

South Wales Gas Pipeline Project Site 213 Land at Gilfach Llangain Carmarthenshire

Archaeological Watching Brief

for

Rhead Group on behalf of

National Grid

CA Project: 9150 CA Report: 13142 Event: DAT108841

January 2014

South Wales Gas Pipeline Project Site 213

Archaeological Watching Brief

CA Project: 9150 CA Report: 13142 Event: DAT102846

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CONTENTS

SUMM	ARY	.2
1.	INTRODUCTION	.3
2.	RESULTS (FIG. 2)	.5
3.	PROJECT TEAM	.6
4.	REFERENCES	.7
APPEN	NDIX A: CONTEXT DESCRIPTIONS	.8
APPEN	NDIX B: THE FINDS	.8
APPEN	IDIX C: PALAEOENVIRONMENTAL EVIDENCE BY JAMES RACKHAM	.9
APPEN	IDIX D: RADIOCARBON DATING BY SEREN GRIFFITHS	. 11

LIST OF ILLUSTRATIONS

Fig. 1	Site	location	plan	(1:25,	,000)
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- Fig. 2 Burnt mound 213004, plan and sections (1:100 and 1:20)
- Fig. 3 The calibrated radiocarbon dates from Site 213 (Appendix D)

GLOSSARY

- CA Cotswold Archaeology
- CAP Cambrian Archaeological Projects
- CPAT Clwyd Powys Archaeological Trust
- DAT Dyfed Archaeological Trust
- GGAT Glamorgan Gwent Archaeological Trust
- FTP Felindre to Brecon gas pipeline
- HER Historic Environment Record
- MHA Milford Haven to Aberdulais gas pipeline
- NAL Network Archaeology Ltd
- NLMJV Nacap Land & Marine Joint Venture
- UPD Updated Project Design

SUMMARY

Project Name:	South Wales Gas Pipeline Project					
Location:	Site 213, Land at Gilfach, Llangain, Carmarthenshire					
NGR:	SN 3864 1470					
Туре:	Watching Brief					
Date:	28 April 2006					
Location of Archive:	To be deposited with RCAHMW (original paper archive) and					
	Carmarthenshire Museum (material archive and digital copy of					
	paper archive; accession number CAASG 2008.0282)					
Site Code:	MHA06					

An archaeological watching brief was undertaken by Cotswold Archaeology during groundworks associated with construction of gas pipelines (part of the South Wales high pressure gas pipeline scheme) between Milford Haven and Aberdulais, and Felindre and Brecon, which were conducted between 2005 and 2007.

The remains of a stream-side burnt mound were present. Radiocarbon dates of 1870–1630 and 1690–1500 cal. BC obtained from charcoal from the burnt mound suggest that it was perhaps formed over a prolonged period during the Early and Middle Bronze Age and given this length of time, may have been the focus of intermittent visits.

An unstratified Mesolithic/Early Neolithic flint flake was also present, suggesting that the area was visited during the earlier prehistoric era. This conclusion is supported by nearby standing stones and other remains in the vicinity, including those at found 1.1km west at pipeline Site 501.

1. INTRODUCTION

- NACAP Land and Marine Joint Venture (NLMJV), on behalf of National Grid, 1.1 commissioned RSK Environment (part of the RSK Group) to manage the archaeological works (non-invasive surveys, desk based assessment, evaluation, watching brief, and open area excavation) on a 216km-long section of pipeline from Milford Haven (Pembrokeshire) to Brecon (in Powys). The high pressure gas pipeline (part of the 316km-long pipeline route from Milford Haven to Tirley in Gloucestershire) was required to reinforce the gas transmission network. The archaeological work performed in advance of this pipeline was undertaken in a number of sections by a number of archaeological companies. The westernmost section of 122km, from Milford Haven to Aberdulais, was investigated by CA (then Cotswold Archaeological Trust) during 2005–2007 with some additional excavation work carried out by CAP. The section of 89km, from Felindre to Brecon was investigated by CA during 2006–2007 and CAP during 2007Assessment reports on the works were completed in January 2012 (NLM 2012a, 2012b) and the current reporting stage was commissioned in February 2013.
- 1.2 In April 2006 CA carried out an archaeological watching brief at Site 213, Land at Gilfach, Llangain, Carmarthenshire (centred on NGR: SN 3864 1470; Fig. 1). The objective of the watching brief was to record all archaeological remains exposed during the pipeline development.
- 1.3 The watching brief was carried out in accordance with professional codes, standards and guidance documents (EH 1991; IfA 1999a, 1999b, 2001a, 2001b and IfA Wales 2008). The methodologies were laid out in an Archaeological Management Plan (AMP) (RSK 2006) and associated Written Statements of Investigation (WSIs) and Method Statements.

