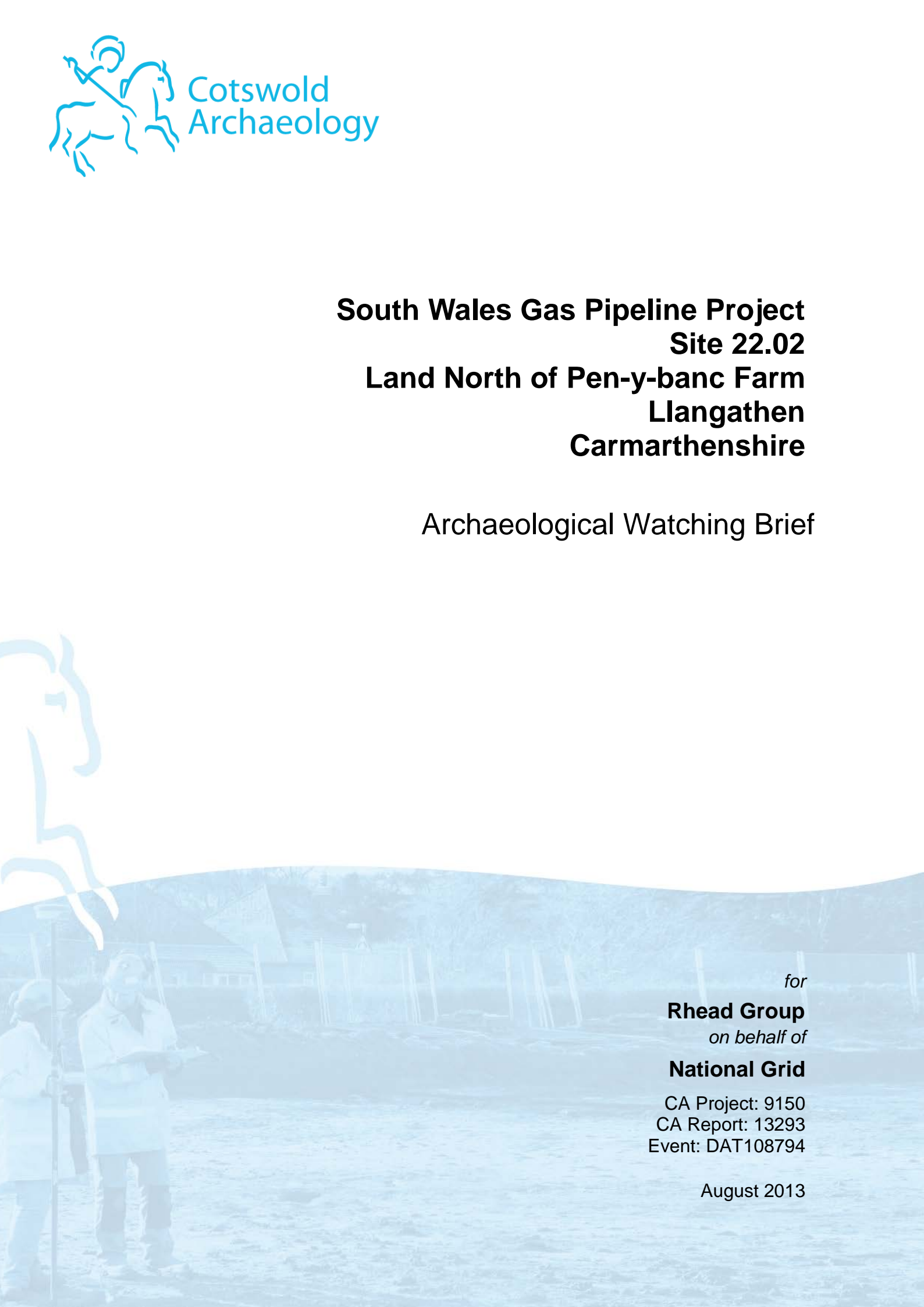


**South Wales Gas Pipeline Project  
Site 22.09  
Land South of Llwynceilyn Farm  
Llangathen  
Carmarthenshire**

Archaeological Excavation



*for*  
**Rhead Group**  
*on behalf of*  
**National Grid**

CA Project: 9150  
CA Report: 13294  
Event: DAT108796

March 2014

# South Wales Gas Pipeline Project

## Site 22.09

### Archaeological Excavation

CA Project: 9150  
CA Report: 13294  
Event: DAT102846

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date	26 March 2014
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## CONTENTS

SUMMARY .....	2
1. INTRODUCTION.....	3
<i>The site</i> .....	3
<i>Archaeological background</i> .....	4
<i>Archaeological objectives</i> .....	4
<i>Methodology</i> .....	4
2. RESULTS (FIG. 2) .....	5
3. PROJECT TEAM .....	8
4. REFERENCES.....	9
APPENDIX A: CONTEXT DESCRIPTIONS .....	11
APPENDIX B: THE FINDS.....	13
APPENDIX C: PALAEOENVIRONMENTAL EVIDENCE BY JAMES RACKHAM.....	17

## LIST OF ILLUSTRATIONS

Fig. 1 Site location plan (1:25,000)

Fig. 2 Plan of archaeological features (1:400)

## 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 22.09, Land South of Llwynceilyn Farm, Llangathen, Carmarthenshire  
**NGR:** SN 6055 2360  
**Type:** Excavation  
**Date:** 2–21 March 2007  
**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:** FTB07

An archaeological excavation 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 small burnt mound associated with a possible hearth was identified adjacent to a palaeochannel.

South of this, two phases of ditches likely to represent field/enclosure boundaries were found, along with what were probably natural features. Only one find pre-dating the medieval period was recovered, a single sherd of Roman pottery from the upper fill of a ditch. In the absence of further finds of this date this sherd cannot be regarded as secure dating evidence and the features south of the burnt mound are best regarded as undated. The mound and hearth were also undated by finds, although examples found elsewhere along the pipeline have mostly been radiocarbon dated to the Bronze Age.



