

WPWA17



WYLFA POTABLE WATER PIPELINE ROUTE, ANGLESEY PHASE 1 TRENCHING

ARCHAEOLOGICAL EVALUATION

commissioned by SWECO

January 2018

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PROJECT INFO:

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PROJECT SUMMARY

Archaeological field evaluation, via trial trenching, was undertaken by Headland Archaeology (UK) Ltd on land on the route of a proposed water main pipeline on Anglesey. The evaluation identified evidence of former agricultural use of the land in the form of drainage and field boundary ditches and remnants of ridge and furrow agriculture. A small, possible enclosed area of occupation or activity was also identified. No artefactual or dateable material was recovered.

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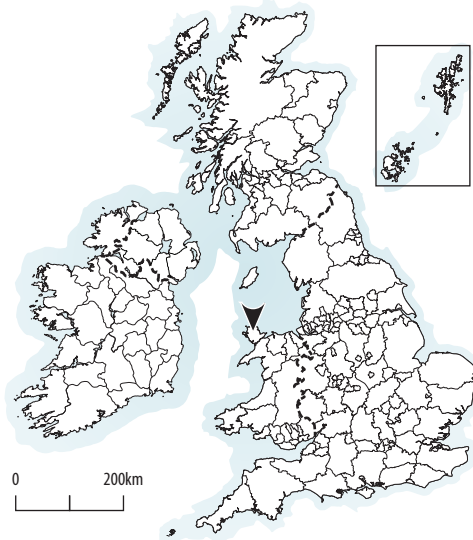
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Wylfa Potable Water Pipeline
Isle of Anglesey



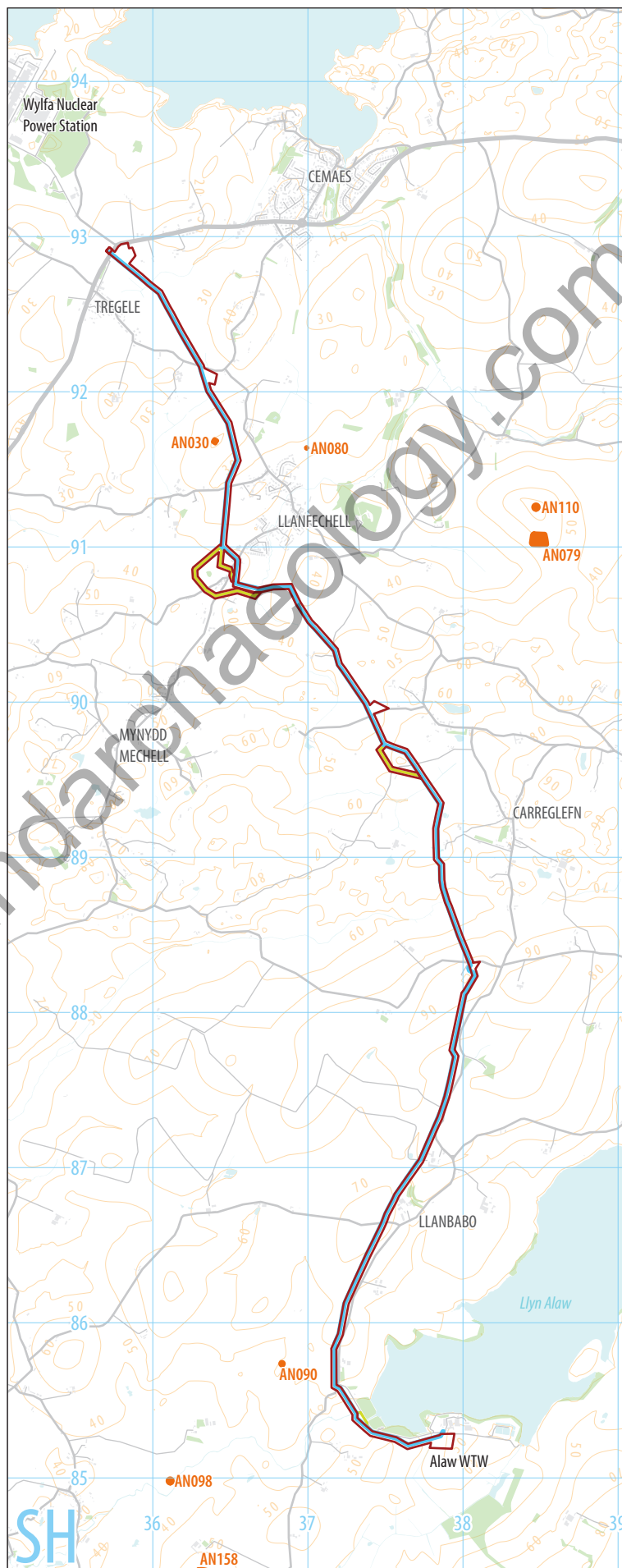
- ▬ geophysical survey area
- ▬ proposed water main
- ▬ alternative route
- scheduled monument



NORTH

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ILLUS 1 Site location



WYLFA POTABLE WATER PIPELINE ROUTE, ANGLESEY PHASE 1 TRENCHING

ARCHAEOLOGICAL EVALUATION

1 INTRODUCTION

This report presents the results of an archaeological site investigation on land along the route of a proposed water pipeline on Anglesey. Archaeological trial trenching was undertaken in 5 fields as part of a wider, phased programme of archaeological investigation along the course of the route.

1.1 PLANNING BACKGROUND

SWECO is proposing to construct a 9km long pipeline to carry fresh water from the Alaw Water Treatment Works to Wylfa Nuclear Power Station.

Upon consideration of the results of both the desk-based assessment and geophysical survey, the archaeological advisor to the local planning authority, Ashley Batten, recommended trial trenching in targeted areas along the route of the pipeline.

Headland Archaeology was commissioned by the client to prepare a written scheme of investigation (Craddock-Bennett 2017) and to carry out an archaeological trial trench evaluation in order to inform the client of archaeological constraints along the route of the pipeline.