The site

1.4 The site is located within a field and is adjacent to a small tributary of the River Towy (Fig. 1). It lies at approximately 45m AOD on land that slopes down eastwards to the tributary. The underlying solid geology of the area is mapped as the Milford Haven Group (Interbedded Argillaceous Rocks and Sandstone and Conglomerates) of the Devonian and Silurian Periods, overlain by Quaternary Till deposits (BGS 2013).

Archaeological background

1.5 No archaeological remains were identified within the site during the preliminary Archaeology and Heritage Survey (CA 2005). The survey did identify the presence of three standing stones within 250m of the site, including two in a pair believed to be of Bronze Age date (PRNs 2205 and 2199). Site 501 recorded during the pipeline construction works, lies 1.1km west of the current site and contained a further standing stone surrounded by small groups of pits and postholes with dating evidence suggesting that the site was visited intermittently during the Early Neolithic, Beaker and Early Bronze Age periods.

Archaeological objectives

- 1.6 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; and
 - 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

- 1.7 The fieldwork followed the methodology set out within the *WSI* (NLM 2006). An archaeologist was present during intrusive groundworks comprising stripping of the pipeline easement to the natural substrate (Fig. 1).
- 1.8 Where archaeological deposits were encountered written, graphic and photographic records were compiled in accordance with CA Technical Manual 1: *Fieldwork Recording Manual*.
- 1.9 The post-excavation work was undertaken following the production of the UPD (GA 2012) and included re-examination of the original site records. Finds and environmental evidence was taken from the assessment report (NLM 2012a) except where the UPD recommended further work, in which case the updated reports were used. The archaeological background to the site was assessed using the following resources:-

- the Archaeology and Heritage Survey which was undertaken in advance of the pipeline construction and which examined a 1km-wide corridor centred on the pipeline centre line, including the then existing HER record (CA 2005);
- Dyfed Archaeological Trust HER data (received May 2014); and
- other online resources, such as Google Earth and Ordnance Survey maps available at <u>http://www.old-maps.co.uk/index.html</u>.

All monuments thus identified that were relevant to the site were taken into account when considering the results of the fieldwork.

1.10 The archive and artefacts from the watching brief are currently held by CA at their offices in Kemble. Subject to the agreement of the legal landowner the artefacts will be deposited with Carmarthenshire Museum under accession number CAASG 2008.0282, along with a copy of the paper archive. The original paper archive will be deposited with the RCAHMW.

2. RESULTS (FIG. 2)

- 2.1 This section provides an overview of the watching brief results; detailed summaries of the recorded contexts, finds, environmental samples (palaeoenvironmental evidence) and radiocarbon dating are to be found in Appendices A, B, C and D. Full, original versions of the specialist reports are available within the archive. In addition to the remains described below, a single Mesolithic/Early Neolithic flint flake was recovered from the subsoil.
- 2.2 The natural geological substrate (213002), consisting of red-brown silty clay with pebbles, was overlain by burnt mound 213004. Initially, this was thought to have occupied a shallow cut, but the 'edges' of this were poorly defined and it is perhaps more likely to have been a natural depression. The burnt mound was oval in plan, 5.3m long, 3.35m wide and 0.1m thick and comprised charcoal and burnt stones. A sample taken from it yielded only fuelwood charcoal, dominated by oak, but also including including alder, ash and hazel. Two charcoal fragments produced radiocarbon dates of 1870–1630 and 1690–1500 cal. BC (SUERC-55508 and 55512), dates within the Early to Middle Bronze Age.