## 1. INTRODUCTION

- 1.1 NACAP Land and Marine Joint Venture (NLMJV), on behalf of National Grid, 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 Between 2–21 March 2007 CAP carried out an archaeological excavation at Site 22.09, Land South of Llwynceilyn Farm, Llangathen, Carmarthenshire (centred on NGR: SN 6055 2360; Fig. 1). The objective of the excavation was to record all archaeological remains exposed on site during the pipeline construction.
- 1.3 The excavation 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 Document* (AFD) (RSK 2007) and associated Written Statements of Investigation (WSIs) and Method Statements

### ***The site***

- 1.4 The site is located within fields alongside the north-eastern boundary of King's Lodge Wood (Fig 1). It lies at approximately 80m AOD within a shallow valley close to the confluence of two minor tributaries of the River Towy.

- 1.5 The underlying solid geology of the area is mapped as the Nantmel Mudstones Formation of the Ordovician Period, with no overlying superficial deposits (BGS 2013).

### ***Archaeological background***

- 1.6 No archaeological remains were identified within the site during the preliminary *Archaeology and Heritage Survey* (CA 2006). A possible Bronze Age ring-ditch has been recorded 1km south-east of the site (PRN 11092). A geophysical survey undertaken in advance of the construction works identified linear anomalies across the site (Bartlett 2006). Two evaluation trenches tested these geophysical anomalies (CA 2009; Site 22.09, trenches 1 and 2) and identified the terminus of an undated ditch, although it is not clear how this relates to features found during the subsequent excavation.
- 1.7 Further remains were found along the pipeline route during the construction works (Fig. 1). From west to east these included a pit with burnt stone, possibly a burnt mound trough (Site OAE 11); a Neolithic pit (Site 20.18); ridge and furrow earthworks (Site 845); a burnt mound and trough and prehistoric pits (Site 21.02); undated ditches (Site 23.04); early prehistoric pits, possibly including cremations (Site 23.07); undated features (Site 24.01) and post-Roman crop drying ovens and a farm dating to at least the 19th century (Sites 24.06/24.07).

### ***Archaeological objectives***

- 1.8 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***

- 1.9 The fieldwork followed the methodology set out within the *WSI*. An archaeologist was present during intrusive groundworks comprising stripping of the pipeline easement to the natural substrate (Fig. 1).

1.10 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 reports (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 <http://www.old-maps.co.uk/index.html>.

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

1.11 The georeferencing data provided for the site plans were not sufficient to accurately geolocate them. The site has therefore been shown in a 'best fit' location within the field within which it was located. Due to the fragmentary nature of the site archive, with many 'features' being recorded and sampled for palaeoenvironmental analysis then discounted in the field, it has not been possible to reconcile all of the samples with features. There are therefore some samples in Appendix C which do not relate to features described in the report text.

1.12 The archive and artefacts from the evaluation and excavation 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 digital 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 excavation results; detailed summaries of the recorded contexts, finds and environmental samples (palaeoenvironmental evidence) are to be found in Appendices A, B and C. Full, original versions of the specialist reports are contained within the archive.

***Evaluation (not illustrated)***

- 2.2 Two trenches were excavated. Trench 22.09.T1 contained no archaeological remains. Within Trench 22.09.T2, the clay substrate was cut by probable ditch terminus 22.09.T2.04. This was aligned east/west and was undated. It is not clear how this ditch relates to features subsequently exposed during the excavation given the difficulties experienced in geolocating the excavation site.

***Excavation***

- 2.3 The natural geological substrate (229003), comprising yellow-brown clay, was cut by postholes, pits and ditches and was overlain by a burnt mound. Most were undated and poorly defined, and stratigraphic relationships between features were largely absent. Two phases of ditches were identified and these were phased relative to one another based on stratigraphic relationships (Phase 1 and Phase 2). However, the ditches were not dateable to a period and were not phased relative to other features on the site. Some features were not numbered on site or recorded beyond a plan drawing; where these are referred to in the text below, they have been assigned letter codes, (A, B and C) during this reporting stage. Many or all of the remaining features may have been natural in origin. Environmental samples from the feature fills yielded little evidence and are summarised in Appendix C.

***Burnt mound***

- 2.4 Pit 229153 was the northernmost exposed cut feature. It was circular in plan with moderately sloping sides and an uneven base and was up to 4.5m wide and 0.4m deep. *In situ* burning of the surrounding natural substrate was identified along the pit's base and sides. It contained four fills of which the upper and lowermost fills included charcoal and burnt stones.
- 2.5 The pit was sealed by layer 229154 which comprised charcoal and burnt stones and was up to 4.5m in diameter and 0.1m thick. It was noted on site that these features were adjacent to a palaeochannel (not planned). It is likely that the layer was a burnt mound and that the underlying pit was the remains of a large hearth.

***Phase 1 ditches***

- 2.6 A north-west/south-east alignment of ditches was found running through the site, with further ditches laid out broadly at right angles to these. The north-west/south-east alignment comprised ditches 229007, 229075 and 229274. Ditch 229075 included a right angled return on its south-western side which may have defined part of an



enclosure, along with partially exposed ditch 229288. Gaps between the ditches were probably entrances to fields/enclosures and an area of erosion was identified at the entrance between ditches 229007 and 229075.

- 2.7 At the western end of the site, two curvilinear ditches (229011 and 229052) were present between ditches 229007 and 229075. Both were only partially exposed within the site but potentially defined a small circular enclosure c. 5m in diameter. No features were found within the exposed part of this enclosure.
- 2.8 Further ditches were laid out along the north-eastern side of ditches 229007, 229075 and 229274. These included un-numbered ditches A and B and intercutting ditches 229113 and 229137.
- 2.9 The ditches described above were all filled with up to three grey/grey-brown silty clay deposits suggestive of natural infilling. A single sherd of Roman pottery dateable to the 2nd to 4th centuries AD recovered from the upper fill of ditch 229007 was the sole find from these ditches but it is not certain whether this was contemporary with the ditches or a residual find.

