

SGN Gasholder Heritage Review

Weir Road, Newton-on-Ayr

Historic Building Recording Report

AOC 23686

2nd February, 2017



ARCHAEOLOGY

HERITAGE

CONSERVATION

SGN Gasholder Heritage Review

Historic Building Recording Report

On Behalf of:	Montague Evans Fourth Floor Exchange Tower 19 Canning Street Edinburgh EH3 8EG
	On behalf of: Scottish Gas Network (SGN)
National Grid Reference (NGR):	NS 33882 23091
AOC Project No:	23686
OASIS No:	275027
Prepared by:	Diana Sproat Gemma Hudson

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

Author: Diana Sproat	Date: 2nd February, 2017
Approved by: Graeme Cavers	Date: 2nd February, 2017
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Enquiries to: AOC Archaeology Group
Edgefield Industrial Estate
Edgefield Road
Loanhead
EH20 9SY

Tel. 0131 440 3593
Fax. 0131 440 3422
e-mail. admin@aocarchaeology.com

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Summary

AOC Archaeology Group was commissioned by Montagu Evans on behalf of SGN to undertake three basic level historic buildings surveys of redundant gasholders in advance of their decommissioning and demolition.

The gasholder at Weir Road, Newton-on-Ayr was built in 1960 and is a four-lift spiral gasholder.

1 INTRODUCTION

1.1 Project Background

1.1.1 AOC Archaeology Group was commissioned by Montagu Evans on behalf of SGN to undertake three surveys of redundant gasholders at Alloa, Newton-on-Ayr and Aberdeen in advance of their decommissioning and demolition. The work has been undertaken in advance of a wider programme involving the decommissioning and dismantling of the remaining redundant gasholders in Scotland operated by the Scottish Gas Network (SGN). This report concerns the gasholder at Weir Road in Newtown-on-Ayr.

1.2 Site Location

1.2.1 The gasholder at Weir Road at Newton-on-Ayr is centred on NGR: NS 33882 23091 (Figure 1). It is accessed from Weir Road which is to the east of the site and turns round to the north and west to become Saltpans Road before continuing over the railway which dominates the north and west of the compound. A large open manufacturing yard is located to the south.

1.3 Brief background to the Gasholders in Scotland

1.3.1 Gasholders were established in the UK in the early 19th century, the first telescopic gasholder invented in 1824, with the first gasholder erected in Leeds. The 'lifts' consisted of one to three sections that rose from a fixed circular base – usually filled with water to prevent the gas from igniting - when filled with gas. In the early to mid-19th century, the gasholders were highly decorative with a framework of open wrought iron in girders around the holders.

1.3.2 By the late 19th century, the first spiral-guided gasholders appeared, invented by William Gadd of Manchester, which meant that the frames around the gasholders, so iconic of the early examples, were no longer necessary. By the end of the 19th century and into the early 20th century, gasholders were a common feature in the landscape.

1.3.3 In the 1960s, gas was discovered in the North Sea and, as such, many of the towns and cities throughout the UK pared down their gasworks, with only the gasholder remaining on the site to store the gas which would now be pumped in from the sea. Technologies in construction also meant that larger gasholders could be constructed. However, due to advances in gas pipe technology, by the end of the 20th century the gasholders were no longer needed to store the gas. Initiatives throughout the UK by the various gas networks that monitor and operate the gas supply throughout the country are therefore now in the processing of decommissioning all gasholders to free up the brownfield sites they sit on for further development.

