GAS PIPELINE REPLACEMENT: PWLLHELI CITY GATE PRI TO BLAENAU FFESTINIOG PRI

Archaeological Evaluation

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Report No. 893
November 2010

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust
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Prepared for

RSK Environment Ltd

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By

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GAS PIPELINE REPLACEMENT: PWLLHELI CITY GATE PRI TO BLAENAU FFESTINIOG PRI ARCHAEOLOGICAL EVALUATION REPORT (G2148)

Summary

Gwynedd Archaeological Trust (GAT) was commissioned by RSK Environment Ltd (RSK) to complete an archaeological evaluation along the corridor of the proposed Pwllheli to Blaenau Ffestiniog gas pipeline. The scheme involves the construction of 38.0km of a 6" wide gas pipe, within a 20.0m working corridor.

A total of 33 evaluation trenches were completed along the pipeline route, to target the results of the archaeological desk-based assessment/field reconnaissance survey and geophysical survey completed by RSK.

Evidence for modern ground disturbance associated with the A487 Road Improvement Scheme was identified within the area incorporating trenches 05 to 08.

Modern drainage activty was noted within the area incorporating trenches 27 to 30.

Archaeological activity was limited to trenches 15a, 17 and 24. Trench 15a contained two possible redundant field boundaries/ditches of suspected post-medieval date. Trench 17 contained a small pit and gully of unknown provenance that appeared to continue outside of the trench; Trench 24 contained part of a truncated burnt mound, of suspected Bronze Age provenance that also continued outside of the evaluation area. No artefacts of archaeological interest were recovered from any example and no artefacts were recovered from elsewhere along the route.

1.0 INTRODUCTION

Gwynedd Archaeological Trust (GAT) was commissioned by *RSK Environment Ltd* (RSK) to complete out an archaeological evaluation along the corridor of a proposed 38.0km long pipeline from Pwllheli to Blaenau Ffestiniog gas pipeline.

The archaeological evaluation forms part of an ongoing programme of archaeological work undertaken in advance of the proposed pipeline. The archaeological evaluation has been preceded by an archaeological desk-based assessment/field reconnaissance survey (RSK 2010a) and geophysical survey (Bartlett 2010) of the route that informed an Environmental Statement (RSK 2010b) for the pipeline.

A total of 37 evaluation trenches were proposed at 17 separate locations along the proposed route. The location of the trenches were based on the results of the archaeological desk-based assessment/field reconnaissance survey (RSK 2010a), the Project Specification for the work (RSK 2010b) and geophysical survey (Bartlett 2010), with all trench positions marked on RSK Archaeological Monitoring Locations Map 01 to 39.

1.1 Standards

RSK and Gwynedd Archaeological Trust are Registered Organisations with the Institute for Archaeologists (IfA). All work was undertaken in accordance with the IfA's (2008) *Standard and Guidance for Field Evaluation* and (2010) *Code of Conduct.*

2.0 BACKGROUND

An archaeological desk-based assessment/field reconnaissance survey (DBA) of the route was completed by RSK (RSK 2010a). The DBA considered sources from the Gwynedd Archaeological Trust and Snowdonia National Park Historic Environment Records, including tithe maps, estate maps (where available) and 1st and 2nd edition Ordnance Survey mapping. The DBA was supported by an Archaeological Field Reconnaissance Survey (FRS), and a review of borehole data.

In total, 618 archaeological sites or areas of interest were identified within the Study Area (a 1.0km strip based on the proposed pipeline centerline): these sites included 5 Scheduled Monuments, 189 Listed Buildings, four Conservation Areas, three Historic Parks and Gardens and 417 non-scheduled archaeological sites. Sites ranged from negligible to high archaeological importance and dated from the prehistoric to modern periods (qv. RSK 2010a: Appendix A).

3.0 METHODOLOGY

The archaeological evaluation was completed as a series of trenches targeting locations identified on RSK Archaeological Monitoring Locations Maps 01 to 39 and accompanying trench schedule (latter reproduced as Appendix I). Reference was also made to *RSK Pwllheli to Blaenau Ffestiniog Proposed Gas Pipeline Geophysical Survey 2009*: Figures 01 to 48. The trench locations were identified using triangulation from local field boundaries and using handheld GPS (using co-ordinates supplied by RSK).

A total of 37 trenches were proposed: trenches 34 to 37 were not completed due to ecological constraints; trenches 28 and 31 were not completed due waterlogging/flooding. The individual trench sizes and results are discussed in para. 4.0.

The archaeological evaluation was completed between the 6th and 23rd September 2010. Most trenches were excavated using a backhoe excavator although a 3.5 tonne crawler excavator was used on four trenches located in very wet areas and on one trench located on steep ground. All the trenches were backfilled in the same order as soil was removed with the turf re-instated on the upper surface.

A photographic record was maintained throughout, using a digital SLR camera set to maximum resolution.

Notations were made of all subsurface deposits on individual trench record sheets. All trenches were planned at a scale of 1:50, and levels taken of the top and bottom of the trench ends and centre. Archaeological deposits were also planned at a scale of 1:20 and sections drawn at a scale of 1:10. Archaeological features and deposits were also recorded on individual context sheets.

The archive is be held by GAT under an appropriate project number (**G2148**).

4.0 RESULTS

Each trench is discussed separately, along with the relevant trench size, orientation and field location (based on field designations used by RSK Archaeological Monitoring Locations Maps 01 to 39). Reference is made to the results of the Bartlett-Clark Consultancy magnetometer survey, reproduced in *RSK Pwllheli to Blaenau Ffestiniog Proposed Gas Pipeline Geophysical Survey 2009*: Figures 01 to 48, which provided background information on the targeted trench locations.

TRENCH 01 (Figure 01)
Size (l x w x d): 20.0m x 1.60m x 1.50m Orientation NE-SW Field 0/10

Description
Targeted a 10.0m wide curvilinear feature identified in the geophysical survey.

The trench was located near the bottom of a shallow slope which in the 19th century was thought to be the shoreline. Depth of topsoil was 0.30m and overlay a brown silt-rich subsoil with depth of between 0.30m-0.85m. The natural was a slightly orange sand and gravel, and was tested at the SW corner of the trench to a depth of 1.50m.

No archaeological activity was identified within the confines of the trench.

TRENCH 02 (Figure 02)
Size (l x w x d): 20.0m x 1.60m x 1.50m Orientation N-S Field 3/6

Description

The trench targeted an area of “possibly archaeological” activity identified through geophysics.

The trench was located on very rough stone-rich and wet ground close to a drainage ditch. The topsoil was a pale brown leached soil containing large rounded stones which lay in a grey silt. This was probably a deliberate deposit as post-med pot (19th century) and more modern metal was recorded (but not removed). This in turn lay on a bed of peat with reeds still visible. These deposits lay directly on more stones and grey clay natural. A test pit was dug at the eastern end of the trench to a depth of 1.50m, but this rapidly filled with water. The “possibly archaeological” geophysics may have identified the deliberate backfilling of a wet and boggy area.

TRENCH 03 (Figure 02)
Size (l x w x d): 20.0m x 1.60m x 1.50m Orientation NNE-SSW Field 3/6

Description

This trench was located to target an area of “possibly archaeological” activity identified through geophysics and was positioned between a low lying marshy area and a shallow upward slope leading onto rough ground. The topsoil had a depth of 0.30m and was above a grey-brown clay-silt with maximum depth of 0.40m. Below these deposits the natural was a grey, gravel-sand-clay. The subsoil towards the SSW of the trench seemed to be a more yellow, very silt-rich clay which corresponded with the NE facing slope of the bank.

No archaeological activity was identified within the confines of the trench.

TRENCH 04 (Figure 3)
Size (l x w x d): Trench 4a 20.0m x 1.60m x 0.60m Orientation NW-SE Field 3/12
Trench 4b 20.om x 1.60m x 0.50m Orientation WSW-ENE

Description
This trench was located to target “uncertain/unknown” geophysics.

