

# Llechryd Trunk Main Llechryd, Ceredigion to Rhos-Hill Pembrokeshire

*Archaeological Watching Brief*



for  
Skanska

CA Project: 6050  
CA Report: 16585

November 2017



# Llechryd Trunk Main Llechryd, Ceredigion to Rhos-Hill, Pembrokeshire

## Archaeological Watching Brief

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Revision	Date	Author	Checked by	Status	Reasons for revision	Approved by
A	9 November 2017	Pete Searle/Noel Boothroyd	Ian Barnes	Internal review	Client comment	Cliff Bateman
B	23 November 2017	D Sausins	Ian Barnes	Internal review	Curatorial comment	

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## SUMMARY

<b>Project Name:</b>	Llechryd Trunk Main
<b>Location:</b>	Llechryd Ceredigion to Rhos-Hill Pembrokeshire
<b>NGR:</b>	SN 20614 41676
<b>Type:</b>	Watching Brief
<b>Date:</b>	3–19 October 2016, 31 May-9 June 2017
<b>Location of Archive:</b>	Ceredigion Museum, Aberystwyth
<b>Site Code:</b>	LTM 16

An archaeological watching brief was undertaken by Cotswold Archaeology during groundworks associated with construction of the Llechryd Trunk Main, between Llechryd, Ceredigion and Rhos-Hill, Pembrokeshire.

No features or deposits of archaeological interest were observed during groundworks and no artefactual material was recovered.



## 1. INTRODUCTION

1.1 In October 2016 and between May/June 2017 Cotswold Archaeology (CA) carried out an archaeological watching brief for Skanska on behalf of Dwr Cymru/ Welsh Water along the Llechryd Trunk Main between Llechryd, Ceredigion and Rhos-Hill, Pembrokeshire (centred on NGR: SN 20614 41676; Fig. 1). The watching brief was undertaken at the request of Skanska following consultation with Dyfed Archaeological Trust Development Management (DATDM), archaeological advisor to Ceredigion County Council (CCC) and Pembrokeshire County Council (PCC), who recommended that archaeological monitoring be undertaken along certain parts of the route as shown on the attached plan (Appendix B).

1.2 The watching brief was carried out in accordance with a *brief* prepared by DATDM, the archaeological advisors to CCC/PCC, and with a subsequent detailed *Written Scheme of Investigation* (WSI) produced by CA (2016) and approved by CCC/PCC acting on the advice DATDM. The fieldwork also followed *Standard and guidance: Archaeological watching brief* (ClfA 2014).

### ***The site***

1.3 The proposed pipeline (hereafter 'the route') runs approximately 7.2km from immediately south of the village of Llechryd, Ceredigion to south of the village of Rhos-Hill, Pembrokeshire. The route crosses multiple irregularly-shaped open fields with hedged field boundaries which are currently in agricultural use. The route lies between 25m and 135m AOD. Following discussions with DATDM, it was agreed that only the northern and southern extents of the route would be observed (see Appendix B for location and extent).

1.4 The underlying bedrock geology of the route is mapped as Nantmel Mudstones Formation of the Ordovician Period with superficial deposits of alluvium clay, silt, sand and gravel of the Quaternary Period (BGS 2016). The observed natural substrate within all groundworks comprised mudstone.



## 2. ARCHAEOLOGICAL BACKGROUND

- 2.1 The route has not been subject to previous archaeological assessment. The following is a brief summary of pertinent public domain evidence, divided in terms of relevance to the northern and southern sections of the route.
- 2.2 The northern section of the route lies within the Castell Malgwyn Historic Landscape Characterisation area, the boundary of which corresponds with Castell Malgwyn Park which dates to the late 18th – 19th centuries. A medieval castle may have been present in the area of Castell Malgwyn, and records dating to c1400 place a high status house within the park area here. During the mid to late 18th century, an iron and tinplate works was established c50m to the north of the routes northern extent which required the maintenance of a canal or leat. The works continued to operate until 1806 (Cadw 2002).
- 2.3 Three Scheduled Monuments are located in the vicinity of the northern section of the route. The Iron Age Onnen-Deg defended settlement or lowland promontory fort (Monument ref CD162) is located c1.2km east of the north section at its closest point, while the post-medieval bridges Castle Malgywn (NPRN ref: PE383) and Llechryd (NPRN ref: 5227) are located approximately 200m and 230m to the north-west of the northern section of the route respectively.
- 2.4 The Cefn Garth Tumulus (NPRN 304130), a possible Bronze Age barrow, is located approximately 1km to the west of the northern section of the route. Within Llechryd itself, approximately 200m to the north of the northern section of the route, post-medieval structures including the Tabernacle Congregational Chapel and Holycross Church are noted. The Castell Malgwyn Freehold and Leasehold Estates plan of 1820 shows the northern section of the route to lie within a single field, though this has been subdivided by the time of the First Edition Ordnance Survey map of 1889.
- 2.5 A post medieval quarry (PRN 19889) is noted approximately 1.5km to the north-east of the south section of the route at its closest point, and an 18th-century house (PRN 21870) is located c700m east of the south section of the route at its closest point..

## 3. AIMS AND OBJECTIVES

- 3.1 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.