1.2 SITE LOCATION, DESCRIPTION AND SETTING

The proposed pipeline is approximately 9km long and commences at the Alaw Water Treatment Works (WTW) (SH 3750 8550) skirting the south-eastern edge of Llyn Alaw before heading northwards, passing close to the villages of Llanbabo and Carreglefn. Here the scheme turns north-westwards passing south and west of the village of Llanfechall and north of Tregle to Wylfa Nuclear Power Station (SH 3550 9250) (Illus 1).

The scheme passes through 82 fields (F1–F82) within an undulating landscape with frequent rocky outcrops, short steep gradients and winding minor watercourses. Generally, the topography rises from 46m above Ordnance Datum (AOD) at the Alaw WTW to 93m AOD at the highest point of the scheme, south-west of Carreglefn, in the uplands known as Mynydd Mechell. From here the topography drops to 24m AOD at Tregle.

The underlying bedrock geology consists of New Harbour Group – Mica Schist and Psammite to the north, South Stack Formation – Psammite and Pelite with bands of unnamed igneous intrusions running through the middle section, and Ordovician Rocks – Mudstone and Sandstone to the south. The superficial geology is mainly recorded as till – diamicton across the site with the exception of isolated elevated pockets and the central Mynydd Mechell upland area where none are recorded (NERC 2017).

1.3 ARCHAEOLOGICAL BACKGROUND

An archaeological desk-based assessment of the route of the pipeline (Richards 2017) identified 18 known or probable heritage assets with the potential to be affected by the construction of the pipeline. It also identified that there is potential for currently unknown historic assets, particularly of medieval or prehistoric date to be present within the development area.

The area around Llanfechall and the recent Wylfa Newydd archaeological evaluation have revealed much more of the archaeological landscape at the northern end of the route, illuminating prehistoric funerary, as well as Roman and early Medieval discoveries. Burnt mounds appear to be common along watercourses with enclosed settlements more often found on higher ground.

Analysis of historical mapping indicates that the division of land within the proposed development has altered considerably since the publication of Llantrisant (1845), Llanbabo (1842) and Llanfechell (1845) tithe maps with larger landholdings being sub-divided into numerous smaller fields. Farm boundaries, however, particularly those which match with parish boundaries, have remained unchanged up to the present day.

In March 2017 a geophysical survey was undertaken along the route of the proposed pipeline (Harrison 2017). The survey identified linear anomalies suggestive of former field systems in two distinct areas; to the immediate south and east of Alaw, and within a single field in the north of the scheme. The field systems are not depicted on any available historic maps and are therefore likely to be post-medieval or earlier in origin. Localised clusters of high magnitude anomalies, perhaps being due to burnt mounds, have also been located adjacent to streams at six sites across the scheme. In addition, two further isolated areas of archaeological potential have been identified, including a large curving ditch at Llanbabo and a possible small enclosure near to Llyn Alaw. Anomalies caused by modern field boundaries, drainage and modern cultivation have been identified across the southern and northern parts of the scheme whilst anomalies caused by near-surface geological variation occur throughout, but are particularly prevalent across the more rugged central section where bands of igneous intrusions are recorded and outcropping is common.

2 AIMS AND OBJECTIVES

The purpose of the evaluation was to test the nature of geophysical anomalies identified along the route of the proposed potable water main.

The evaluation was undertaken in accordance with guidance contained within Planning Policy Wales (Edition 9, November 2016), Ch.6 Conserving the Historic Environment and within Welsh Office Circular 60/96 Planning and the Historic Environment: Archaeology.

The results of the evaluation will be used to describe the significance of heritage assets potentially affected by the development, allowing the planning authority to make an informed assessment of any potential impacts on the historic environment.

The resulting archive (finds and records) will be organised and deposited with Oriel Ynys Mon Museum in Llangefni to facilitate access for future research and interpretation for public benefit.

3 METHOD

The fieldwork was conducted in accordance with the above mentioned WSI and method statement and in accordance with the following documents:

- › Code of Conduct (Chartered Institute for Archaeologists, 2014a)
- › Standard and Guidance for Archaeological Field Evaluations (Chartered Institute for Archaeologists, 2014b)

Trenching across the route was designed to take place in three phases. Phases 1a and 1b are the subjects of this report with Phase 2 to commence early in 2018. Phase 1a was undertaken between the 31st October and 3rd November 2017 and Phase 1b between the 14th and 16th November 2017. The excavated trenches and reasons for positioning are outlined in Table 1 and their positions are shown on Illus 2.

Trench 13 was initially part of Phase 1b but was re-scheduled to Phase 2 trenching due to access issues. Trench 6 was repositioned 30m northward owing to the location of overhead power lines and Trench 8 was segmented centrally due to the presence of a service detected with a cable avoidance tool.

TR	Phase	Dimensions		Field	Purpose of Trench
		L (m)	W (m)		
06	1b	50	1.60	8	Linear geophysical anomalies – possibly edge of cist cemetery
07	1a	25	4.00	9	Geophysical anomalies - potential mortuary enclosure
08	1b	50	1.60	13	Linear geophysical anomalies
09	1a	50	1.60	14	Potential early church site
12	1a	10	10	70	Proximity to Scheduled Monument