#### *Phase 2 ditches*

- 2.10 The Phase 1 ditches were truncated by ditches assigned to Phase 2. These included east/west aligned ditch 229017 and un-numbered north-east/south-west aligned ditch C. Ditch C was probably associated with ditch 229277 to the north-east. The Phase 2 ditches contained similar fills to those of Phase 1 and were devoid of finds.

#### *Pits and Postholes and short ditches*

- 2.11 Discrete features and short linear features were found throughout much of the central part of the site, south of the burnt mound and mostly to the north of Phase 1 ditches 229007, 229075 and 229274. Most were poorly defined, irregular and devoid of finds and may have been natural features. (Where these were indicated as such on site records, they have been shown as natural features on Fig. 2).

#### **Discussion**

- 2.12 The almost total absence of dating evidence and of evidence allowing the site to be phased, other than the stratigraphic phasing of the ditches, severely restricts the potential for interpreting this site. The burnt mound and possible hearth are likely to

have been prehistoric; most other examples found along the pipeline have been radiocarbon dated to the Bronze Age, although later and earlier examples are known from elsewhere in the British Isles and the pipeline works exposed a single Late Neolithic and Iron Age examples. No evidence was forthcoming regarding the nature of the activities associated with the mound and hearth although, as is typical for such features, they were located alongside a former water course. There was no evidence that the mound was associated with any of the other features on site, although this possibility cannot be excluded. It has been estimated that there was approximately 2 tons of burnt stone in the surviving mound deposits, among the smallest on the pipeline (see Appendix C, below); although as it only survived within a cut or hollow in the natural, it is likely that the original mound was larger than the surviving portion.

- 2.13 Other than finds from modern features, only one dateable find was recovered from a secure context. This was the Roman sherd from ditch 229007, but the fact that it came from the uppermost ditch fill, taken with the absence of further Roman finds, means that it cannot be regarded as secure evidence for dating the ditches, and these are best regarded as undated. The low frequency of anthropogenic material within them suggests that these ditches were probably field or enclosure boundaries.
- 2.14 The finds from the topsoil and subsoil were almost all post-medieval and early modern in date, although a single medieval tile fragment was also present. These may have been dumped during manuring activities, although the tile fragment is likely to have derived from a substantial building.

### 3. PROJECT TEAM

The excavation was undertaken by Cambrian Archaeological Projects. This report was written by Jonathan Hart, Stuart Joyce and Christopher Leonard, with illustrations prepared by Daniel Bashford and Anne Leaver. The archive has been compiled by Jonathan Hart, and prepared for deposition by Hazel O'Neill. The excavation fieldwork was managed for CAP by Kevin Blockley and the post-excavation was managed for CA by Karen Walker.



#### 4. REFERENCES

- Bartlett, A. 2006 *Felindre to Tirley Gas Pipeline: Report on Archaeogeophysical Surveys 2005-6*
- BGS (British Geological Survey) 2013 *Geology of Britain Viewer*. Online resource at <http://mapapps.bgs.ac.uk/geologyofbritain/home.html> accessed 16 August 2013
- Carruthers, W. 2008 'Assessment Report for Charred Plant Remains', in NLM 2012b
- CA (Cotswold Archaeology) 2006 *Felindre to Tirley Gas Pipeline: Archaeology and Heritage Survey*. CA typescript report **05140**
- CA (Cotswold Archaeology) 2009 *Felindre to Tirley Gas Pipeline: Archaeological Evaluation*. CA typescript report **09079**
- Courtney, P. 2009 'Assessment Report for Medieval and Later Pottery', in NLM 2012b
- EH (English Heritage) 1991 *The Management of Archaeological Projects 2*
- GA (Groundwork Archaeology) 2012 *Milford Haven to Aberdulais and Felindre to Brecon High Pressure Gas Pipelines: Updated Project Design*
- IfA (Institute for Archaeologists) 1999a *Guidelines for Finds Work*. IfA, Birmingham
- IfA (Institute for Archaeologists) 1999b *Standard and Guidance for Finds and Ecofact Studies and Curation*. IfA, Reading
- IfA (Institute for Archaeologists) 2001a *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*.
- IfA (Institute for Archaeologists) 2001b *Standard and Guidance for an Archaeological Excavation*
- IfA Wales (Institute for Archaeologists of Wales/Cymru) 2008 *Introducing a Research Framework for the Archaeology of Wales*, online resource at <http://www.archaeoleg.org.uk/intro.html> accessed December 2012
- Leahy, K. 2009 'Assessment Report for Metal Objects', in NLM 2012b
- Major, H. 2009 'Assessment Report for Clay Pipes' in NLM 2012b
- NLM (Nacap Land and Marine) 2006 *Milford Haven to Aberdulais Natural Gas Pipeline: Scheme of investigation for a programme of archaeological works*
- NLM (Nacap Land and Marine) 2012a *Milford Haven to Aberdulais High Pressure Gas Pipeline: Archaeology Assessment of Potential for Analysis*
- NLM (Nacap Land and Marine) 2012b *Felindre to Brecon High Pressure Gas Pipeline: Archaeology Assessment of Potential for Analysis*
- Old Maps 2013. Online resource at <http://www.old-maps.co.uk> accessed 16 August 2013
- RSK (RSKENSr) 2007 *Felindre to Tirley Natural Gas Pipeline: Archaeological Framework*, v7. Nacap Land and Marine Final, RSKENSr Environmental Ltd

- Rackham, J., Challinor, D., Langdon, C. and Scaife, R. in prep *Palaeoenvironmental studies along the Milford Haven to Aberdulais and Felindre to Tirley Natural Gas Pipeline*. Southampton University Archaeology Monograph Series
- Richmond, A. 2009 'Assessment Report for Glass' in NLM 2012b
- Timby, J. 2013 *Roman Pottery Publication Summary*, typescript report for Cotswold Archaeology on behalf of National Grid



## APPENDIX A: CONTEXT DESCRIPTIONS

Only features described within the text are listed below; details of the remainder are included within the site archive