#### 4. METHODOLOGY

- 4.1 The fieldwork followed the methodology set out within the WSI (CA 2016). An archaeologist was present during intrusive groundworks associated with the easement and excavation of a pipeline trench within the two specified monitoring areas (see Fig. 2 for location and extent).
- 4.2 Where archaeological deposits were encountered written, graphic and photographic records were compiled in accordance with CA Technical Manual 1: *Fieldwork Recording Manual*.
- 4.3 The digital archive will be prepared in accordance with *The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales 2017* and will be deposited with the Royal Commission.
- 4.4 The archive is currently held by CA at their offices in Kemble and will be deposited with Ceredigion Museum, Aberystwyth.

#### 5. RESULTS (FIGS 2-4)

- 5.1 Within the northern area of the route, natural geological substrate 1003 consisted of laminated mudstone, recorded at a typical depth of 1.3m below present ground level (bpgl). This was overlain by alluvial deposit 1002, 1m in thickness, which was in turn sealed by subsoil 1001, of 0.3m in thickness. Overlying this was topsoil 1000.
- 5.2 A north-south orientated hedge bank, 1004, with its associated hedge formed the boundary between Fields 1 and 2 (Figs 2 and 3). The hedge bank comprised a light

grey brown silty clay bank with stone facing, and was constructed upon the subsoil horizon.

- 5.3 No further archaeological features were observed throughout the monitoring of the northern area.
- 5.4 Within the southern, Rhos-Hill section of the route the natural geological substrate 2002 consisting of mudstone, was observed between 0.2 and 0.5m bpgl. This was overlain by a subsoil 2001, between 0.1 and 0.3m in thickness, which was in turn sealed by topsoil 2000.
- 5.5 No archaeological features or finds were observed within the southern area of the route.

## **6. DISCUSSION**

- 6.1 Within the northern area of the route, observations were consistent with the historic use of the area as part of the Castell Malgwyn Park as largely being open space, set away from the industrial works. The recorded field boundary is likely to date between the Castell Malgwyn Freehold and Leasehold Estates plan of 1820 and the first edition Ordnance Survey map of 1889.
- 6.2 Observations in the southern area of the route are consistent with the First Edition Ordnance Survey map of 1889 as indicating the area was open field historically.

## **7. CA PROJECT TEAM**

Fieldwork was undertaken by Noel Boothroyd, Peter Busby, Peter Searle and Jay Wood. The report was written by Noel Boothroyd and Peter Searle. The illustrations were prepared by Esther Escudero. The archive has been compiled by Peter Searle, and prepared for deposition by Hazel O'Neill. The project was managed for CA by Ian Barnes.





## 8. REFERENCES

BGS (British Geological Survey) 2017 *Geology of Britain Viewer*  
<http://mapapps.bgs.ac.uk/geologyofbritain/home.html> Accessed 09 November 2016

CA (Cotswold Archaeology) 2016 *Llechryd Trunk Main, Llechryd, Ceredigion: Written Scheme of Investigation for Archaeological Watching Brief*

Cadw 2002 *Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales, Part 1 Parks and Gardens, Carmarthenshire, Ceredigion & Pembrokeshire*



## APPENDIX A: CONTEXT DESCRIPTIONS

Trench No.	Context No.	Type	Context interpretation	Description	L (m)	W (m)	Depth/thickness (m)
1	1000	Layer	Topsoil	Mid grey brown clay silt		>1.4	0.12
1	1001	Layer	Subsoil	Mid red brown clay silt		>1.4	0.5
1	1002	Layer	Alluvium	Mid grey brown silt with abundant rounded pebbles		>1.4	1.3
1	1003	Layer	Natural Substrate	Laminated mudstone bedrock		>1.4	
1	1004	Structure	Hedge Bank	Mid grey brown clay silt bounded by stone slabs on edge	>6.4	2.18	0.94
1	1005	Layer	Deposit	Mixed mid grey and reddish brown slightly silty clay		>1.4	0.5
1	1006	Layer	Deposit	Mid reddish brown clay.		>1.4	>1
2	2000	Layer	Topsoil	Dark grey-brown silty clay			0.20
2	2001	Layer	Subsoil	Mid orange-brown silty clay			0.30
2	2002	Layer	Natural substrate	Weathered shale bedrock			>1.5