TABLE 1 Phase 1a and 1b trenches

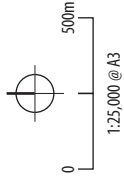
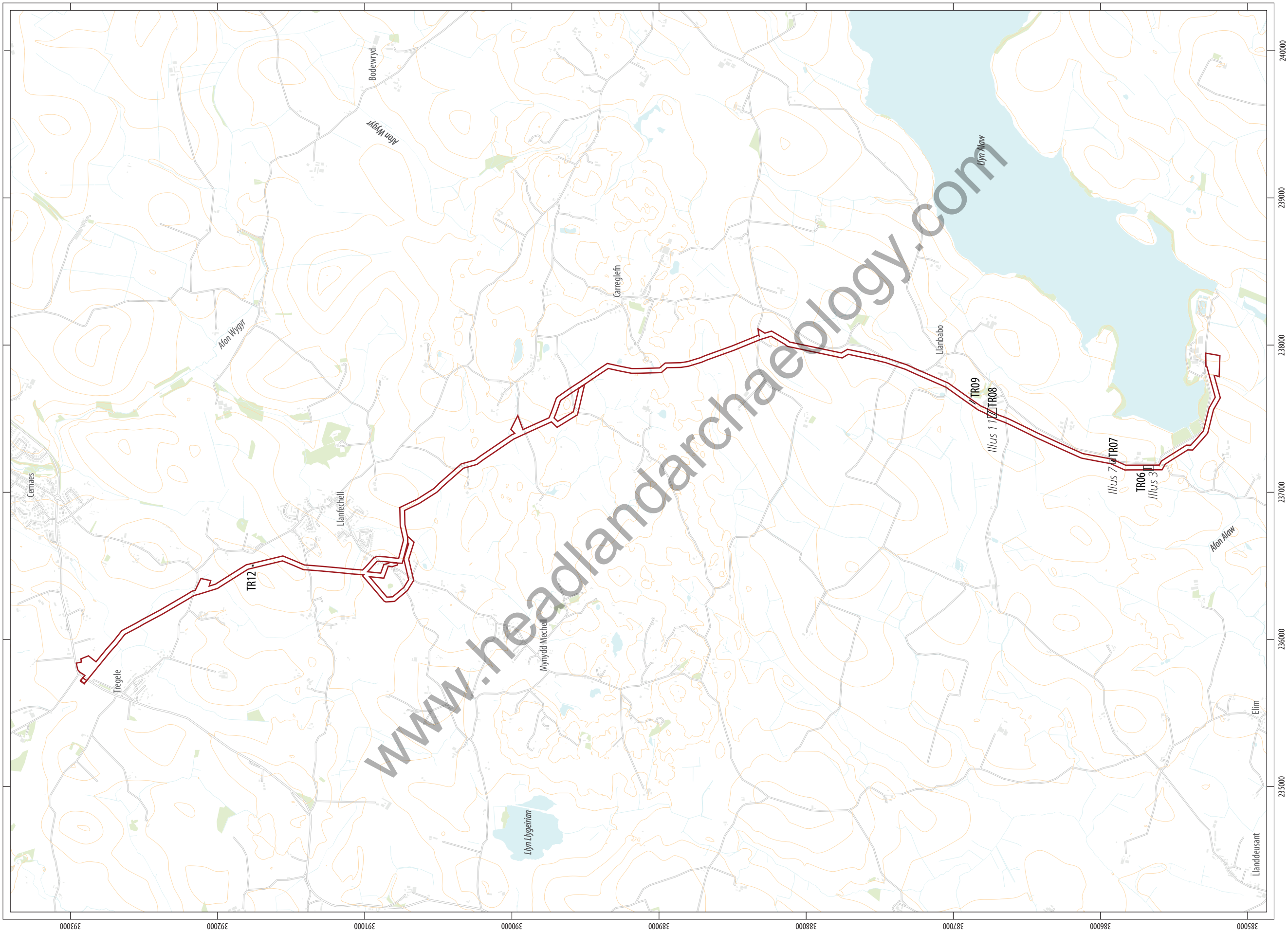
Prior to excavation, utility plans were consulted and a cable avoidance tool was used to check for the presence of potential buried services. Trenches were excavated using a JCB mechanical excavator fitted with a bladed ditching bucket to depths where archaeological features were identified or geological deposits encountered.

Exposed archaeological remains were recorded on Headland Archaeology pro forma record sheets and features identified were subsequently sample excavated by hand to determine form, function and retrieve dateable material. The general stratigraphy of the site and interventions made were recorded photographically and digitally surveyed. Where appropriate, scale hand drawings were reproduced of sections through the exposed archaeological remains.

All recording followed standard archaeological guidelines as set out by the Chartered Institute for Archaeologists (CIfA). The recorded contexts were assigned unique numbers and recording was undertaken on Headland Archaeology pro forma trench and context record sheets. Digital and black and white photographs were taken of all trenches and identified features, with a graduated metric scale clearly visible. An overall site plan of the trenches and recorded features was digitally produced. Digital surveying was undertaken using a Trimble dGPS system.

4 RESULTS

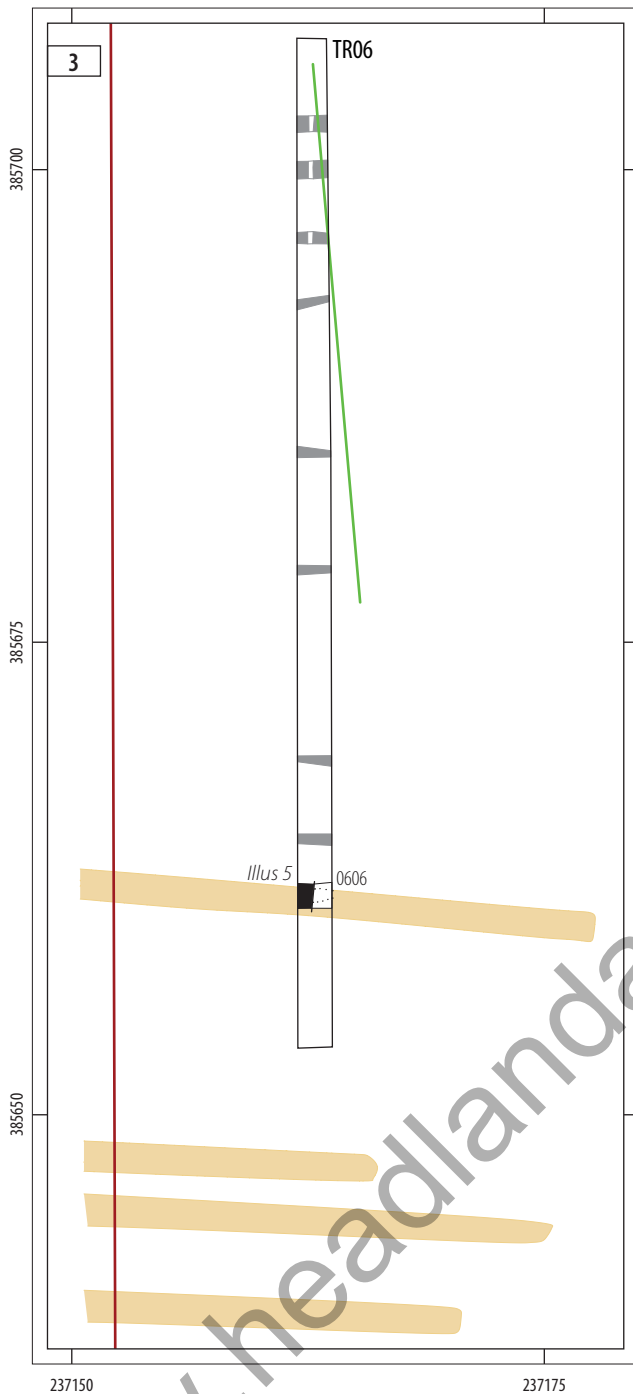
A summary of trenches and recorded contexts is presented as Appendix 1. Results are detailed below by trench with a preceding discussion of the general stratigraphy identified.