2 OBJECTIVES

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

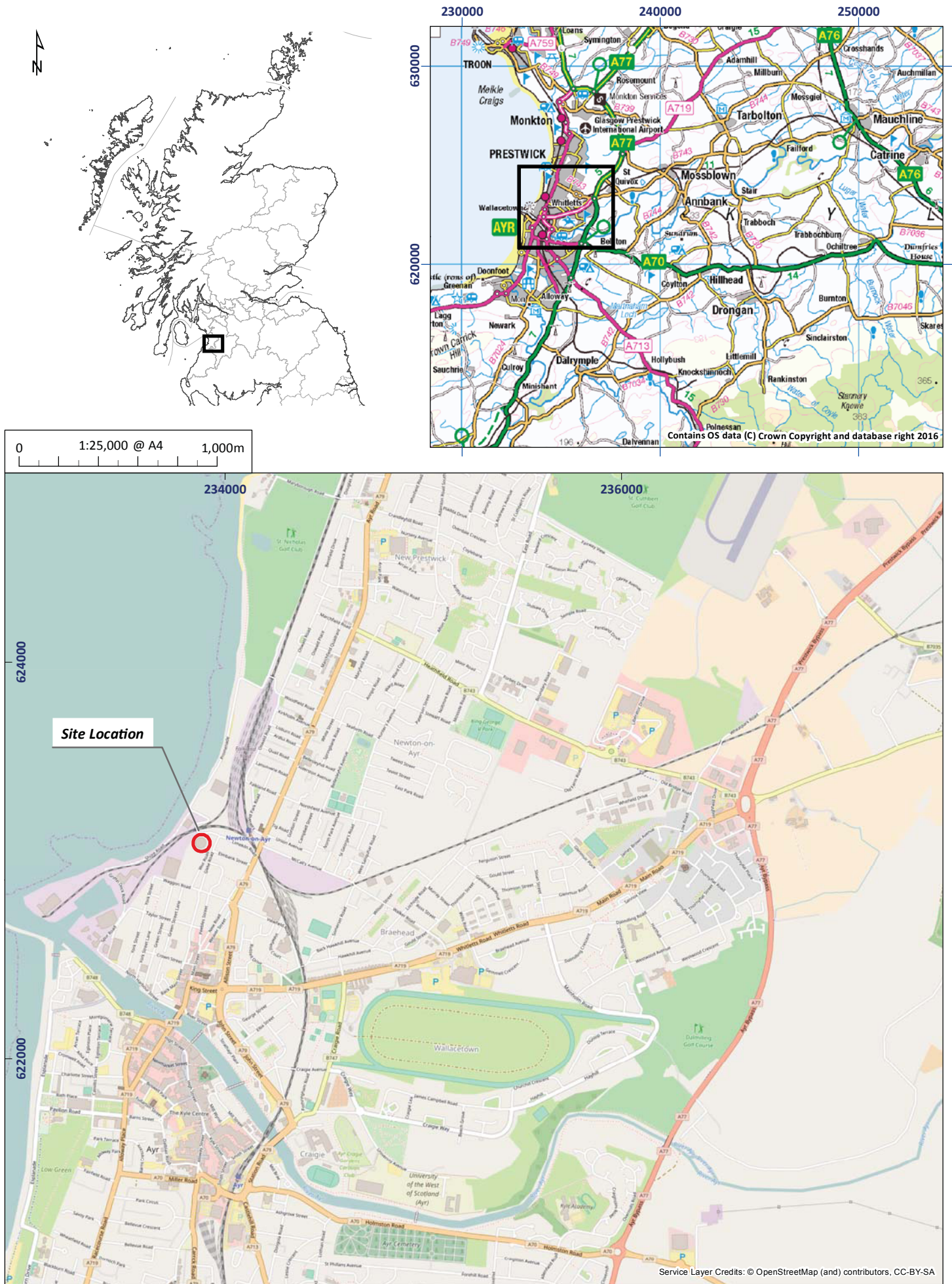


Figure 1: Weir Road, Newtown-on-Ayr, site location plan

3 METHODOLOGY

3.1 Introduction

3.1.1 A 'Basic' survey (as per ALGAO guidelines) was undertaken on the gasholder, which included a written and photographic written preceded by map-regression and a small amount of archive research on each site.

3.2 Archive Research

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

3.3 Photographic record

3.3.1 A general exterior photographic survey was undertaken of the structure in black and white print and colour digital using a 35mm SLR camera and digital SLR camera respectively. Photographs were taken of the gasholder and associated buildings within their setting. In addition, detail shots of features such as structural elements, pipes and inlets/outlets, stairs, etc were taken. A discreetly placed 2m ranging pole was placed in all shots where access and health and safety allowed for scale. A register of photographs was taken on site and can be found in Appendix 1, and a selection of digital photographs has been used as plates to illustrate this report.