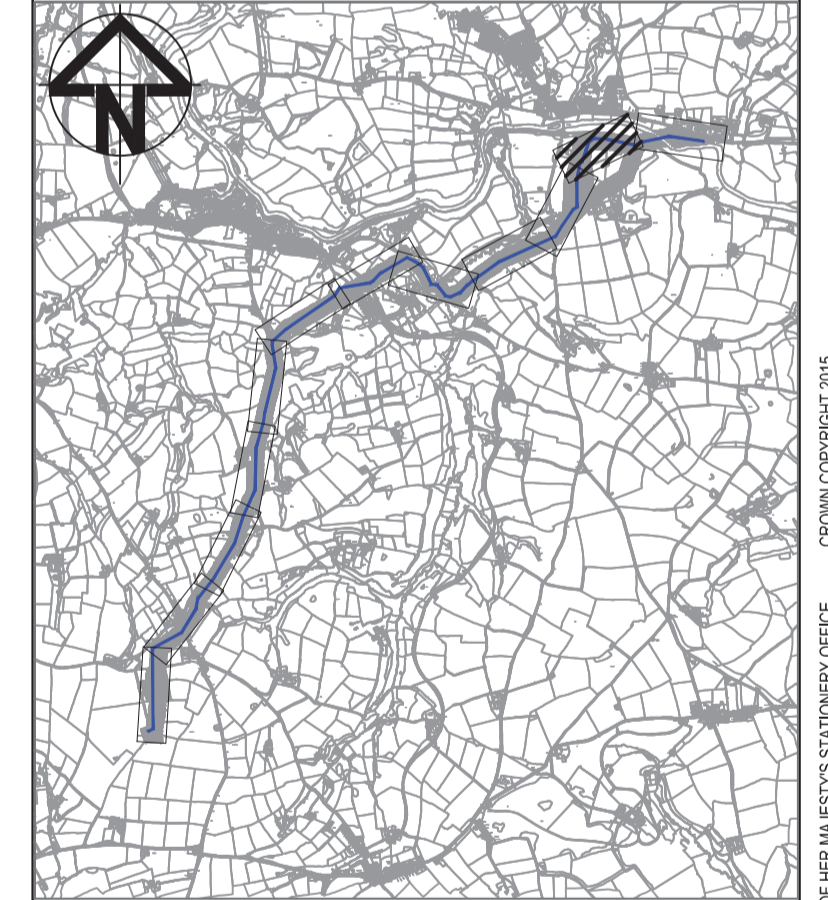
## **APPENDIX B: ARCHAEOLOGICAL MONITORING AREAS**

NOTES

1. THIS DRAWING IS NOT TO BE SCALED.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
3. FOR EASE OF INTERPRETATION, THIS DRAWING SHOULD BE VIEWED IN COLOUR AND AT A1 SIZE.
4. DETAILS OF BURIED SERVICES ARE TAKEN FROM GPR SURVEY AND GIS RECORDS DCWW ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION THE CONTRACTOR SHALL ACCURATELY LOCATE ALL BURIED SERVICES PRIOR TO CONSTRUCTION.
5. WATER MAINS AND SEWERS SHOWN OUTSIDE THE GPR SURVEY AREA WERE TAKEN FROM DCWW ASSET DATABASE AND ONLY GIVE INDICATIVE POSITIONS. DCWW ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION.
6. PIPES TO BE ABANDONED ARE ONLY TO BE ABANDONED AFTER COMMISSIONING OF NEW PIPES AND WITH PRIOR PERMISSION OF DCWW.
7. CONTRACTOR TO IDENTIFY THE EXACT EXISTING ROUTE AND CONNECTION OF WATER MAIN, PRIOR TO CONSTRUCTION.
8. CONTRACTOR TO UNDER TAKE PRE-CONSTRUCTION INSPECTION OF PROPOSED CONNECTION POINTS TO EXISTING WATER MAINS AND MEASURE PIPEWORK WITH CALLIPERS TO ENSURE ANY OVALISATION CAN BE ACCOMMODATED BY PROPOSED PIPEWORK AND CUSTOM PIECES.
9. CHLORINATION OF WATER MAIN-CONTRACTOR TO FOLLOW APPROPRIATE METHOD STATEMENT AND COSHH REGULATIONS.
10. OPERATING PRESSURE FOR ALL PROPOSED WATER MAINS IS 28.1 BAR, ALL PROPOSED WATER MAINS SHALL BE PRESSURE TESTED TO 33.1 BAR.

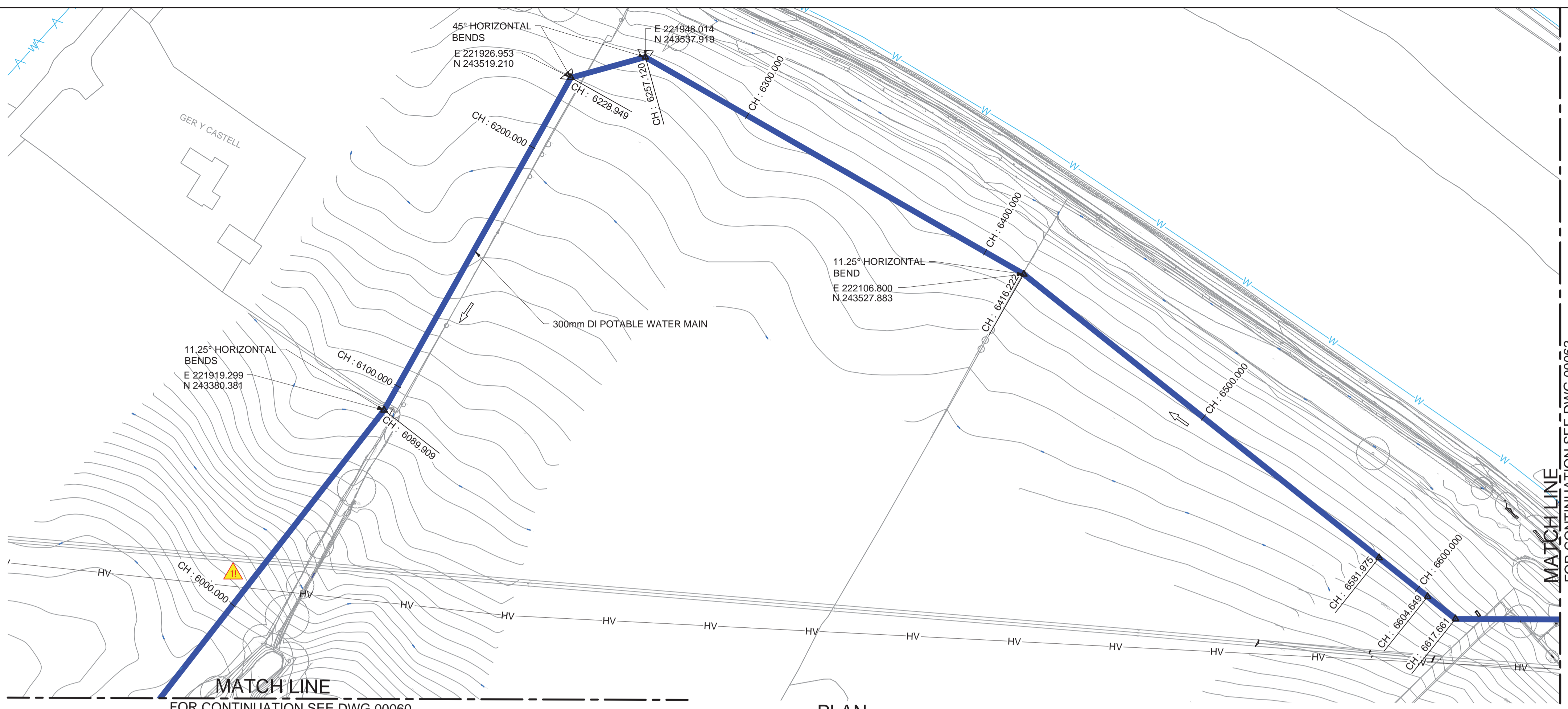
LEGEND:

- PROPOSED 300 DIA WATER MAIN
- W- EXISTING WATER MAIN
- CS- EXISTING COMBINED SEWER
- TE- EXISTING TREATED EFFLUENT
- FW- EXISTING FOUL SEWER
- SW- EXISTING STORM WATER
- HV- OVERHEAD ELECTRICITY CABLE
- LV- EXISTING LOW VOLTAGE ELECTRICITY CABLE
- G- EXISTING GAS MAIN
- FLOW DIRECTION



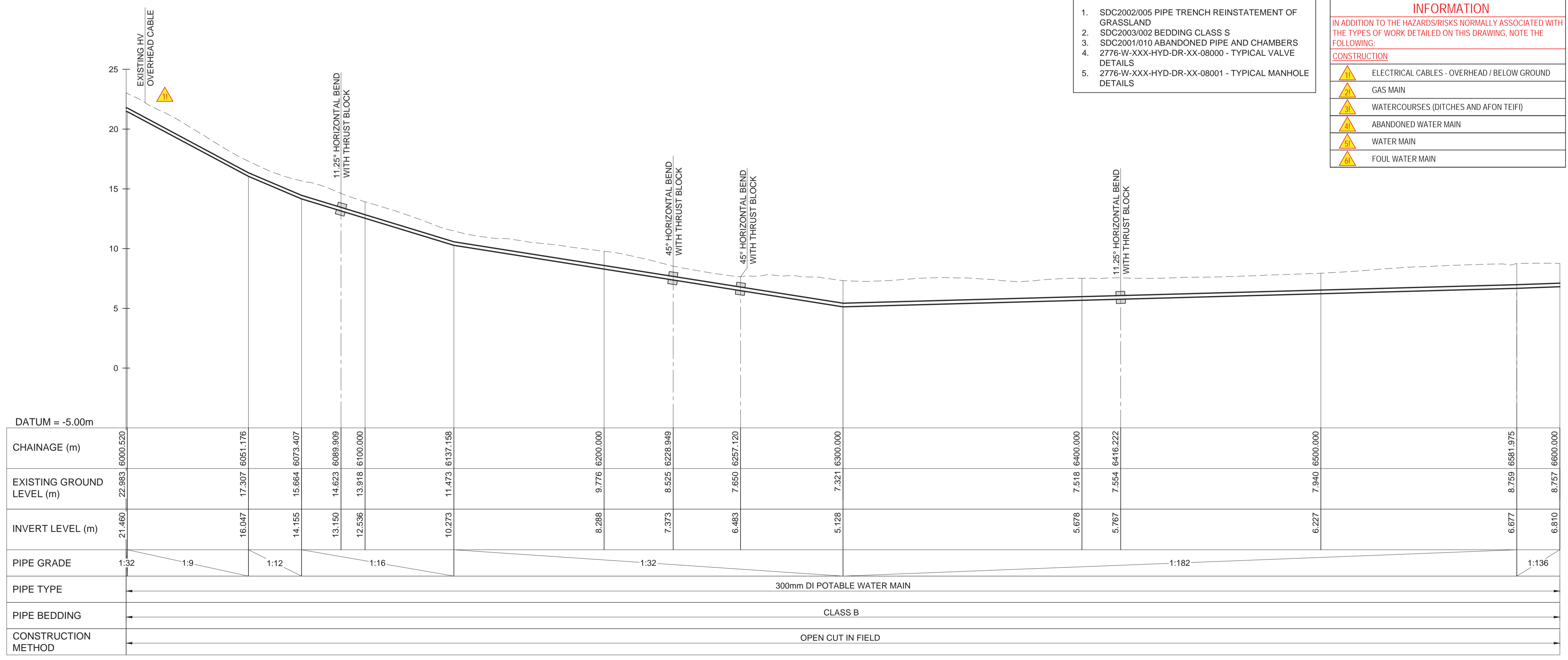
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Project Name: LLECHRYD TRUNK MAIN RENEWAL						
Drawing Title: PROPOSED ALIGNMENT PLAN AND PROFILE CH-6000.00 TO CH-6600.00						
Drawing Status: FOR CONSTRUCTION						
Checked:	D. Old	Approved:	K. Cowton	Date:	20.05.16	
Scale:	AS SHOWN	Designer:	K.P	Rev.	C01	
Drawing Number: 2776-W-XXX-HYD-13-XX-DR-CX-00061						