development boundary
trench location

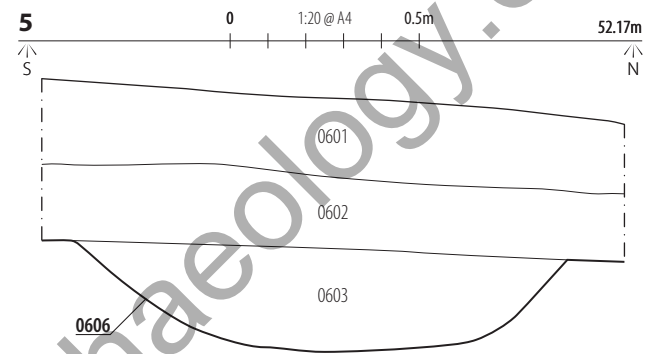
ILLUS 2 Trench location plan

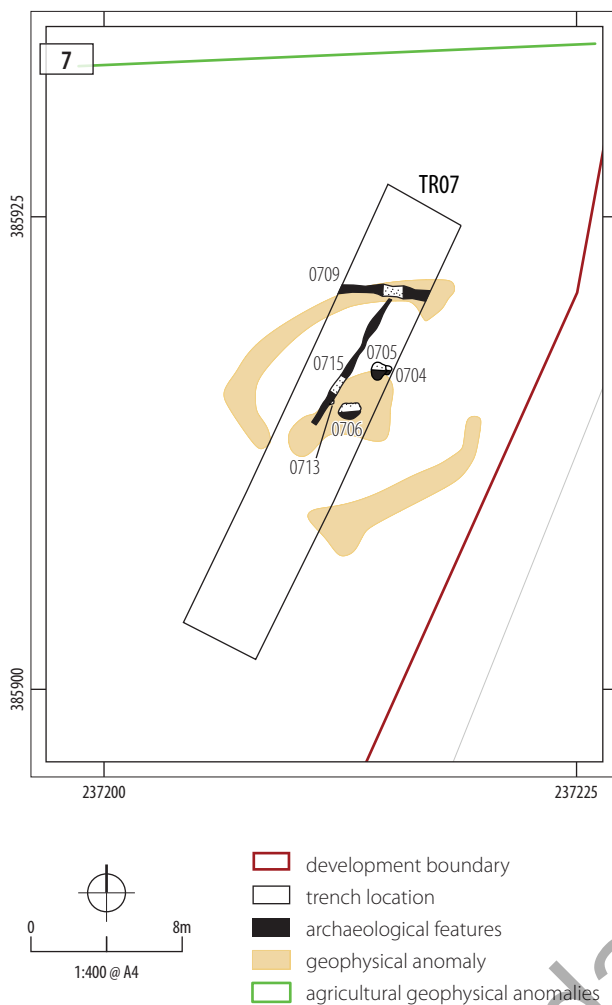
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- development boundary
- trench location
- archaeological features
- furrow 0605
- geophysical anomaly
- agricultural geophysical anomalies

ILLUS 3 Post-excavation plan of Trench 6 showing geophysical anomalies
ILLUS 4 General view of ditch [0606] looking east
ILLUS 5 West facing section through [0606] showing general stratigraphy
ILLUS 6 Plan view surviving Ridge and Furrow [0605]





ILLUS 7 Post-excavation plan of Trench 7 showing geophysical anomalies

ILLUS 8 General post-excavation view of [0706 and 0713] looking south

ILLUS 9 East facing section through ditch [0709] **ILLUS 10** North facing section through [0704 and 0705]



4.1 GENERAL STRATIGRAPHY

The soil profile across the targeted trenches displayed general consistency in form and was of a brown-earth type. Archaeological remains were encountered cut into geological deposits at an average depth below ground level of 0.40m.

The earliest deposits encountered represented glacial till and generally consisted of light yellow-brown and yellow-orange clay and stones (eg 0603, 0703, 0811). Slight variations in colour were observed across the excavated trenches though the composition remained essentially the same, as in Trenches 8 and 9, where a reddish hue to the deposits was noted (0805, 0903).

Within Trench 8, the ground sloped downwards to the north and east and approximately 0.30m of colluvial deposits (0803, 0804) sealed the glacial till (0805). These were overlain by a 0.12 – 0.15m

thick brownish grey silty clay subsoil (0802). A similar shallow subsoil (0.12 – 0.17m thick) was observed across all of the excavated trenches. This was sealed by a generally dark grey clayey silt topsoil between 0.14 and 0.30m thick.

A general paucity of cultural material of any period was noted in both topsoil and subsoil deposits across the trenches. Broadly east-west plough scarring was observed within the top of geological deposits in Trench 8 but interfaces between the top and subsoils suggested the fields had not been extensively ploughed for some time and had been utilised as pasture in more recent times.

4.2 TRENCH 6 – FIELD 8 (ILLUS 3)

Oriented east-west and located 6.50m from the southern end of the trench, a 1.30m wide x 0.28m deep ditch [0606] was recorded (Illus 4 and 5). The ditch contained a single fill of greyish brown silty

clay with frequent sub-rounded stones (0607). No dateable material was recovered from the fill. The ditch correlated with an east-west anomaly identified by the geophysical survey.

