 27), measuring the same dimensions as previously described but with a flattened tab measuring 0.10m in height) by 0.39m in width, replacing the top and bottom points. The third tier of plates deviate in form from the second tier description, with each flattened tab measuring 0.23m by 0.35m (Plate 28).
- 5.2.11 The top two tiers of tank sheeting are absent of strengthening plates. A series of regularly spaced riveted steel brackets of alternating design support the tank platform above, and span the top two tiers (Plate 29). The brackets are both riveted and bolted between the underside of the platform and the tank's outer edge. The larger bracket is of flat plate construction in a triangular arrangement. Each intermediate bracket is smaller in size and comprised of an angled steel frame reinforced by latticed flat-bar cross bracing. The tank platform is of textured steel sheeting, measuring 900mm wide.
- 5.2.12 At ground level the structure rests on a reinforced concrete base that protrudes from the tank extent by a width of 0.25m (Plate 30). The base comprises a reinforced concrete table supported on 1368 piles of reinforced concrete to hold a weight of 43,500 tons (41,000 tons of which are produced by the water). The base was constructed by Messrs. West's Rotinoff Compnay Ltd. (sub-contractors of Dempster & Sons Ltd.) (Gas Journal 1031, 598). On the south-east edge of the structure, an open-sided rectangular concrete structure (Plate 31) measuring 1.92m in length by 1.33m wide, projects from the base in an easterly direction, to create a below ground tunnel into the gasholder interior.
- 5.2.13 At ground level, to the southern edge, the gasholder is identified as 'No. 5 Gasholder' by modern acrylic signage (Plate 32).
- 5.2.14 The tank is flanked to the north and south by a pair of substantial steel standpipes, and their corresponding siphon pits, each terminating level with the tank platform guard rail and secured to the tank by slender angled brackets towards their top (Plates 33 and 34). The piping provides gas to the holder or the system depending of demand and pressure. Two large standpipes were seen within the gasholder, braced by T-section steels which descend to the tank floor, and corresponding to the external piping (Plate 35). All site pipework was originally constructed by Stanton Ironworks Company Ltd. and Staveley Coal & Iron Company Ltd. and installed by J.

J. Shardlow & Co., though since installation areas of pipework have undergone renewal. The pipework to the south connects at above-ground level to the adjoining 'Donkin' pipework (of Bryan Donkin Co, Ltd. Chesterfield) that extends to the respective plant located within the site's northern compound; the northern pipe is supplied by a single substantial pipe located c.2m below ground level within a concrete channel which forms a continuation of the same pipeline. The pipeline supplying the southern siphon, travels along the western side of the compound and is supported by a series of steel frames comprising angled uprights with diagonal bracing, supported on concrete bases at ground level. The southern inlet/outlet is served by a small access stair extending to the connection height of the pipework and adjoining shaft and presumably served maintenance purposes (Plate 36). Both pipelines, when operational, acted as a siphon in relation to an associated gas inlet and outlet mains, both served by a manual operation valve (Plate 37). Both siphons stand on concrete bases; the north mains measures 6.25m in length by 3.55m in width with a small projection on its western edge that terminates at the mid-point; the southern base measures 4.85m by 2.25m and adjoins a concrete passage to its northern edge (similar in appearance to the eastern tunnel previously described).

- 5.2.15 A staircase is located on the north-western edge of the gasholder, providing access from ground level to the tank platform (Plate 38). The stair is formed of open textured treads between channel-bar steel strings protected by a combination of bottom, mid- and top slender tubular handrails supported by angled-section balusters (Plate 39). The staircase is of two flights, the half-landing is supported mid-way by a simple rectangular steel frame comprising angled uprights, strengthened by diagonal bracing (identical in appearance to those supporting the pipeline to the western side of the site) and stands on a concrete base measuring 2.20m by 1.75m.

Southern Compound Ancillary Structures

- 5.2.16 A short distance to the north-west of the gasholder are a collection of simple rectangular containers (Figure 21; Plate 40), comprising a Pump House and Boiler House, accompanied by a pair of electrical control stores, all set on an area of concrete hardstanding. The area at the foot of the access bridge, which carries the site's gas mains, is occupied by an MEG Tank and footpath with access gate (Plate 41). The elevations of these structures are formed by cast steel panels and are featureless except for their hinged doors on their east sides. The structures' joint functions were formerly associated with the regulation of the holder's anti-freeze equipment. The original access bridge was constructed by Horseley Bridge & Engineering Company Ltd. and comprised a compound box girder (Gas Journal 1931, 598). In addition to providing access to the northern site compound, both sides hold the inlet and outlet pipes that serve the holder.

5.3 Gasholder No. 7

The General Design

- 5.3.1 Gasholder No. 7 (Plate 42; Figure 22), has a construction date of 1965-66, and was completed by Newton Chambers & Co., a firm originating from Sheffield and founded in 1793. The gasholder represents a typical late example of a four lift, water-sealed, spiral-guided holder with an above-ground tank, of welded mild steel construction.

The Principal Elements

- 5.3.2 The bell (Plate 43) is comprised of four lifts with a convex crown, constructed using 19 rings of staggered welded mild steel plates, laid vertically from the centre outwards. The sheeting of the crown curb and the two outermost rings are laid horizontally, in the same manner as Gasholder No. 5. The crown sheeting is laid over a truss system of riveted and bolted radial I-girders surmounted by a series of purlins and supported internally by an alternating series of light and heavy trusses (Plates 44 and 45). Below the apex of the crown a large steel standard descends, supported in turn by a radial series of steel braces to the crown truss system. This standard rests atop a box-girder plinth when at rest. The crown occupies a surface area of c.5138 sq. m with a diameter of c.80.15m (measurements obtained from topographical information). A series of bolted circular inspection hatches are situated on the outer south-east, south-west and northern edges of the bell. All hatches protrude from the crown surface and are located on the second tier of sheeting adjoining the curb.
- 5.3.3 The constructional details of the four lift design are similar in description to that of No. 5. The width of each lift wall decreases in size from the outermost lift inwards and each lift is separated by a water sealed lute, of which there are three in total, which narrow relative to the decreasing lift wall width. The lift walls are formed of welded steel sheets running at a 45° angle and supported within the first lift by vertical ribs. In its deflated state, the bases of the lifts sit atop evenly spaced I-girder supports (Plate 46). The lift cups were visible in section during the demolition of the gasholder, being square-sectioned channels, c.300mm deep, with reinforced lips (Plate 47). The outer lift has a slighter cup than the other lifts, as it is not required to cup a successive lift in rising. Downpipes orientated at 45° were seen to descend between lifts, for managing overflow while extended.
- 5.3.4 The gasholder's lift water seals are fitted with the same continuous cup-level monitoring equipment, electrical modular heating pump system and associated anti-freeze system as found on Gasholder No. 5. (Section 5.2.4), in addition to the associated electrical antifreeze system. A ring-main for the antifreeze system circumnavigates the base of the holder, with offshoots rising to the tank platform at regular intervals. Hoses and cables are guided between lifts by upright box-girder hose guides serviced by caged ladders. Grab-wire switches of identical arrangement as found on Gasholder No. 5 (see Section 5.2.4), are fitted to each lift wall on the east and west sides. Associated switch boxes are located at ground level (Plate 48).
- 5.3.5 A series of guide carriages are located at regular intervals around the perimeter of each lift. The guide carriages are of paired-wheel type set vertically at an inclined angle, as opposed to the horizontal arrangement found on Gasholder No. 5 (Section 5.2.5). The guide carriages serving the inner lifts are mounted to the top of the corresponding lift wall (lift grip) and comprise an additional smaller carriage wheel at their base located on the side of the lift wall in relation to the direction of travel and set within a welded steel plate base. The guide carriages serving the outer lift are fixed to the inner edge of the tank platform on a paired steel plate base, both of welded construction (Plate 49), set over the width of the outer lute. Detailed description, including measurements, of the carriages was unobtainable as the tank platform was not accessible at the time of the visits.
- 5.3.6 Each guide carriage houses its respective 'I' section guide stay which is inclined at 45 degrees, and gripped between the paired carriage wheels and fixed to the sides of the individual lifts. The carriages serving Lifts 2 – 4 have a secondary 'I' section stay which is set at a lower level and fixed to the inner edge of the corresponding lift side.

The lifts and associated guide stays alternate in their operational rotation, starting in an anti-clockwise direction from the outer lift inwards.

- 5.3.7 A steel guard rail is erected around the external edge of each lift and the tank platform. All comprise a series of cast tubular components with bottom, mid- and top rails. The outer edge of each rail is secured with a flat steel plate at its base. An additional fourth rail tier fronts each guide carriage serving the inner lifts.
- 5.3.8 When extended, each lift is accessed via a single slender spiral staircase of similar design as those on Gasholder No. 5 (Section 5.2.8) and mounted in the same way (Plate 50). The stairs are supported by welded steel frames of tubular construction, bolted together at each terminating end via a series of steel sheet plating. The outer edge of each stair has a tubular handrail of identical construction as elsewhere, serving each lift. In contrast to Gasholder No. 5, the inner face of each stair does not appear to have a grooved inset and additional carriage wheel to support the travel of the corresponding stair when operational (information obtained from photographic evidence supplied by National Grid and requires confirmation). All four staircases are located to the northern edge of the structure when at rest.
- 5.3.9 The above-ground steel tank (Plate 51) measures 80.15m in diameter and rests on a concrete base measuring 0.25m in width. The tank is constructed with welded mild steel sheets arranged horizontally over seven tiers, each coated with a water-borne acrylic paint covering to minimise corrosion. The sheets are strengthened at regular intervals by 72 vertical stanchions (spaced 3.10m apart), comprising angled steel uprights reinforced by horizontal flat-bar plates at each tier. Each stanchion measures 0.62m in width and forms 7.5 rectangular sections, each extending 1.65m in height. Each upright is secured to the tank via a series of regularly placed 'L' shaped brackets, welded to the tank exterior (Plate 52).
- 5.3.10 A series of welded steel brackets of alternating design support the tank platform (Plate 53). These brackets form flat plate struts welded between the underside of the platform and the tank's outer edge. The larger of the two bracket designs are located within the top tier of each stanchion and are also of flat plate construction, but form a triangular arrangement.
- 5.3.11 A staircase is located on the north-eastern edge of the gasholder, providing access from ground level to the narrow platform that runs around the tank's perimeter (Plate 54). The staircase is of three flights, the two half-landings are supported by their inner and outer edge by sets of paired 'U' section steel brackets, welded and bolted to the tank's external sheeting. The base of the stair is enclosed within a secure steel cage and stands on a concrete base. The stair is guarded on either side by a combination of bottom, mid- and top slender tubular handrails supported by tubular balusters with an additional flat foot plate bordering the outward edge of each landing. A short distance to the east of the stair at ground level, the gasholder is fitted with metal signage identifying the construction companies 'Newton Chambers' (Plate 55).
- 5.3.12 The tank is flanked to the north by a substantial steel pipe (Plate 56) which extends below ground level and acted as a syphon regulating the gas inlet and outlet flow when in operation. The base of the pipe is served by a manual 'Open / Shut' operation valve, identified with the manufacturers 'Westwoods and Wrights, Brierley'. To the west of the pipe there is a large recess at ground level, perhaps suggesting the existence of a former pipework extension once situated on this side. The pipework is served by a guard rail of identical arrangement as described elsewhere

at tank platform level. The pipework rises level with the tank platform guard rail and extends in an easterly direction overhead to a larger concentration of adjoining 'Donkin' gas pipework (Plate 57), all set upon a concrete base measuring 13.36m by 4.90m. This pipework in-turn continues overhead in in a southerly direction to the adjoining southern compound (Plate 58) and is supported by a combination of angled steel flat bar bracing (as found within the southern compound) and substantial steel columns which are bolted at ground level to a steel plate set within a concrete base, measuring 3.05m by 2.85m (Plate 59).

Northern Compound: Boiler House

- 5.3.13 A short distance to the north of the gasholder is a single rectangular structure, measuring 6.60m in length and 3.70m wide (Figure 22). The structure is aligned north-west – south-east and formerly served as a Boiler House. The single storey building is of orange/brown brickwork laid in stretcher bond with a flat felt roof (Plate 60). The building's principal elevation faces north-east, with the sole entrance located to its eastern end. The entrance comprises a two-leaf timber door with ventilation grilles occupying their lower halves and a concrete lintel. To the northern end is a narrow four light window at the upper level, with protruding concrete sill. The remaining elevations are blank. Three aluminium pipes extend through the roof of the structure towards the south-eastern end and are supported by a simple steel frame fixed to the roof. The interior of the building contains alarm systems and antifreeze pump apparatus (Plates 61 and 62).
- 5.3.14 Along the eastern edge of the northern compound there are two large areas of redundant concrete hardstanding which presumably held associated plant equipment. The larger base is aligned north – south and measures 8.05m in length, with a width of 5.92. The second base, aligned east – west measures 4.67m in length and 3.66m wide.

6.0 DISCUSSION

- 6.1 Constructed in 1930 by R & J Dempster Ltd., Gasholder No. 5 represents an early example of a four lift spiral-guided holder with an above-ground tank of riveted construction. Gasholder No. 7, constructed between 1965-66 by Newton Chambers Ltd., represents a late example of a typical large capacity holder of a four lift spiral-guided design with an above-ground tank of welded mild steel construction.
- 6.2 Both gasholders are adaptations of a British spiral-guided design patented in 1887 by Gadd & Mason of Manchester (see Appendix 2). Gasholder No. 5 is representative of a wider shift towards the preference of spiral-guided design holders during the early 20th century, due in part to the self-supportive design eliminating the need for an external guide frame, producing an economical and easily maintainable structure. These attributes led to the common use of the design for new gasholders by the 1930s (English Heritage 2000, 42), the period which this holder represents. The gasholder's riveted steel construction, in comparison to iron, allowed the erection of an above-ground tank as opposed to the earlier in-ground designs that utilised the surrounding ground to oppose the outward compressive force generated by the structure (English Heritage 2000, 59). The Gasholder has an impressive internal structure – a framework of concentric steel structures which support the untrussed crown of the holder when depressed. Gasholder No. 7 of welded steel construction serves to illustrate the continued advancements in gasholder innovation throughout

the 20th century. Both holders and associated ancillary equipment reflect advances in both gasholder and plant design during this period.