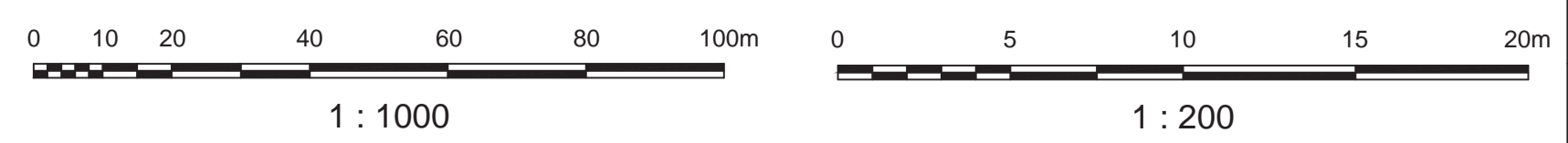


- STANDARD REFERENCE DRAWINGS:
1. SDC2002/005 PIPE TRENCH REINSTATEMENT OF GRASSLAND
  2. SDC2003/002 BEDDING CLASS S
  3. SDC2001/010 ABANDONED PIPE AND CHAMBERS
  4. 2776-W-XXX-HYD-DR-XX-08000 - TYPICAL VALVE DETAILS
  5. 2776-W-XXX-HYD-DR-XX-08001 - TYPICAL MANHOLE DETAILS

- SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION
- IN ADDITION TO THE HAZARDS/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING:
- CONSTRUCTION
- ELECTRICAL CABLES - OVERHEAD / BELOW GROUND
  - GAS MAIN
  - WATERCOURSES (DITCHES AND AFON TEIFI)
  - ABANDONED WATER MAIN
  - WATER MAIN
  - FOUL WATER MAIN













LONGITUDINAL SECTION  
HOR - 1 : 1000  
VERT - 1 : 200

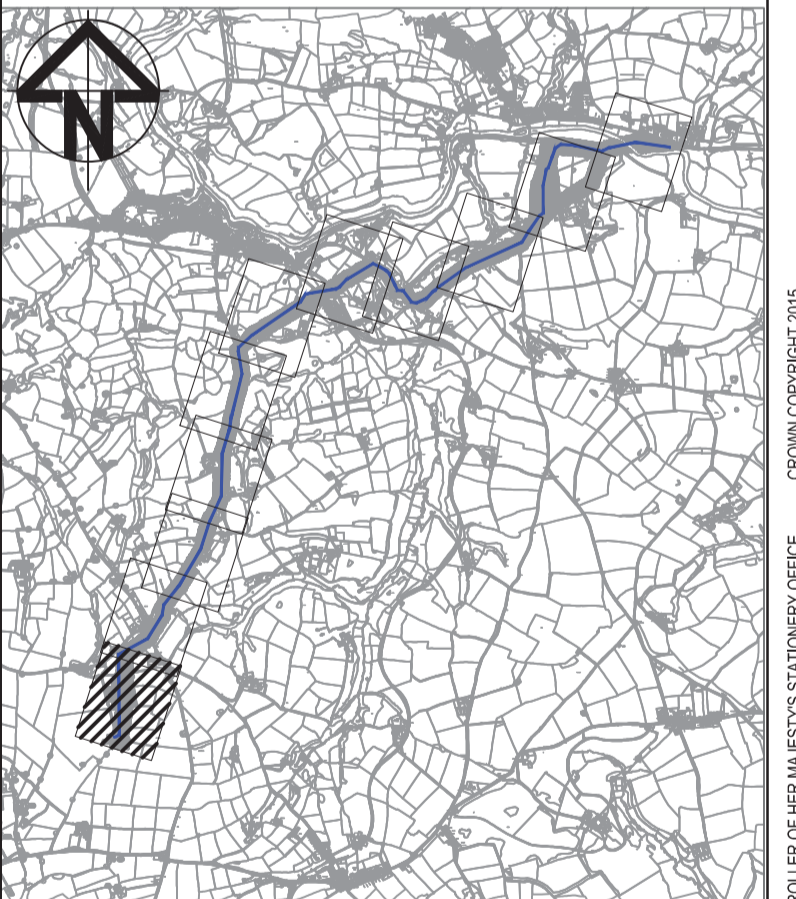


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-  EXISTING COMBINED SEWER
-  EXISTING TREATED EFFLUENT
-  EXISTING FOUL SEWER
-  EXISTING STORM WATER
-  OVERHEAD ELECTRICITY CABLE
-  EXISTING LOW VOLTAGE ELECTRICITY CABLE
-  EXISTING GAS MAIN
-  FLOW DIRECTION



