

Historic Scotland
Properties in Care
Minor Archaeological Works
2008

Biggar Gasworks
HS Index No.90322

Job No. HSCO-90322-2008-001

Archaeological monitoring
February 2008

March 2008
Kirkdale Archaeology

Site Biggar Gasworks
N.G.R NT 0388 3768
Project Description Archaeological monitoring

Contents

1.0 Introduction	1
2.0 Description	1
3.0 Interpretation and observations	2
A1.0 Appendix 1: List of contexts	3
A2.0 Appendix 2: List of drawings	3
A3.0 Appendix 3: List of photographs	4

1.0 INTRODUCTION

Under the terms of its call-off contract with Historic Scotland, Kirkdale Archaeology was asked to undertake a short period of archaeological recording at Biggar Gasworks following the discovery of finds and a circular lattice like structure at the bottom of the smaller of two gas holders during remedial works to the interior. The gasworks was built in 1839 and the smaller of the two gas holders is the original. It consists of an upper section running on early triform lattice guides into a semi-subterranean water tank, this enabled consistent gas pressure in the mains. The upper section was rebuilt in the 1970s. The site was visited on 08/02/08, 12/02/08, 04/03/08.

2.0 DESCRIPTION

On the initial visit it was not possible to access the bottom of gas holder because scaffolding was not yet in place. The semi-subterranean water tank was also filled with water obscuring the circular lattice like structure at the bottom.

On following visits access was possible via scaffolding platforms erected inside the gas holder and the semi-subterranean gas tank was continually drained of water using an electric pump.

The side wall **001** of the semi-subterranean water tank comprises several curved panels of corroding iron. Part of the remedial work inside the tank involves blasting the corrosion off the panels and painting them with a protective coating. Joins are visible between the panels but the panels are probably fixed together on the outside with rivets. Three grooves **006**, **007** and **008** are integral to side wall **001**, these are equally spaced and run vertically the height of the side wall. The purpose of these is to guide the upper gas holder, similar to the external triform lattice guides when the volume of gas in the gas holder changes.

The entire bottom of the tank is formed from radiating panels of iron riveted together along ridges forming the circular lattice like structure **002** observed at the initial draining of the semi-subterranean water tank. It consists of two thicknesses of iron ridges, distributed as shown in the plan. It is not clear why there are two thicknesses of ridge except that the thick ridges may form the basic layout and the

thin ridges were possibly secondary during construction. Two repairs are visible near the centre of **002**, these are two additional panels **004** and **005** bolted into the existing panel segments. A possible third repair is a disc of metal **003** bolted directly into the centre of **002**. There is a central upright iron projecting from **003**, it is not clear whether this is part of **003** or whether **003** fits around it. The purpose of this upright iron rod is unclear.

Around the edge of **001** and **002**, there are six equally spaced 'T' sectioned (or possibly 'I' sectioned) platforms **009-014**. They do not appear to be fixed to **001** or **002** hence the suggestion that they are 'I' sectioned even though the base is obscured by water and silt. These platforms probably support the base of the upper gas holder when it is empty.

At the S side of the semi-subterranean water tank there are two upright pipes **015** and **016**, both have a diameter of approximately 100mm. The function of the pipes is not certain but they are most likely original to the gas holder and may relate to either the water level or delivering gas to the mains.

At the SW side of the semi-subterranean water tank there was a collection of debris **017** piled against the side wall **001** on top of **002**. This was removed from the tank by contractors. The debris consisted of several bricks, a shovel, roof slates and several metal objects including a large iron key, a number of lengths of iron pipe, a grill, a door lock, and a spanner. All of the objects, with the exception of the iron key, were left on a palette on site as they were too bulky to transport. The key was retained to be sent for conservation.

