

South Wales Gas Pipeline Project Site 20.18 Land East of Cilsan Mill Llangathen Carmarthenshire

Archaeological Watching Brief

for

Rhead Group on behalf of

National Grid

CA Project: 9150 CA Report: 13269 Event: DAT108793

March 2014

South Wales Gas Pipeline Project Site 20.18

Archaeological Watching Brief

CA Project: 9150 CA Report: 13269 Event: DAT102846

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date	26 March 2014
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Fig. 1 Site location plan (1:25,000)

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 20.18, Land East of Cilsan Mill, Llangathen, Carmarthenshire							
NGR:	SN 59 22							
Туре:	Watching Brief							
Date:	1 May 2007							
Location of Archive:	To be deposited with RCAHMW (original paper archive) and							
	Carmarthenshire Museum (digital copy of paper archive; accession							
	number CAASG 2008.0282)							
Site Code:	MHA06							

An archaeological watching brief was undertaken by Cambrian Archaeological Projects 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.

A single isolated pit was found. The pit contained a small quantity of charred hazelnut shell fragments, one of which was radiocarbon dated to the Late Neolithic period. It is possible that further remains of this date survive beyond the easement and it is likely that the pit relates to occupation, although the nature, duration and intensity of this remain unknown.

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 2007. Assessment 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 May 2007 CAP carried out an archaeological watching brief at 20.18, Land East of Cilsan Mill, Llangathen, Carmarthenshire (centred on NGR: SN 59 22; Fig. 1). The objective of the watching brief was to record all archaeological remains exposed during the pipeline construction.
- 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 Framework (RSK 2007) and associated Written Statements of Investigation (WSIs) and Method Statements.

The site

1.4 The site is located within a field on the east side of a small hilltop plateau on the north-eastern bank of the River Towy (Fig. 1). It lies at approximately 40m AOD. The underlying solid geology of the area is mapped as the Abergwilli Mudstone Formation of the Ordovician Period; no superficial deposits were recorded (BGS 2013).

Archaeological background

- 1.5 No archaeological remains were identified within the site during the preliminary Archaeology and Heritage Survey (CA 2006). A group of pits dating to the Early to Middle Neolithic, Late Neolithic and Early Bronze Age periods was found 200m north-east of the site at Site 21.02 (CA 2013a). At the same location, a burnt mound and trough were also found (*ibid*.). A second possible trough was recorded 200m south-west of the site at pipeline Site OEA 11 (*ibid*.). Bronze Age finds have also been recovered from an area 450m south-west of the site (PRN 706).
- 1.6 Elements of the medieval landscape also survive, such as Dinefwr Castle, 1.4km south-east of the site. Within the wider landscape, post-medieval buildings have been recorded (CA 2006, ref. IDs 745, 775, 795, 817 and 5926) and the landscape includes the remains of post-medieval ridge and furrow cultivation which extends to within 70m of the site (CA 2006, ref. IDs 839 and 845). An earthwork survey of some of these cultivation remains was undertaken in advance of the pipeline construction works at pipeline Site 845 (CA 2013b).

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; 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

- 1.8 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).
- 1.9 The post-excavation work was undertaken following the production of the UPD (GA 2012) and included re-examination of the original site records. 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 (2006);
- Dyfed Archaeological Trust HER data (received July 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 archaeological features recorded on this site were not georeferenced. A nominal location for the site has been indicated along the pipeline centre line within the field within which the site was located. No site plans were drawn and the identified feature is therefore not illustrated.
- 1.11 The post-excavation work was undertaken following the production of the UPD (GA 2012) and included re-examination of the original site records. Environmental evidence was taken from the assessment report (NLM 2012b) 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 2006);
 - Dyfed Archaeological Trust HER data (received July 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.

1.12 The archive from the watching brief is currently held by CA at their offices in Kemble. The original paper archive will be deposited with the RCAHMW and a digital copy with Carmarthenshire Museum under accession number CAASG 2008.0282.