- 6.3 Both gasholders, as part of the wider site were constructed in response to the need for increased gas storage capacity and manufacture not obtainable from the city's existing Belgrave Gate Works, to supply coal gas within and around Leicester during the 20th century.
- 6.4 The remaining ancillary structures and associated plant serve to give context to the gasholders, while the nearby river, road and rail connections serve as a reminder of the influence that improved technology and transport links had in advancing the gas industry within Britain. In particular the construction and extension of the Leicester and Swannington Railway (L&SR) in 1832 served a vital role in the transportation of coal from the Leicestershire coalfield to the town, thus providing the gas industry in Leicester with abundant coal resources throughout the region during the late 19th and early 20th century, ensuring continued expansion of the gasworks site.
- 6.5 The existing gasholders and plant survive from the last phase of expansion of the gasworks, which began production of coal gas in 1878. In a broader view, the expansion and clearance of the gasworks is illustrative of general trends occurring in the gas industry following the discovery of natural gas production and reserves towards the end of the 20th century.

7.0 SOURCES CONSULTED

Primary Resources

National Gas Archive Documents:			
Title of Document	Reference	Date	Figure No.
Plan of Proposed Extensions - Aylestone Road Gas Works, plan showing planned extensions and holders/buildings (not labelled)	EM/LEC/AYL/E/E/6	10 th Jan 1889	3
Plan of Gas, Chemical and Electricity Works - Aylestone Road gas works showing Gas holders, Purifiers, Coal stores, Liquor & Tar tanks, retort house.	EM/LEC/AYL/E/E/4A	Jan 1910	6
Plan of Extension - Aylestone Road Gas Works, plan showing extension, holders and buildings (not labelled)	EM/LEC/AYL/E/E/5	July 1921	8
Plan of extension works to Leicester's Gas Plant	GJ/1931_195/597	1931	N/A
Photographs of Aylestone Rd Gasworks (g00943 & 00945)	EM/LEC/AYL/E/F/1	Undated (00943 - late 19 th /early 20 th century) (00945 - Post 1965)	4
Aerial view of Aylestone Road Gasworks, Leicester	TEMP_AA1236	June 1935	10
Leicester - Aylestone Rd (Available to view on site)	BG81/PD/BOX 27	Undated	N/A - Copy not available for reproduction
Leicester - Aylestone Rd (Available to view on site)	BG81/PD/BOX 30	Undated	N/A - Copy not available for reproduction
Leicester - Aylestone Rd (Available to view on site)	BG81/PD/BOX 31	Undated	N/A - Copy not available for reproduction
Leicester - Aylestone Rd (Available to view on site)	BG81/PD/BOX 33	Undated	N/A - Copy not available for reproduction

Leicester - Aylestone Rd (Available to view on site)						Undated	N/A - Copy not available for reproduction	
Leicester - Aylestone Rd (Available to view on site)						Undated	N/A - Copy not available for reproduction	
Leicester - Aylestone Rd x 8 (houses sold) (Available to view on site)						Undated	N/A - Copy not available for reproduction	
Leicester, 211, 215, 217, 223 & 229, Aylestone Road (Available to view on site)						Undated	N/A - Copy not available for reproduction	
239 & 241 Aylestone Road, Leicester (Available to view on site)						Undated	N/A - Copy not available for reproduction	
237, Aylestone Road Leicester (Available to view on site)						Undated	N/A - Copy not available for reproduction	
Leicester Corporation technical drawings of arrangement and foundations of retort house [pre 1949], filmed in 1945. (Available to view on site)						Undated	N/A - Copy not available for reproduction	
Mostly technical drawings of holders and purifiers, also includes 1937 site plans showing gas, electric, steam, water, tar and liquor mains. (Available to view on site)						Undated	N/A - Copy not available for reproduction	
Historic England Documents:								
Vertical Aerial Photography:								
Sortie No.	Library No.	Frame No.	Centre Point	Run	Date	Scale 1:	Film Details	Figure No.
RAF/106G /UK/1017	3464	7125	SK 578 023	5	17 NOV 1945	5000	Black and White 9 x 9	11

Archaeology South-East
Former Gasworks at Aylestone Road, Leicester
Historic Building Record

RAF/540/ 1143	1462	242	SK 578 020	16	09 JUN 1953	10000	Black and White 8.25 x 7.5	12
MAL/5939 1	21401	72361	SK 578 027	1	19 JUL 1959	2500	19 JUL 1959	N/A
MAL/6502 5	4190	46	SK 578 026	2	06 APR 1965	3000	Black and White 9 x 9	14
MAL/6600 9	4311	156	SK 578 024	1	06 APR 1966	2400	Black and White 9 x 9	15
MAL/6602 6	4444	95	SK 578 024	2	29 MAY 1966	2400	Black and White 9 x 9	N/A
OS/67299	11593	61	SK 578 026	10	07 AUG 1967	7500	Black and White 9 x 9	16
MAL/7111 0	5786	74	SK 578 021	2	07 JUL 1971	2500	Black and White 9 x 9	N/A
MAL/7603 5	7382	1	SK 579 024	1	05 JUN 1976	3000	Black and White 9 x 9	17
OS/87106	13141	19	SK 579 020	1	16 AUG 1987	5200	Black and White 9 x 9	18
OS/92274	14026	175	SK 578 023	7	26 JUL 1992	5300	Black and White 9 x 9	19
Oblique's:								
Date	Size	Film Details		NGR Reference :	Film No.	Fra me No.	Index No.	Figure No.
OCT 1920	5"x4"	BW Glass Plate (www.brtainfromabove.or g.uk)		SK 579024	AFL 60040	EPW 0051 01	SK 5702 / 10	7
JUL 1931	5"x4"	BW Glass Plate (www.brtainfromabove.or g.uk)		SK 579023	AFL 60759	EPW 0359 90	SK 5702 / 11	9
17 OCT 2000	35mm	Colour Slide		SK 578025	NMR 18977	04	SK 5702 / 3	20

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Britain from Above

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<http://www.gracesguide.co.uk>

Accessed 30th November 2015

British Geological Society, 2015. Geology of Britain Viewer
<http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html?src=topNav>
Accessed 30th November 2015

8.0 DEPOSITION OF THE ARCHIVE

A full archive intended for deposition with the Leicester City Historic Environment Record has been prepared. In addition a digital copy of the written record will be made available to the Historic England Archive, Swindon and the National Gas Archive, Warrington. The archive has been assigned the site code ARG15. The full site archive will be prepared in accordance with the principles of *Management of Research Projects in the Historic Environment (MoRPHE)* (English Heritage 2006) and the requirements of the recipient museum. The full archive will comprise a hard copy of the full report, a pdf version of the report on CD, the full photographic record with registers, field notes and drawings.

9.0 ACKNOWLEDGEMENTS

Archaeology South-East would like to thank Montagu Evans LLP, for commissioning this Historic Building Record, on behalf of National Grid. The assistance of Chris James while on site (National Grid) is also greatly appreciated. The author would like to thank all those who helped with archival enquiries, but particularly Alison Percival (National Gas Archive, Warrington) and Nigel Wilkins (Historic England Archive, Swindon).

PLATES



Plate 1: General view of Gasholder No. 5, facing south-east (ARG15-0121)



Plate 2: Gasholder No. 5, view of the crown (ARG15-0158)



Plate 3: Gasholder No. 5, representative hatch access (ARG15-0182)



Plate 4: Gasholder No. 5, Interior of the crown (ARG15-0284)



Plate 5: Gas holder No. 5, crown supports and framework (ARG15-0285)



Plate 6: Gasholder No. 5, Interior framework (ARG15-0269)



Plate 7: Gasholder No. 5, Interior framework – the bags are filled with sludge from the desludging process following the draining of the holder (ARG15-0275)

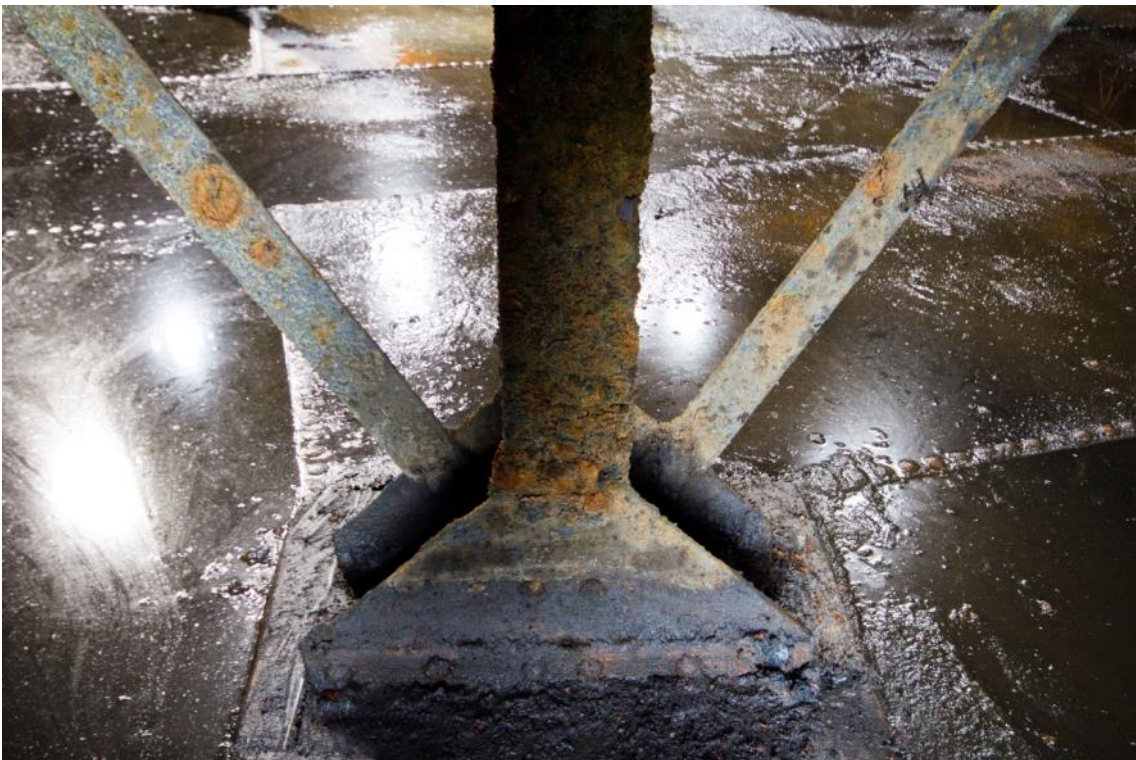


Plate 8: Gasholder No. 5, Standard base (ARG15-0242)



Plate 9: Gasholder No. 5, interior framework detail (ARG15-0283)



Plate 10: Gasholder No. 5, the apex of the crown and framework (ARG15-0265)



Plate 11: Gasholder No. 5, remnant rope on framework (ARG15-0288)



Plate 12: Gasholder No. 5, Interior of the crown (ARG15-0170)

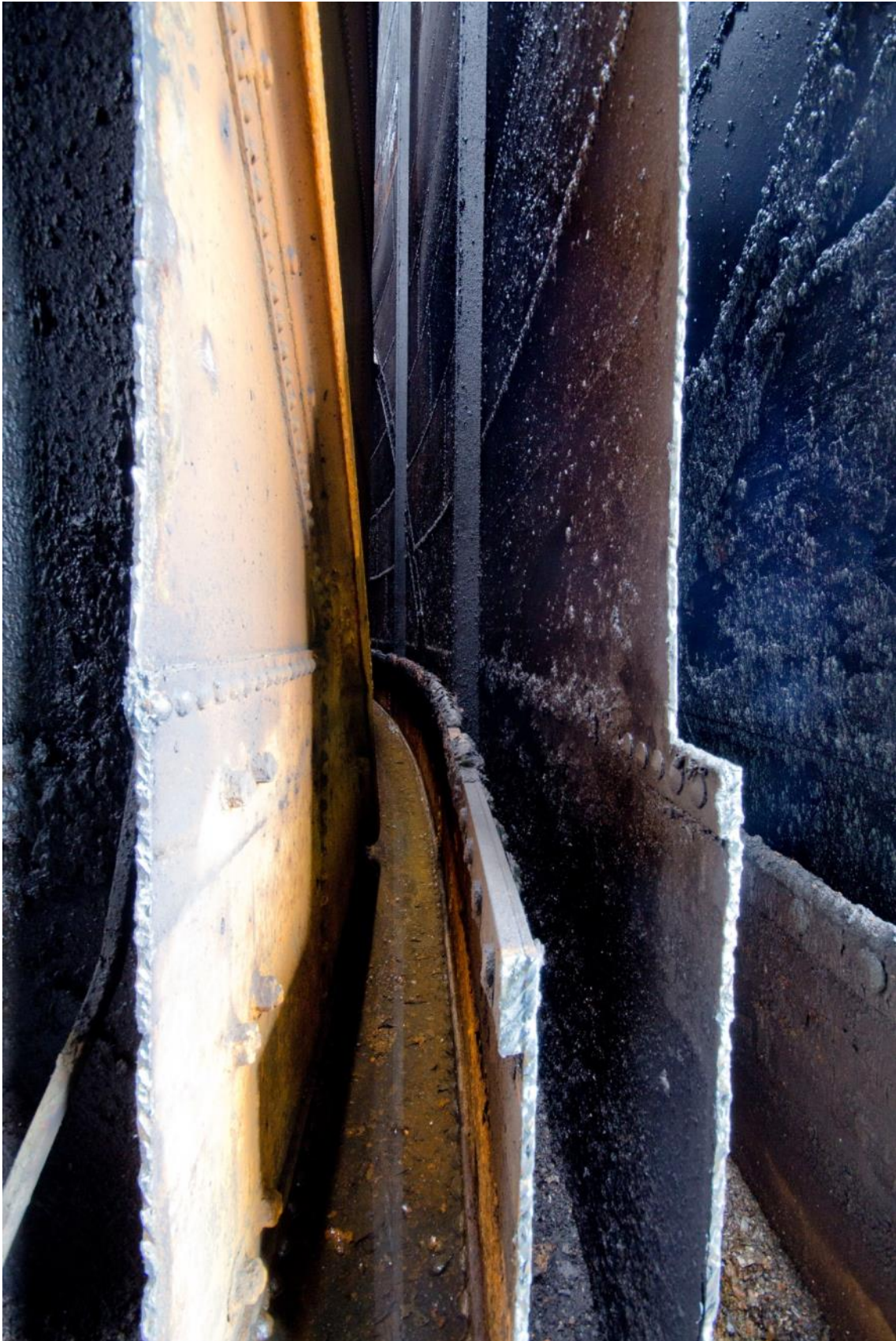


Plate 13: Gasholder No. 5, lift cup section (after being cut through to form an opening) – note the guide rail on the left (ARG15-0245)