This trench was in fact one T-shaped trench but will be recorded here as 4a and 4b.
Trench 4a. Below the turf was a layer of a mid grey-brown sand-silt topsoil reaching a maximum depth of 0.30m. The subsoil was quite shallow with a depth of only 0.20m and was a mid brownish grey silt-rich clay. Below the subsoil at a maximum depth of 0.50m was a glacial sand-rich clay, within which gravel and lenses of stone were observed. These clearly demonstrate glacial activity, and shallow roots in amorphous patches indicated evidence of the former presence of small trees and shrubs.
No archaeological activity was identified within the confines of the trench. The geophysics may have identified glacial activity.
Trench 4b. As trench 4a, however the interface between topsoil and subsoil suggests that it may have been re-instated at some time in the past.

TRENCH 05 (Figure 04)
Size (l x w x d): 20.0m x 1.60m x 0.80m Orientation E-W Field 3/15

Description
This trench was located to target a maize field that had not been investigated by geophysical survey, but was close to the Scheduled Monument of Tomen Fawr (RSK Site 2).

The trench contained dark grey sand-silt topsoil reaching a depth of 0.30m, overlying dark orange brown sand-rich clay subsoil with inclusions of small rounded and sub-angular stones with depth of 0.20m. The underlying natural was a gravel and sand containing small rounded stones, orange brown in colour. No archaeological activity was identified within the confines of the trench.

TRENCH 06 (Figure 04)
Size (l x w x d): 16m x 1.60m x 0.65m Orientation N-S Field 3/15

Description

This trench was located to target a maize field that had not been investigated by geophysical survey, but was close to the Scheduled Monument of Tomen Fawr (RSK Site 2).

Trench 6 consisted of an overburden of topsoil and subsoil to a depth of 0.60m, overlying a mixed glacial natural of stone-rich gravel and clay. A marked glacial change was noticed 4.10m from the southern end of the trench between the clay and gravels. On instruction (Sally Rotherham *RSK* email communication 10/09/2010), the trench was shortened 4.0m to avoid going into the maize.

TRENCH 07 (Figure 04)
Size (l x w x d): 20.0m x 1.60m x 0.80m Orientation NW-SE Field 3/16

Description
This trench was located to target "mainly geological" geophysics.

This trench comprised topsoil and subsoil reaching a depth of 0.50m, overlying glacial gravels. The evenness of the layers suggests that the soils may have been re-instated over the glacial gravels. The discovery of a manhole cover and fragments of tarmacadam within the subsoil tends to confirm this and may have also caused the anomaly on the geophysical survey. The natural was tested to a depth of 0.80m at the western end of trench. No archaeological activity was identified within the confines of the trench; the landholder informed the site team that sand and gravel had been extracted for the widening of the A487 and the ground was subsequently levelled off (Harry Parry, pers. comm.).

TRENCH 08 (Figure 04)
Size (l x w x d): 20.0m x 1.60m x 0.60m Orientation NNW-SSE Field 3/16

Description
This trench was located to target "mainly geological" geophysics.

As Trench 07: waste material such as a spray paint can and a plastic bottle of *Lucozade* give further evidence of re-instatement in this area, as does the consistent trench depth. These trenches are consistent with the widening of the A487 which runs parallel to the location of trenches 05, 06, 07 and 08.

TRENCH 09 (Figure 05)
Size (l x w x d): 20.0m x 1.60m x 0.50m Orientation WSW-ENE Field 3/21

Description
This trench was located to investigate "a possible archaeological feature" identified via geophysics.

The trench contained a stone-rich topsoil and subsoil overlying a stone-rich clay and gravel glacial natural. A blue-grey clay at the east end suggested perennial waterlogging as it was closer to a wet area further to the east. To the western end of the trench, a mid orange brown gravel and clay pre-dominated as the natural ground level rose progressively. Topsoil depth remained consistent throughout at 0.30m. No archaeological activity was identified within the confines of the trench; no evidence for a possible archaeological feature was identified.

TRENCH 10 (Figure 05)
Size (l x w x d): 16.0m x 1.60m x 0.50m Orientation N-S Field 3/21

Description
This trench was located to investigate "a possible archaeological feature" identified via geophysics.

This trench was reduced in length by 4.0m from the south due to its close proximity to an existing gas main. The trench was located on boggy ground, with reeds overlying a waterlogged clay containing organic matter at a depth of 0.50m. This overlay natural gravels into which a stone filled land drain was cut, at the northern end of the trench, and another later ceramic land drain. These were cut into the natural gravel at a depth of 0.50m below the ground level, and seem to represent successive attempts to drain this boggy area. No archaeological activity was identified within the confines of the trench.

TRENCH 11 (Figure 05)
Size (l x w x d): 20.0m x 1.60m x 0.50m Orientation SW-NE Field 3/24
10.0m x 1.60m x 0.50m Orientation SE-NW

Description
This trench was located to investigate "a possible archaeological feature" identified via geophysics.

The trench was T-shaped and quite shallow. Topsoil of a mid brown clay-rich soil with depth of 0.20m, underlain by a pale brown clay-silt again 0.20m thick. The natural was a stone-rich grey clay with orange mottling containing large rounded stones up to boulder size. No archaeological activity was identified within the confines of the trench and evidence of "a possible archaeological feature" was not forthcoming.

TRENCH 12 (Figure 06)
Size (l x w x d): 10.0m x 1.60m x 0.65m Orientation WSW-ENE Field 3/26

Description
This trench was located to investigate "a possible archaeological feature" identified via geophysics.

The trench contained glacial clay consisting of sub-rounded and sub-angular stones with gravel in a light grey-brown clay matrix. The glacial clay underlay a substantial overburden of 0.40m of topsoil and 0.20m of subsoil.
No archaeological activity was identified within the confines of the trench and evidence of "a possible archaeological feature" was not forthcoming.

TRENCH 13 (Figure 06)
Size (l x w x d): 10.0m x 1.60m x 0.70m Orientation NW-SE Field 3/26

Description
This trench was located to investigate "a possible archaeological feature" identified via geophysics.

This trench was very similar to Trench 12, with a deep layer of topsoil and subsoil over a glacial clay gravel of rounded and sub-angular stones. A tree bole was noted near the northern end of the trench, with very similar fill to the subsoil. It's irregular profile and presence of large amount of roots suggests that it is a fairly recent tree bole. No archaeological activity was identified within the confines of the trench and evidence of "a possible archaeological feature" was not forthcoming.

TRENCH 14 (Figure 07; Plates 1 and 2)
Size (l x w x d): 20.0m x 1.60m x 0.50m Orientation SE-NW Field 6/1

Description
This trench was positioned to target "uncertain/unknown" geophysics and was located on the lower area of field 6/1. After the removal of the topsoil, which had a depth of 0.20m, an orange brown clay-silt subsoil with orange mottling was seen again with a depth of 0.20m. At the centre of the trench there was a deposit of large stones, initially thought to be the remains of a field boundary, within a matrix of grey clay with orange mottling. Further investigation showed voids in the stones and edges indicating that this feature was quite a large stone filled drain.
The drain seemed to date from the 19th century and was certainly late post-medieval.

TRENCH 15 (Figure 07)
Size (l x w x d): 20.0m x 1.60m x 0.60m Orientation ENE-WSW Field 6/2

Description
This trench was positioned to target "mainly geological" geophysics.

The trench consisted of a shallow overburden (0.40m at it's deepest at the ENE end of trench) of a partly waterlogged topsoil of sand-silt containing significant quantities of organic matter. This overlay a varied clay of a mottled mid grey and orange brown colour, containing some large sub-angular stones, and was examined to a depth of 0.60m to the ENE of the trench. There were very large stones

bordering the field on all sides suggesting a significant amount of field clearance had occurred in this area. No archaeological activity was identified within the confines of the trench.

TRENCH 15a (Figure 07; Plates 3 and 4)
Size (l x w x d): 20.0m x 1.60m x 0.50m Orientation SE-NW Field 6/4

Description
This trench was positioned to target "mainly geological" geophysics.

Trench 15a was located on a relatively steep SE-NW slope, with the down slope to the NW end of trench. The trench contained a mid orange brown silt-rich clay topsoil (which varied in depth from 0.20m to 0.40m) and glacial boulder clay.