A series of east-west oriented linear features [0605] were identified cutting the glacial till and identified as representing the remnants of a former ridge and furrow agricultural system. During machine excavation of the trench, the surviving tops of the furrows were just visible within the subsoil and sealed by topsoil deposits. The furrows measured between 0.75 and 0.95m wide across their bases and survived to a maximum 0.05m depth within the geological deposits (Illus 6). Variable truncation was observed with furrows surviving only as a scar in the geology towards the southern extent of the trench. A broad spacing of 2.50 to 3.00m was apparent, though this appeared closer at the northern end of the trench. A single fill (0604) was observed very similar in character to the subsoil. No dateable material was recovered from interventions in the surviving remnants or during machine excavation.

4.3 TRENCH 7 – FIELD 9 (ILLUS 7)

Located centrally within the trench, a sub-circular feature [0706] measuring 1.13m x 0.82m and 0.24m deep was recorded (Illus 8). The feature was interpreted as a 'fire pit' and contained a primary fill of dark brownish black silty clay and heat affected stones (0707) overlain by a 0.05m thick brownish orange silty clay (0708). The secondary fill appeared relatively highly fired, possibly representing in situ burning or remnants of burnt remains. An environmental sample taken from the deposit (ES 001) contained no environmental indicators, with fired clay recovered being undiagnostic nor indicative of function. A further sample from the primary fill (ES 002) contained no environmental indicators (other than charcoal) or dateable material. A small amount of fuel-ash slag material was recovered from the primary fill, too small to conclusively identify, but in the absence of other environmental indicators could imply a more industrial than domestic function for the feature. The geology immediately to the east end of the feature also displayed evidence of being heat affected with a light orange hue, possibly resulting from activity associated with the feature.

Approximately 0.50m to the west of the fire-pit, a post-hole [0713] measuring 0.24 x 0.22m and 0.12m deep was recorded (Illus 8). The post-hole was steep sided with a rounded base and suggested a vertically set post. A dark brownish black silty clay and small heat affected stones (0714) filled the cut. This appeared similar in character to (0707) potentially suggesting a level of contemporaneity, with an ingress of material filling the void of a decayed post base. No dateable material was recovered from either feature.

Towards the northern end of the trench, a slightly curving linear feature [0709] broadly corresponding with a geophysical anomaly was recorded and observed to extend beyond the limits of the trench to the east and west. The feature was oriented broadly east-west and measured 0.64m wide x 0.27m deep with a steep 'u' shaped profile (Illus 9). A mottled light greyish brown and light yellowish brown silty clay (0710) filled the cut. Large stones (c 0.20m long) were concentrated towards the base of the cut, with smaller stones randomly distributed within the fill. The stones may have been placed to assist drainage or represented collapse or fall into the ditch. No dateable material was recovered.

Approximately 1.50m north-east of the 'hearth' [0706] a further post-hole [0704] measuring 0.45 x 0.43m and 0.30m deep was identified and contained a single silty clay fill (0711) containing rare small stones. The post-hole was cut on its western edge by a sub-circular feature [0705] (Illus 10) measuring 0.80 x 0.79m and 0.12m deep. The cut contained a single mid-greyish yellow silty clay fill (0712). No dateable material was recovered from either feature and no function could be ascribed to [0705].

Oriented north-east/south-west, a shallow linear cut [0715] measuring c.7m long, 0.38m wide and 0.07m deep was observed to partially truncate the edge of post-hole [0713]. No positive terminal ends to the feature could be identified and it appeared to be truncated away at both its northern and southern ends. A single fill of mid-greyish brown silty clay (0716), similar in composition to the subsoil, filled the cut, from which a single sherd of post-medieval pottery was recovered but not retained. The feature is likely to have represented remnants of plough scarring.

4.4 TRENCH 8 – FIELD 13 (ILLUS 11)

Oriented broadly north-west/south-east and located at the northern end of the trench, a linear cut [0806] was identified as a ditch and measured 0.55m wide and 0.16m deep. The ditch contained a single fill (0807) and was sealed by colluvial deposits.

Approximately 8.00m to the south, a further ditch [0812] was also oriented north-west/south-east and measured 2.35m wide and 0.51m deep (Illus 12). The ditch was slightly stepped on its northern edge with a broad concave base. The ditch contained a primary and secondary fill (0813 and 0814) which suggested lower energy gradual sedimentation. No dateable material was recovered with an absence of charcoal noted within the fill.