Plate 14: Gasholder No. 5, walls of the first lift (ARG15-0249)



Plate 15: Gasholder No. 5, lift walls resting atop steel chocks (ARG15-0256)



Plate 16: Gasholder No. 5, detail of the grabwire emergency switches (ARG15-0181)



Plate 17: Gasholder No. 5, hose guides(ARG15-0196)



Plate 18: Gasholder No. 5, oil monitoring apparatus (ARG15-0202)



Plate 19: Gasholder No. 5, detail of the switch boxes serving the anti-freeze monitoring equipment and ring main, facing east (ARG15-0113)



Plate 20: Gasholder No. 5, view of the guide carriage, tank platform and lift arrangement (ARG15-0157)



Plate 21: Gasholder No. 5, view of the guide carriage, tank platform and lift arrangement (ARG15-0184)



Plate 22: Gasholder No. 5, view handrail arrangement (ARG15-0164)



Plate 23: Gasholder No. 5, guide rail on lift stair (ARG15-0161)



Plate 24: Gasholder No. 5, lift stair (ARG15-0160)



Plate 25: Gasholder No. 5, general view of tank construction, facing south-west (ARG15-0086)



Plate 26: Gasholder No. 5, detail of support plates within the tank's first tier of sheeting, facing south (ARG15-0078)

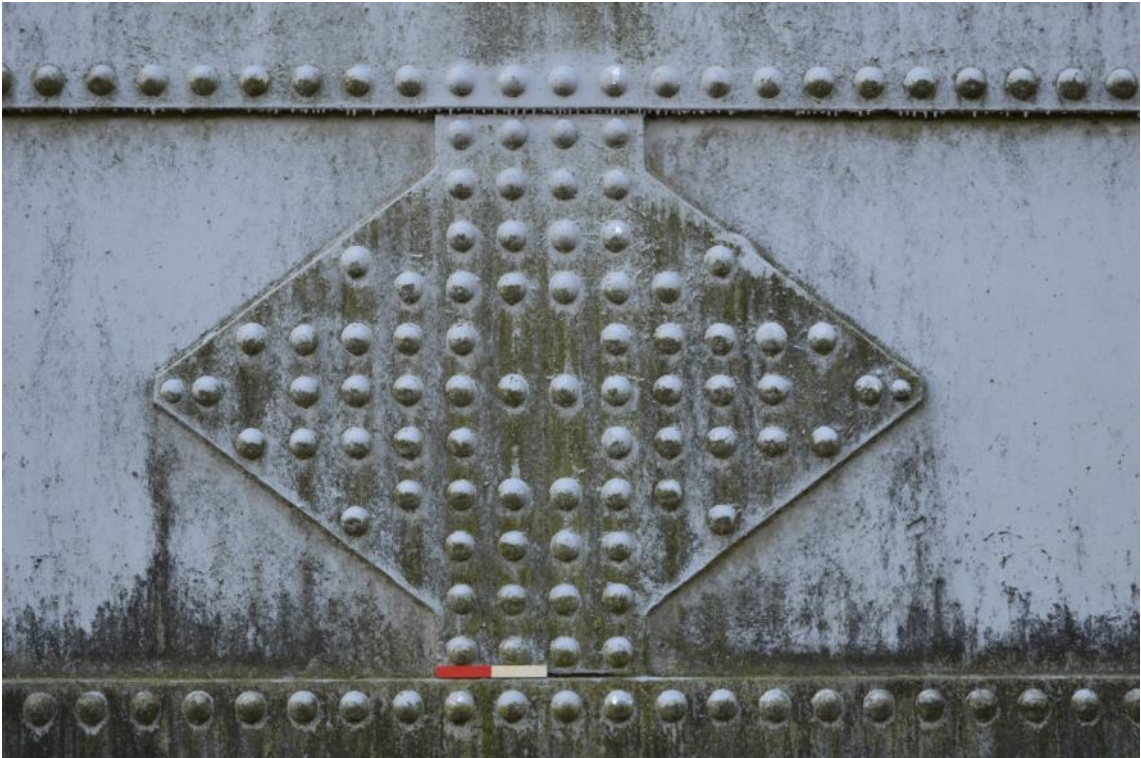


Plate 27: Gasholder No. 5, detail of support plates within the tank's second tier of sheeting, facing south (ARG15-0077)

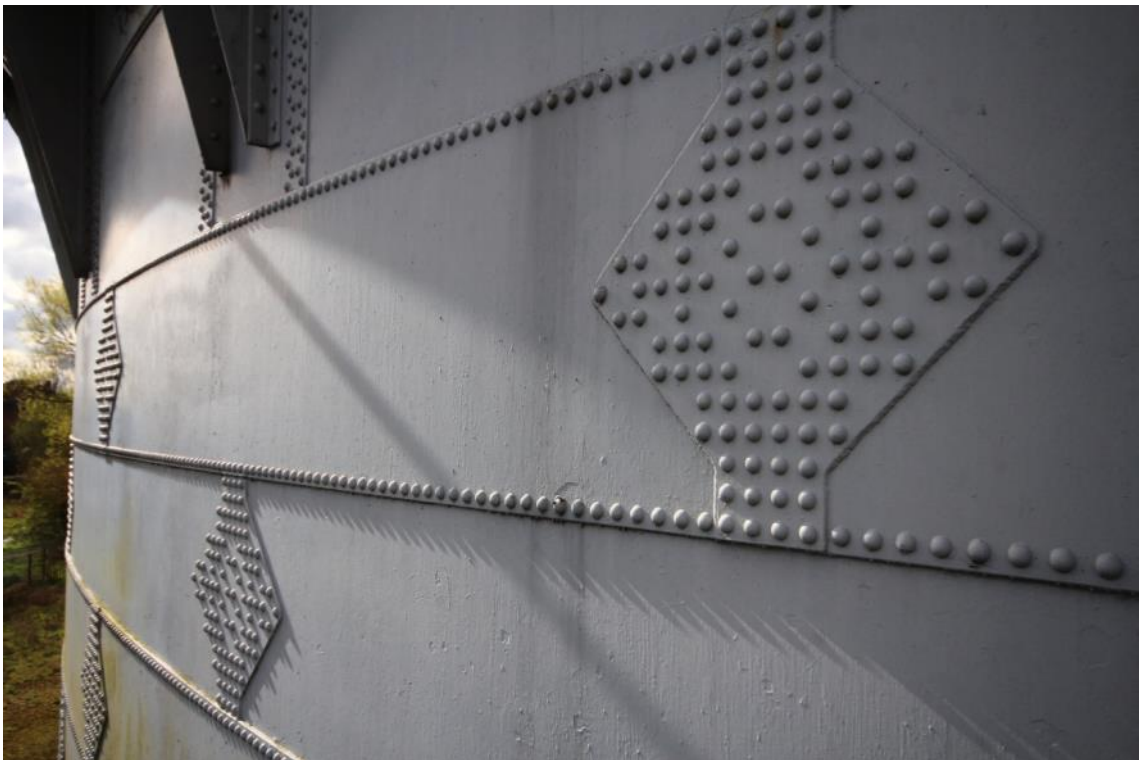


Plate 28: Gasholder No. 5, detail of support plates within the tank's third tier of sheeting, facing west (ARG15-0148)



Plate 29: Gasholder No. 5, Support brackets to the tank platform (ARG15-0146)



Plate 30: Gasholder No. 5, concrete tank base, facing north-east (ARG15-0087)



Plate 31: Gasholder No. 5, view of below ground access tunnel, facing north-west (ARG15-0088)



Plate 32: Gasholder No. 5, modern 'No. 5 Gasholder' identification signage, facing north (ARG15-0099)



Plate 33: Gasholder No. 5, view of southern gas inlet/outlet syphon pipework, facing north-west (ARG15-0189)



Plate 34: Gasholder No. 5, view of northern gas inlet/outlet syphon pipework, facing north-east (ARG15-0070)



Plate 35: Gasholder No. 5, standpipe for gas supply within the gasholder (ARG15-0272)



Plate 36: Gasholder No. 5, detail of the stair serving the southern gas inlet/outlet syphon, facing north-west (ARG15-0101)



Plate 37: Gasholder No. 5, detail of manual operation valve serving the northern gas inlet/outlet syphon, facing south-west (ARG15-0128)



Plate 38: Gasholder No. 5, view of tank access stair, facing south (ARG15-0124)



Plate 39: Gasholder No. 5, detail of tank access stair construction, facing south (ARG15-0127)



Plate 40: Pump House, Boiler House, and MEG Tank situated within the southern compound, facing north-west (ARG15-0116)



Plate 41: Gasholder No. 5, southern compound access bridge with associated gas mains pipework below, facing north (ARG15-0118)



Plate 42: Gasholder No. 7, view of tank construction, facing north-east (ARG15-0014)



Plate 43: Gasholder No. 7, view of tank bell, platform, lift, access stair and handrail arrangement, facing west (ARG15-0136) (Supplied by National Grid)



Plate 44: Gasholder No. 7, interior of the bell (ARG15-0213)



Plate 45: Gasholder No. 7, interior of the bell, plinth and crown stanchion (ARG15-0220)



Plate 46: Gasholder No. 7, detail of enclosed access ladders and ancillary hoses, facing north (ARG15-0011)



Plate 47: Gasholder No. 7, detail of lift cups seen in section (ARG15-0234)



Plate 48: Gasholder No. 7, switch box pertaining to the antifreeze system (ARG15-0045)



Plate 49: Gasholder No. 7, detail of the guide carriage arrangement, facing south-west (ARG15-0137)
(Supplied by National Grid)



Plate 50: Gasholder No. 7, view of the lift access stair design, facing south-west (ARG15-0052)



Plate 51: Gasholder No. 7, view of the tank construction, facing north-east (ARG15-0012)



Plate 52: Gasholder No. 7, detail of the welded tank sheeting and vertical support stanchions, facing north-west (ARG15-0006)



Plate 53: Gasholder No. 7, detail of tank platform support brackets, facing north-west (ARG15-0005)



Plate 54: Gasholder No. 7, view of three tier tank access stair, facing south-east (ARG15-0036)



Plate 55: Gasholder No. 7, metal 'Newton Chambers' makers identification signage, facing south (ARG15-0043)



Plate 56: Gasholder No. 7, detail of northern gas mains inlet/outlet syphon pipework and manual operation valve, facing south-west (ARG15-0033)



Plate 57: Gasholder No. 7, detail of the gas mains 'Donkin' pipework serving the northern compound, facing south-west (ARG15-0040)



Plate 58: Gasholder No. 7, view of the gas mains 'Donkin' pipework extending to the site's southern compound, facing north-west (ARG15-0053)



Plate 59: Detail of the column base supporting the gas mains pipework around the site, facing south-east (ARG15-0042)



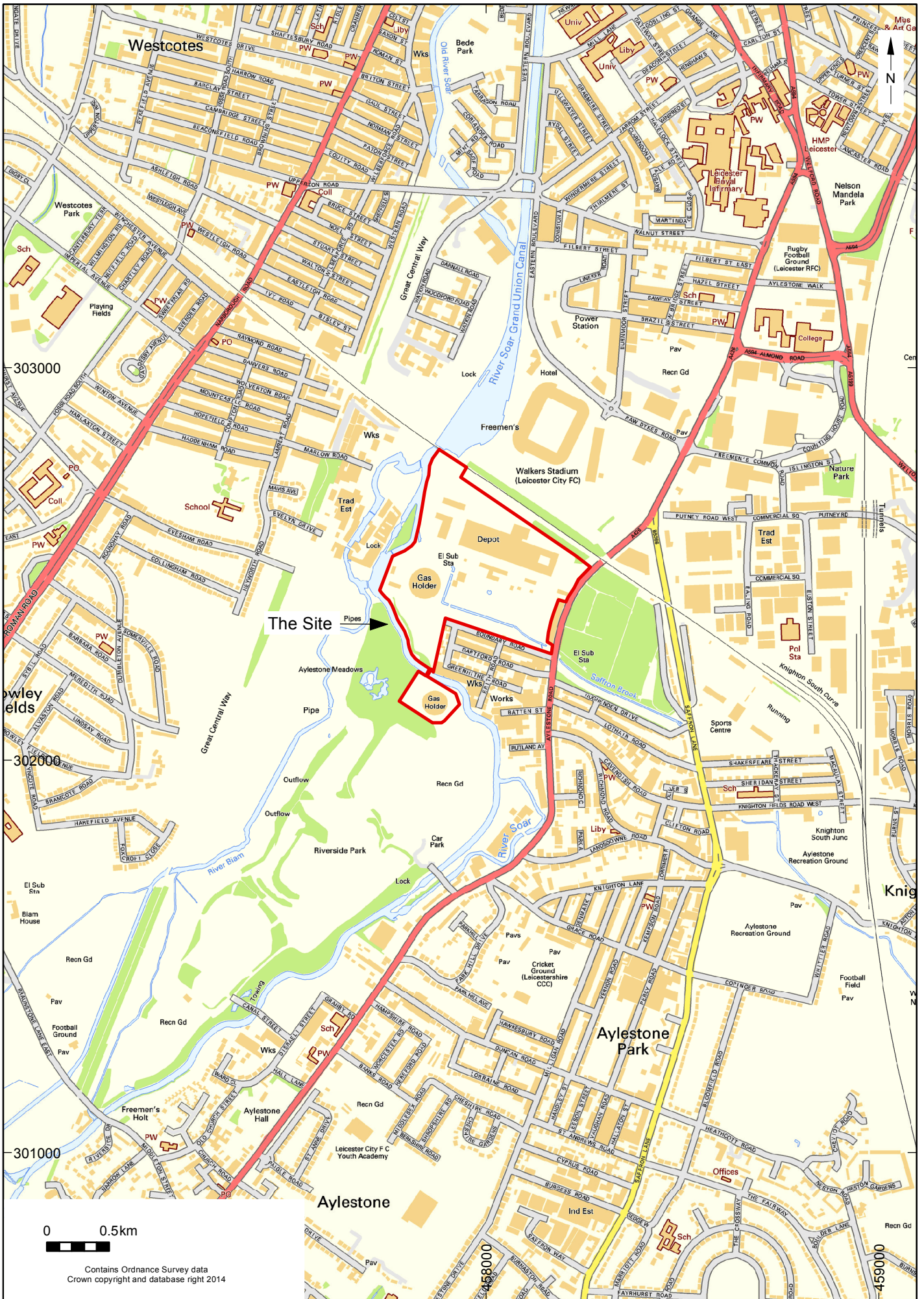
Plate 60: View of the Boiler House within the northern compound, facing south-east (ARG15-0035)