Context No.	Fill of	Context interpretation	Description	W (m)	Depth (m)	Spot date
229001		Topsoil	Light brown silty clay		0.3	Mod
229002		Subsoil	Grey-brown silty clay		0.35	Mod
229003		Natural	Mudstone			
229004		Posthole	Circular with steep sides and rounded base	0.5	0.25	
229005	229004	Posthole fill	Packing stones	0.5	0.25	
229006	229004	Posthole fill	Red-yellow silty sand clay with occasional shale fragments	0.5	0.25	
229007		Ditch	NW/SE aligned. Shallow sides, concave base	1.6	0.40	
229008	229007	Ditch fill	Lower fill; mid grey clay silt with stones	1.6	0.05	
229009	229007	Ditch fill	2nd fill; mid yellow-grey silty clay	1.6	0.1	
229010	229007	Ditch fill	Upper fill; mid brown-grey silty clay	1.6	0.3	C2-4
229011		Ditch	Curvilinear ditch; not fully exposed. Flat-based profile	0.6	0.15	
229012	229011	Ditch fill	Mid orange-brown silty clay	0.6	0.15	
229017		Ditch	E/W aligned. Moderately steep sides and concave base	0.9	0.25	
229018	229017	Ditch fill	Lower fill; mid brown-grey silty clay with abundant shale	0.35	0.05	
229019	229017	Ditch fill	Upper fill; light grey-brown silty clay	0.75	0.2	
229020		Ditch	Part of 229017	0.9	0.25	
229021	229020	Ditch fill	Same as 229019	0.9	0.2	
229022	229020	Ditch fill	Same as 229018	0.15	0.05	
229025		Modern ditch	NE/SW aligned, cut through topsoil (not illustrated)	0.85	0.1	
229026	229025	Ditch fill	Grey-brown clay silt with brick and tile	0.85	0.1	Modern
229037		Ditch	= 229075			
229038	229037	Ditch fill	= 229074			
229046			= 229007			
229047			= 229008			
229048			= 229009			
229049			= 229010			
229052		Ditch	Curvilinear ditch; not fully exposed. Flat-based profile	0.8	0.15	
229053	229052	Ditch fill	Mid orange-brown silty clay			
229074	229075	Ditch fill	Mid brown silty clay	0.6	0.1	
229075		Ditch	NW/SE aligned, flat base	0.6	0.1	
229082		Ditch	Oval in plan, steep sides, concave base	5.0	0.45	
229083	229082	Ditch fill	Yellow-grey silty clay	5.0	0.45	
229109		Ditch	= 229075			
229110	229109	Ditch fill	= 229074			
229113		Ditch	N/S aligned	0.6	0.25	
229114	229113	Ditch fill	Mid brown silty clay	0.6	0.25	
229124			= 229082			
229125			= 229083			
229133		Ditch	= 229075			
229134	229133	Ditch fill	= 229074			
229137		Ditch	N/S aligned with NE/SW return	0.7	0.3	

229138	229137	Ditch fill	Mid brown silty clay	0.7	0.3	
229155		Ditch	= 229274			
229156	229155	Ditch fill	= 229275			
229157	229155	Ditch fill	= 229276			
229177		Ditch	= 229075			
229178	229177	Ditch fill	= 229074			
229179		Ditch	= 229075			
229180	229179	Ditch fill	= 229074			
229113		Ditch	N/S aligned, U-shaped profile	0.8	0.2	
229114	229113	Ditch fill	Mid brown sandy clay	0.8	0.2	
229214		Ditch	= 229075			
229215	229214	Ditch fill	= 229074			
229137		Ditch	= 229113			
229138	229137	Ditch fill	= 229114			
229153		Pit	Circular in plan with gently sloping sides and an uneven base	4.5	0.4	
229154	229153	Pit fill	Upper fill: grey-black with burnt stones	4.5.	0.1	
229253		Ditch	= 229075			
229254	229253	Ditch fill	= 229074			
229255			= 229017			
229256			= 229018			
229257		Ditch	= 229274			
229258		Ditch fill	= 229274			
229259		Ditch fill	2nd fill: mid grey silty clay			
229260	229257	Ditch fill	= 229276			
229261		Ditch	= 229274			
229262	229261	Ditch fill	= 229275			
229263	229261	Ditch fill	= 229276			
229264		Ditch	= 229274			
229265	229264	Ditch fill	= 229276			
229270		Ditch	= 229277			
229271	229271	Ditch fill	= 229278			
229274		Ditch	NE/SW aligned, flat base	0.8	0.25	
229275	229274	Ditch fill	Lower fill: orange-grey silt	0.4	0.1	
229276	229274	Ditch fill	Upper fill: dark grey-brown clay silt	0.8	0.15	
229277		Ditch	NE/SW aligned, u-shaped profile	0.8	0.1	
229278	229277	Ditch fill	Mid brown silty clay	0.8	0.1	
229279		Ditch	= 229277			
229280	229279	Ditch fill	= 229278			
229281		Ditch	= 229274			
229282	229281	Ditch fill	= 229276			
229283	229153	Pit fill	3rd fill: orange-grey silty clay	2.8	0.3	
229284	229153	Pit fill	2nd fill: light grey clay	1.5	0.2	
229285	229153	Pit fill	Lower fill: light orange-grey clay silt with occasional burnt stones	2.3	0.1	
229286		Ditch	= 229288			
229287	229286	Ditch fill	= 229289			
229288		Ditch	NW/SE aligned; u-shaped profile	0.65	0.2	
229289	229288	Ditch fill	Mid grey-brown silty clay	0.65	0.2	

## APPENDIX B: THE FINDS

### Roman Pottery (Timby 2013)

A single base sherd from a plain-rimmed Dorset black burnished ware dish or bowl (DOR BB1), dating to the 2nd–4th centuries AD, was recovered from fill 229010 of ditch 229007.