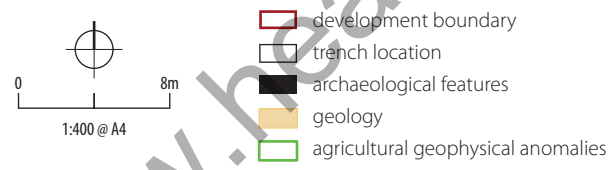
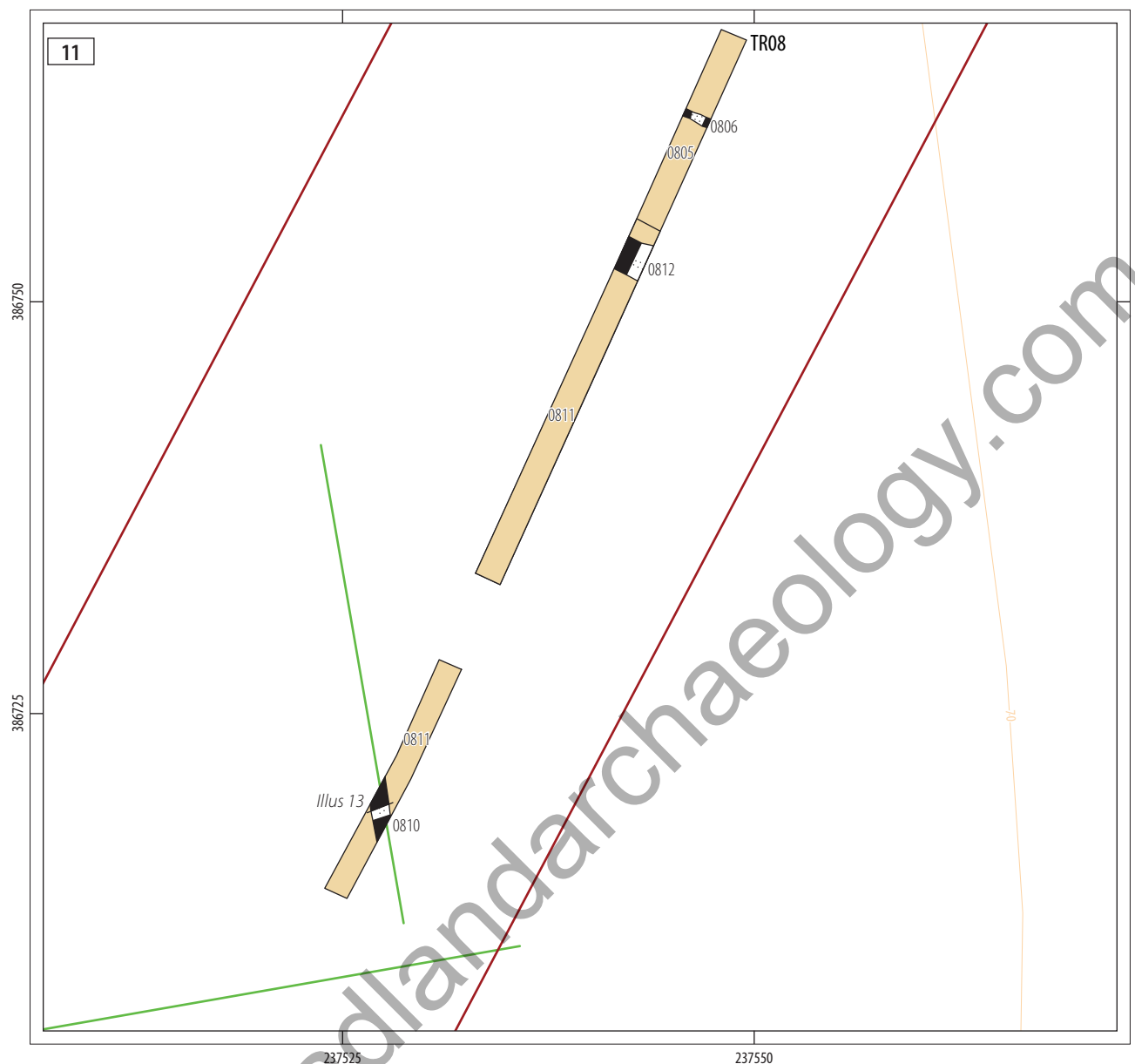
In the southern segment of the trench, a further ditch [0810] (Illus 13 and 14) was recorded on an approximate north-south orientation. The ditch measured 1.10m wide and 0.40m deep. A primary fill (0809) contained lenses of redeposited glacial clays suggesting an element of erosion and/or weathering and collapse of up-cast possibly associated with a former bank. A secondary fill (0808) related to general sedimentation within the ditch. No dateable material was recovered from the ditch.

Trenches 9 and 12 (Fields 14 and 70) recorded no archaeological remains, with only land drains identified in Trench 12.

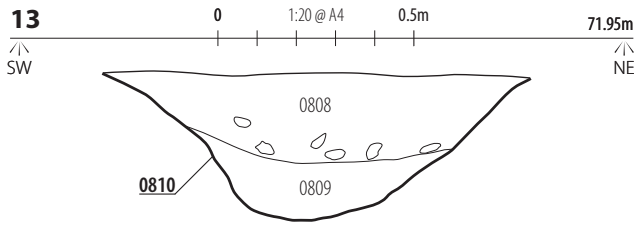
5 DISCUSSION

The evaluation has largely corroborated the evidence of geophysical results with generally good correlation between highlighted anomalies and features identified in excavated trenches. The exception to this being Trench 8, where two ditches were identified during trenching which provided no corresponding anomalies from the geophysical survey. This may be due to the effect of an area of colluvium sealing and masking the features.

Ditches identified appear to relate to agricultural use of the land, primarily serving a drainage and probable field boundary function.



ILLUS 11 Post-excitation plan of Trench 8 ILLUS 12 North-west facing section through [0812]



ILLUS 13 South-east facing section through [0810] **ILLUS 14** General view ditch [0810] looking north-west



Within both Trenches 6 and 8, groundwater percolated into the trenched area at only 0.40m below ground level and both fields were noted to be relatively boggy, suggesting the need for drainage. Two ditches within Trench 8 [0806 and 0812] appeared to be draining the land towards the north-east and relatively lower ground, whilst the third [0810], ran across the gradient, midway down the slope, perhaps attempting to catch and divert water away from the lower ground. This and the orientations of the ditches would suggest phases of agricultural use of the land rather than any association between the features, though the lack of any dateable material precludes any positive suggestion of when this may have occurred.

A ditch within Trench 6 [0606] may have served a similar function and was also noted to align with remnants of a hedgerow on the opposite side of the road to the east, possibly suggesting a former field boundary. This could relate to larger earlier post-medieval field systems, broken up into smaller holdings as was observed and discussed within the Desk Based Assessment for the route (Richards 2017).

The remnants of ridge and furrow remains identified in Trench 6 also attest to former agricultural use of the land. The slightly irregular but relatively tight spacing of the furrows (averaging 2.5 to 3m apart) is generally indicative of an earlier form of ridge and furrow, potentially medieval, not in keeping with the much wider spacing and regularity of post-medieval systems (Foster & Smout 1994). Geophysical anomalies to the south of the location of the Trench appeared to show a similar pattern to the ridge and furrow remains identified within the north of the Trench and it is possible these anomalies relate to a continuation of the field system in the south. Whilst no dateable material was recovered from any of the ditches or furrows identified, all were sealed by subsoil deposits suggesting a relative degree of antiquity.