3.0 INTERPRETATION AND OBSERVATIONS

The opportunity to gain access to the bottom of the gas holder's semi-subterranean water tank was a valuable one as it may not be possible to look closely at it again for some time once it is returned to working order. Most of the features identified are most likely original features including the side wall **001** with inbuilt grooves or guides **006-008**, the circular lattice structure of the base of the semi-subterranean water tank **002**, the 'T' section iron plates **009-014**, and pipes **015** and **016**.

The repairs to the tank **003-005** may have been made at any time but it is possible that the repairs took place during the rebuilding of the upper gas holder in the 1970's.

The deposit of debris **017** probably took place throughout the period of use and disuse of the gas holder up to the rebuilding of the upper gas holder in the 1970's. Items such as the iron key may have fallen in by accident, some of the pipes may have been part of the workings of the tank, but many of the items such as the lock, grill, the bricks and roof slates were probably disposed of in the gas tank. The spanner, possibly some of the metal piping and the shovel may have been left behind after the rebuilding of the upper gas holder.

A1.0

APPENDIX 1: LIST OF CONTEXTS

No	Description
001	Side wall of the semi-subterranean water tank.
002	Spoked iron structure of the base of the water tank.
003	Central plate bolted to the base of 002 with upright iron pole, possible repair.
004	Repair to 002. Metal plate bolted to 002.
005	Repair to 002. Metal plate bolted to 002.
006	One of three grooves built into 001 for moving upper gas holder.
007	One of three grooves built into 001 for moving upper gas holder.
008	One of three grooves built into 001 for moving upper gas holder.
009	One of six iron 'T' section plates creating a platform to support the base of the moving upper gas holder when it was empty
010	One of six iron 'T' section plates creating a platform to support the base of the moving upper gas holder when it was empty
011	One of six iron 'T' section plates creating a platform to support the base of the moving upper gas holder when it was empty
012	One of six iron 'T' section plates creating a platform to support the base of the moving upper gas holder when it was empty
013	One of six iron 'T' section plates creating a platform to support the base of the moving upper gas holder when it was empty
014	One of six iron 'T' section plates creating a platform to support the base of the moving upper gas holder when it was empty
015	One of two iron pipes.
016	One of two iron pipes.
017	Deposit of finds against the SW edge of 001 sitting on 002.

A2.0

APPENDIX 2: LIST OF DRAWINGS

No	Type	Description	Scale
1	Map	Location map showing the scheduled area.	NTS
2	Plan	Plan of the internal base of the gas tank.	1:50

Frame	Description	From	Date
DSCN3483	General shot looking down into the gas holder from above before scaffolding. Poor lighting.	NE	08/02/08
DSCN3485	General shot looking down into the gas holder from above before scaffolding. Poor lighting.	NE	08/02/08
DSCN3486	Shot showing the aperture in the top of the gas holder from which the above photos were taken.	NE	08/02/08
DSCN3491	General shot showing the covered exterior of the gas tank.	NE	08/02/08
DSCN3518	General shot looking down into the gap between the upper gas holder and the lower semi-subterranean water tank.	NE	12/02/08
CNV00008	Shot showing the central plate and upright rod 003 .	-	13/02/08
CNV00009	General shot showing debris in the SW corner of the tank.	NE	13/02/08
CNV00011	General shot showing one of the 'T' sectioned platforms 009-014 .	-	13/02/08
CNV00013	Shot showing the central plate and upright rod 003 .	-	13/02/08
CNV00016	General shot showing the above ground section of the semi-subterranean water tank.	NE	13/02/08
CNV00017	General shot showing the above ground section of the semi-subterranean water tank.	NE	13/02/08
S1050222	General shot of the debris removed from the bottom of the water tank.	-	04/03/08
S1050225	General shot of the debris removed from the bottom of the water tank.	-	04/03/08
S1050230	Shot showing the lengths of pipe retrieved from the bottom of the water tank.	-	04/03/08
S1050232	Shot showing the lengths of pipe retrieved from the bottom of the water tank.	-	04/03/08
S1050233	Shot showing the bricks and objects removed from the bottom of the water tank.	-	04/03/08
S1050234	Detail showing 'THISTLE' stamped on to one of the bricks.	-	04/03/08
S1050236	General shot of the debris removed from the bottom of the water tank.	-	04/03/08
S1050237	Shot showing the objects removed from the bottom of the water tank.	-	04/03/08
S1050241	Shot showing a shovel still in the bottom of the water tank which was part of the general debris piled against the SW side.	N	04/03/08

