Glan yr Afon Gas Works
Ystalyfera
Neath, Port Talbot

Archaeological Watching Brief

for
Grontmij
on behalf of
Wales and West Utilities

CA Project: 4572
CA Report: 13697

December 2013
Glan yr Afon Gas Main Replacement
Ystalyfera
Neath, Port Talbot

Archaeological Watching Brief

CA Project: 4572
CA Report: 13697

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12 December 2013

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date
23 December 2013

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signed

date

issue
01

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Glan yr Afon Gas Main Replacement, Ystalyfera: Archaeological Watching Brief
An archaeological watching brief was undertaken by Cotswold Archaeology during groundworks associated with a gas main replacement scheme at the site.

Evidence for slag heap tipping, associated with the processing of iron ore, was recorded. Two phases of iron tracks and associated culverts relating the movement of materials at the Ystalyfera iron works were also recorded. Further to this a number of concrete foundations which may be part of the bridge structures still visible in spanning the river Tawe.
1. **INTRODUCTION**

1.1 Between 1 October and 15 November 2013 Cotswold Archaeology (CA) carried out an archaeological watching brief for Grontnij on behalf of the Wales and West Utilities at Glan yr Afon (centred on NGR: SN 7655 0830; Fig. 1). The objective of the watching brief was to record all archaeological remains exposed during the development.

1.2 The watching brief was carried out in accordance with a detailed Written Scheme of Investigation (WSI) produced by CA (2013) and approved by the LPA acting on the advice of Judith Doyle, the acting planning manager, GGAT. The fieldwork also followed the *Standard and guidance for an archaeological watching brief* (IfA 2009) and the *Management of Archaeological Projects 2* (English Heritage 1991), the *Management of Research Projects in the Historic Environment (MORPHE): Project Manager’s Guide* (EH 2006).

*The site*

1.3 The site is located on flat land on the west bank of the River Tawe between Varteg Hill and Mynydd Altt-y-grug (Fig. 2). The gas main trench ran for approximately 900m along eastern carriageway and verges of the A4067 (Swansea to Brecon road); the route stated to the the rear of the ASDA supermarket and ran to the northern boundary of Godrer-graig settlement. The route lay at between 110m and 130m AOD.

1.4 The underlying bedrock geology of the area is mapped as South Wales Middle Coal Measures Formation - Mudstone, Siltstone and Sandstone of the Carboniferous Period. Superficial geology is marked as Alluvium - Clay, Silt, Sand and Gravel of the Quaternary Period (BGS 2013). Natural substrate was observed in the southern extent of the gas main trench.
Archaeological background

1.6 The alignment of the replacement gas main is in close proximity to the west of Ystalyfera Ironworks (as seen in the Midland Railway company map 1870s), noted as being established around 1838, and is considered one of the most extensive works nationally. The associated tinworks was equally significant and peaked in terms of production in the mid-19th century, though remained in operation until the mid-20th century (GGAT 2005). The 1st edition OS map of the area shows the iron works at its largest extent, the survival of archaeological remains being confirmed by recent fieldwork carried out by Dyfed Archaeological Trust (DAT). The route of the gas main runs through the eastern periphery of the works area, and appears to transect buildings, tramways and tips illustrated on the 1877/1878 OS imprint that had disappeared by the 1961 edition of the OS map.

1.7 Much of the additional archaeological background evidence links closely to the ironworks, including record of infrastructure (such as the remnants of the canal to the north) and the boundary wall at the west end of Glanyravon; the latter is protected as a Grade II Listed Building.

Archaeological objectives

1.7 The objectives of the archaeological works were:

- to monitor groundworks, and to identify, investigate and record all significant buried archaeological deposits revealed on the site during the course of the development groundworks;

- at the conclusion of the project, to produce an integrated archive for the project work and a report setting out the results of the project and the archaeological conclusions that can be drawn from the recorded data.

Methodology

1.8 The fieldwork followed the methodology set out within the WSI (CA 2013). An archaeologist was present during intrusive groundworks comprising of the excavation of replacement gas main trench (Fig. 2). Because of the consolidated nature of the ground a toothed bucket and mechanical breaker used to break up
hard spots relating to possible slag tips. A toothless bucket was used where feasible aside of these areas.

1.9 Where archaeological deposits were encountered written, graphic and photographic records were compiled in accordance with CA Technical Manual 1: Fieldwork Recording Manual (2007).

1.10 The archive from the watching brief are currently held by CA at their offices in Kemble and will be deposited with Neath Port Talbot Museum Service.

2. RESULTS (FIGS 2-4)

2.1 The excavations consisted of approximately 900 metres of trench which for the purposes of recording was split into four trenches and three road crossings (RDX).