Trench 7 provided a positive correlation with geophysical anomalies which highlighted a probable small enclosed area. The evaluation established a narrow ditch aligning with the north-westernmost

anomaly and a possible 'fire-pit' and post-holes corresponding with a central area of magnetic disturbance. A second geophysical anomaly lay outwith the eastern edge of the trench and may be associated with the identified features creating a small enclosed area. The limited exposure of the remains renders full interpretation difficult but it is possible that the 'firepit' and post-holes are bounded by an encircling or segmented ditch, defining an area of activity, the purpose or nature of which cannot presently be unequivocally defined.

6 CONCLUSION

Archaeological evaluation of land at locations along the route of the Wylfa Potable Water Pipeline successfully corroborated geophysical survey results and evidenced the potential for further agricultural remains (such as ditches) and discrete features to additionally be present on the route of the pipeline.

Agricultural use of the land was evidenced in the form of field drainage and boundary ditches with remnants of a ridge and furrow agricultural system also identified. A possible small enclosure associated with activity or occupation was recorded. No dateable material was recovered from any features identified.

7 REFERENCES

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8 APPENDICES

APPENDIX 1 TRENCH AND CONTEXT REGISTER

DBGL = Depth below ground level

TR06	Orientation	L (m)	W (m)	Av. D (m)
	N-S	50	1.60	0.40
Context	Description			DBGL (m)
0601	Topsoil - Dark grey clayey silt containing frequent angular and sub-angular stones and gravel			0 – 0.23
0602	Subsoil – Mid-greyish brown gritty, clayey silt containing frequent angular and sub-angular stones and gravel – deepens slightly to south of trench towards base of slope in topography			0.23 – 0.40
0603	Geological deposit – Light yellowish brown stone and clay – glacial till			0.40
0604	Mid-greyish brown silty clay containing frequent sub-angular gravel – fill of [0605]			0.40
0605	Furrow cuts – 0.95–0.75m wide, E-W orientation, irregular spacing 1.5–3m, heavily truncated – ridge and furrow field system			0.40
0606	Linear cut, E-W orientation, 1.30m wide x 0.28m deep – Field boundary ditch			0.40
0607	Mid-greyish brown silty clay containing frequent sub-rounded stones – fill of [0606]			0.40
Summary: Rough pasture, N-S downslope. Ridge and furrow remnants, field boundary ditch				
TR07	Orientation	L (m)	W (m)	Av. D (m)
	NE-SW	25	4.00	0.30
Context	Description			DBGL (m)
0701	Topsoil – Mid greyish brown, soft silty clay with occasional small sub-angular stones inclusions.			0 – 0.14
0702	Subsoil – Mid grey with orange hue, friable silty clay. Occasional small to medium sub-angular stone inclusions.			0.14 – 0.27
0703	Natural geology – light yellowish orange plastic clay with frequent small to medium sub-angular stone inclusions.			0.27+
0704	Sub-circular cut – 0.45 x 0.43 x 0.30 m, steep sides, concave base – Possible post-hole			0.27
0705	Sub-circular cut – 0.80 x 0.79 x 0.12, flat base, gently sloping sides – indeterminate function			0.27
0706	Sub-circular, slightly irregular shape cut – 1.13 x 0.82 x 0.24m, steep sides uneven base – possible fire pit			0.27
0707	Dark-brownish black silty clay and heat affected stone, containing occasional small stones - Primary fill pit [0706]			0.27
0708	Mid-brownish orange silty clay containing rare small sub-angular stones – Secondary fill pit [0706]			0.27

0709	Linear cut – E-W orientation, 0.64m wide x 0.27m deep – drainage ditch	0.27		
0710	Mottled light greyish brown and light yellowish brown silty clay containing occasional angular large stones 10-20cm. Fill of linear [0709]	0.27		
0711	Mid-orange brown silty clay containing occasional manganese frags and rare small stones – Single fill of pit [0704]	0.27		
0712	Mid-greyish yellow silty clay containing occasional small stones – Single fill of pit [0705]	0.27		
0713	Sub-circular cut – 0.24 x 0.22 x 0.12m – possible post-hole	0.27		
0714	Dark-brownish black silty clay and heat affected stone – Single fill of [0713]	0.27		
0715	Linear cut – N-S orientation, 0.38 x 0.07m gently sloping sides, concave base	0.27		
0716	Fill of linear [0715]	0.27		
Summary: Pasture, sloping down to east parallel to hedge and lane. 1 N-S linear cut by possible post-hole; 1 E-W drainage ditch; 1 shallow pit cut by post-hole. Evidence of plough scarring.				
TR08	Orientation	L (m)	W (m)	Av. D (m)
	NE-SW	50	1.60	0.45
Context	Description			DBGL (m)
0801	Topsoil – Mid-grey clayey silt containing frequent angular stones and sub-rounded gravel			0 – 0.30
0802	Subsoil – Mid-brownish grey silty clay containing frequent stone and gravel, rare charcoal fragments			0.30 – 0.45
0803	Colluvial deposit - Mid-reddish brown silty clay and gravel and stones, containing frequent manganese fragments			0.45+
0804	Colluvial deposit – Mid-yellowish brown silty clay containing occasional sub-angular stones and gravel			0.65
0805	Geological deposit - Mid-yellowish brown gravelly clay – glacial till			0.65
0806	Linear cut – NW-SE orientation, 0.55m wide x 0.16m deep, steep sides rounded base – Drainage ditch			0.38
0807	Mid-greyish brown silty clay containing occasional large stones, sub-angular stones and charcoal flecks – Single fill of [0806]			0.38
0808	Light grey gritty, silty clay containing freq. sub-angular and angular stones, rare charcoal flecks and freq. Fe+ staining – secondary fill of [0810]			0.38
0809	Light brownish grey silty clay containing freq. gravel, occasional angular stones, rare manganese frags – primary fill of [0810]			0.40
0810	Linear cut – NNW-SSE orientation, steep sides, concave base – Drainage ditch			0.46
0811	Geological deposit – Light yellow brown gravelly clay – Glacial till			0.46

0812 Linear cut – NW-SE orientation, 2.35m wide x 0.51m deep, uneven sides, rounded base – Drainage ditch – agricultural boundary 0.46

0813 Mid-brownish grey silty clay containing freq. small sub-angular and angular stones – Primary fill of [0812] 0.46

0814 Mid-greyish brown silty clay containing freq. small sub-angular and angular stones – secondary fill of [0814] 0.46

Summary: Under pasture, across E-W downslope – 3 x ditches variable orientations

TR09	Orientation	L (m)	W (m)	Av. D (m)
	NE-SW	50	1.60	0.30
Context	Description	DBGL (m)		

0901 Topsoil – Dark reddish brown compact silty clay with very small to small angular stone inclusions. 0 – 0.26

0902 Subsoil – Mid reddish brown compact silty clay with occasional poorly sorted small to medium sub-angular stone inclusions. 0.26 – 0.38

0903 Natural geology – Mid reddish brown compact silty clay and sub-angular gravel. 0.38+

Summary: Pasture, sloping down to NE. Trench shallower at NE end. No archaeological remains.