At the NW end of the trench a former field boundary (context 1505) was identified beneath the topsoil, cutting the glacial boulder clay and running at a right angle to the trench. The full width of the feature could not be determined within the confines of the trench (*c.* 0.50m was extant); no datable artefacts were recovered.

At the SE end of the trench another possible field boundary ditch (context 1508) was identified beneath the topsoil, cutting the glacial boulder clay and running at a right angle to the trench. The feature measured *c.*2.00m in width and 0.25m in depth, with a U-shaped profile and a flat base; no datable artefacts were recovered.

There was a sharp break of slope running E-W across field 6/4, and through Trench 15a. The boundary ditch at the SE of the trench was located close to the break of slope and the boundary ditch at the NW end was located at the base of slope.

The ditch at the SE end appears to be recent in date, as the Ordnance Survey 1st Edition shows a footpath running NNE-SSW which would have been crossed by Trench 15a at the SW end of trench. At the northwest end of the trench, the possible field boundary ditch matches the alignment of an extant field boundary on the other side of the local field wall; however, no field boundary or feature is shown on the Ordnance Survey 1st Edition corresponding to this feature.

TRENCH 16 (Figure 08)
Size (l x w x d): 20.0m x 1.60m x 0.80m Orientation WSW-ENE Field 6/10

Description
This trench was positioned within an area of "mainly geological" geophysics.

Trench 16 was positioned on an E-W slope above the valley bottom and consisted of a topsoil (0.30m deep) and subsoil (0.15m deep) overlying colluvial slippage, at the west end of the trench. Two ephemeral patches of burning were noted within the deposit, which were more modern burning of roots. The changeable geology within this trench comprised of a mid grey clay and gravel at the higher end, with a more orange clean clays at the lower western end. The clays were tested to a depth of 0.80m at the western end of the trench and was found to be consistent throughout.
No archaeological activity was identified within the confines of the trench.

TRENCH 17 (Figures 08 and 14; Plates 5 to 7)
Size (l x w x d): 20.0m x 1.60m x 0.70m Orientation N-S Field 6/11

Description
This trench was located to target "geological and uncertain/unknown" geophysics.

Trench 17 was positioned across the steep west-facing slope of field 6/11. The trench was excavated from north to south. Up to the 13.0m point along the trench the depth remained consistent at an average depth of 0.45m; the remaining 7.0m of the trench increased in depth to 0.70m.

Within the latter area two archaeological features were identified: a pit (context 006) that measured 0.60m in width and 0.20m in depth and cut both the natural (context 003) and a larger silt-rich pit or hollow (context 011). The pit fill (context 005) contained occasional charcoal inclusions and stone

(some of which were burnt). The silt-rich pit or hollow (context 011) measured 1.10m in width and 0.15m in depth and was filled by a semi-circular deposit of a brown silt containing stones and charcoal; the pit/hollow and associated fill were only partly extant within the trench. A 0.50m wide slot was cut through the fill, identifying a sealed band of charcoal-rich silt (context 009), which was atop the natural. It could not be determined within the confines of the trench whether the larger feature was a deliberately cut pit or a natural scoop or hollow.

Overlying both features was a very pale sand-rich clay (context 007).

The provenance of the features could not be determined within the confines of the trench.

TRENCH 18 (Figure 08)
Size (l x w x d): 20.0m x 1.60m x 0.90m max Orientation E-W Field 6/11

Description
This trench was located to target "geological and uncertain/unknown" geophysics.

This trench was cut down a steeply sloping field, with the depth varying from 0.90m at the eastern end to 0.40m to the west. The depth of the topsoil remained consistent at 0.20m, with the brown stone-rich silt-rich subsoil varying from 0.60m at the east to 0.20m to the west. The underlying natural was a mixture of a grey orange gravel-rich clay-silt with fractured shale. No archaeological activity was identified within the confines of the trench. The "geological and uncertain/unknown" geophysics may represent the varying depth of the trench and also the variable glacial activity.

TRENCH 19 (Figure 09)
Size (l x w x d): 20.0m x 1.60m x 0.45m Orientation SW-NE Field 6/19

Description
This trench was located to target possible cultivation markings identified on the geophysics survey.

Trench consists of a thick topsoil (0.30m) of a mid grey brown sand-silt overlying a thin band of an orange brownish subsoil. These deposits overlie the glacial natural which consisted of a light grey-brown clay with sub-angular stones and gravel. Apart from a small quantity of sand the deposits were remarkably uniform throughout the trench.
No archaeological activity was identified within the confines of the trench.

TRENCH 20 (Figure 09)
Size (l x w x d): 20.0m x 1.60m x 0.45m Orientation SW-NE Field 6/20

Description
This trench was located to target "mainly geological" geophysics.

The trench contained a mid grey-brown topsoil (0.25m deep) that sealed a dark orange brown clay subsoil (0.15m) with a combined depth of 0.40m. These deposits overlie the natural glacial clay which consisted of a light grey-brown clay and sand matrix containing small and medium sized stones and gravel.
No archaeological activity was identified within the confines of the trench.

TRENCH 21 (Figure 09; Plate 8)
Size (l x w x d): 20.0m x 1.60m x 0.80m Orientation ENE-WSW Field 6/28

Description
This trench was located to target "mainly geological" geophysics.

The trench was positioned at the edge of a boggy patch of ground. Depth of the mid orange brown clay-silt topsoil varied considerably but had a maximum depth of 0.60m. Below was a mid grey-brown silt-rich clay subsoil with a depth of 0.20m containing some very large stones. This overlay a glacial clay which in turn overlay a shale bedrock which was exposed through the glacial clay in places. The area was very waterlogged and two stone filled field drains were noted cut into the subsoil. The

ground is very boggy with evidence of waterlogging in the clay silt above the bedrock, probably due to poor drainage, the land drains appear to have been an attempt to remedy this.
No further archaeological activity was identified within the confines of the trench.

TRENCH 22 (Figure 09)
Size (l x w x d): 20.0m x 1.60m x 0.80m Orientation SSW-NNE Field 6/29

Description
This trench was located to target "geological and uncertain/unknown" geophysics.

The trench depth varied from 0.40m at the SW end to 0.80m at the NE and had substantial overburden of 0.60m, in equal amounts of topsoil and subsoil, overlying a glacial clay which consisted of grey gravel patches, of small to medium rounded and sub-angular stones and a mottled mid orange brown clay.
No archaeological activity was identified within the confines of the trench.

TRENCH 23 (Figure 10)
Size (l x w x d): 20.0m x 1.60m x 0.50m Orientation E-W Field 6/33

Description
This trench was located to target "geological and uncertain/unknown" geophysics.

The trench was excavated down a slope from the east to west, but was generally quite shallow with a maximum depth of 0.50m. Topsoil depth varied between 0.20m and 0.30m, with the underlying pale brown and occasionally orange subsoil containing infrequent large stones.
No archaeological activity was identified within the confines of the trench.

TRENCH 24 (Figures 10 and 15; Plates 9 to 11)
Size (l x w x d): 20.0m x 1.60m x 0.50m Orientation NNE-SSW Field 6/33

Description
The trench was located to target "geological and uncertain/unknown" geophysics and was positioned near a gate in the stone wall at the top of the slope above a boggy and marshy area. A large boulder was encountered near the SSW end of the trench which we were unable to remove as it would damage the trench sides. The natural in this trench comprised of a grey and orange gravel and fractured rock. Large flat slabs were found at 10.0m along the trench and seem to be natural, although this could not be confirmed. Further towards the NNE a deposit of burnt stone and charcoal was found which continued to the end of the trench. This deposit is typical of burnt mound material. The total exposed area within this trench was 5.0m x 1.60m (trench width), although it is very likely to continue for an unknown distance down the slope and the exterior edges of the trench, the depth of the material at the outer edge of the mound was 0.20m.
Trench 24 contained evidence for Bronze Age prehistoric activity.