Frame	Description	From	Date
S1050243	General shot showing spoke structure 002 of the base of the watertank. Poor light and dust particles.	W	04/03/08
S1050244	Groove 006 , 'T' section platform 009 , and pipes 015 and 016 . Poor light and dust particles.	NW	04/03/08
S1050245	General shot showing spoke structure 002 of the base of the watertank. Poor light and dust particles.	W	04/03/08
S1050246	General shot showing the centre of 002 , with repairs 004 and 005 . Poor light and dust particles.	S	04/03/08
S1050247	'T' section platform 009 and groove 006 .	NE	04/03/08
S1050248	Groove 006 , 'T' section platform 009 , and pipes 015 and 016 . Poor light and dust particles.	NW	04/03/08
S1050249	General shot showing spoke structure 002 of the base of the watertank. Poor light and dust particles.	W	04/03/08
S1050250	General shot showing spoke structure 002 of the base of the watertank. Poor light and dust particles.	W	04/03/08
S1050251	General shot showing the E side of the tank.	W	04/03/08
S1050252	General shot showing spoke structure 002 of the base of the watertank. Poor light and dust particles.	W	04/03/08
S1050254	Groove 006 , 'T' section platform 009 , and pipes 015 and 016 . Poor light and dust particles.	NW	04/03/08
S1050255	Repair 004 .	W	04/03/08
S1050256	Repairs 004 and 006 .	SE	04/03/08
S1050257	Groove 006 , 'T' section platform 009 , and pipes 015 and 016 . Poor light and dust particles.	W	04/03/08
S1050258	General shot showing spoke structure 002 of the base of the watertank. Poor light and dust	W	04/03/08
S1050330	Iron key, removed from site for conservation, part of deposit 017 .	-	13/03/08