KEY PLAN

NTS

Rev.	Date	Drawn	Description	Chkd.	Appd.	Date
C01	18.07.16	R.P	FOR CONSTRUCTION	DO	KC	JUL16

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**Cynghair Cyflawni Cyfalaf**

**Ty Awen, Spooner Close, Coed Karnew, Newport, NP108FZ**

Project Name: **LLECHRYD TRUNK MAIN RENEWAL**

Drawing Title: **PROPOSED ALIGNMENT CH-0.00 TO CH-600.00**

Drawing Status: **FOR CONSTRUCTION**

Checked: **D. Old** Approved: **K. Cowton** Date: **20.05.16**







Scale: **1 : 1000** Designer: **K.P** Rev: **C01**

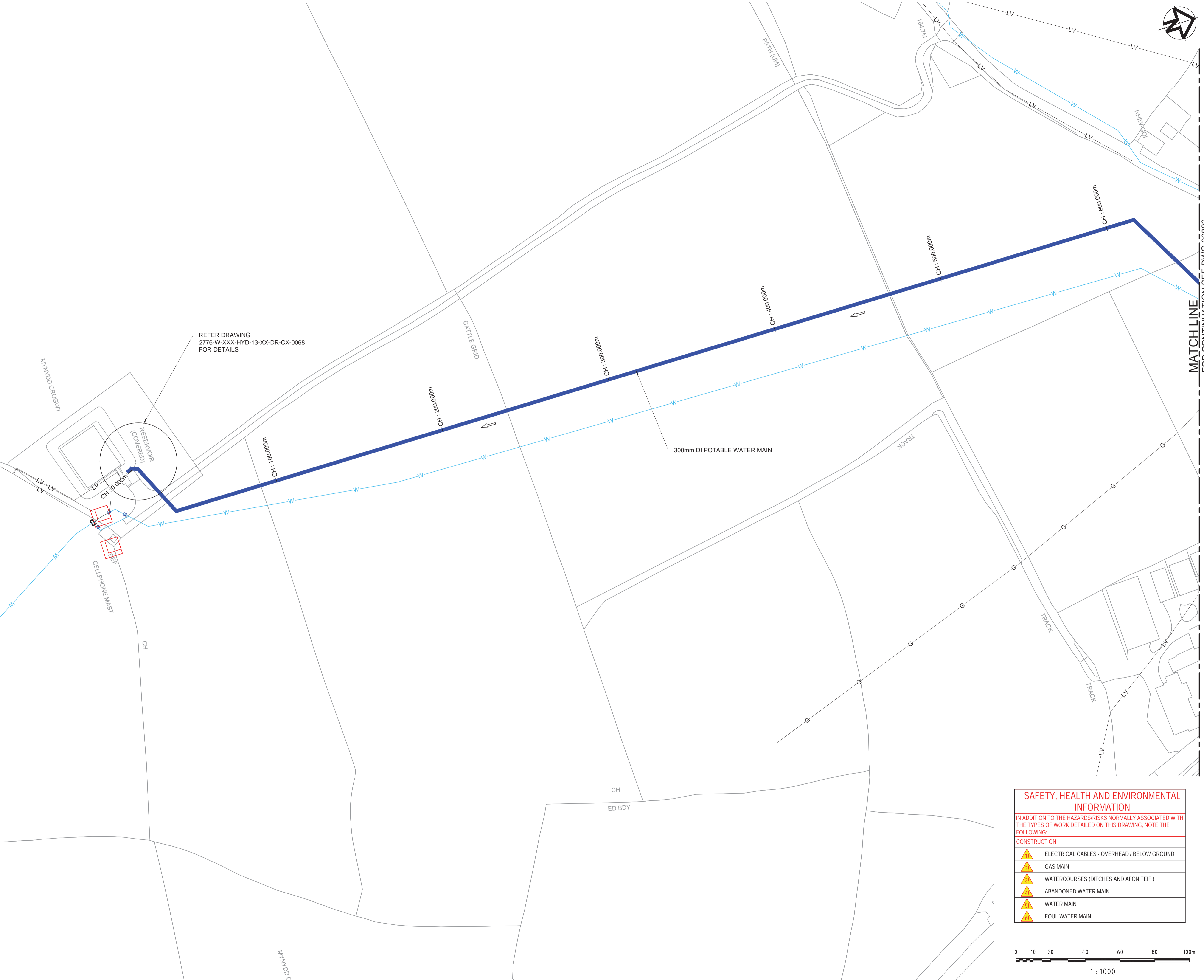
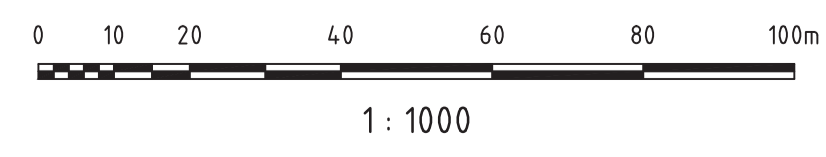
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**CONSTRUCTION**