TRENCH 25 (Figure 11)
Size (l x w x d): 20.0m x 1.60m x 1.0m Orientation ENE-WSW Field 6/50

Description
This trench was located to investigate "mainly geological" geophysics.

This trench was also located on a shallow slope, and contained topsoil with a maximum depth of 0.30m. Subsoil reached a depth of up to 0.50m, below which was an orange stone-rich natural and shaley bedrock.
No archaeological activity was identified within the confines of the trench.

TRENCH 26 (Figure 11)
Size (l x w x d): 20.0m x 1.60m x 0.70m Orientation E-W Field 6/50

Description
This trench was located to investigate "mainly geological" geophysics.

The trench was cut across a natural terrace which gave the appearance of a trackway, on excavation this was not the case: excavation showed a very shallow shale bedrock from the east end of the trench towards a pronounced ridge of bedrock approximately 13.0m from the eastern end. The remaining 7m included grey and yellow clays below an orange subsoil with a depth of 0.40m (which only existed at the western end of trench). Topsoil reached a maximum depth of 0.30m, again deeper at the western end. As indicated by the geophysics, the terrace was a geological feature.

TRENCH 27 (Figure 12; Plate 12)
Size (l x w x d): 20.0m x 1.60m x 0.30m Orientation W-E Field 6/51

Description
This trench was located to target "mainly geological" geophysics.

Trench 27 was located on the re-claimed land of Traeth Mawr, hence natural clays lie below organic topsoil with a maximum depth of 0.30m. Evidence for localised drainage was indicated by a series of 5 ceramic field drains within the trench. Despite the drainage, the field remained waterlogged and a considerable amount of surface water hampered clear visibility within the trench for photographic purposes. The land drains were cut into the clay although the trench cuts were imperceptible, probably due to the frequent waterlogging of the area. The use of ceramic pipes suggests a date of 20th century for the drainage works. No archaeological activity was identified within the confines of the trench, apart from the modern drainage pipes.

TRENCH 28 (Figure 12)
Size (l x w x d): T-shaped 20.0m x 1.60m Cancelled due to flooding.
10.0m x 1.60m

TRENCH 29 (Figure 12; Plate 13)
Size (l x w x d): 20.0m x 1.60m x 0.40m Orientation E-W Field 6/53

Description
This trench was located to target "possibly geological" geophysics.

This trench was cut into soft and wet ground, with a dark brown topsoil with a depth of 0.20m overlying a pale grey sand with a depth of 0.10m. The natural alluvial deposit was a very sand-rich grey clay, this was tested to a depth of 0.90m before flooding occurred. A ceramic field drain was found within the trench, which was blocked with silt and not working, and also a stone filled field drain was exposed which began to fill the trench with water. No archaeological activity was identified within the confines of the trench, apart from the drainage activity.

TRENCH 30 (Figure 12; Plate 14)
Size (l x w x d): 20.0m x 1.60m x 0.40m Orientation E-W Field 6/53

Description
This trench was positioned across a low lying channel between two higher areas. The topsoil had a depth of 0.20m and overlay a subsoil of pale grey sand that reached a maximum depth of 0.20m. The natural was a grey very sand-rich clay-silt. Two ceramic land drains found within the first 6.60m from the east, and another just over half way in the trench. A test pit was excavated to confirm the nature of the natural: a narrow band of a natural peaty organic material was seen in this area, but the trench began to flood and the excavation discontinued.
No archaeological activity was identified within the confines of the trench, apart from the drainage activity.

TRENCH 31
Size (l x w x d): 20.0m x 1.60m Cancelled due to flooding.

TRENCH 32 (Figure 13)
Size (l x w x d): 30.0m x 1.60m x 0.40m Orientation N-S Field 15/33

Description
The trench was located to investigate "possibly archaeological" geophysics.

Trench was cut diagonally across the shallow SW facing slope of field 15/33. The overall depth of the trench was 0.40m, with the topsoil varying in depth between 0.20m and 0.30m. Below which was a pale orange brown subsoil with a maximum depth of 0.20m. The underlying natural was a stone-rich orange silt-rich clay.
No archaeological activity was identified within the confines of the trench.

TRENCH 33 (Figure 13)
Size (l x w x d): 30.0m x 1.60m x 0.80m Orientation SE-NW Field 15/33

Description
The trench was located to investigate "possibly archaeological" geophysics.

The topsoil in this trench reached a maximum depth of 0.35m and was a mid grey-brown silt-rich sand, and was underlain by a mid orange brown silt-rich clay subsoil containing small to medium sized sub-angular stones. This overlay a varied glacial deposit, consisting of a bright orange at the NW end of the trench and a shale and gravel-rich clay matrix further to the SW. The distinctive change can be noted about 6.50m from the north end of the trench which could explain the anomalies shown on the geophysical survey. The general SW-NE slope is reflected in the underlying geological deposits, with the higher ground overlying shattered shale and the lower lying ground composed of a mid orange clay. The overburden is shallower at the SE end of trench.

No archaeological activty was identified within the confines of the trench.

5.0 CONCLUSIONS

The majority of the evaluation trenches did not contain archaeological activity within the confines of the trench.

Evidence for modern ground disturbance associated with the A487 Road Improvement Scheme was identified within the area incorporating trenches 05 to 08.

Modern drainage activty was noted within the area incorporating trenches 27 to 30.

Archaeological activity was limited to trenches 15a, 17 and 24. Trench 15a contained a probable boundary ditch (partly extant) at the southeastern end of the trench, visible on the Ordnance Survey 1st Edition map of the area and of suspected post-medieval date; a second ditch, located at the northwestern end of the trench could not be provenanced via map regression, but was of suspected modern date, due to the possible alignment of this feature with a local boundary. Trench 17 contained a small pit and gully of unknown provenance that appeared to continue outside of the trench; Trench 24 contained part of a truncated burnt mound, of suspected Bronze Age provenance that also continued outside of the evaluation area. No artefacts of archaeological interest were recovered from either example and no artefacts were recovered from elsewhere along the route.

6.0 BIBLIOGRAPHY AND SOURCES

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RSK Environment Ltd. 2010b. August 2010. *Gas Pipeline Replacement: Pwllheli City Gate to Blaenau Ffestiniog:* Written Scheme of Investigation for Archaeological Trial Trenching

RSK Environment Ltd. *Archaeological Monitoring Locations Maps 01 to 39*

RSK Environment Ltd. *Pwllheli to Blaenau Ffestiniog Proposed Gas Pipeline Geophysical Survey 2009*: Figures 01 to 48