Discussion

- 2.3 In common with most burnt mounds found along the pipeline route and beyond, the burnt mound at Site 213 occupied a stream-side location. The Bronze Age dating of the mound is also comparable to mounds found along the pipeline and beyond, although earlier and later examples are known. Although there is some overlap between the radiocarbon date ranges, these ranges were statistically inconsistent and the mound may well have been formed over a considerable period of time, although too few data are present to estimate the duration of this period. Given this, the mound may have been the focus of intermittent visits.
- 2.4 No associated features such as troughs or hearths were discovered accompanying the mound, but this might reflect the limited extent of the excavations, or that the mound was only 50% excavated, with the potential for further remains to survive beyond the site and/or beneath the unexcavated parts of the mound. In this respect, it is worth observing that at other sites along the pipeline, most notable at Site 506, multiple mounds have been found alongside a single water course, and it is therefore possible that further mounds exist alongside the small tributary which flows east of Site 213.

3. PROJECT TEAM

Fieldwork was undertaken by Kelly Saunders assisted by Richard Watts. This report was written by Jonathan Hart with illustrations prepared by Daniel Bashford. The archive has been compiled by Jonathan Hart, and prepared for deposition by Hazel O'Neill. The fieldwork was managed for CA by Clifford Bateman and the postexcavation was managed for CA by Karen Walker.

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APPENDIX A: CONTEXT DESCRIPTIONS

Context	Туре	Fill of	Context	Description	L	W	Depth/thick	Spot-
No.			interpretation		(m)	(m)	ness (m)	date
213000	Layer		Topsoil	Brown-grey clay silt			0.2	
213001	Layer		Subsoil	Brown-grey clay silt			0.2	Mod
213002	Layer		Natural	Red-brown silty clay with pebbles				
213003	-		Natural depression	Shallow natural depression in the natural	5.3	3.35	0.1	
213004	Layer		Burnt mound	Charcoal, ash and burnt stone layer	5.3	3.35	0.1	

APPENDIX B: THE FINDS

Metal object (Leahy 2008)

Context 213001: fragment of an iron horseshoe, no sign of nail holes but traces of calkin at one end.

Dimensions: Length 112.0mm, Width 33.0mm, Thickness 8.2mm

Mass: 140.8g

Condition: Corroded, exfoliating

Dating: This object is incomplete making it difficult to date but its apparently large proportions would suggest that it is relatively recent.

Lithic object (Pannett 2009)

A single Mesolithic/Early Neolithic flint flake from a blade core was recovered from the subsoil.

APPENDIX C: PALAEOENVIRONMENTAL EVIDENCE BY JAMES RACKHAM

Environmental soil samples

A single environmental sample (213000) was taken at this site from the fill of burnt mound 213004, a deposit of charcoal ash and burnt stone. The site is located beside a small stream that flows into the estuary of the River Towy. Samples of hazel and alder round wood were submitted from this sample for radiocarbon dating.

Table 1 Bulk environmental sample from Site 213

sample no	context no	feature	description	processed processed wt kg vol l		date
213000	213004		Burnt mound deposit	53	32	BA?

The sample was processed in the manner described in the assessment report (Giorgi and Martin 2009) with the additional refloating of the dried <2mm sample residues that had been retained whose flot volume is indicated in Table 2 as '2nd flot'. This second flot was then sorted for charred macrofossils and the residue re-dried and checked with a magnet to recover any further magnetic material.

Table 2 Data for the environmental sample from Site 213

sample no	context no	processed vol I	1st flot vol ml	2nd flot vol	residue wt g	pottery	burnt clay	burnt stone g.	coal	flint	magnetic g.	burnt bone
213000	213004	32	425	292	2726+			24000	E		2.2 +A	

* abundance rating - E= 1-10 items; D=11-50, C=51=100, B=101-200, A=>200;

nd – no data; + additional unrecorded or weighed material

The archaeological finds from the sample were dominated by burnt stone, with a little coal and an appreciable magnetic component (Table 2), the latter composed of small silt stone and concretions some of which may have been burnt.