TR12	Orientation	L (m)	W (m)	Av. D (m)
	N/A	10	10	0.40
Context	Description	DBGL (m)		

1201 Topsoil – Dark reddish brown friable slightly sandy, silty, clay with very small to small poorly sorted sub-angular stone inclusions. 0 – 0.26

1202 Subsoil – Mid orangey red friable silty clay with occasional very small to small sub-angular stone inclusions. 0.26 – 0.40

1203 Natural geology – Mid yellowish orange gravelly clay with occasional large sub-rounded stone inclusions. Gravel lessens towards NE corner. 0.40+

Summary: Pasture sloping down to the south. The field is adjacent to standing stones. Three land drains. No archaeological remains

APPENDIX 2 FINDS ASSESSMENT

The report includes finds from sample retents. The finds were collected, processed and packaged for long-term storage in accordance with professional guidelines (ClfA 2014; Watkinson & Neal 1998). The finds were each assessed and recorded by appropriate specialists. The resultant data was then drawn together into one MS Access database. A copy of this data is given below.

The finds assemblage was very small, numbering 25 sherds (232g) of fired clay and 37g of possible fuel ash slag. These were both found associated with fire pit [0706], and indicate that there was burning on site. The fired clay was retrieved from secondary fill (0708) and is undiagnostic. It could either be derived from pit lining, industrial furnaces or domestic hearths or ovens or a fired wattle and daub structure. The possible fuel ash slag was retrieved from primary fill (0707) and is indicative only of burning. None of the finds can be dated. A complete catalogue is given in Table 2 below.

Recommendations for further work

The assemblage is of little value and no further work needs to be undertaken.

ID	TR	Context	Feature	Sample	Qty	Wgt (g)	Material	Object	Description
1	07	0708	fire pit 0706	1	25	232	CBM	Fired Clay	amorphous lumps, abraded, stone and charcoal inclusions
2	07	0707	fire pit 0706	2		37	Industrial waste	Fuel Ash Slag?	compacted soil with occasional charcoal inclusions

TABLE 2 Finds catalogue

Recommendations for archive

The material has no further archaeological value and is not recommended for retention. Archiving decisions will be made in consultation with, and according to the standards of, the Oriel Ynys Môn museum (OYMMS 2015).

References

Chartered Institute for Archaeologists (ClfA) 2014 *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (Reading) <http://www.archaeologists.net/sites/default/files/ClfA%20Finds%201.pdf> accessed 06 December 2017

Oriel Ynys Môn Museums Service (OYMMS) 2015 *Guidelines for the preparation and deposition of archaeological archive Llangefni*

Watkinson D & Neal V (1998) *First aid for finds: Practical Guide for Archaeologists* (3rd revised edn) London

APPENDIX 3 ENVIRONMENTAL ASSESSMENT

Introduction

Two bulk sediment samples, ranging in size from 10 to 20 litres, were recovered during archaeological trial trenching on land on the route of a proposed water main pipeline on Anglesey. Both samples were recovered from 'fire' pit [0706]. The aims of the assessment were to assess the presence, preservation and abundance of any environmental remains and to determine the potential of the material in indicating the character and significance of the deposit.

Method

Bulk samples were subjected to flotation and wet sieving in a Siraf-style flotation machine. The floating debris (the flot) was collected in a 250 µm sieve and once dry, scanned using a binocular microscope. Any material remaining in the flotation tank (retent) was wet-sieved through a 1mm mesh and air-dried. All samples were scanned using a stereomicroscope at magnifications of x10 and up to x100. Identifications, where provided, were confirmed using modern reference material and seed atlases including Cappers et al (2006) and Zohary et al (2012) nomenclature for wild taxa follow Stace (1997).

Results

The results are presented in Table 3. There was no material present sufficient for AMS (Accelerated Mass Spectrometry) radiocarbon dating.

Context		0708	0707
Sample		001	002
Context type		'fire' pit [0706]	'fire' pit [0706]
Field		9	9
Sample Vol (l)		10	20
Retent Vol (l)		4.07	6.65
Flot Vol (ml)		30	40
Building materials	Other	+++	–
Industrial waste	Other	–	+++
Charcoal	Qty	+	+++
	Max size (mm)	10	12
Sufficient for AMS?		N	N
Comments		rectilinear oak charcoal	rectilinear oak charcoal

Key: + = rare (0–5), ++ = occasional (6–15), +++ = common (15–50) and ++++ = abundant (>50)

NB charcoal over 10mm is sufficient for identification and AMS dating

TABLE 3 Environmental sample results

Wood charcoal

Wood charcoal was recovered from both of the sampled contexts (Table 3). The charcoal was predominantly heavily abraded oak (*Quercus* sp.) and a small number of the fragments were vitrified. The charcoal is insufficient for AMS radiocarbon dating.

Discussion

The environmental assemblage offers little insight into site economy. Charcoal was the only material recovered. The paucity of remains precludes any further analysis.

References

- Cappers RTJ, Bekker RM & Jans JEA (2006) *Digital seed atlas of the Netherlands* Groningen
- Stace C (1997) *New Flora of the British Isles* (2nd edn) Cambridge
- Zohary D, Hopf M & Weiss E (2012) *Domestication of Plants in the Old World* (4th edn) Oxford

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