### Medieval and Later Pottery (Courtney 2008)

Context	Fill of	Fabric	Sherds	Weight (g)	Form	Decoration	Date
229001 topsoil		RTIL	1	268	Med glazed ridge tile	Herefs type fabric	MED
		NOSW	1	9	Bowl rim (dark brown glaze)		PMED
		SDRE	4	23	Bowls	Slip trailed; joggled	PMED
		CMRW	3	209	Bowl(s) inc. rim IG	IG- black	PMED
		NDGF	1	24	Jar		PMED
		LGRE	15	233	Bowls		PMED
		NDGT	23	842	Bowls; handles (?crock)		PMED
		EWSG	2	18	Bowl base; HW-scratch blue		PMED
		CREA	6	15	HW		PMED
		SPOR	15	55	Cup; dishes; bowls	Red paint (1); moulded	EMOD
		PEAW	72	330	HW and FW	BT-chinois and floral; painted; blue/green edged	EMOD
		MDEW	15	49	HW	Mocha (1) rest banded	EMOD
		IDYW	8	59	Bowls	Red and blue wavy bands	EMOD
		LESW	8	111	Bottles (grey finish)		EMOD
		DEWW	155	839	HW and FW	BT-chinois and floral; plain; painted; blue sponge	EMOD
		WWCG	7	43	Bowls	Black; blue and yellow glazes	EMOD
229002 subsoil		ROCK	1	10	Teapot lid		EMOD
229026	Modern Ditch 229025*	ROCK	2	13	Teapot		EMOD
		PEAW	3	14	Handle; BT dishes	BT-chinois	EMOD
229271	229270 hedge-row*	RTIL	2	15	NDGT glazed ridge tile		PMED

Fabrics: CMRW= Coal Measure Redware; CREA= Creamware; DEWW= Developed White Wares; EWSG= English White Saltglazed Stoneware; IDYW= Industrial Yellow Ware; LESW= Late English Stonewares; LGRE= Lead glazed Red Earthenware; MDEW= Mocha and Dipped Earthenware; NDGF= North Devon Gravel Free; NDGT= North Devon Gravel Tempered; NOSW= Nottingham Stoneware; PEAW= Pearlware; ROCK=Rockingham Ware; RTIL= Ridge Tiles; SDRE= Slip Decorated Red Earthenware; SPOR= Semi-porcelainous Wares; WWCG= White Wares with Coloured Glazes

Form: BT= Blue transfer; FW= Flatware; HW= Hollow ware; IG= Internal glaze

Date: MED= Medieval; PMED= Post-medieval; EMOD= Early modern;

\* not illustrated on Fig. 2

### Glass (Richmond 2009)

The assemblage comprises glass fragments from topsoil 229001 comprising five shards of free-blown black-glass, two from a wine bottle of cylinder form; six shards from a clear glass machine-made octagonal utility; two fragments from a clear glass machine-pressed drinking beaker; four shards of clear window glass; one shard of clear bottle glass and one fragment from an aqua mineral bottle with machine embossing detailing a trade mark. All of the pieces date to the late 18th–20th centuries.

**Clay tobacco pipe fragments** (Major 2009)

Clay tobacco pipe fragments were recovered from the topsoil and comprised ten stems, one possibly of 17<sup>th</sup>-century date and the rest likely to be later.

**Metal objects** (Leahy 2009)

Metal objects from the site are catalogued below.

**229026**

Description: Iron wire, slightly bent.  
Dimensions: Length 101.9mm, Diameter 4.7mm  
Mass: 8.4g  
Condition: Corroded and exfoliated  
Identification: Wire  
Dating: Not datable  
Further action: None required

**229001**

Description: Iron bar with a 'D' shaped section, tapering towards its ends.  
Dimensions: Length 123.4mm, Width 1.6mm, Thickness 7.8mm  
Mass: 19.5g  
Condition: Corroded  
Identification: Not known  
Dating: Not known  
Further action: None required

**229001**

Description: Iron hook, 'C' shaped with an oval section, square sectioned tang at one side.  
Dimensions: Length 82.0mm, Width 41.9mm, Section (oval) 12.7 x 9.2mm, (square) 7.7 x 4.3mm  
Mass: 44.7g  
Condition: Corroded  
Identification: Not known  
Dating: Not known  
Further action: None required

**229001**

Description: Iron wedge, tapering in one direction, slightly bent, end expanded by hammering.  
Dimensions: Length, 71.6mm, Width, 14.4mm, Thickness 8.4 – 4.6mm  
Mass: 33.6g  
Condition: Corroded  
Identification: Wedge  
Dating: Not known  
Further action: None required

**229001**

Description: Fragment of iron strip, both ends truncated in antiquity, traces remain of two edges. Two rivets (8.5mm diameter x 8.6mm high) on one face of the strip.  
Dimensions: Length, 70.0mm, Width, 26.1mm, Thickness 4.0mm  
Mass: 16.9g  
Condition: Corroded  
Identification: Not known  
Dating: Not known  
Further action: None required



**229001**

Description: Iron nail with a square section. Dimensions: Length, 52.7mm, Shaft section 8.5 x 8.2mm, Head section 14.9 x 12.1mm,  
Mass: 10.4g  
Condition: Corroded  
Identification: Not known  
Dating: Not known  
Further action: None required

**229001**

Description: Iron bar, round section, tapering towards ends, curved along length.  
Dimensions: Length, 73.4mm, Section diameter 7.9mm tapering  
Mass: 13.0g  
Condition: Corroded  
Identification: Drawer handle?  
Dating: Recent?  
Further action: None required

**229001**

Description: Iron nail, square sectioned shaft.  
Dimensions: Length, 54.6mm, Section of shaft 6.6 x 5.3mm, Head 9.5 x 8.1mm  
Mass: 6.8g  
Condition: Corroded  
Identification: Nail  
Dating: Not known  
Further action: None required

**229001**

Description: Iron nail, square sectioned shaft.  
Dimensions: Length, 39.7mm, Section of shaft 6.5 x 6.4mm, Head 9.6 x 6.6mm  
Mass: 5.5g  
Condition: Corroded  
Identification: Nail  
Dating: Not known  
Further action: None required

**229001**

Description: Iron nail, square sectioned shaft.  
Dimensions: Length, 30.5mm, Section of shaft 6.9 x 6.4mm, Head 15.9 x 10.3mm.  
Mass: 7.2g  
Condition: Corroded  
Identification: Nail 123  
Dating: Not known  
Further action: None required

**229001**

Description: Iron object, details hidden by corrosion but exfoliation suggests that the lump contains two pieces of c.3.2mm diameter wire.  
Dimensions: Length, 43.7mm, Section 11.8 x 10.8mm  
Mass: 7.3g  
Condition: Corroded  
Identification: Wire?  
Dating: Probably recent  
Further action: None required

**229001**

Description: Iron bar, details hidden.