APPENDIX I

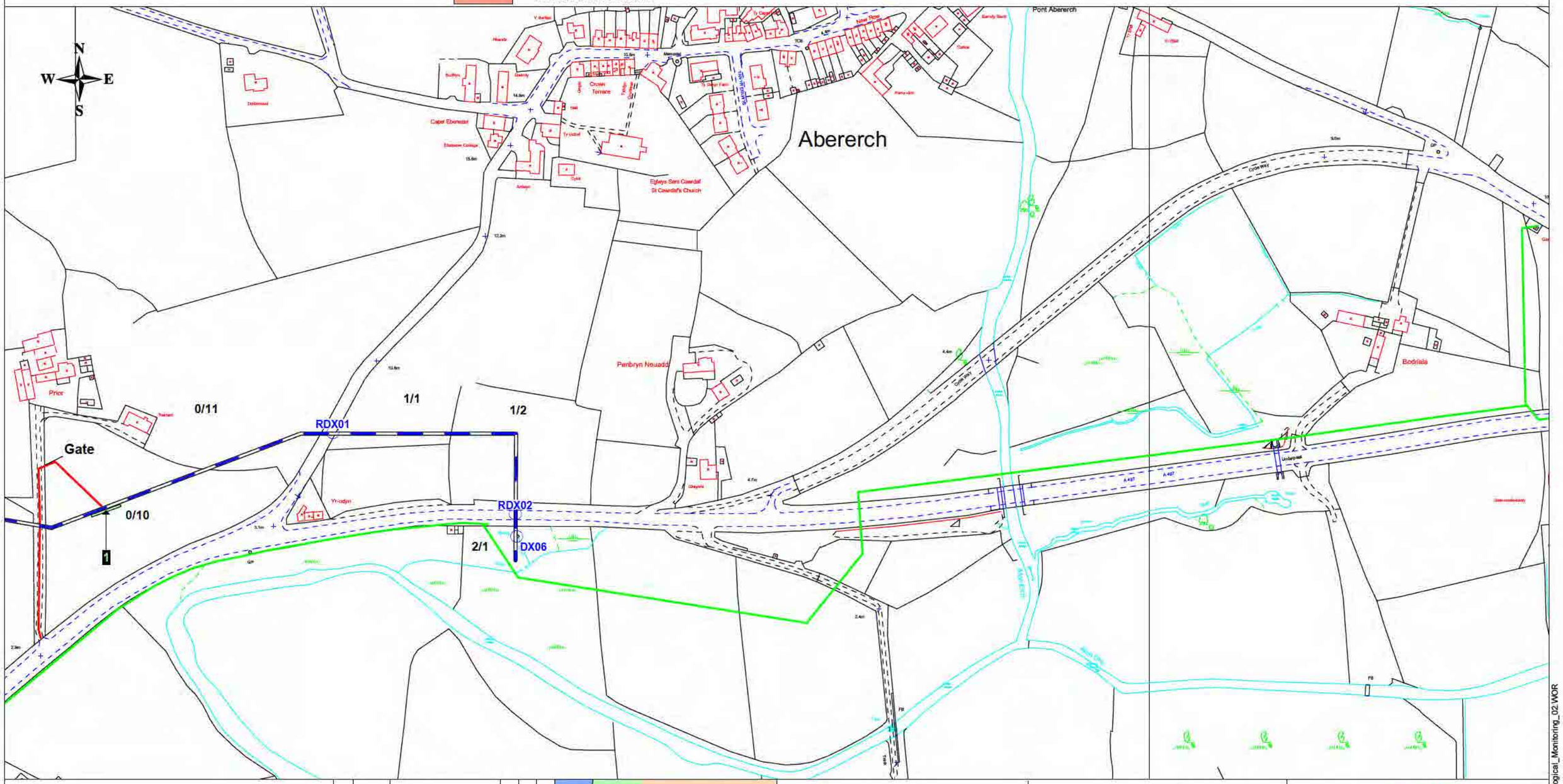
Reproduction of RSK Environment Ltd. Pwllheli City Gate PRI to Blaenau Ffestiniog PRI Archaeological Trench Schedule

Map	Trench Number	Field Location	Trench Dimensions
2	**1**	0/10	1 Trench- 20m x 1.6m
5	**2**	3/6	1 Trench- 20m x 1.6m
5	**3**	3/6	1 Trench- 20m x 1.6m
6	**4**	3/12	1 T-shaped Trench- 20m x 20m x 1.6m
7	**5**	3/15	1 Trench- 20m x 1.6m
7	**6**	3/15	1 Trench- 20m x 1.6m
7	**7**	3/16	1 Trench- 20m x 1.6m
7	**8**	3/16	1 Trench- 20m x 1.6m
8	**9**	3/21	1 Trench- 20m x 1.6m
8	**10**	3/21	1 Trench- 20m x 1.6m
8	**11**	3/24	1 T-shaped Trench- 20m x 10m x 1.6m
9	**12**	3/26	1 Trench- 10m x 1.6m
9	**13**	3/26	1 Trench- 10m x 1.6m
12	**14**	6/1	1 Trench- 20m x 1.6m
12	**15**	6/2	1 Trench- 20m x 1.6m
13	**16**	6/10	1 Trench- 20m x 1.6m
13	**17**	6/11	1 Trench- 20m x 1.6m
13	**18**	6/11	1 Trench- 20m x 1.6m
15	**19**	6/19	1 Trench- 20m x 1.6m
15	**20**	6/20	1 Trench- 20m x 1.6m
15	**21**	6/28	1 Trench- 20m x 1.6m
15	**22**	6/29	1 Trench- 20m x 1.6m
16	**23**	6/33	1 Trench- 20m x 1.6m
16	**24**	6/33	1 Trench- 20m x 1.6m
17	**25**	6/50	1 Trench- 20m x 1.6m
17	**26**	6/50	1 Trench- 20m x 1.6m
18	**27**	6/51	1 Trench- 20m x 1.6m
18	**28**	6/52	1 T-shaped Trench- 20m x 10m x 1.6m
18	**29**	6/53	1 Trench- 20m x 1.6m
18	**30**	6/53	1 Trench- 20m x 1.6m
30	**31**	13/34	1 Trench- 20m x 1.6m
35	**32**	15/23	1 Trench- 30m x 1.6m
35	**33**	15/23	1 Trench- 30m x 1.6m
35	**34**	15/28	1 Trench- 30m x 1.6m
35	**35**	15/28	1 Trench- 30m x 1.6m
36	**36**	15/29	1 Trench- 20m x 1.6m
36	**37**	16/6	1 Trench- 20m x 1.6m

FIGURES

Legend

- Proposed Pipeline Route
- Existing and Retained Pipeline Route
- RDX - Road Crossing
  RLX - Rail Crossing
  DRLX - Disused Rail Crossing
  RVX - River Crossing
  DX - Ditch Crossing
- Proposed Trial Trench Access Route
- Proposed Above Ground Installation (AGI)
- Existing Above Ground Installation (AGI)
- 1/8 Plot Number
- Early Works / Watching Brief / Controlled Strip
- Trial Trench Location
- Trial Trenches Will Not Be Undertaken Due to Sensitive Grassland



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00	02.07.10	First Draft	CS	HK	HK

Gwynedd

GAS PIPELINE REPLACEMENT
PWLLHELI CITY GATE PRI TO
BLAENAU FFESTINIOG PRI

WALES&WEST UTILITIES

MULTI TECH

RSK GROUP PLC

TITLE: **Archaeological Monitoring Locations (Map 2 of 39)**

SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P4133\004 GIS\Archaeological_Monitoring_02.WOR

Legend

- Proposed Pipeline Route
- Existing and Retained Pipeline Route
- RDX - Road Crossing
  RLX - Rail Crossing
  DRLX - Disused Rail Crossing
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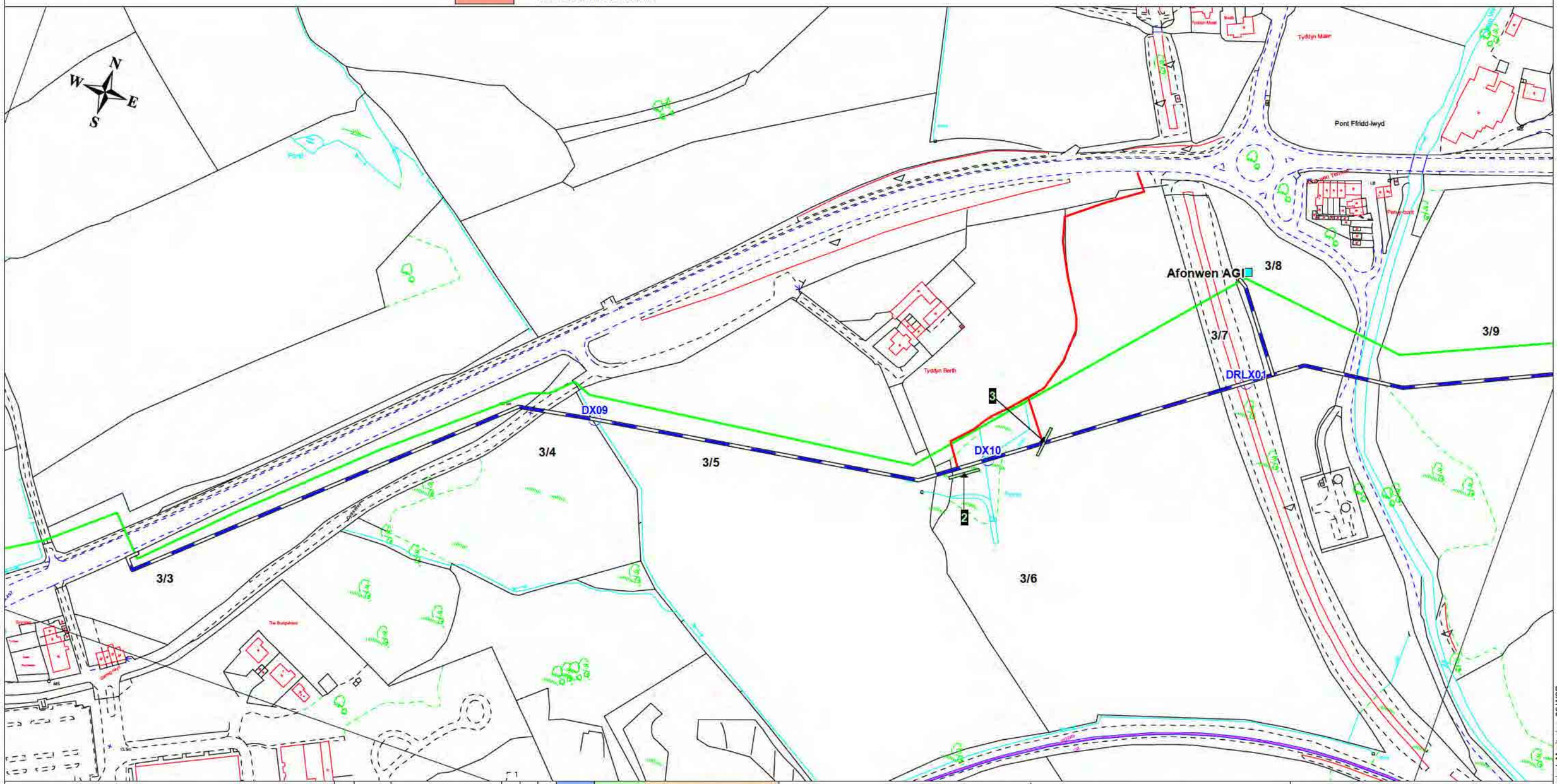