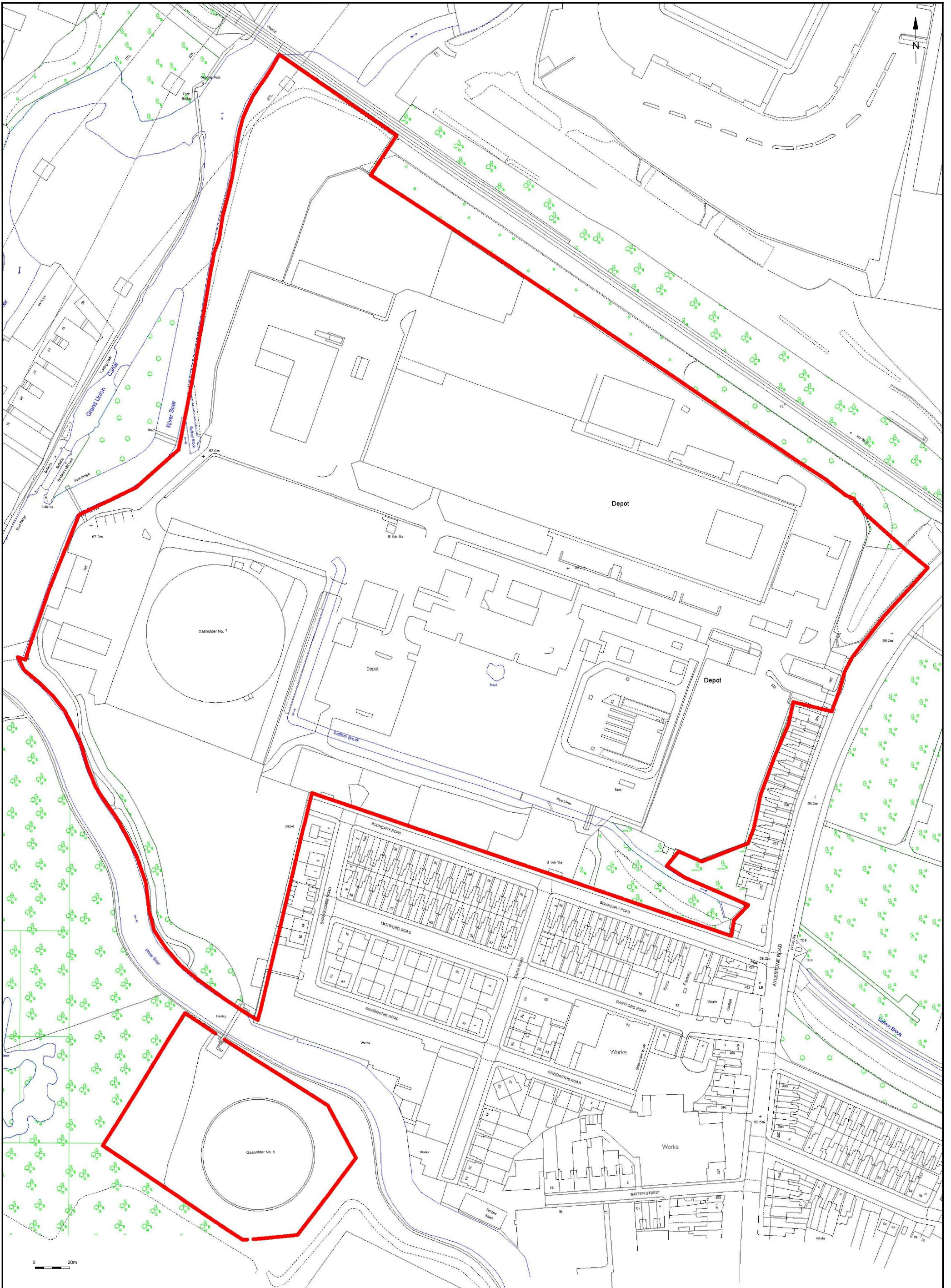
Plate 61: Apparatus within the boiler house (ARG15-0229)



Plate 62: Alarm systems within the boiler house (ARG15-0230)



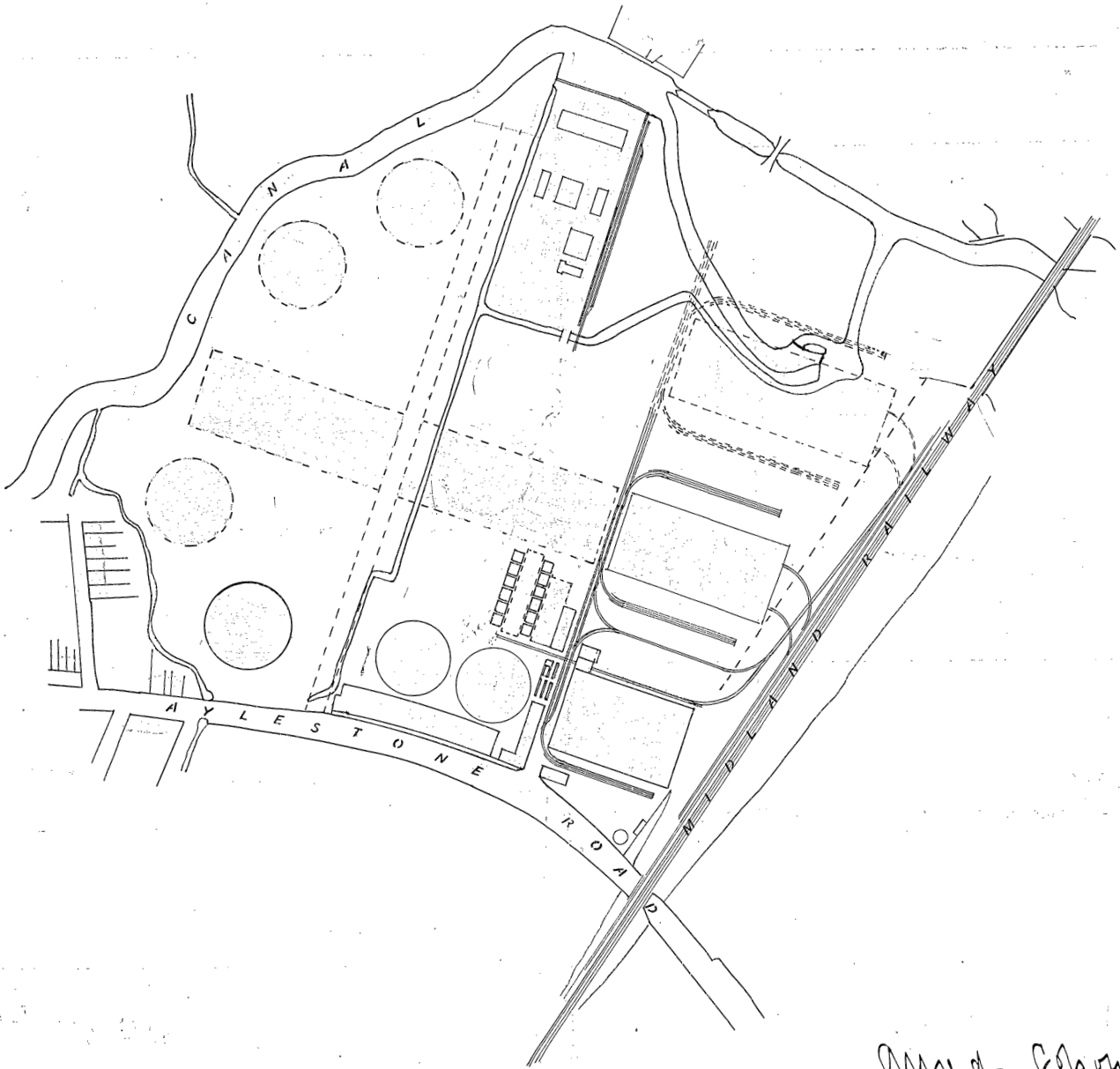
© Archaeology South-East		Former Gasworks at Aylestone Road, Leicester		Fig. 1
Project Ref: 7912	January 2016	Site location		
Report Ref: 2015449	Drawn by: HG			



CORPORATION OF LEICESTER

GAS DEPARTMENT

AYLESTONE ROAD WORKS

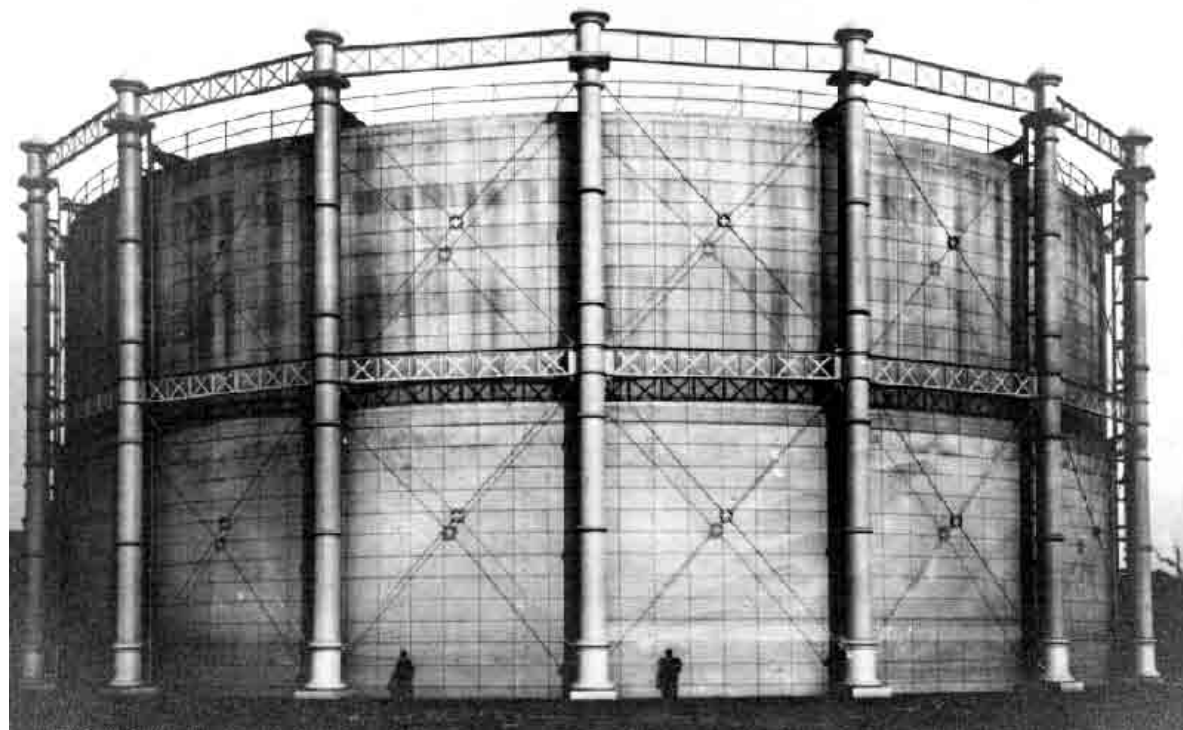


Alfred Colson
ENGINEER

10th Jan 87.

[EM] LEC/E/E/6

© Archaeology South-East		Former Gasworks at Aylestone Road, Leicester		Fig. 3
Project Ref: 7912	January 2016	Plan of Proposed Extensions - Aylestone Road Gas Works, plan showing		
Report Ref: 2015449	Drawn by: HG	planned extensions and holders/buildings (10th Jan 1889) (NGA)		



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Former Gasworks at Aylestone Road, Leicester

Project Ref: 7912
Report Ref: 2015449

January 2016
Drawn by: HG

Early Photograph of Gasholder No. 1 / 2 (1878 - 1884) (NGA00943)

Fig. 4



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Former Gasworks at Aylestone Road, Leicester

Project Ref: 7912

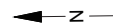
January 2016

Report Ref: 2015449

Drawn by: HG

Top: View of the gasworks' entrance towards the gatehouse c.1900.
 Bottom: Present view of entrance and clocktower (Source: EMG/ASE)

Fig. 5



<http://www.britainfromabove.org.uk/image/EPW005101>

© Historic England

© Archaeology South-East		Former Gasworks at Aylestone Road, Leicester	Fig. 7
Project Ref: 7912	January 2016	Aerial View of Aylestone Road Gasworks and St Mary's Mills, 1920 (HE)	
Report Ref: 2015449	Drawn by: HG		

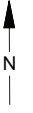
City of Leicester
 Gas Department.
AYLESTONE ROAD WORKS
EXTENSION 1921.

acres, rods, perches.
 Area 81. 1. 26.