3.4 Written record

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

4 RESULTS

4.1 Historical Background

4.1.1 The Gasholder at Weir Road is a relatively late commission, built in 1960 by Whessoe, a company that started out as an iron foundry in the 1790s. Prior to this, the land of ground upon which it was built was unused. In the 19th century, it was used as the landscaped lawns associated with Newton Lodge to the south-west, as can be seen on the 1857 Ordnance Survey map (Figure 2). By the early-mid 20th century, the area had been heavily industrialised, with the creation of Ayr Harbour Junction to the immediate north-west and west of the site, as can be seen in the 1947 Ordnance Survey map (Figure 3).



Figure 2 (left): Extract from Ordnance Survey map, 1857



Figure 3 (right): Extract from Ordnance Survey map, 1947

4.2 The Gasholder

- 4.2.1 The Gasholder at Weir Road is a four-lift spiral-guided gasholder with a nominal capacity of 3,049,933ft³ (86,365m³) (Plates 1 - 5). It is located in a grassy compound and comprises steel sheets welded together with ladder-style stanchions set 3295mm apart supporting the upper walkway (Plate 6). The upper platform has a set of gantry steps to the south-west side (Plates 7 - 9). The gasholder is in a poor to moderate condition with some large areas of rusting, particularly to the stanchions which support the upper platform. It has been painted in a light grey, although flaking paintwork in some areas identifies at least three other paint layers beneath in darker greys and a dark orange. There are two sets of double pipes with identical fittings and pipework features above a steel gantry floor at ground level. The first is located to the SSW side of the gasholder (Plates 10 - 12), the other located to the east side (Plate 13). There are three large inlet/outlet pipes covered openings to the gasholder located on the north-west, north and north-east sides (Plates 14 - 17). These are surrounded by a welded support with a large circular opening with two support handles. The gasholder is set in its own concrete foundations, although to the north-west side, where the ground level is much lower, the base of the gasholder has been excavated out and the remaining small embankment paved with modern bricks from various brickworks (Plate 18). There is a large modern interceptor tank to the south-east side (Plate 19).
- 4.2.2 There is a small building in brick and roughcast render with a steeply pitched roof to the south-west of the gasholder, consisting of the Anti-Freeze Control Room with a small telemetry building to the south-west of it (Plates 20 & 21).

5 CONCLUSIONS

- 5.1 The gasholder at Weir Road in Newton-on-Ayr was constructed in 1960 and is a four-lift spiral-guided gasholder which was a design invented by W Gadd, the first example built in 1888 (Thomas 2016). It is a typical examples of gasholders of the region and period.
- 5.2 Although no access was permitted to the upper platforms of the gasholder as part of this survey on health and safety grounds, the operation of the rising lifts would have been identified the spiral guided rails which would have been fixed to the side of the tank. A detailed example of the type of operation that might be present was identified in a gasholder surveyed by MOLA in 2014 in Preston, Lancashire (Bassir & Clarke 2014).
- 5.3 Most gasholders today are the only remnants of former gasworks, and many were constantly being upgraded, enlarged and rebuilt throughout the late 19th and early years of the 20th century. The 1950s appears to have been a boom time for the renewal of many gasholder projects, with technology allowing larger and more complex systems to be put in place to store the city's gas supply. At Newtown-on-Ayr, only two small buildings had survived, clearly later replacements, belonging to the operation of the gasholder.



Plate 1: Weir Road, Newtown-on-Ayr, general view of the gasholder from the SSW



Plate 2: Weir Road, Newtown-on-Ayr, general view of the gasholder from the west



Plate 3: Weir Road, Newtown-on-Ayr, general view of the gasholder from the south-west



Plate 4: Weir Road, Newtown-on-Ayr, general view of the gasholder from Saltpans Road from the north



Plate 5: Weir Road, Newtown-on-Ayr, general view of the north side of the gasholder from the NEE



Plate 6: Weir Road, Newtown-on-Ayr, detail of stanchion on the south side of the gasholder from the west



Plate 7: Weir Road, Newtown-on-Ayr, general view of stair on the south side of the gasholder from the south-east



Plate 8: Weir Road, Newtown-on-Ayr, general view of the side of the stair from the south-west