Dimensions: 27.2 x 8.6 x 4.9mm

Mass: 3.0g

Condition: Corroded

Identification: Nail

Dating: Not known

Further action: None required

**229001**

Description: Iron strip, details hidden, with a recent break on one end.

Dimensions: Length 204.0mm, Width 24.2mm, Thickness 5.2mm 27.2 x 8.6 x 4.9mm

Mass: 144.6g

Condition: Corroded

Identification: Nail

Dating: Not known

Further action: None required



## APPENDIX C: PALAEOENVIRONMENTAL EVIDENCE BY JAMES RACKHAM

### Environmental Soil samples

A total of twenty six environmental samples were taken, but only thirteen of these were processed and assessed (Table 1). The remainder were discarded before processing after it was decided that many of the recorded and sampled features were 'natural'. None of the sampled features have been dated, although a concentration of burnt stone in the 4.5m wide pit 229153 has suggested that this feature could be a burnt mound of prehistoric date. The burnt stone layer and the deposit underlying it were sampled. The remaining processed samples were taken from ditches 229007, 229017, 229097 and 229288, posthole 229004 and pit 229143 (Table 1). The precise location of the latter sample is uncertain.

**Table 1.** Bulk environmental samples from Site 22.09

sample	Context	feature	description	Wt kg.	Vol. l.*	Date
2293000	229061	229060	Discarded	nd	40	
2293001	229016	229015	Discarded	nd	10	
2293002	229051	229050	Discarded	nd	10	
2293003	229067	229066	Discarded	nd	10	
2293004	229069	229068	Discarded	nd	10	
2293005	229063	229062	Discarded	nd	10	
2293006	229064	229062	Discarded	nd	10	
2293007	229022	229021	Discarded	nd	20	
2293008	229023	229021	Discarded	nd	20	
2293009	229044	229043	Discarded	nd	10	
2293010	229006	229004	Posthole fill	13	20	undated
2293011	229134	229133	Fill ditch terminus - 299007	9	nd	undated
2293012	229148	nd	Discarded			
2293013	229150	229149	Discarded	nd	10	
2293014	229151	229149	discarded	nd	10	
2293015	229144	229143	Fill pit 229143	10	15	undated
2293016	229157	229155	Upper fill ditch 229007	9.5	10	undated
2293017	229156	229155	primary fill ditch 229007	12.5	10	undated
2293018	229154	229153	Large pit fill – burnt mound?	41	29	prehistoric?
2293019	229174	229172	Discarded	nd	3	
2293020	229059	229058	Ditch fill (229017)	2	1	undated
2293021	229041	229056	C shaped ditch fill	2	1	undated
2293022	229101	229100	recut of short linear 229097	19.5	30	undated
2293023	229228	229153	Deposit beneath 229154	30	nd	undated
2293024	229260	229257	Fill terminus, ditch 229007	6	nd	undated
2293025	229260	229257	Fill terminus, ditch 229007	6	nd	undated
2293026	229287	229286	Fill C shaped ditch 229288	13.5	nd	undated

\* - volume recorded on site – not accurate

The samples were processed in the manner described in the assessment report (Carruthers 2008), with the additional refloating and sorting of the dried sample residues whose flot volume (2nd flot) is indicated in Table 2. The second flots were then sorted for charred macrofossils and the residue for other finds. The processing sheets for these samples do not include any record of finds and all the finds noted in Table 2 were recovered during the sorting of the residues at the time they were refloated.

**Table 2.** Data for the environmental samples from Site 22.09

Sample no	Context no	Pro-processed wt kg	1st flot vol ml	2nd flot vol	residue wt g	pottery	burnt clay	burnt stone g.	coal	flint	magnetic g.	burnt bone	comments
2293010	229006	13	28	<1	1855								Indet grain frag.x1;?HNSx1; CBM crumb
2293015	229144	10	5	<1	2500								HNSx1
2293022	229101	19.5	6	2	455+			366+			8.8		HNSx3
'Burnt mound' & underlying deposit													
2293018	229154	41	2000+		11200+			12979			4		Indet grainx1
2293023	229228	30	24	1	628			230					HNSx1
C shaped ditch and ditch 229007													
2293011	229134	9	<1	<1	4000			+					
2293020	229059	2	17	<1	17								
2293026	229287	13.5	<1	<1	2000								
2293024	229260	6	<1	<1	112			29					HNSx1
2293025	229260	6	1	<1	155			+					
2293016	229157	9.5	8	<1	932			480					HNSx2
2293017	229156	12.5	<1	1	5000								
Later ditch 229017													
2293021	229041	2	1	<1	43						0.4		

+ present but not weighed; HNS – hazel nutshell fragment; CBM – ceramic building material.

The 'burnt mound' deposit, 229154, from pit 229153, exhibits all the characteristics one would expect from such a site. The residues are dominated by burnt stone and produced an abundance of charcoal in keeping with most of the other burnt mounds along the pipeline. The single fragment of unidentifiable grain is consistent with a number of the other mounds where some food remains were found. The sample from the underlying deposit, 229228, has just a few burnt stones and a single fragment of hazelnut. This deposit may represent the upper fill of an underlying feature described on site as a 'palaeochannel' into which the burnt stone of the mound has sunk or been trampled.

Sample 2293022 from a recut of short linear 229097 produced a burnt stone component, fragments of charred hazel nutshell and a relatively high magnetic fraction suggesting the possibility of *in situ* burning. Pit 229143 produced very little, although one charred hazel nutshell fragment was present. Sample 2293010 from the fill of a posthole in the north-west of the site contained indeterminate cereal grain fragments, a fragment of hazelnut and a few small 'crumbs' of brick or tile. These are very small and could have moved down through the soil or might suggest a medieval or later date for this feature.