A relatively large flot dominated by charcoal was recovered. No charred plant remains were recorded but a random sample of the charcoal has been studied.

Charcoal (Dana Challinor)

The charcoal assemblage from sample 213000 was submitted for analysis, comprising material from burnt mound deposit 213004. Radiocarbon dating results were not yet available at the time of analysis but the feature provisionally has been assigned to the Middle–Late Bronze Age periods. The sample produced abundant charcoal, but taxonomic diversity was relatively low. Thirty fragments, from a range of sieve sizes, were randomly selected and identified following standard procedures. The condition of the charcoal was quite good; some surface covering of sediment, but with a clear anatomical structure on fracturing. Four taxa were positively identified; *Quercus* sp. (oak), *Alnus glutinosa* (alder) *Corylus avellana* (hazel) and *Fraxinus excelsior* (ash) (Table 3).

No complete roundwood stems were observed, but fragments with moderate to strong ring curvature have been recorded as roundwood (r). A few fragments of oak presented tyloses, indicative of heartwood and a single

fragment was identified as sapwood on the basis of absence of tyloses (in a piece large enough to be certain). Several oak fragments exhibited radial cracks and low levels of vitrification.

	Feature type	burnt mound
	Context number	213004
	Sample number	213000
Quercus sp.	oak	20 (shr)
Alnus glutinosa Gaertn.	alder	3
Corylus avellana L.	hazel	5 (r)
Alnus/Corylus	alder/hazel	1
Fraxinus excelsior L.	ash	1r

Table 3 Charcoal from burnt mound deposits at Site 213

s=sapwood; h=heartwood; r=roundwood; (brackets denotes presence in some fragments only)

The assemblage was clearly dominated by oak, with minor components of hazel, alder and ash. This is consistent with the oak-hazel woodland prevalent in the region during the Bronze Age. Alder favours damp ground, especially near streams/riversides. Optimum conditions for ash include moist, but well-draining, soil conditions and the tree is frequently a coloniser, though it also occurs in groups in mixed broadleaf woodland

Discussion

As with other burnt mound assemblages along the pipeline there was no evidence for any charred food remains or waste suggestive of domestic occupation. The sample flot is dominated by charcoal from species suggestive of local woodland of oak and hazel with alder probably growing along the stream margin.

APPENDIX D: RADIOCARBON DATING BY SEREN GRIFFITHS

For the analysis, radiocarbon measurements were produced on short-life, single entity charred plant remains. Samples with the 'Beta-' laboratory code were pretreated as detailed here http://www.radiocarbon.com/. Samples with the 'SUERC-' laboratory code were pretreated using an acid-base-acid process. Samples were combusted and graphitized and then dated by Accelerator Mass Spectrometry (AMS). The results are conventional radiocarbon ages, quoted according to the international standard set at the Trondheim Convention. The results have been calibrated using IntCal13, and OxCal v4.2. The date ranges have been calculated using the maximum intercept method, and have the endpoints rounded outward to 10 years.

Two radiocarbon results produced on shortlife samples from burnt mound layer 213004 were statistically inconsistent (T'=6.0; T'5%=3.8; df=1; Ward and Wilson 1978), and indicate that activity at the site occurred over a period between 1870–1630 cal BC (95% confidence; SUERC-55508) and 1690–1500 cal BC (95% confidence; SUERC-55512; Fig. 3).

Context	Feature	Sampled material	Suerc Sample	Measured	δ 13C	Calibrated age (95%)
				age		
213004	Burnt	Alnus sp. charcoal	SUERC-55508	3418±30	-26.7	1870–1630 cal BC
	mound		(GU35197)			
213004	Burnt	Corylus sp. charcoal	SUERC-55512	3314±30	-26	1690–1500 cal BC
	mound		(GU35198)			

Dating undertaken by Scottish Universities Environmental Research Centre

Fig. 3 The calibrated radiocarbon dates from Site 213