2. RESULTS

- 2.1 This section provides an overview of the watching brief results; summaries of the recorded contexts, environmental samples (palaeoenvironmental evidence) and radiocarbon dates can be found in Appendices A, B and C. Full, original versions of the specialist reports are available within the archive.
- 2.2 A single pit (20.18.001) was recorded. It was sub-circular in plan with a bowl-shaped profile and was up to 0.6m wide and 0.05m deep. It contained yellow-grey clay with charcoal 20.18.002 and a sample from this material yielded charred hazelnut shell fragments that it is suggested, were derived from cooking waste (subsequently dumped into the pit). The analysis of the charcoal shows that hazel wood was used for fuelling the fire and hazel/alder fuelwood charcoal. Radiocarbon dating of a hazelnut shell fragment returned a Late Neolithic date of 2880–2570 cal. BC.

Discussion

2.3 The pit is likely to represent Late Neolithic occupation. However, although it was found as an isolated feature, it is not known whether or not further remains of this date survive beyond the excavated area, and so the nature, intensity and duration of this occupation are unknown. Given the presence of early prehistoric pits at Site 21.02 (CA 2013a), 200m to the north-east, it may be that the locality was used episodically for occupation, although whether the occupation at Site 20.18 was transient or more protracted is not knowable on the basis of the current evidence.

3. PROJECT TEAM

Fieldwork was undertaken by Cambrian Archaeological Projects. This report was written by Luke Brannlund with comments by Jonathan Hart and 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 CAP by Kevin Blockley and the post-excavation work was managed for CA by Karen Walker.

4. **REFERENCES**

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- EH (English Heritage) 1991 The Management of Archaeological Projects 2
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- RSK (RSKENSR) 2007 Felindre to Tirley Natural Gas Pipeline: Archaeological Framework, v7. Nacap Land and Marine Final, RSKENSR Environmental Ltd

APPENDIX A: CONTEXT DESCRIPTIONS

Context	Fill of	Interpretation	Description	L (m)	W (m)	Depth (m)
20.18.001		Cut of Pit	Sub-circular in plan with a shallow bowl-shaped profile	0.6	0.5	0.05
20.18.002	20.18.001	Fill of pit	Mid yellow-grey clay with charcoal	0.6	0.5	0.05

APPENDIX B: PALAEOENVIRONMENTAL EVIDENCE BY JAMES RACKHAM

Bone

No bone was recovered from this site either by excavation or from the sample. It is assumed that the burial environment was unsuitable for the survival of unburnt bone.

Environmental Soil Samples

A single pit, 2018001, was found and an environmental sample was taken from fill 2018002 (Table 1). The sample was processed in the manner described in the assessment report (Carruthers 2008). No residue was located for this sample so it could not be refloated, or the residue checked for archaeological finds and a magnetic component. A possible polished stone was sorted from the sample residue during initial processing but otherwise no archaeological finds were recorded.

The flot produced 189 fragments of charred hazel nutshell, weighing 3g, but no other identifiable charred plant macrofossils, the remainder of the flot being composed of charcoal, a large proportion of which exceeds 8mm in size. On the basis of the results from other sites there was likely to have been more unrecovered nutshell in the residue.

sample no	context no	feature	description	Wt kg.	Vol. I.
20183000	2018002	2018001	Pit fill	6.5	3*

*volume estimated on site - not accurate; HNS - hazel nutshell

Table 2. Data for the environmental sample from Site 20.18

Sample no	Context no	wt kg.	Residue wt g.	1st flot vol ml	2nd flot vol ml	Pottery*	Burnt clay*	flint*	Magnetic*	Burnt Bone *			
20183000	2018002	6.5	893	200	none				nd		Possible hazelnuts	polished x 189/3g	stone;

*quantities - E=1-10; D=11-50; C=51-100; B=101-200; A=200+ items; nd = no data; # flot from 1/3 of residue

Charcoal (Dana Challinor)

The single sample from fill 2018002 was analysed for charcoal following standard methodological procedures. The condition of the charcoal was fair, though with some sediment encrustation. Two taxa were identified; *Alnus glutinosa* (alder) and *Corylus avellana* (hazel). It was not always possible to distinguish between the taxa due to sediment encrustation or because the perforation plates had burnt out. A few of the hazel fragments exhibited moderate ring curvature, but there were no stems with pith or bark, and most of the material came from trunkwood or large branchwood. There were frequent insect tunnels, small and round in shape, present in both taxa. The two indeterminate fragments were highly vitrified.