Trench 1

2.2 Trench 1 was approximately 120m long and contained silt-clay 1002 that was not fully excavated. Inclusions of brick, worked stone and slag suggest that this was a redeposited layer possibly recently disturbed by re levelling the A4067. This was sealed by 0.2m of topsoil 1000.

RDX 2

2.3 This trench contained a continuation of deposits seen in trench 1.

Trench 2

2.4 Trench 2 was approximately 30m long. At an average depth of 1.2m below present ground level a buried modern road (2002) consisting of tarmac and concrete was revealed. This appears to be the original orientation of the B4599 as seen in the 1961 OS map of the area. This was overlain by redeposited deposits of silt clay 2001 and rubble up to 0.8m in depth. These were sealed by topsoil 2000 and a modern path 2003 averaging 0.2m deep.

RDX 3

2.5 This trench was approximately 9m long and contained a continuation of the redeposited silt-clay and rubble seen in trench 2. This was sealed by a modern road surface.

Trench 3
2.6 Trench 3 was approximately 50m long and cut through a deposit of slag, sand and gravel that was over 1m deep and not bottomed. This is interpreted as being part of the slag heaps associated with the iron works. It was sealed by a modern path.

RDX 4

2.7 This trench was approximately 17m long and contained a continuation of the deposits seen in Trench 3. No evidence was seen for the continuation of the road or track leading from the bridge seen in the 1877-8 map (Fig. 4).

Trench 4

2.8 The natural geological substrate consisting of silt clay and sandstone was revealed at the southern end of Trench 4 at an average depth of 0.6m below current ground level. This was overlain by a buried soil and slag heap tipping, which was sealed by the current road.

2.9 At the northern end of Trench 4 a series of concrete foundations were revealed. Due to the limited scope of the intervention little interpretation can be made of these however they may of later date related to the bridge structures which remain spanning the Tawe due to its close proximity.

2.10 Two phase of iron tracks were also recorded (Section AA) near the concrete foundations both orientated northeast-southwest. The first (4011 and 4022) were set into a layer of cinder and slag (4012) which may have been deposited to provide a firm base, consisted of four iron rails 3m apart and may represent two parallel lines. Into this was also cut a stone lined culvert (4019) which was probably used for drainage associated with the second phase of tracks. The rails were covered by a layer 4015 of slag gravel and concrete which formed a base for the second phase of tracks 4014. These were laid on a timber sleeper (4016) and consisted of two sets of rails set approximately 1.2m apart. The tracks were then overlain by 4017 a concrete and gravel layer and then sealed by the tarmac road.

3. DISCUSSION

3.1 The excavations revealed a series of slag tipping events adjacent to the western bank of the River Tawe. Much of this may be redeposited or disturbed as a result of
1960s levelling and landscaping of the site following the closure of the iron works in 1946 (DAT forthcoming). The findings were consistent with the first addition OS map (Fig. 4).

3.2 The rail tracks recorded in Trench 4 align with a still extant bridge crossing the Tawe and were probably part of the extensive network of tramways and train tracks that were used to move materials around the iron works. The earlier phase of tracks appear to correspond to those illustrated on a map from the 1870s produced by the Midland railway Company (Midland railway company 1870s), and may be evidence for a tramway or railway. The later phase appear to be railway tracks. This may coincide with the arrival of the railway in the 1860s which partly replaced the cannel (DAT forthcoming). The concrete foundations observed may be part of the still surviving bridges spanning the river Tawe however little further interpretation can be made.

4. CA PROJECT TEAM

Fieldwork was undertaken by Peter Busby, Luke Brannlund and Matt Nichol. The report was written by Peter Busby. The illustrations were prepared by Jon Bennet. The archive has been compiled by Luke Brannlund, and prepared for deposition by Jon Hart. The project was managed for CA by Ian Barnes.

5. REFERENCES


CA (Cotswold Archaeology) 2013 Glan Yr Afon Gas Main Replacement, Ystalyfera, Neath Port Talbot; Written Scheme of Investigation for an Archaeological Watching Brief

DAT (Dyfed Archaeological Trust) Forthcoming; Ystalyfera Iron & Tinplate Works, Ystalyfera Archaeological Excavation
GGAT (Glamorgan Gwent Archaeological Trust) 2005 Southeast Wales Industrial Ironworks Landscapes – Year 1: The Core Ironworks Area GGAT Report 2005/56CA

Midland Railways Company 1870s Map of Swansea Canal Properties
### APPENDIX A: CONTEXT DESCRIPTIONS

<table>
<thead>
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<th>Trench No.</th>
<th>Context No.</th>
<th>Type</th>
<th>Fill of Context interpretation</th>
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Observed groundworks

Location of trench section
Section AA

Southern rails of earlier rail track 4011

Rail track 4014, looking north-east
Glan Yr Avon, Gas main replacement, Ystalyfera, Neath Port Talbot

Extract from the 1877 to 1878 map of Ystalyfera showing observed groundworks