Scale=3500

Feet 100 50 0 100 200 300 400 500 600 700 800 900 1000 1500.Ft

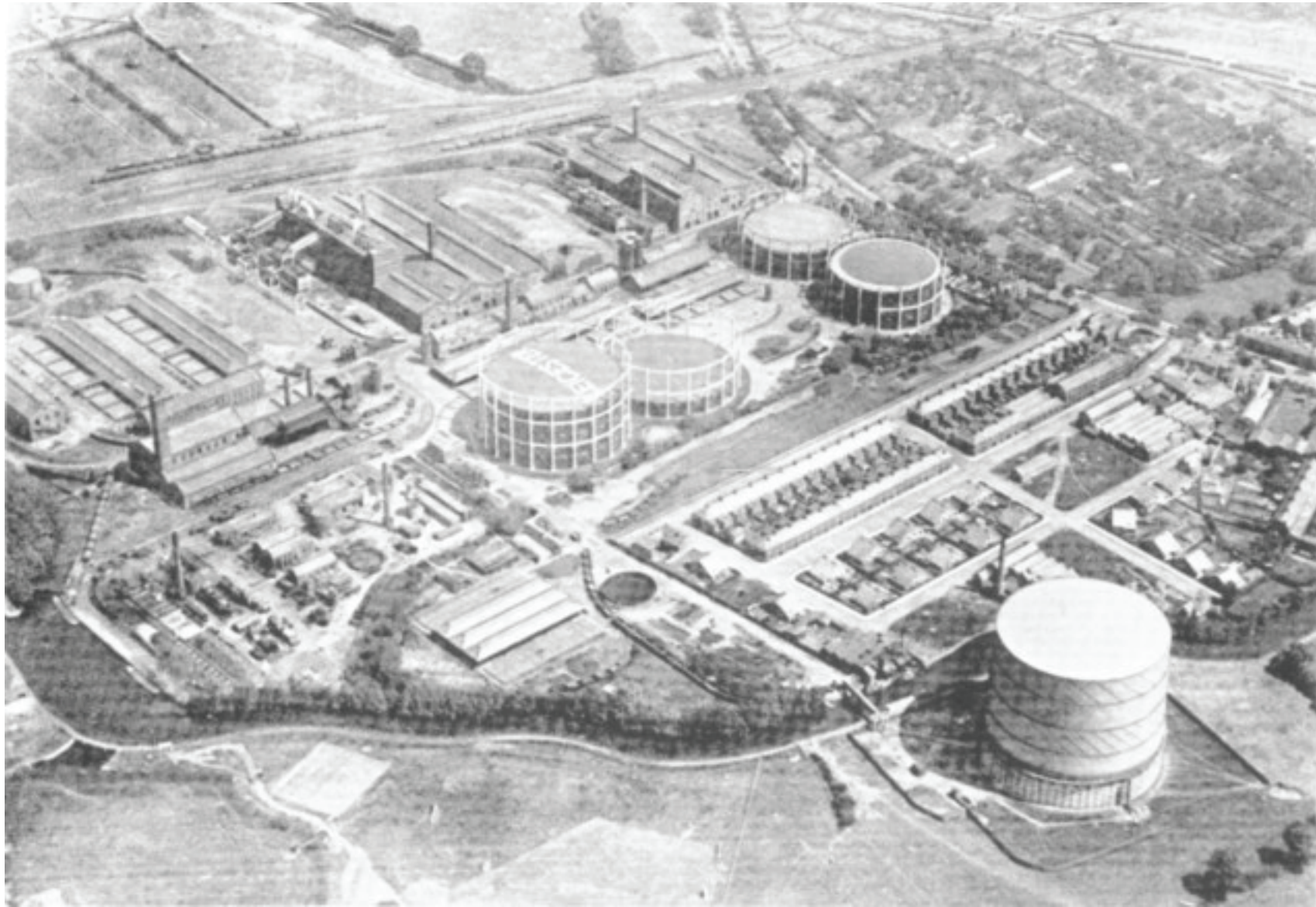
*Copy of plan sent to the Town Clerk
 May 5th 1920.*



J. H. Dooling
 Engineer & Manager.
 July 1921.

[EM]LEC/E/E/5

© Archaeology South-East		Former Gasworks at Aylestone Road, Leicester		Fig. 8
Project Ref: 7912	January 2016	Plan of Extension - Aylestone Road Gas Works, plan showing extension, holders and buildings (July 1921) (NGA)		
Report Ref: 2015449	Drawn by: HG			



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Project Ref: 7912 January 2016
Report Ref: 2015449 Drawn by: HG

Former Gasworks at Aylestone Road, Leicester

Aerial view of site dated to c.1931 (HE)

Fig. 9



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Project Ref: 7912 January 2016
 Report Ref: 2015449 Drawn by: HG

Former Gasworks at Aylestone Road, Leicester

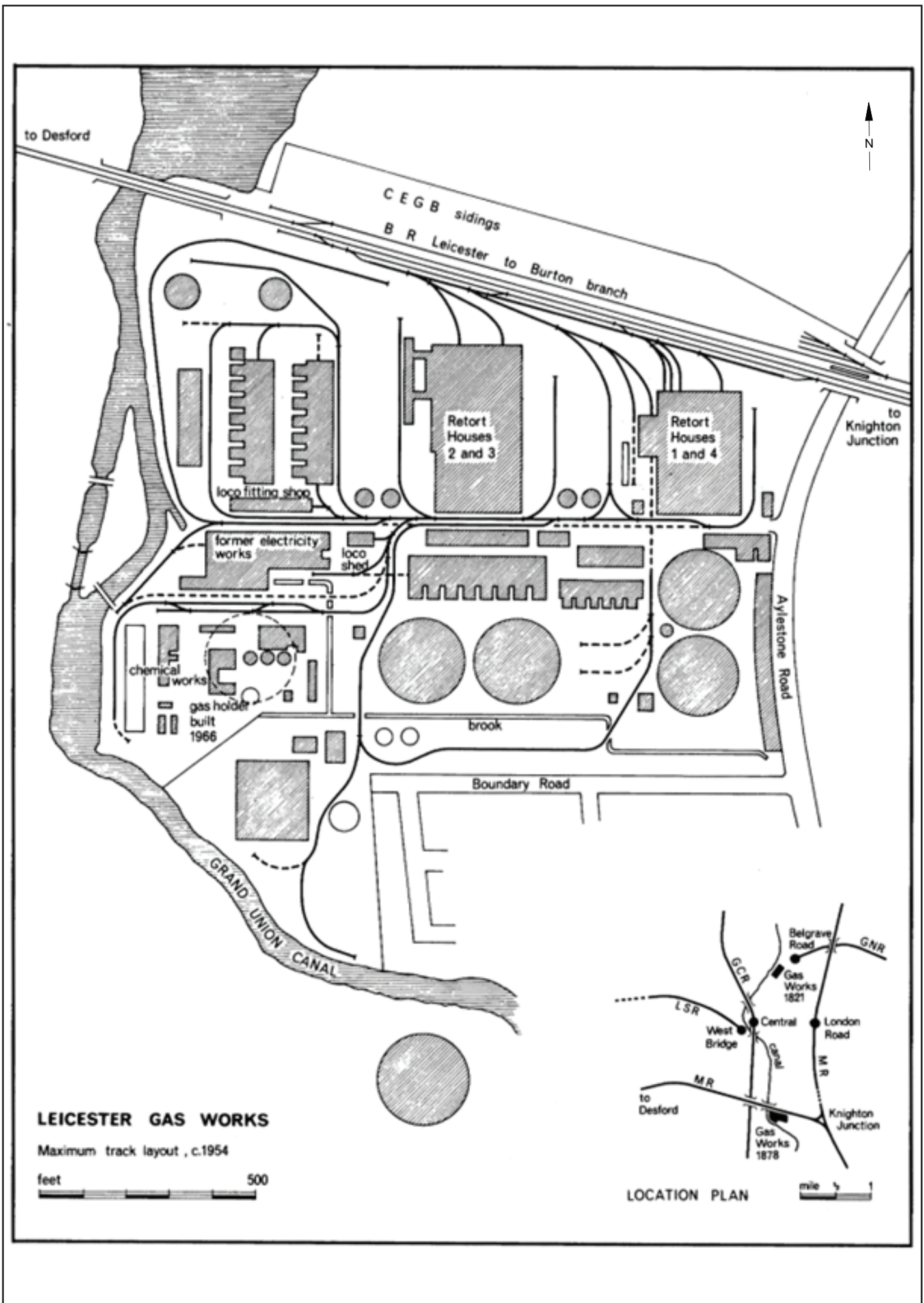
Aerial view of Aylestone Road Gasworks,
 Leicester, facing south-east (1935) (NGA)

Fig. 10

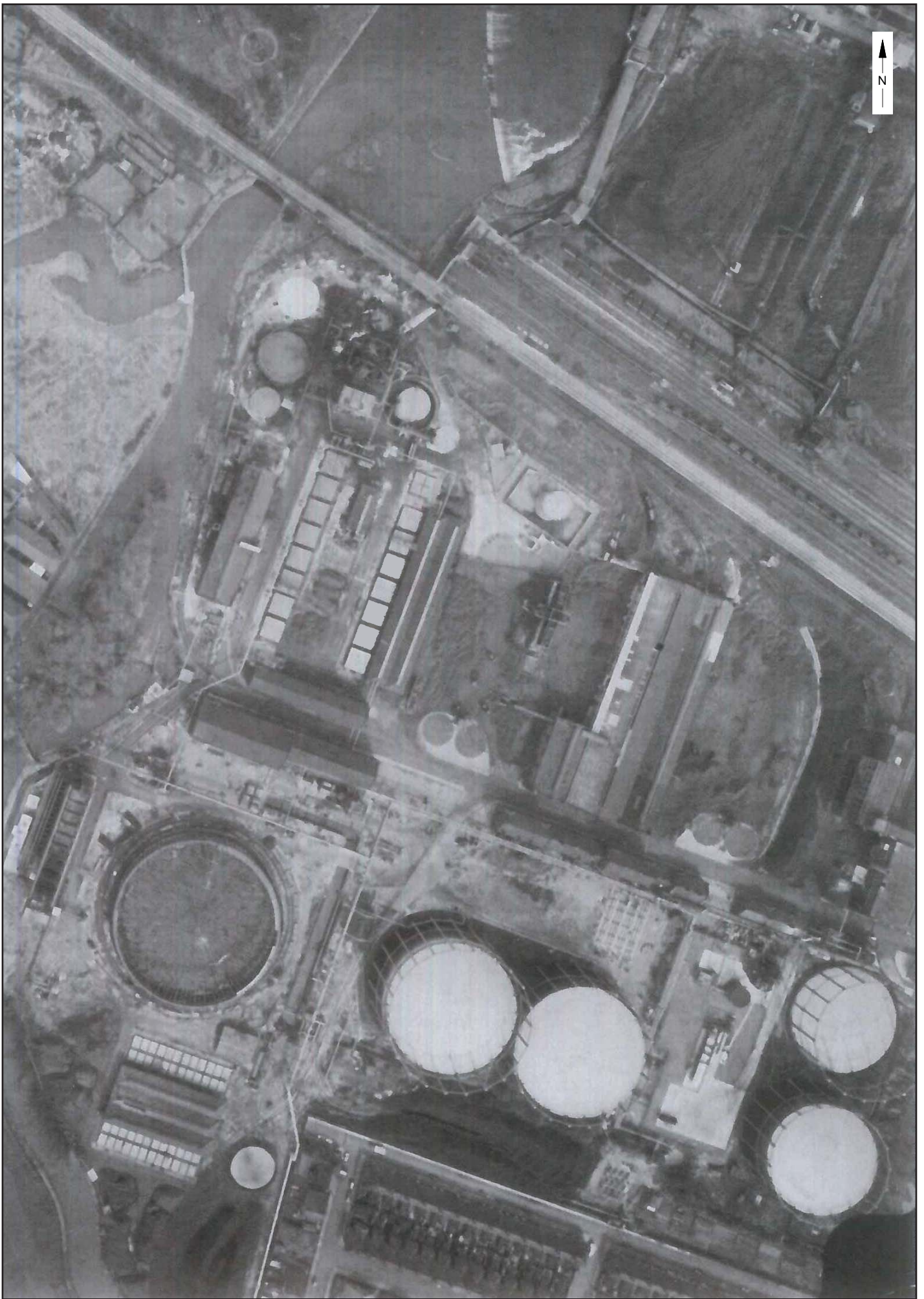




© Archaeology South-East		Former Gasworks at Aylestone Road, Leicester	Fig. 12
Project Ref: 7912	January 2016	Aerial view of Aylestone Road Gasworks, Leicester (09 JUN 1953) (HE)	
Report Ref: 2015449	Drawn by: HG		



© Archaeology South-East		Former Gasworks at Aylestone Road, Leicester	Fig. 13
Project Ref: 7912	January 2016	Site plan of the Gasworks c.1954	
Report Ref: 2015449	Drawn by: HG	(Source: http://www.irsociety.co.uk/Archives/52/Leics_Gas.htm)	



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Project Ref: 7912
Report Ref: 2015449

Former Gasworks at Aylestone Road, Leicester
January 2016
Drawn by: HG
Aerial view of Aylestone Road Gasworks, Leicester (06 APR 1965) (HE)

Fig. 14



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Former Gasworks at Aylestone Road, Leicester