Plate 9: Weir Road, Newtown-on-Ayr, detail of the top of the stair from the south



Plate 10: Weir Road, Newtown-on-Ayr, general view of pipes on the SSW side of the gasholder from the SSE



Plate 11: Weir Road, Newtown-on-Ayr, general view of pipes on the SSW side of the gasholder from the NWW



Plate 12: Weir Road, Newtown-on-Ayr, detail of pipe fittings on the pipes on the SSW side of the gasholder from the SSW



Plate 13: Weir Road, Newtown-on-Ayr, general view of the pipes on the east side of the gasholder from the south-east



Plate 14: Weir Road, Newtown-on-Ayr, detail of inlet pipe on the south side of the gasholder from the south



Plate 15: Weir Road, Newtown-on-Ayr, detail of the inlet pipe on the north-west side of the gasholder from the north-west



Plate 16: Weir Road, Newtown-on-Ayr, detail of the side of the inlet pipe on the north-west side of the gasholder, from the south-west

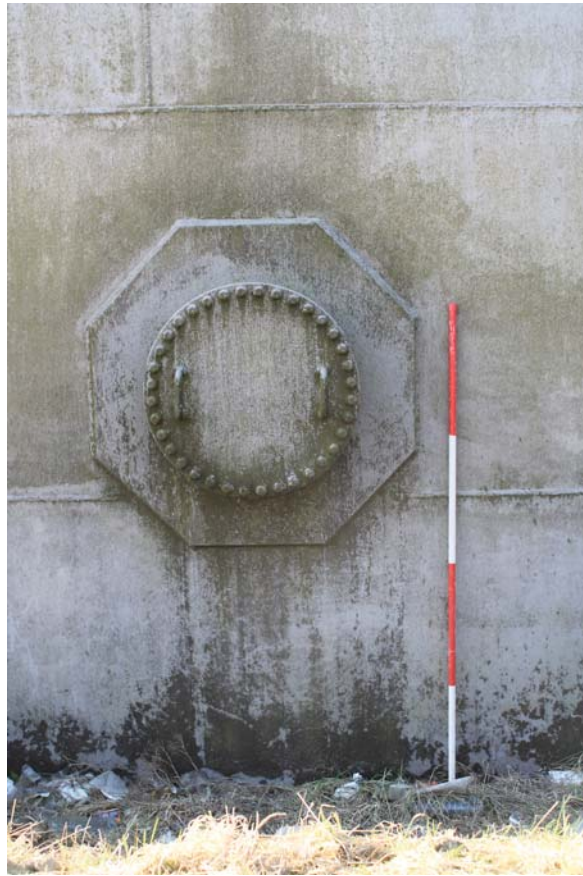


Plate 17: Weir Road, Newtown-on-Ayr, detail of the inlet pipe on the north-east side of the gasholder from the north-east



Plate 18: Weir Road, Newtown-on-Ayr, general view of brick paving to the small embankment on the north-west side, from the south-west



Plate 19: Weir Road, Newtown-on-Ayr, general view of the interceptor tank from the south-west



Plate 20: Weir Road, Newtown-on-Ayr, general view of the gasworks buildings from the south-west



Plate 21: Weir Road, Newtown-on-Ayr, general view of the gasworks buildings from the east

6 REFERENCES

6.1 Bibliographical references

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8.2 Cartographic references

1857 Ordnance Survey *Ayr Sheet XXXIII.2*

1897 Ordnance Survey *Ayrshire Sheet XXXIII.NW*

1911 Ordnance Survey *Ayrshire Sheet XXXIII.NW*

1947 Ordnance Survey *Ayrshire Sheet XXXIII.NW*

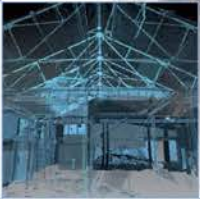
APPENDIX 1: PHOTOGRAPHIC RECORD

Black & White Print & Colour Digital Film #3 (Weir Road, Newtown-on-Ayr)