The charred hazelnut shell recovered from this sample suggests that the assemblage derived from cooking waste which was subsequently dumped into a pit. The analysis of the charcoal shows that hazel wood was used for fuelling the fire, and it is a common component of domestic type charcoal assemblages at other sites along the pipeline. The use of alder, which prefers damp ground, indicates the likely proximity of a river/stream and the insect tunnels, in both taxa, shows that the wood was either gathered as deadwood from local woodland or had been deliberately seasoned before use.

	Feature number	20.18.001		
	Context number	2018002		
	Sample number	20183000		
Alnus glutinosa Gaertn.	alder	6		
Corylus avellana L.	hazel	11 (r)		
Alnus/Corylus	alder/hazel	11		
Indeterminate		2		

Table 3: Charcoal from pit 20.18.001

r-roundwood; (brackets denotes presence in some fragments only)

Discussion

The radiocarbon date on hazel nutshell from this isolated feature places it in the late Neolithic, and this is consistent with the concentration of hazel nutshells in the deposit. The site sits on the east side of a small hilltop plateau, at 40m OD, overlooking the River Towy to the south east. The nearest project pollen study contemporary with the site is about 17km due south at RLX01 (Rackham *et al.* in prep) where the Late Neolithic (estimated by extrapolation from the dated horizons) is represented by an oak and hazel dominated woodland, with alder growing along the rivers and streams and a limited open pastoral element, although there is a Poaceae (grass) peak at around this time that then falls. The implication is a landscape largely wooded, but with areas that have been opened up by the Neolithic population, but it is well to be aware that this picture is a generalisation and locally the landscape will have varied.

There are a number of sites represented by isolated pits, some of which have been dated to the Neolithic, and it is possible that these lay within a wooded rather than open landscape. The nutshell is clearly food waste and such sites might represent short term campsites, perhaps revisited on a number of occasions, and reflect the exploitation of the woodland for hunting and gathering, or just travel. The charcoal assemblage is a little unusual in being dominated by hazel, with alder but no oak. The alder wood in the charcoal sample would suggest collection of firewood from the riverside, currently just under 200m away downslope, although the Towy may have been flowing in a course further away to the east in the Neolithic. The local stream to the west, another

possible source of alder is a bit further away. This, if true would imply an open landscape, since fuel would have been available closer in a wooded landscape, and there are no indications on existing and 19th century maps that a habitat suitable for alder occurred within 50-100m of the site, although it may have some 4500 years ago. The absence of oak in the studied charcoal sample might also argue against a wooded landscape, where oak would have been close by. The collection of deadwood for fuel would fit with a campsite, but seasoned wood would imply a more structured site (ie planned because wood was set aside to season). On a permanent settlement the fuelwood samples are likely to reflect the general or average pattern of fuel selection, but these single feature sites, which might represent no more than one or two short term events (overnight stops?) could easily result in a low diversity fuel assemblage reflecting the immediate local collection of wood for just one or two fires.

These single feature Neolithic sites may well reflect a specific exploitation of the landscape, a non-permanent site type. Obvious suggestions might include the autumn gathering of hazelnuts from the woodland, the coppicing of hazel (and other species) in a programme of woodland management, hunting trips, or even shepherding where campsites rather than permanent structures are used. We have insufficient evidence to decide whether the site lay in woodland, on its margins or in open country, but hazel scrub or woodland must have been local and the occurrence of alder wood would seem to suggest the slopes to the river may have been cleared of woodland since the carriage of fuelwood some 200m would appear unnecessary if the landscape was wooded.

APPENDIX C: THE RADIOCARBONE DATING EVIDENCE BY SEREN GRITHIFFS

For the analysis, radiocarbon measurements were produced on short-life, single entity charred plant remains. 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.

A single radiocarbon date on hazel nutshell from site 20.18 produced the result 2880-2570 cal BC (95% confidence; SUERC-57309).

Table 4 Radiocarbon samples

Sample	Sample	Context	d13C	Lab	Result	Calibrated
				code		date range
						(95%
						confidence)
charred plant remair	s; 20183000	2018002	-25.9 ‰	SUERC-	4120	2880-2570
hazel nutsh	ell			57309	± 30	BC
fragments x1						