The remaining samples were taken from sections of the ditch system, three from the northern C-shaped ditch (its two terminals and a central section), four from the southern stretch of the ditch (two from the upper and lower fills of its northern terminus) and one sample from the later ditch 229017. These were generally devoid of finds but the upper fill from the southern section produced burnt stone and two hazel nutshell fragments, while a little burnt stone and a single hazelnut fragment was found in the northern terminus of this stretch.

## Discussion

Any discussion of the site is constrained by the very limited data recovered from the samples. The site lies in a lowland landscape, just above 40m OD, on the north side of a small stream valley. One of the palaeo-environmental sequences (Rackham *et al* in prep) was sampled immediately south of the site and shows that the valley floor had become a marsh in the early medieval period and has remained so to the present day. The north-west/south-east ditch essentially travels down the slope towards the stream and given its sinuous character may be partly natural and partly enhanced as a drainage feature.

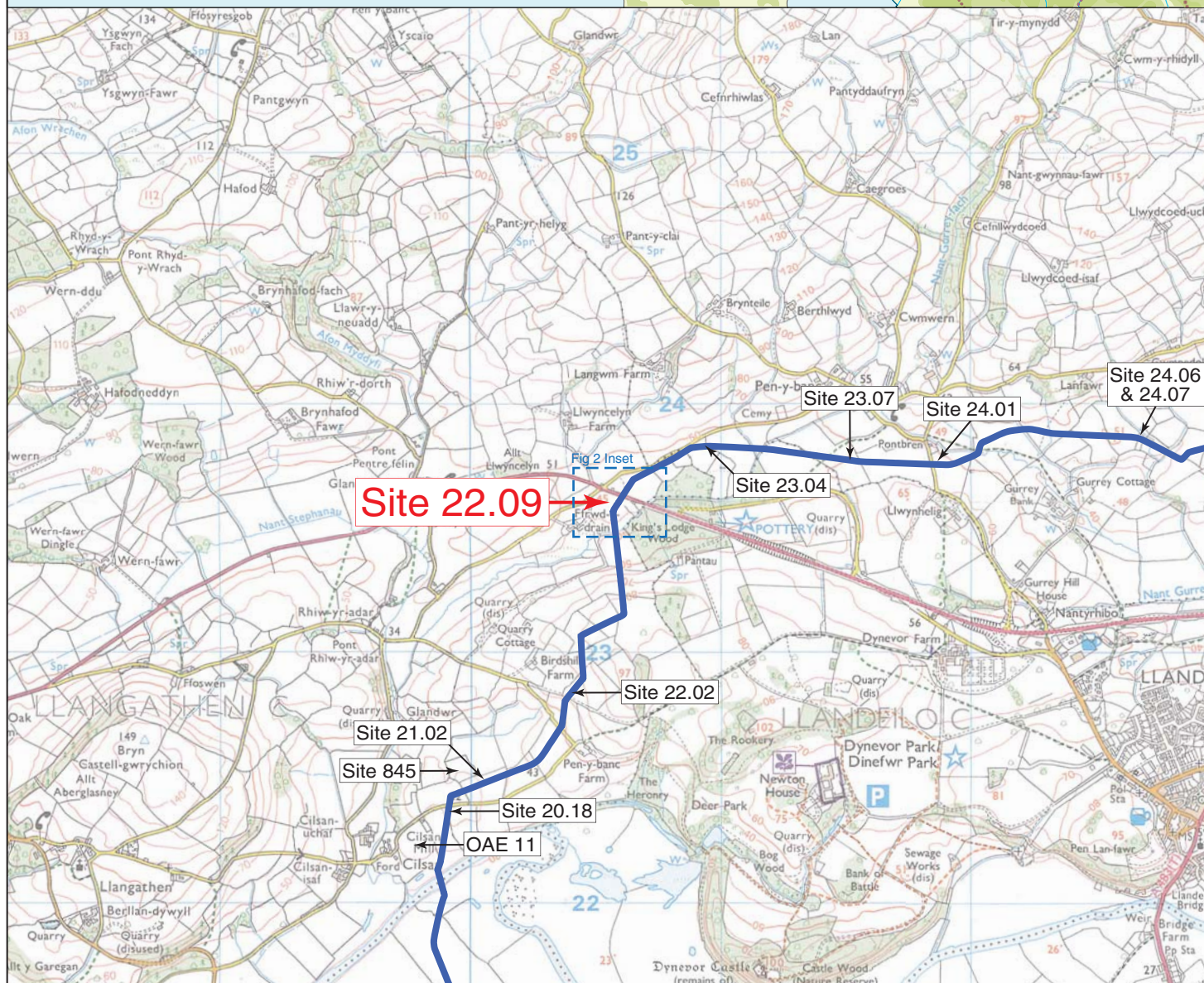
The potential burnt mound, 229153, is technically some distance from water, although it appears to be located over what was described on site as a palaeochannel. The sinuous ditch, which may have existed contemporary with the feature, is approximately 45m away, while the stream on the valley floor is 120m away. The feature is approximately 30.7m<sup>2</sup> in extent, and the burnt stone deposits an estimated 4.6m<sup>3</sup> in volume. On the basis of the single sample from this deposit this broadly equates to 2 tonnes of burnt stone in the surviving feature. Although fairly small in terms of some of the mounds excavated along the pipeline it is sufficiently large to conclude that its interpretation as a burnt mound is probably correct. This weight of burnt stone is unlikely in other types of feature.

The character of the phase 1 ditches on the site is problematic. The possibility that ditch 229007 may be an 'enhanced' stream gully has been suggested above on the basis that its axis is downslope and its character sinuous. There are slight traces of activity within some of its fills, but the few pieces of burnt stone and occasional nutshell fragments could as easily derive from earlier activity on the site, and be residual in the feature. The very low charcoal content in most of the ditch fills is also suggestive of a lack of any local contemporary occupation. It may be that a natural feature of the landscape has been enhanced to divide the valley floor into pastoral fields, arable cultivation is unlikely at this location. The sample from the phase 2 ditch 229017 was too small to make a contribution.