Project Ref: 7912

January 2016

Report Ref: 2015449

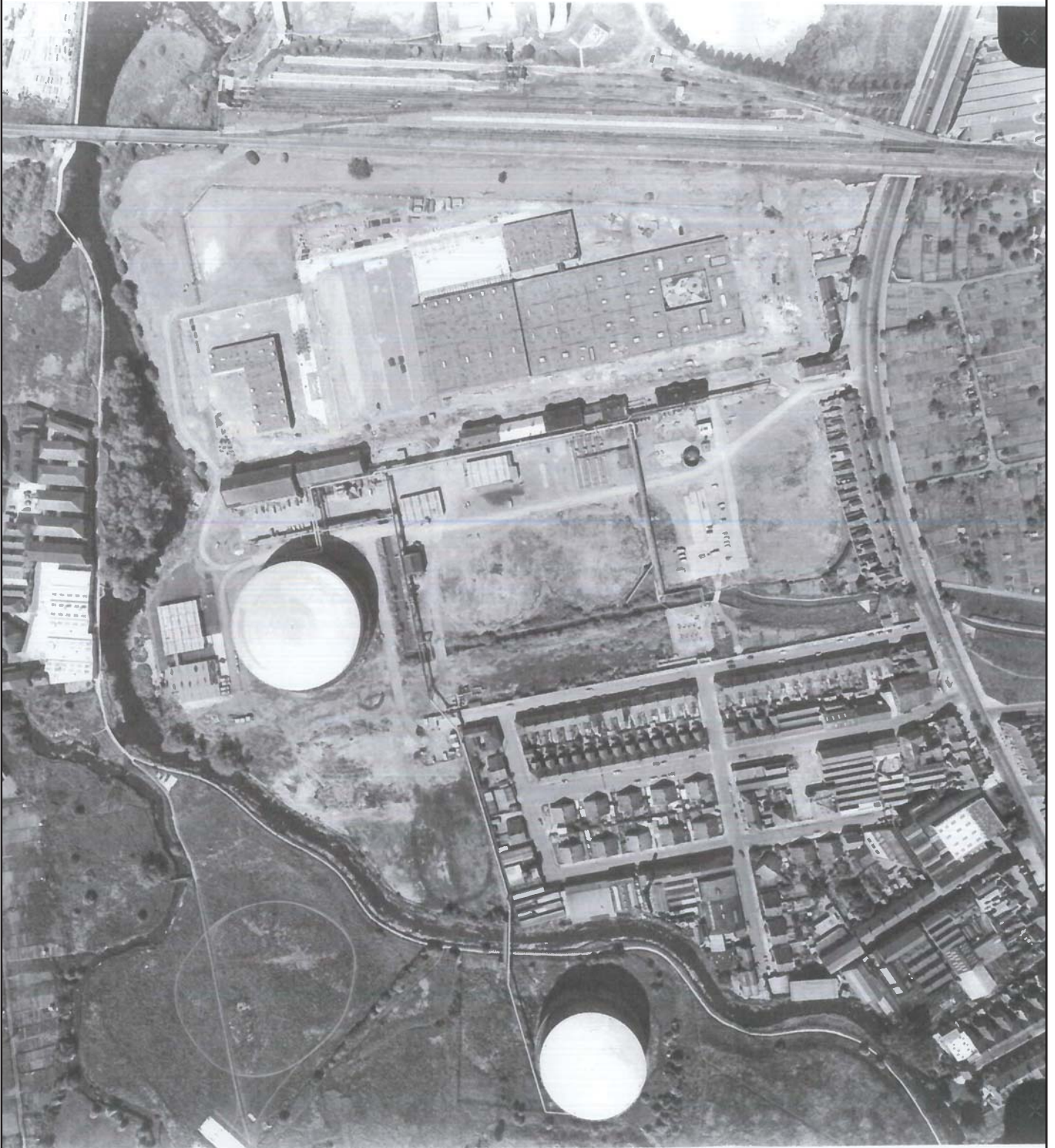
Drawn by: HG

Aerial view of Aylestone Road Gasworks, Leicester (06 APR 1966) (HE)

Fig. 15



© Archaeology South-East		Former Gasworks at Aylestone Road, Leicester	Fig. 16
Project Ref: 7912	January 2016	Aerial view of Aylestone Road Gasworks, Leicester (07 AUG 1967) (HE)	
Report Ref: 2015449	Drawn by: HG		



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Former Gasworks at Aylestone Road, Leicester

Project Ref: 7912

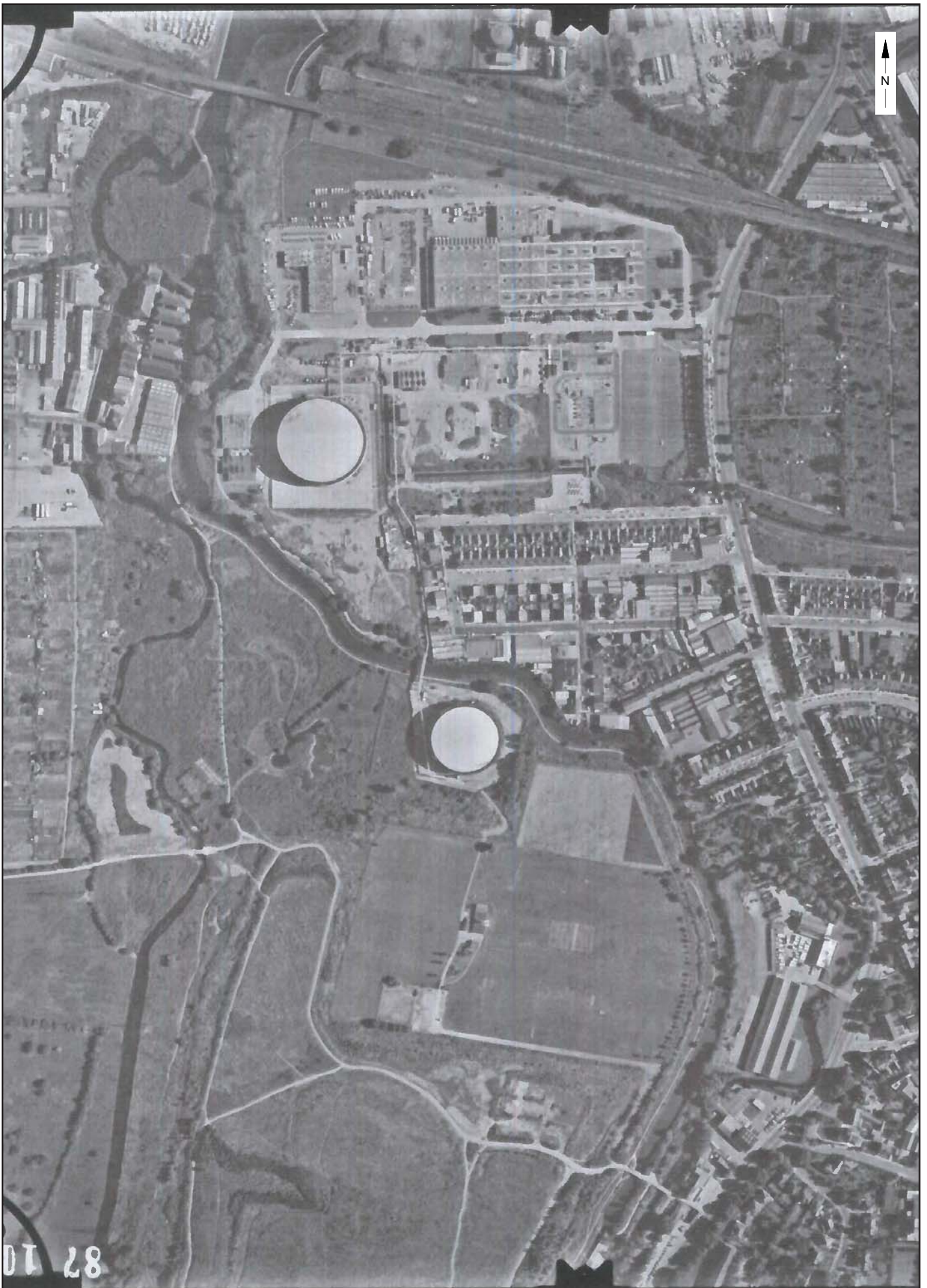
January 2016

Report Ref: 2015449

Drawn by: HG

Aerial view of Aylestone Road Gasworks, Leicester (05 JUN 1976) (HE)

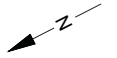
Fig. 17



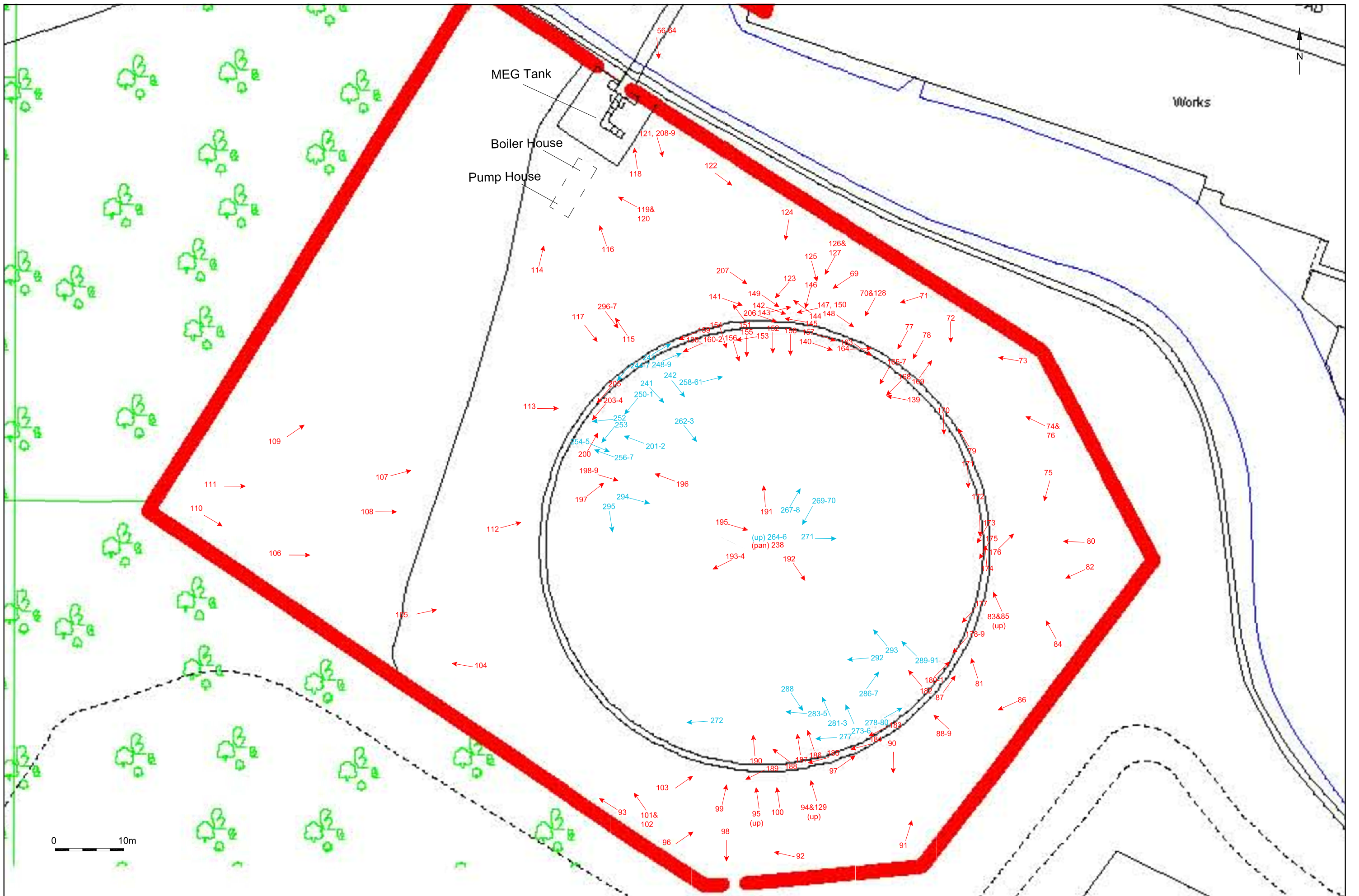
© Archaeology South-East		Former Gasworks at Aylestone Road, Leicester	Fig. 18
Project Ref: 7912	January 2016	Aerial view of Aylestone Road Gasworks, Leicester (16 AUG 1987) (HE)	
Report Ref: 2015449	Drawn by: HG		