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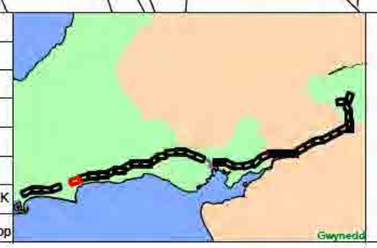

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WALES&WEST UTILITIES

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RSK GROUP PLC

TITLE: **Archaeological Monitoring Locations (Map 5 of 39)**

SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P41330004 GIS\Archaeological_Monitoring_05.WOR

Legend

- Proposed Pipeline Route
- Existing and Retained Pipeline Route
- RDX - Road Crossing
  RLX - Rail Crossing
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- 1/8 Plot Number
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- Trial Trench Location
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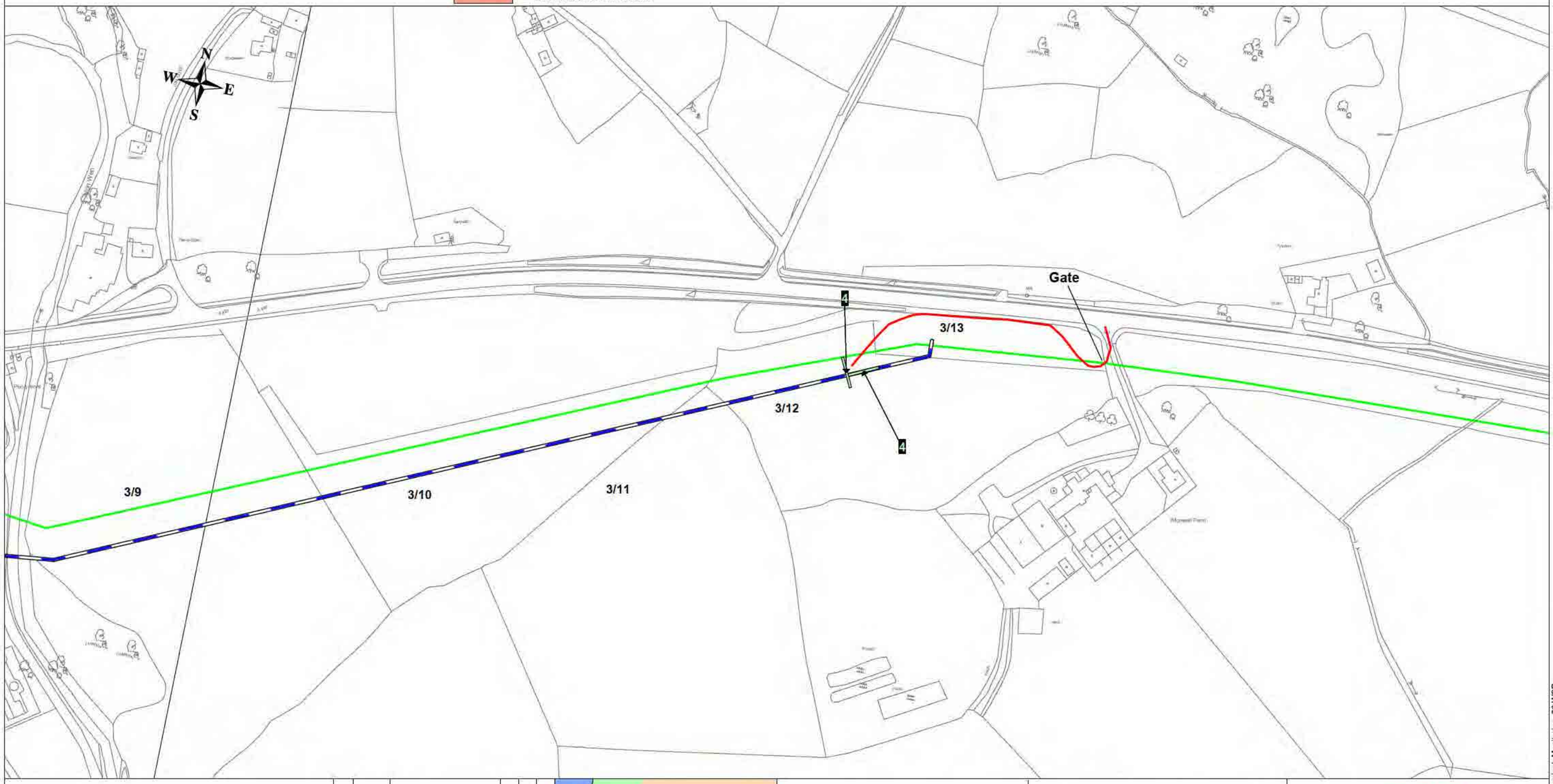

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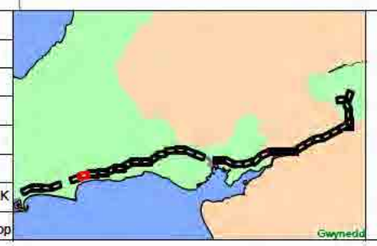

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TITLE: **Archaeological Monitoring Locations (Map 6 of 39)**

SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P4133004 GIS\Archaeological_Monitoring_06.WOR