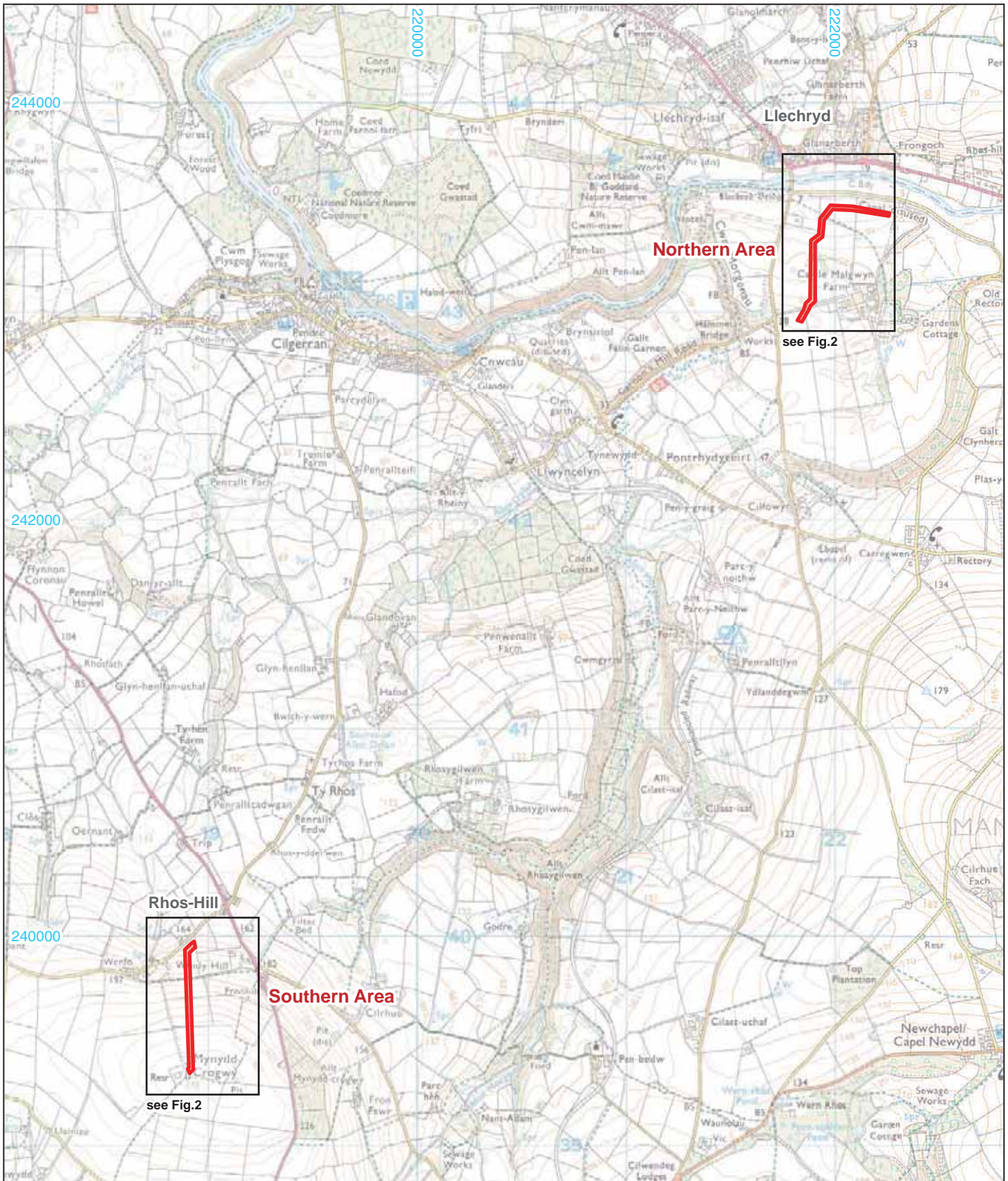
	ELECTRICAL CABLES - OVERHEAD / BELOW GROUND
	GAS MAIN
	WATERCOURSES (DITCHES AND AFON TEIFI)
	ABANDONED WATER MAIN
	WATER MAIN
	FOUL WATER MAIN



MATCH LINE FOR CONTINUATION SEE DWG 00002

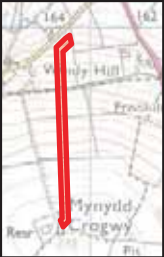
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300mm DI POTABLE WATER MAIN