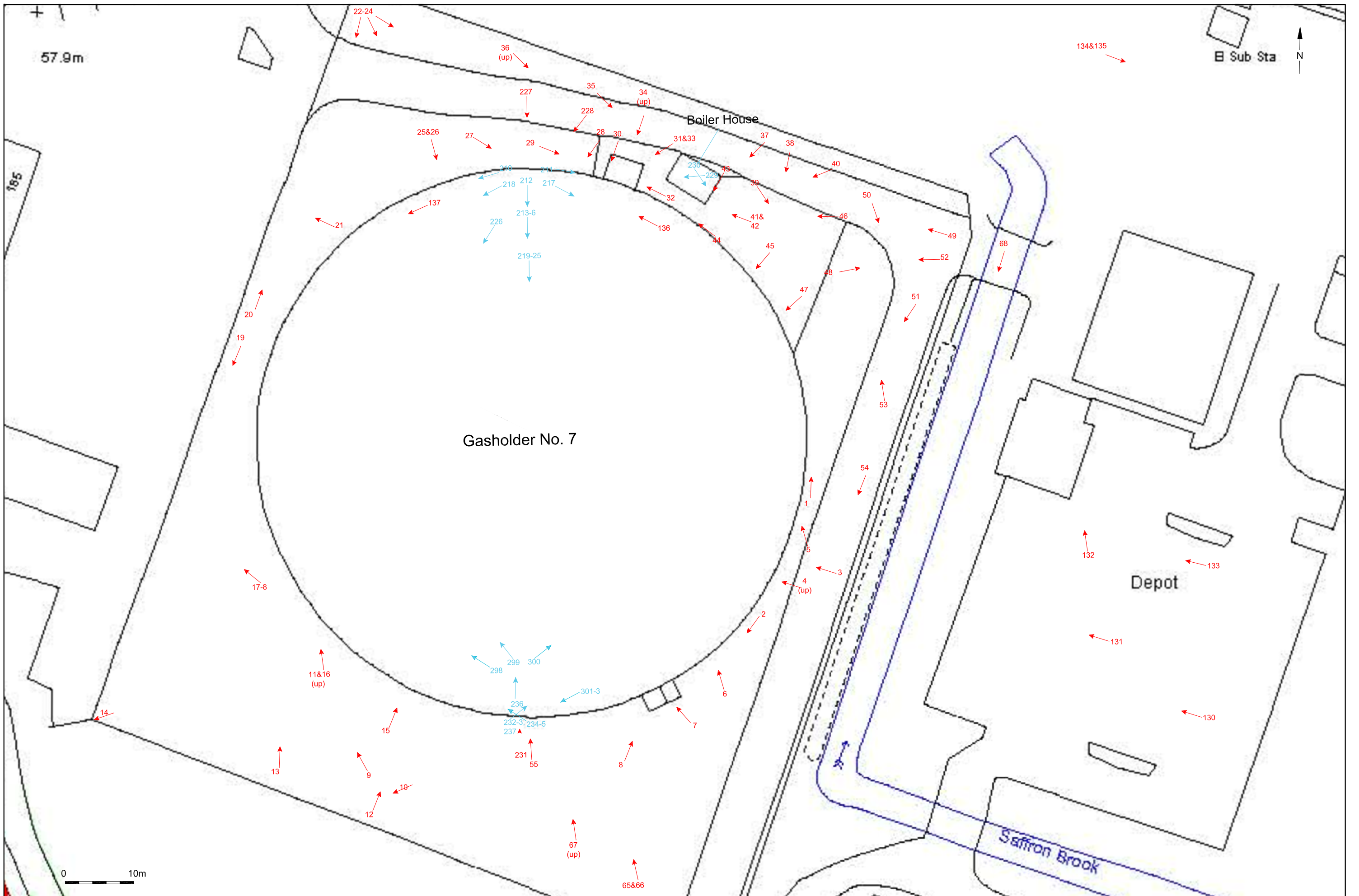


© Archaeology South-East		Former Gasworks at Aylestone Road, Leicester	Fig. 19
Project Ref: 7912	January 2016	Aerial view of Aylestone Road Gasworks, Leicester (26 JUL 1992) (HE)	
Report Ref: 2015449	Drawn by: HG		



© Archaeology South-East		Former Gasworks at Aylestone Road, Leicester	Fig. 20
Project Ref: 7912	January 2016	Aerial view of Aylestone Road Gasworks, Leicester (17 OCT 2000) (HE)	
Report Ref: 2015449	Drawn by: HG		





Appendix 1 Listing Description of the Aylestone Road Gasworks Gatehouse with Clock Tower (Ref. 492508)

GAS WORKS GATEHOUSE WITH CLOCKTOWER

This building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 as amended for its special architectural or historic interest.

Name: GAS WORKS GATEHOUSE WITH CLOCKTOWER

List entry Number: 1391186

Location

GAS WORKS GATEHOUSE WITH CLOCKTOWER, 195, AYLESTONE ROAD

The building may lie within the boundary of more than one authority.

County:

District: City of Leicester

District Type: Unitary Authority

Parish: Non Civil Parish

National Park: Not applicable to this List entry.

Grade: II

Date first listed: 29-Sep-2004

Date of most recent amendment: Not applicable to this List entry.

Legacy System Information

The contents of this record have been generated from a legacy data system.

Legacy System: LBS

UID: 492508

Asset Groupings

This list entry does not comprise part of an Asset Grouping. Asset Groupings are not part of the official record but are added later for information.

List entry Description

Summary of Building
Details

LEICESTER

718/0/10221 AYLESTONE ROAD 29-SEP-04 195 Gas Works gatehouse with clocktower.

GV II Gatehouse and Clock tower. 1879 by Shenton and Baker for Leicester Corporation Gas

Undertaking. Rear extension dated 1898. They formed part of Aylestone Road Gas Works. Red brick, moulded brick and stone dressings, slate roofs, the tower with fishscale slate roofs. Gatehouse. Single storey, two symmetrical bays to Aylestone Road, formerly four bays. Two pairs of sashes in chamfered stone architraves. Upper sashes small paned, the lower sashes plain. Stone cill band, with recessed brick panels beneath. Moulded brick band to plinths of outer bays and band of moulded brick rosettes above windows. Continuous moulded brick band to frieze. Brick dentil cornice. Gables have moulded stone cornices and kneelers, plain stone copings. Each has gable oculus in moulded brick opening. Rebuilt south gable has small window openings replacing single original window. North gable remains unaltered. Tall narrow ridge stack with recessed brick panels, and moulded brick bands and caps. Clocktower. Entrance to north, set forward. Entrance in simply moulded stone architrave set between flush stone bands. Pair of small -panelled doors under small-paned overlight. Band of moulded brick rosettes to frieze. Dentil cornice. Above, blind moulded lunette with glazed oculus. Moulded brick rosettes to the spandrels. Red brick campanile, plain brick pilasters at the angles, with sunk panels to the upper two stages. Moulded brick storey bands. Small vertical openings in flush stone surrounds to lower stages. Clock to each face, set in moulded brick and stone surround, supported visually by corbel table to stage below. Ogival roof of fishscale slates surmounted by weathervane. Rear extension, dated 1898, of five asymmetrical bays. Pedimented second bay with moulded rosette band to frieze, otherwise a plain frieze with single rosette to each bay, and dentil cornice. Engineering brick base. Four timber windows, some sections small paned, each under segmental brick arch with a stone keystone and cill. Enriched window opening to pedimented bay. Northern bay has replaced glazed panelled windows. Slate roof with splayed roofed fleche surmounted by a weathervane.

Aylestone Road elevation. Pair of cast iron lampstands, with four-sided glazed gas lanterns, behind low curved parapet wall, the latter reconstructed after the reduction of the gatehouse.

Selected Sources

Legacy Record - This information may be included in the List Entry Details

National Grid Reference: SK5819702427

Appendix 2 Glossary of Gasholder Terminology

'Guide-frame' - the circular metal structure of vertical columns or standards linked by horizontal girders and sometimes, diagonal bracing, built around the perimeter of the tank and strongly bolted down.

'Bell' – the sheet-metal cylinder with a closed top which contains the gas in all water-sealed holders. It is the moveable part of the gasholder which rises and falls according to the volume of gas stored within. It descends back into the tank as it empties. The bell is usually telescopic and the upper part, known as the 'top curb', is constructed in thicker metal to provide strength.

'Lift and guide rollers' – the circumferential sections located around the bell which enable the bell to rise and fall telescopically. Each lift is mounted by a guide roller, which bears against vertical rails mounted on the standards of the guide frame. The guide rollers help to guide the bell by securing it against the wind.

'Tank' - the open-topped vessel into which the bell descends when empty of gas, and it is filled with water to provide a seal. Usually the tanks are constructed in cast iron or steel. Larger holders, have their tanks set in the ground in brick or mass concrete construction. The gasholder tank was the part of the gasholder which would house the lifts when down and contain the water in which the holder raised and descended depending on gas flow.

Appendix 3 Patent description of spiral-guided gasholder design by Gadd & Mason of Manchester

Patent Specification

Gasholder - No. 405,702

Patented June 25, 1889.

William Gadd of Manchester, England

Patent Application filed:

February 18, 1889` Serial No. 800,884. Patented in England October 6, 1887, No. 13,521; iii Luxemburg August 13, 1888, No. 1,017; in Belgium August 16, 1888, No. 82,788; iii Turkey August 24, 1888; in Canada August 28, 1888, No. 80,001; in Spain September 27, 1888, No. 8,584; in France October 6, 1888, No. 192,229; in New South Wales October 9, 1888, No. 988; in Gripe of Good Hope October 11, 1888, No. 477; in Italy October 13, 1888, No. 23,942; in Natal October 17, 1888; in Tasmania October 20, 1888, No. 6,278; in Brazil October 31, 1888, No. 626; in Victoria November 13, 1888, No. 628; in Sweden December 20, 1888, No. 1,651, Norway December 29, 1888, No. 1,040.

Be it known that I, William Gadd, a subject of the Queen of Britain, and a resident of the city of Manchester, England, have invented new and useful Improvements in Gasholder, of which the following is a specification.

The improvements relate to the construction of gasholders, and have for their object the supporting of the same in their working position in such a manner as to enable the external or upper guide-framing hitherto employed for that purpose to be dispensed with, and yet to give the requisite stability, although such a modified form of framing may be employed in connection with the improvements herein described when desired, and the present improvements form a modification of an invention for the same purpose, for which I have already applied for Letters Patent, filed August 28, 1888, Serial No. 284,024.

To accomplish these my present improvements, I affix round the well or tank, at or near the upper surface thereof and at any suitable intervals, tangential or angled radial rollers, or both, or in lieu thereof angled fixed friction-pieces. Attached to the outer surface of the bell or holder, and extending from top to bottom thereof, or thereabout, are rails of metal or other suitable substance, which are formed in the shape of quick helices or spirals or curved inclines of any working degree of inclination, which will be determined by the circumstances and design, forty-five degrees and sixty degrees from the horizontal being examples of working angles; but other angles may be employed. The spiral rails on the holder take or gear into the spaces between the rollers or their equivalent friction pieces, or it may be rollers and friction-pieces combined. As these spiral rails round the outer face of the holder rest and move upon the rollers or equivalents placed round the tank-by preference both over and under or between, according to the section of rail employed-it will be seen that as the holder becomes

raised by being filled with gas a screw-like motion is imparted to it, thus causing it to partially turn as it rises, and in similar manner allowing it to fall by gravity as the volume of gas is reduced.

The stability of the holder lies in the fact that it is constantly at all working positions supported at an equal height round its circumference, and thus presents a position of firm resistance to wind-pressure and other lateral strains under conditions somewhat similar to that of a holder placed on the ground and resting on its lower edge or rim.

The wheels, rolling sliding blocks, or equivalent devices may either be fixed tangentially with the side of the tank, and so come in contact with the top, or top and bottom, surfaces of the rails on the holder. Or may be arranged radially with the tank, but at the angle of spiral, or, and by preference, the two kinds may be combined and the rolling-surface of the rails adapted thereto or in any other suitable manner, and the rollers or sliding pieces, or equivalent devices, when placed tangentially, may be employed above and beneath the rails alternately or in couples, or otherwise, the rails being constructed in double line or double headed or faced for the purpose.

The improvements are also applicable to telescopic gasholders by employing similar helical or spiral rails, curved purlins, or grooves attached to the inner lift or lifts thereof, which ride upon or between the rollers or equivalent devices attached to the inner surface of the outer lift or lifts of such telescopic gasholders; but that the invention may be better understood, I will, by the aid of the accompanying drawings, proceed more fully to describe means employed in carrying out the same.

In the drawings, Figure 1 represents an elevation with half-plan of a gasholder in single lift raised to about its full height, and with the tank shown in section, of one arrangement in accordance with my invention; and Fig. 2 shows some detail in application of the method described.

The same letters indicate corresponding parts wherever they occur.

A A is the holder; B B, the tank or well within which the holder rises and falls by means of the helical, spiral, or inclined rails or surfaces E E riding on or between the rollers or equivalents.

C C are the tangential and D D the angled radial rollers, which in Fig. 1 are shown arranged separately from and alternately with the tangential rollers OC; but the two kinds of rollers may be arranged together, as shown in Fig. 2, wherein the rail may be formed of channel or other iron, or other substance, having a tangential roller on each side, with the angled radial roller between or the angled radial rollers may be dispensed with by flanges on the tangential rollers; or other means may be employed for keeping the holder centrally or the rails or guides thereof on or between the rollers or equivalents.

Although, in the interests of safety, I greatly prefer to employ either two sets of rollers one above and the other below the inclined or spiral rails-or double rails with one or more sets of rollers between, in order to enable the same to securely grasp or to be grasped by the rails at various points around the edge of the holder, nevertheless it may be possible in some cases to dispense with the under set of

rollers or the over set of rails, as other means may be sufficient to cause the rollers to follow the inclines of the single rails.

Having fully described my invention, what I desire to claim and secure by Letters Patent is. In gasholders, the combination of rollers or equivalent friction-pieces, affixed to the edge or wall of the tank or well, with spiral guides on the outer face of the bell, substantially as set forth.

2. In gasholders, the combination of rollers or equivalent friction-pieces, affixed to the edge or wall of the tank or well, with spiral guides on or in the outer face of the bell, substantially as herein set forth.

3. In gasholders, the combination of angled radial rollers or equivalent friction-pieces, affixed to the edge or wall of the tank or well, with spiral guides on or in the outer face of the bell, substantially as herein set forth.

4. In gasholders, the combination of both angled radial rollers and tangential rollers or their equivalent friction-pieces, affixed to the edge or Wall of the tank or well, with spiral guides on or in the outer face of the bell, substantially as herein set forth.

5. In telescopic gasholders, the combination of rollers or equivalent friction-pieces, affixed to the inner face of an outer lift, with spiral guides on the outer face of an inner lift, substantially as herein set forth.

Signed at Manchester, England, December 31, 1838.

Witnesses:

John Lovelock

Edwin Mansfield

(No Model.)