Legend

- Proposed Pipeline Route
- Existing and Retained Pipeline Route
- RDX - Road Crossing
  RLX - Rail Crossing
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  RVX - River Crossing
  DX - Ditch Crossing
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- 1/8 Plot Number
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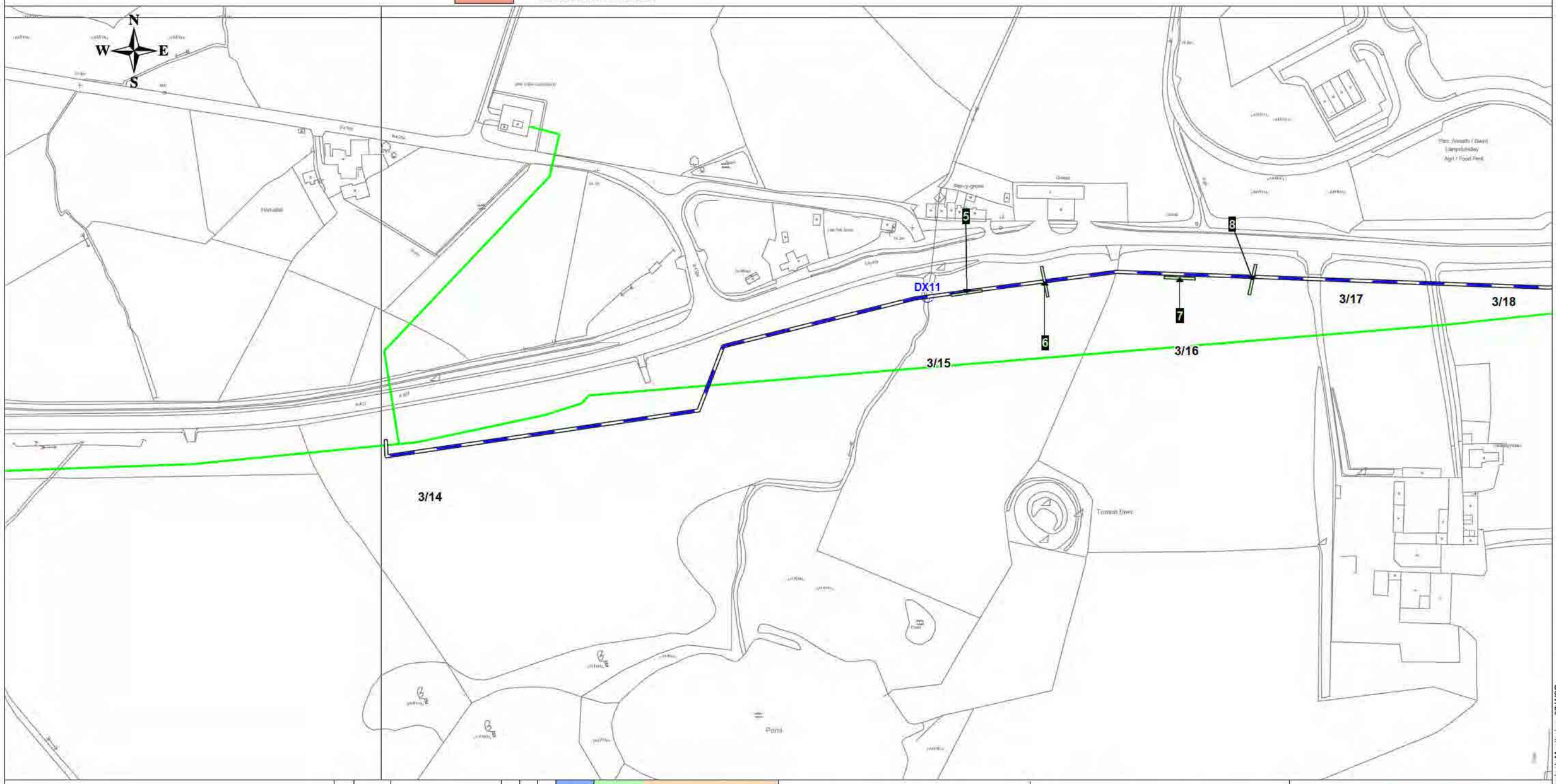
- Trial Trench Location
- Trial Trenches Will Not Be Undertaken Due to Sensitive Grassland



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TITLE: **Archaeological Monitoring Locations (Map 7 of 39)**

SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P41330\04 GIS\Archaeological_Monitoring_07.WOR

Legend

- Proposed Pipeline Route
- Existing and Retained Pipeline Route
- RDX - Road Crossing
  RLX - Rail Crossing
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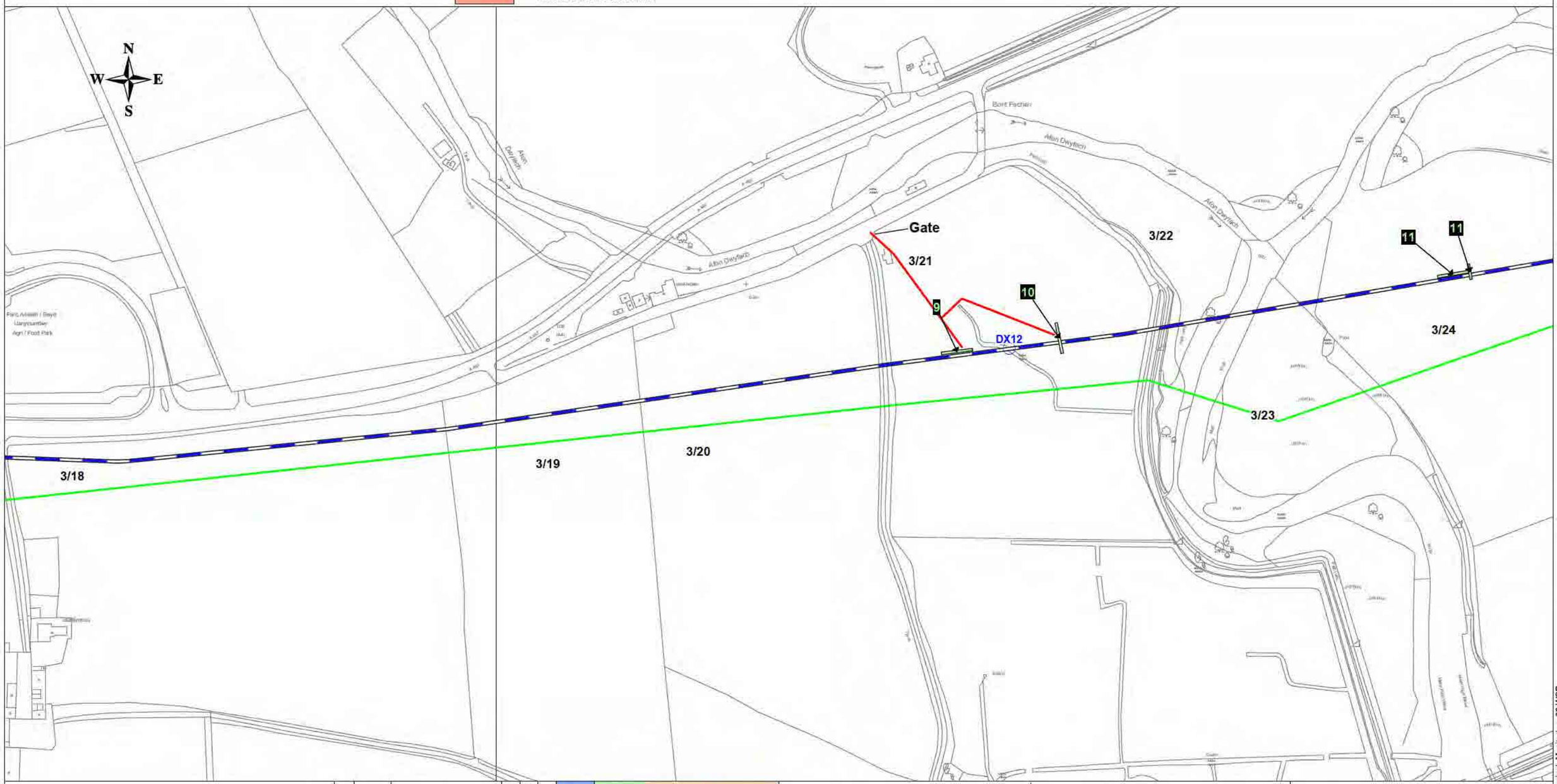

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TITLE: **Archaeological Monitoring Locations (Map 8 of 39)**

SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P4133004 GIS\Archaeological_Monitoring_08.WOR