Northern Area

see Fig.2



Southern Area

see Fig.2



N

0 1km

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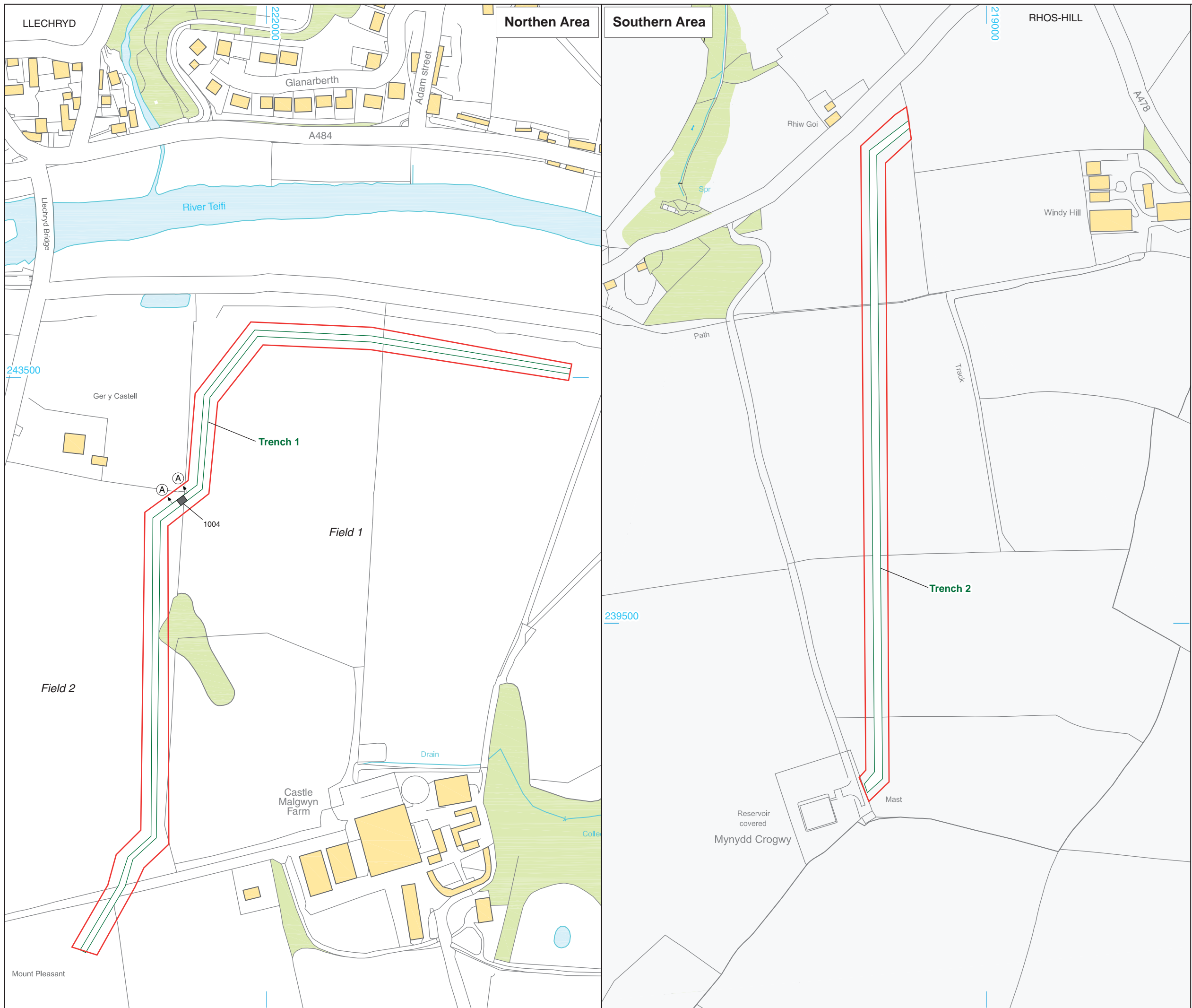


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**PROJECT TITLE**  
 Llechryd Trunk Main, Llechryd,  
 Pembrokeshire

**FIGURE TITLE**  
 Site location plan

<b>DRAWN BY</b> EE	<b>PROJECT NO.</b> 6050	<b>FIGURE NO.</b>
<b>CHECKED BY</b> DJB	<b>DATE</b> 20/11/2017	
<b>APPROVED BY</b> IB	<b>SCALE</b> @A4 1:25,000	<b>1</b>



- Site boundary
- Area of observed groundworks
- Archaeological feature



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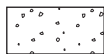
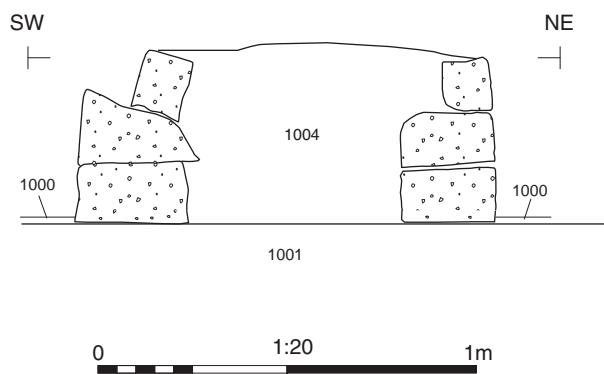
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**PROJECT TITLE**  
 Llechryd Trunk Main, Llechryd, Pembrokeshire

**FIGURE TITLE**  
 Northern and Southern areas within the observed groundworks

DRAWN BY	EE	PROJECT NO.	6050	FIGURE NO.
CHECKED BY	DJB	DATE	20/11/2017	2
APPROVED BY	IB	SCALE @A3	1:3000	

Section AA



Stone



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PROJECT TITLE

Llechryd Trunk Main, Llechryd,  
Pembrokeshire

FIGURE TITLE

**Trench 1, south-east facing section  
through hedge bank 1004**

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FIGURE NO.

**3**





*View of the pipeline easement, looking north*



*Representative section of pipe trench in northern area*



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*PROJECT TITLE*

Llechryd trunk Main, Llechryd,  
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*FIGURE TITLE*

**Photographs**

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*FIGURE NO.*

**4**

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