Frame	Building	Description	Taken From	Date
1	Gasholder	Detail of screw/valve below pipes to the SW side	SW	26/01/2017
2	Gasholder	Detail of fittings between pipes to the E side	SSW	26/01/2017
3	Gasholder	General view of pipes to the E side	SE	26/01/2017
4	Gasholder	General view of pipes to the E side	SSW	26/01/2017
5	Gasholder	General view	SW	26/01/2017
6	AF Building	General view	SW	26/01/2017
7	AF Building	General view	SEE	26/01/2017
8 – 9	Gasholder	General view	SW	26/01/2017
10	Gasholder	General view (from road)	N	26/01/2017
11	Gasholder	Detail of pipe inlet on the N side	NE	26/01/2017
12	Gasholder	General view from the N side	NNW	26/01/2017
13	Gasholder	Detail of brick lining to embankment on NW side	SW	26/01/2017
14	Gasholder	Detail lot side of pipe inlet on W side	SSW	26/01/2017
15	Gasholder	General view	NW	26/01/2017
16	Gasholder	Detail of pipe inlet on W side	NWW	26/01/2017
17	Gasholder	General view	SW	26/01/2017
18	Gasholder	General view of central SW side	SSW	26/01/2017
19	Gasholder	General view of E side	SWW	26/01/2017
20	Gasholder	General view of W side	SW	26/01/2017
21	Gasholder	General view of SW side showing pipes	W	26/01/2017
22	Gasholder	Detail of bolts holding pipes together on SW side	SSW	26/01/2017
23	Gasholder	Detail to base of pipes to SW side	SW	26/01/2017
24	Gasholder	Detail of lower end of pipes to SW side	SE	26/01/2017
25	Gasholder	Detail of pipes to SW side	SW	26/01/2017
26	Gasholder	Detail of pipe inlet to SW side	SW	26/01/2017
27	Gasholder	Detail of stanchion on SSW side	NWW	26/01/2017
28	Gasholder	General view of stair to SSW side	NWW	26/01/2017
29	Gasholder	Detail of interceptor tank to SE side	W	26/01/2017
30	Gasholder	Detail of where interceptor tank connects to gasholder	W	26/01/2017
31	Gasholder	Detail to top of stair	SSW	26/01/2017
32	Gasholder	Detail of stair to SSW side	SSW	26/01/2017
33	Gasholder	General view of SW side	S	26/01/2017
34	Gasholder	Detail of interceptor tank to SE side	SSW	26/01/2017
35	Gasholder	General view of interceptor tank	SW	26/01/2017
36	-	Registration	-	26/01/2017

APPENDIX 2: DISCOVERY & EXCAVATION IN SCOTLAND (DES) ENTRY

LOCAL AUTHORITY:	South Ayrshire Council
PROJECT TITLE/SITE NAME	SGN Gasholder Heritage Review
PROJECT CODE:	AOC 23686
PARISH:	Ayr
NAME OF CONTRIBUTOR:	Diana Sproat
NAME OF ORGANISATION:	AOC Archaeology Group
TYPE(S) OF PROJECT:	Historic Building Recording
NMRS NO(S):	None
SITE/MONUMENT TYPE(S):	Gasholder
SIGNIFICANT FINDS:	None
NGR	NS 33882 23091
START DATE	26 th January 2017
END DATE	26 th January 2017
PREVIOUS WORK	None.
MAIN (NARRATIVE) DESCRIPTION:	AOC Archaeology Group was commissioned by Montagu Evans on behalf of SGN to undertake three basic level historic buildings surveys of redundant gasholders in advance of their decommissioning and demolition. The gasholder at Weir Road, Newton-on-Ayr was built in 1960 and is a four-lift spiral gasholder.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	Montagu Evans; SGN
ADDRESS OF MAIN CONTRIBUTOR:	AOC Archaeology Group, Edgefield Road Industrial Estate, Edgefield Road, Loanhead, Midlothian, EH20 9SY
EMAIL ADDRESS:	edinburgh@aocarchaeology.com
ARCHIVE LOCATION:	Archive to be deposited in NMRS



AOC Archaeology Group, Edgefield Industrial Estate, Edgefield Road, Loanhead EH20 9SY
tel: 0131 440 3593 | fax: 0131 440 3422 | e-mail: edinburgh@aocarchaeology.com

www.aocarchaeology.com