One feature on the site may be associated with occupation activity of some sort. The sample from the recut of short linear, 229097, produced a little burnt stone, three hazelnut fragments and a magnetic fraction that might indicate *in situ* burning. This would suggest some activity associated with this feature, rather than residual material, and is typical of a number of prehistoric features at other sites along the pipeline.

Apart from the charcoal assemblage from feature 229153, none of the other samples have produced material that could be used to confidently radiocarbon date the features because of issues of residual material.





- Milford Haven to Aberdulais pipeline
- Felindre to Brecon pipeline
- 0-75m contour
- 75m contour
- 200m contour
- 400m contour
- 600m contour

0 1km

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#### PROJECT TITLE

South Wales Pipeline. Site 22.09, Land South of Llwyncelyn Farm, Llangathen, Carmarthenshire

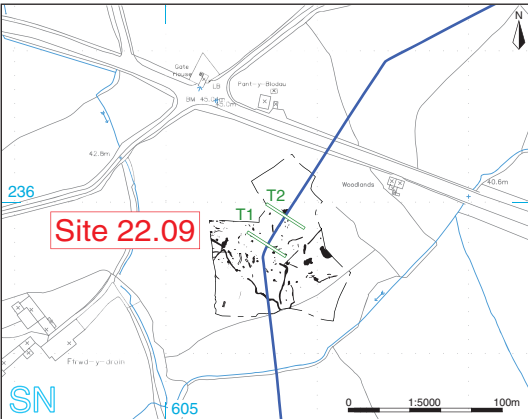
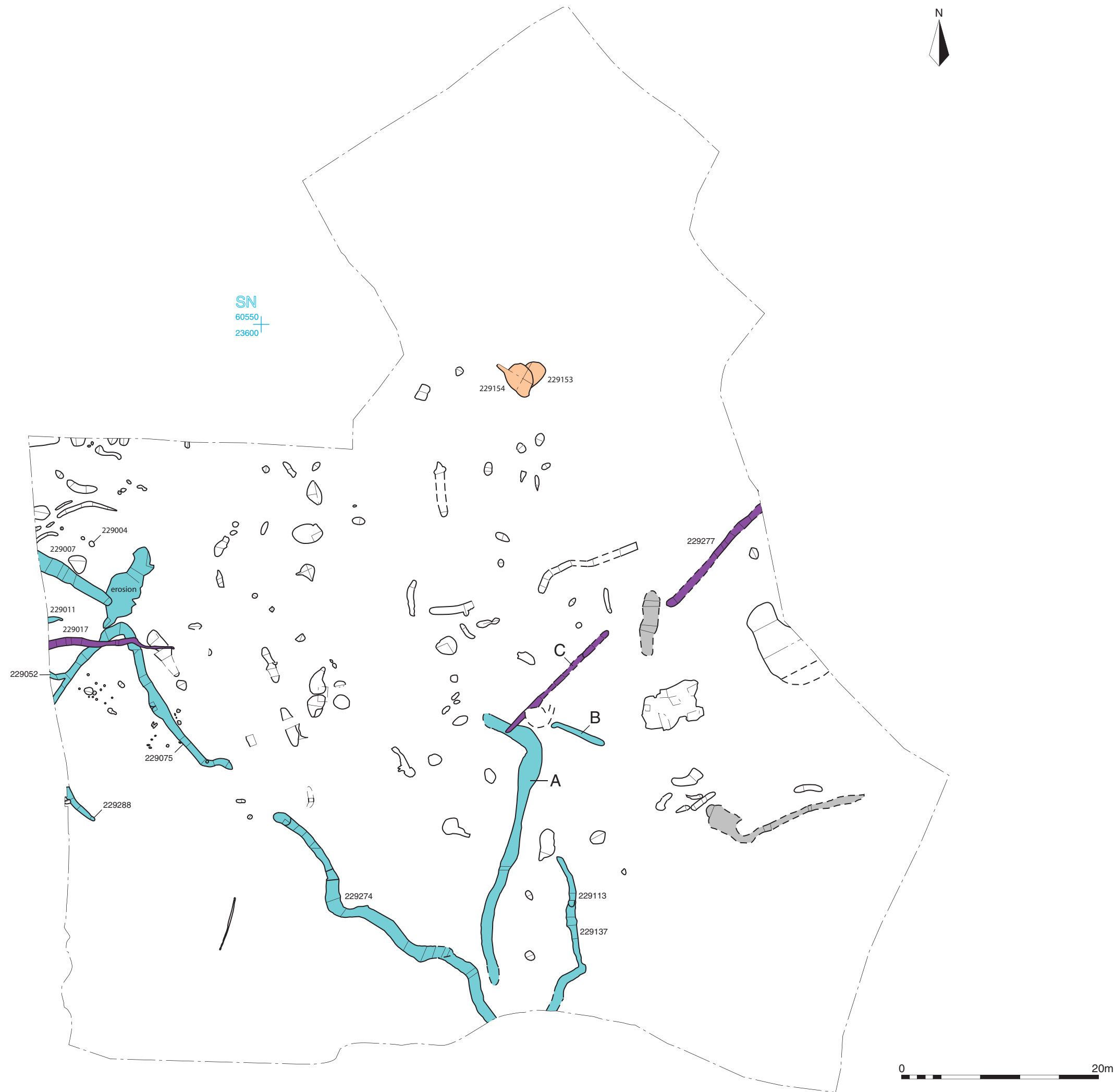
#### FIGURE TITLE

**Site location plan**

PROJECT NO. 9150 DATE 03-08-2013  
DRAWN BY DJB REVISION 00  
APPROVED BY LG SCALE@A4 1:25,000

FIGURE NO.

**1**



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FIGURE TITLE

**Plan of archaeological features**

PROJECT NO.	9150	DATE	03-09-2013	FIGURE NO.
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APPROVED BY	LM	SCALE@A3	1:400	