Gas holder

Biggar gasworks: guardianship area

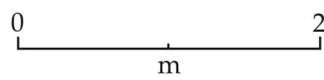
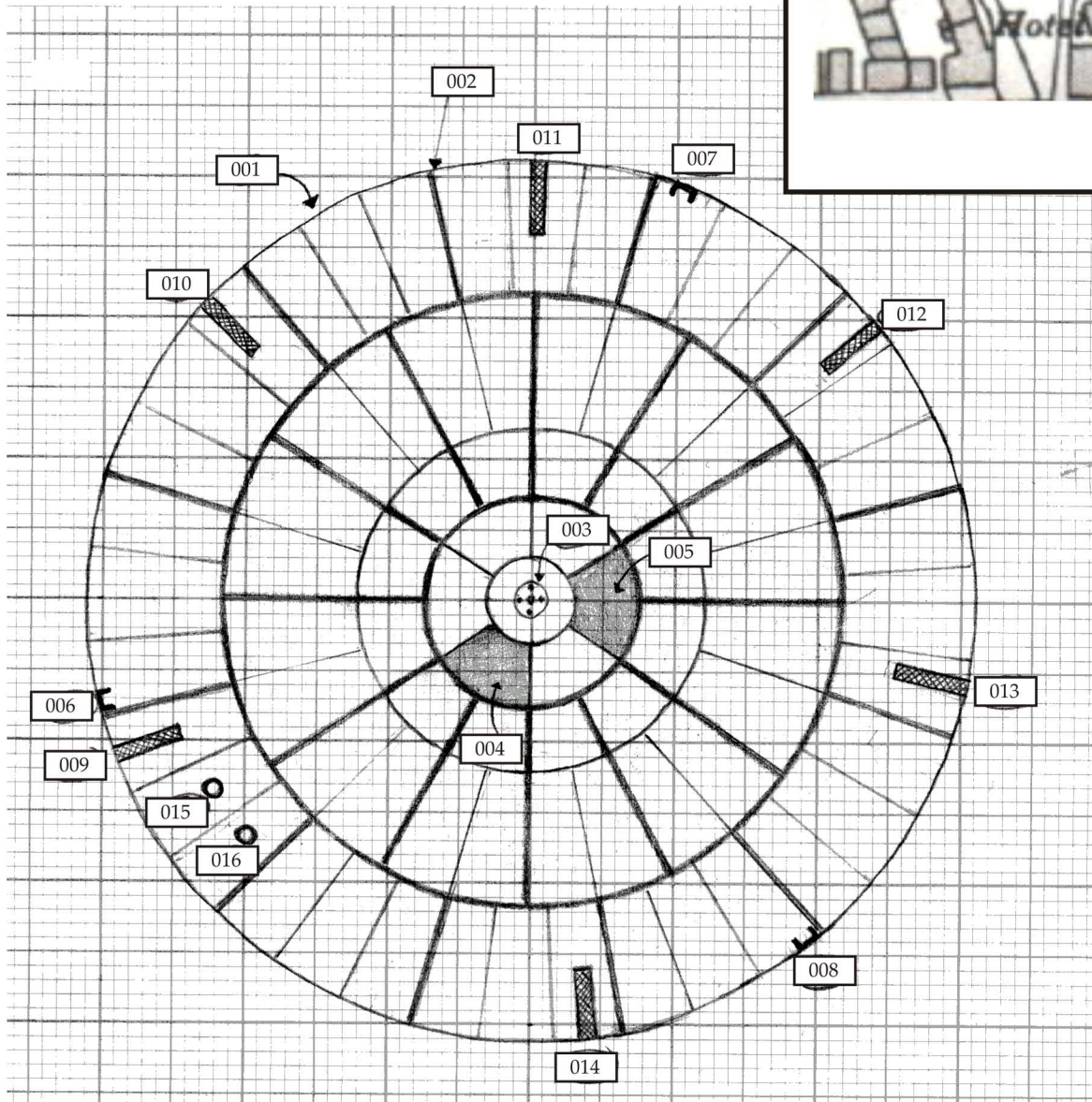
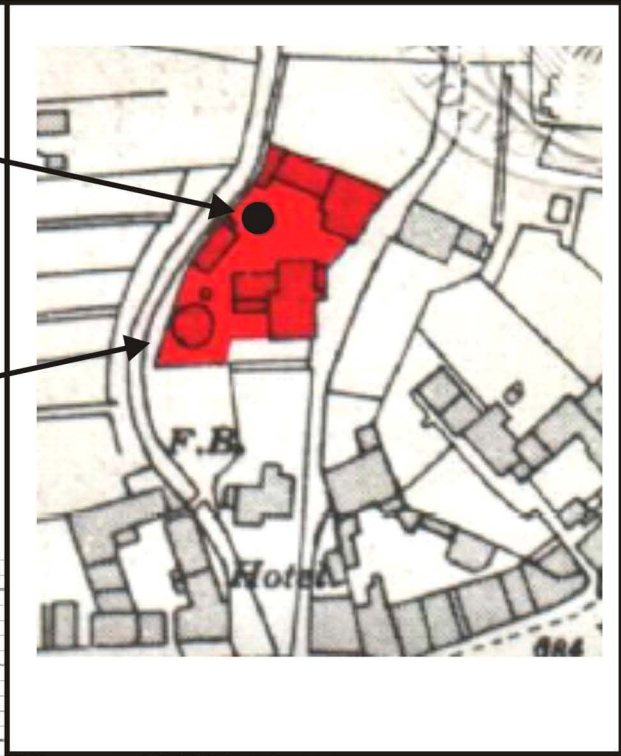


Fig. 1 : Plan showing base of tank (1:50)