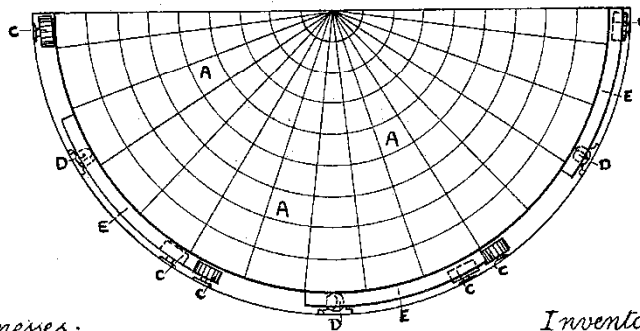
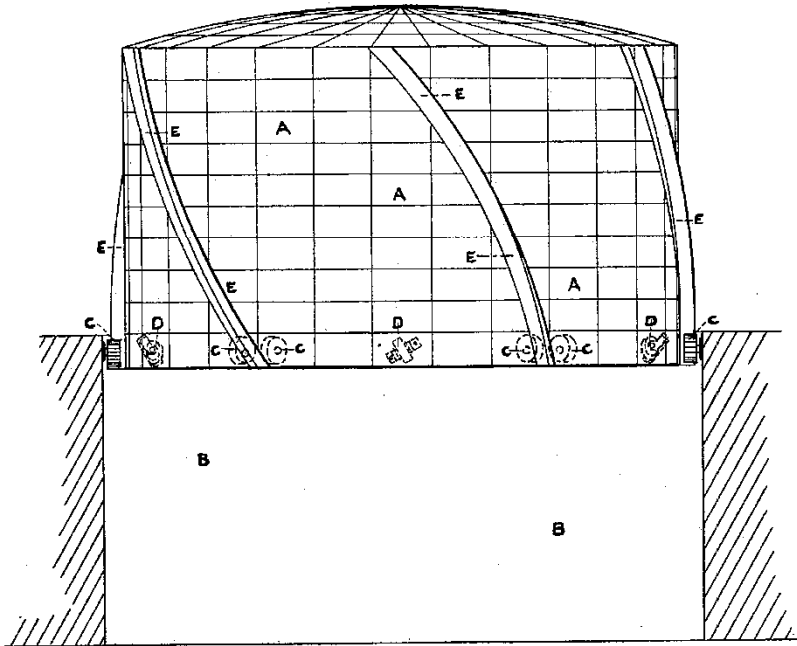
2 Sheets—Sheet 1.

W. GADD.
GAS HOLDER.

No. 405,702.

Patented June 25, 1889.

FIG. 1.



Witnesses:
George Frederick Gadd.
John Alexander Lovelock

Inventor.
William Gadd.

(No Model.)

W. GADD,
GAS HOLDER.

2 Sheets—Sheet 2.

No. 405,702.

Patented June 25, 1889.

FIG. 2.

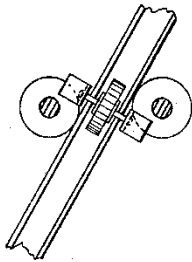


FIG. 3.

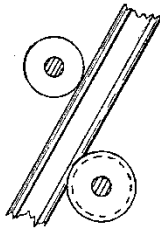


FIG. 4.

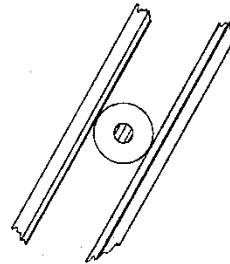


FIG. 5.

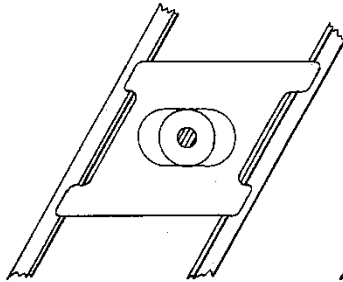


FIG. 6.

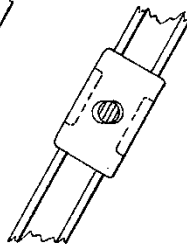


FIG. 7.

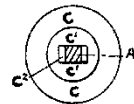
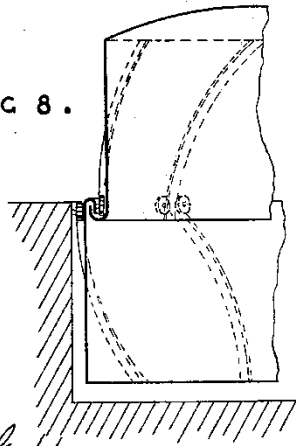


FIG. 8.



Witnesses:
George Frederick Gadd.
John Alexander Lovelock

Inventor.
William Gadd.

Appendix 4 Index of Digital Photographs



ARG15-0001



ARG15-0002



ARG15-0003



ARG15-0004



ARG15-0005



ARG15-0006



ARG15-0007



ARG15-0008



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ARG15-0010



ARG15-0011



ARG15-0012



ARG15-0013



ARG15-0014



ARG15-0015



ARG15-0016



ARG15-0017



ARG15-0018



ARG15-0019



ARG15-0020



ARG15-0021



ARG15-0022



ARG15-0023



ARG15-0024



ARG15-0025



ARG15-0026



ARG15-0027



ARG15-0028



ARG15-0029



ARG15-0030



ARG15-0031



ARG15-0032



ARG15-0033



ARG15-0034



ARG15-0035



ARG15-0036



ARG15-0037



ARG15-0038



ARG15-0039



ARG15-0040



ARG15-0041



ARG15-0042



ARG15-0043



ARG15-0044



ARG15-0045



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ARG15-0049



ARG15-0050



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ARG15-0052



ARG15-0053



ARG15-0054



ARG15-0055



ARG15-0056



ARG15-0057



ARG15-0058



ARG15-0059



ARG15-0060



ARG15-0061



ARG15-0062



ARG15-0063



ARG15-0064



ARG15-0065



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ARG15-0068



ARG15-0069



ARG15-0070



ARG15-0071



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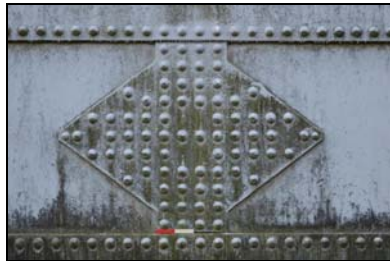
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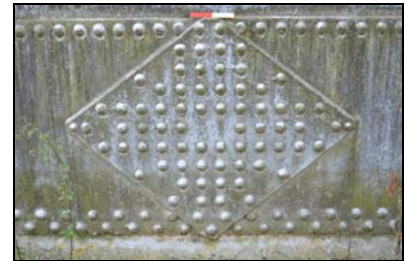
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ARG15-0076



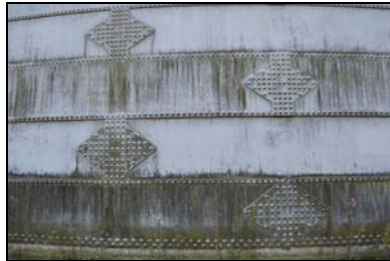
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ARG15-0078



ARG15-0079



ARG15-0080



ARG15-0081



ARG15-0082



ARG15-0083



ARG15-0084



ARG15-0085



ARG15-0086



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ARG15-0089



ARG15-0090



ARG15-0091



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ARG15-0095



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ARG15-0097



ARG15-0098



ARG15-0099



ARG15-0100



ARG15-0101



ARG15-0102



ARG15-0103



ARG15-0104



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ARG15-0144



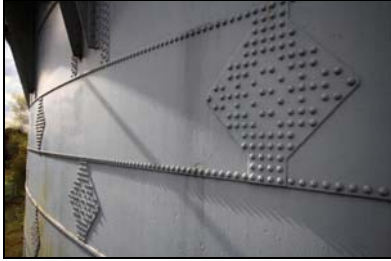
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ARG15-0155



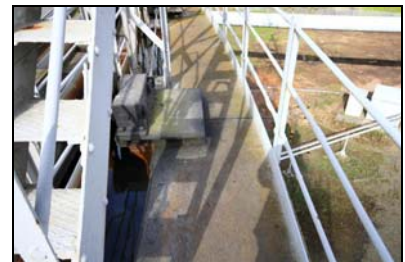
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ARG15-0161



ARG15-0162



ARG15-0163



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ARG15-0188



ARG15-0189



ARG15-0190



ARG15-0191



ARG15-0192



ARG15-0193



ARG15-0194



ARG15-0195



ARG15-0196



ARG15-0197



ARG15-0198



ARG15-0199



ARG15-0200



ARG15-0201



ARG15-0202



ARG15-0203



ARG15-0204



ARG15-0205



ARG15-0206



ARG15-0207



ARG15-0208



ARG15-0209



ARG15-0210



ARG15-0211



ARG15-0212



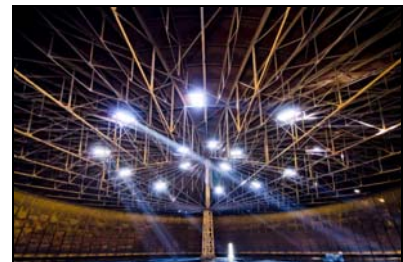
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ARG15-0219



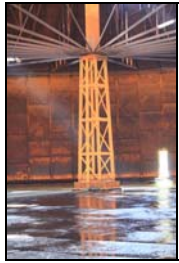
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ARG15-0228



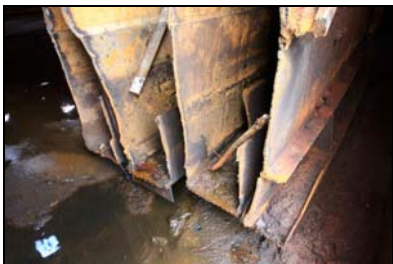
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ARG15-0238

Missing image
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ARG15-0241



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ARG15-0247



ARG15-0248



ARG15-0249



ARG15-0250



ARG15-0251



ARG15-0252



ARG15-0253



ARG15-0254



ARG15-0255



ARG15-0256



ARG15-0257



ARG15-0258



ARG15-0259



ARG15-0260



ARG15-0261



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ARG15-0263



ARG15-0264



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ARG15-0278



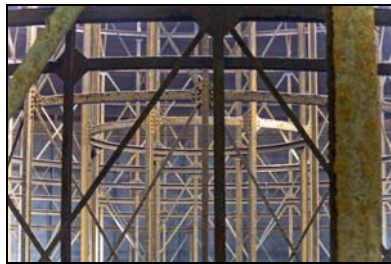
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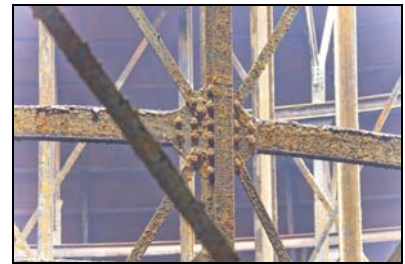
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ARG15-0285



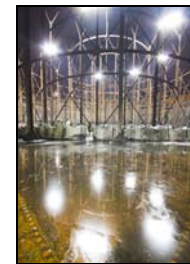
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ARG15-0299



ARG15-0300



ARG15-0301



ARG15-0302



ARG15-0303

Appendix 5 OASIS Data Collection Form

OASIS ID: [archaeol6-236850](#)

Project details

Project name	Historic Building Record Level 2 - Former Gasworks at Aylestone Road, Leicester
Short description of the project	<p>The site presently contains two gasholders, a series of operational and non-operational ancillary buildings, access routes, redundant gas pipelines and open storage areas. The site was purchased in 1875 and began production of coal gas by 1878. The gasworks continued to expand during the 19th century and by the beginning of the 20th century comprised four gasholders, erected in 1878, 1884, 1888 and 1902 respectively. None of these structures remain in-situ following the site's clearance beginning in 1972. The earliest in-situ gasholder (Gasholder No.5) is located within the site's southern compound and was built in 1930 by R and J Dempster Ltd. The structure comprises an early example of a four-lift spiral-guided holder with an above-ground tank of riveted construction. The Gasholder has an impressive internal structure - a framework of concentric steel structures which support the untrussed crown of the holder when depressed. Gasholder No. 7 is located within the northern part of the site and dates to 1965-66. The large capacity holder built by Newton Chambers Ltd, represents a late example of a typical four-lift spiral-guided design with an above-ground tank in a welded mild steel construction.</p>
Project dates	Start: 20-11-2015 End: 28-06-2016
Previous/future work	Not known / No
Any associated project reference codes	ARG15 - Sitecode
Any associated project reference codes	7912 - Contracting Unit No.
Type of project	Building Recording
Site status	None
Current Land use	Industry and Commerce 1 - Industrial
Monument type	GASHOLDER Modern
Monument type	GASHOLDER Modern
Monument type	BOILER HOUSE Modern

Significant Finds	NONE None
Project location	
Country	England
Site location	LEICESTERSHIRE LEICESTER LEICESTER Former Gasworks at Aylestone Road, Leicester
Postcode	LE2 7QJ
Study area	2.2 Hectares
Site coordinates	SK 57800 02303 52.615065886357 -1.146214871625 52 36 54 N 001 08 46 W Point
Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	Montagu Evans LLP
Project design originator	Montagu Evans LLP
Project director/manager	Ron Humphrey/Amy Williamson
Project supervisor	Hannah Green
Type of sponsor/funding body	Consultant
Name of sponsor/funding body	Montagu Evans LLP
Project archives	
Physical Archive Exists?	No
Digital Archive recipient	Leicester City Historic Environment Record
Digital Archive ID	ARG15
Digital Contents	"none"
Digital Media available	"Images raster / digital photography","Text"

Paper Archive recipient	Leicester City Historic Environment Record
Paper Archive ID	ARG15
Paper Contents	"none"
Paper Media available	"Correspondence","Notebook - Excavation"," Research"," General Notes","Photograph","Report"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	Former Gasworks at Aylestone Road, Leicester - Historic Building Record Level 2
Author(s)/Editor(s)	Green, H.
Other bibliographic details	2015449
Date	2016
Issuer or publisher	Archaeology South-East
Place of issue or publication	Archaeology South-East
Entered by	Amy Williamson (amy.williamson@ucl.ac.uk)
Entered on	28 June 2016

Sussex Office

Units 1 & 2
2 Chapel Place
Portslade
East Sussex BN41 1DR
tel: +44(0)1273 426830
email: fau@ucl.ac.uk
www.archaeologyse.co.uk

Essex Office

27 Eastways
Witham
Essex
CM8 3YQ
tel: +44(0)1376 331470
email: fau@ucl.ac.uk
www.archaeologyse.co.uk

London Office

Centre for Applied Archaeology
UCL Institute of Archaeology
31-34 Gordon Square
London WC1H 0PY
tel: +44(0)20 7679 4778
email: fau@ucl.ac.uk
www.ucl.ac.uk/caa