Legend

- Proposed Pipeline Route
- Existing and Retained Pipeline Route
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  RLX - Rail Crossing
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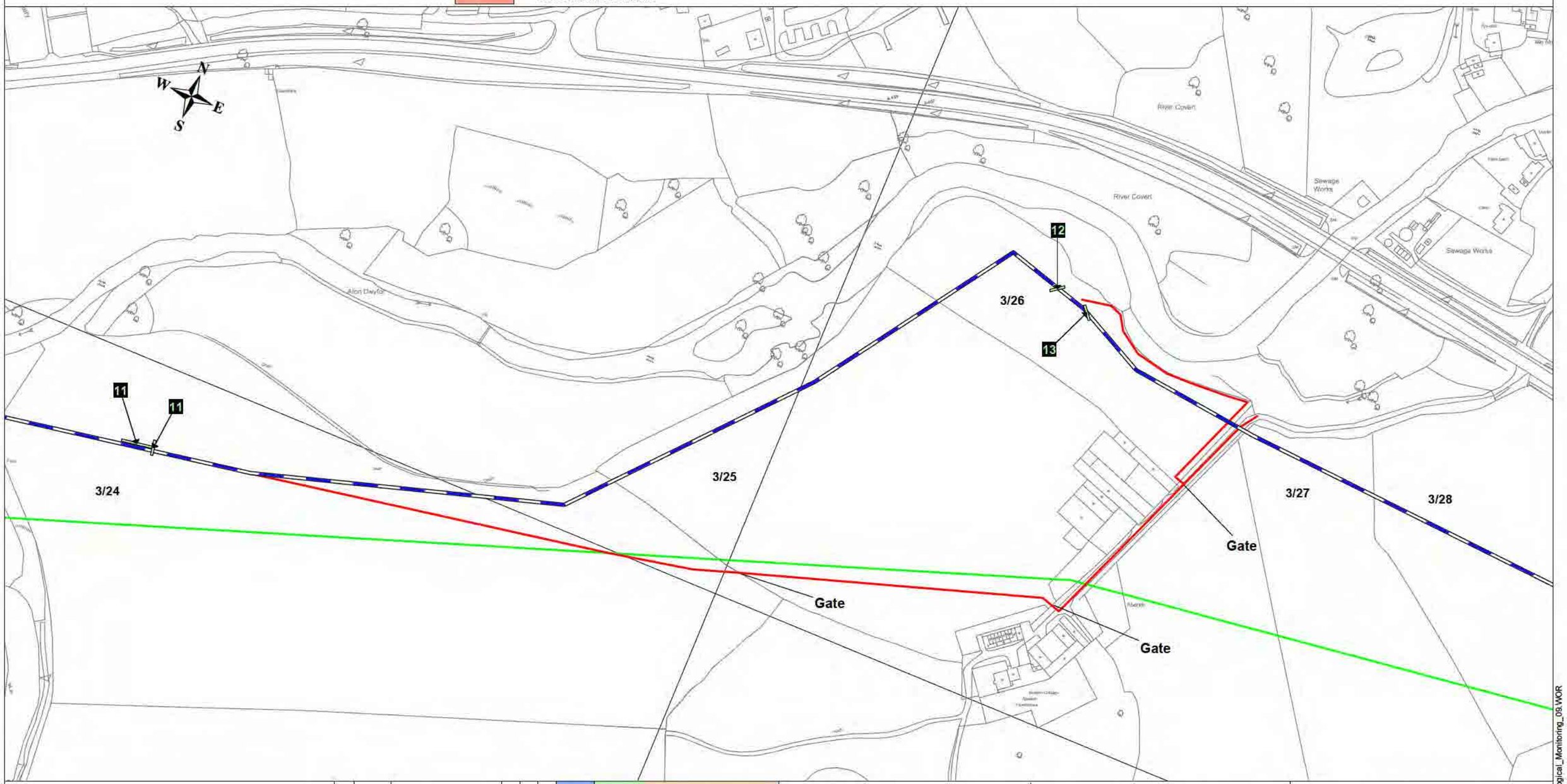

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TITLE: Archaeological Monitoring Locations (Map 9 of 39)

SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P413300\04 GIS\Archaeological_Monitoring_09.WOR

Legend

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- Existing and Retained Pipeline Route
- RDX - Road Crossing
  RLX - Rail Crossing
  DRLX - Disused Rail Crossing
  RVX - River Crossing
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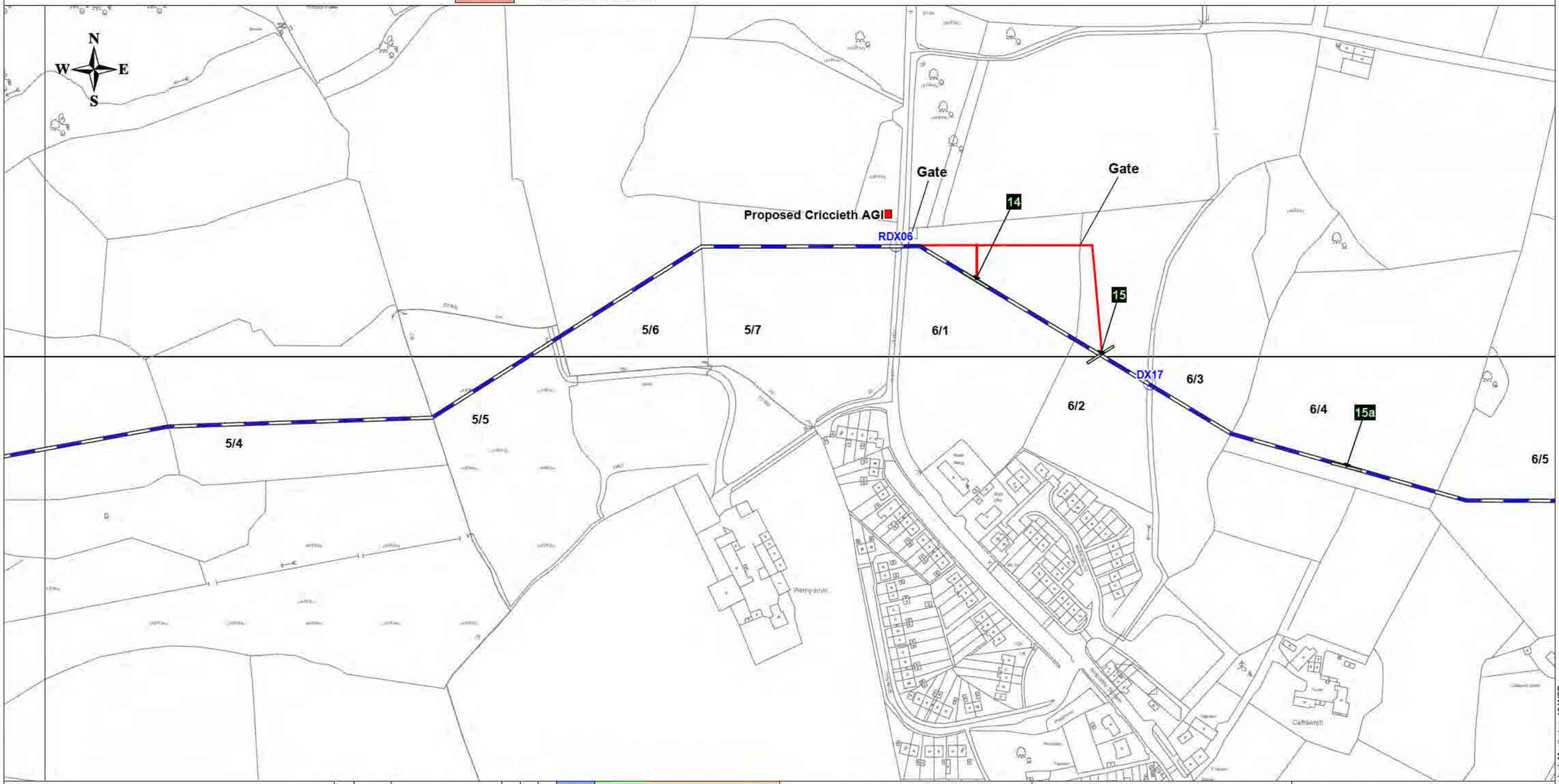

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TITLE: **Archaeological Monitoring Locations (Map 12 of 39)**

SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P4133004 GIS\Archaeological_Monitoring_12.WOR

Legend

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- Existing and Retained Pipeline Route
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- Trial Trench Location
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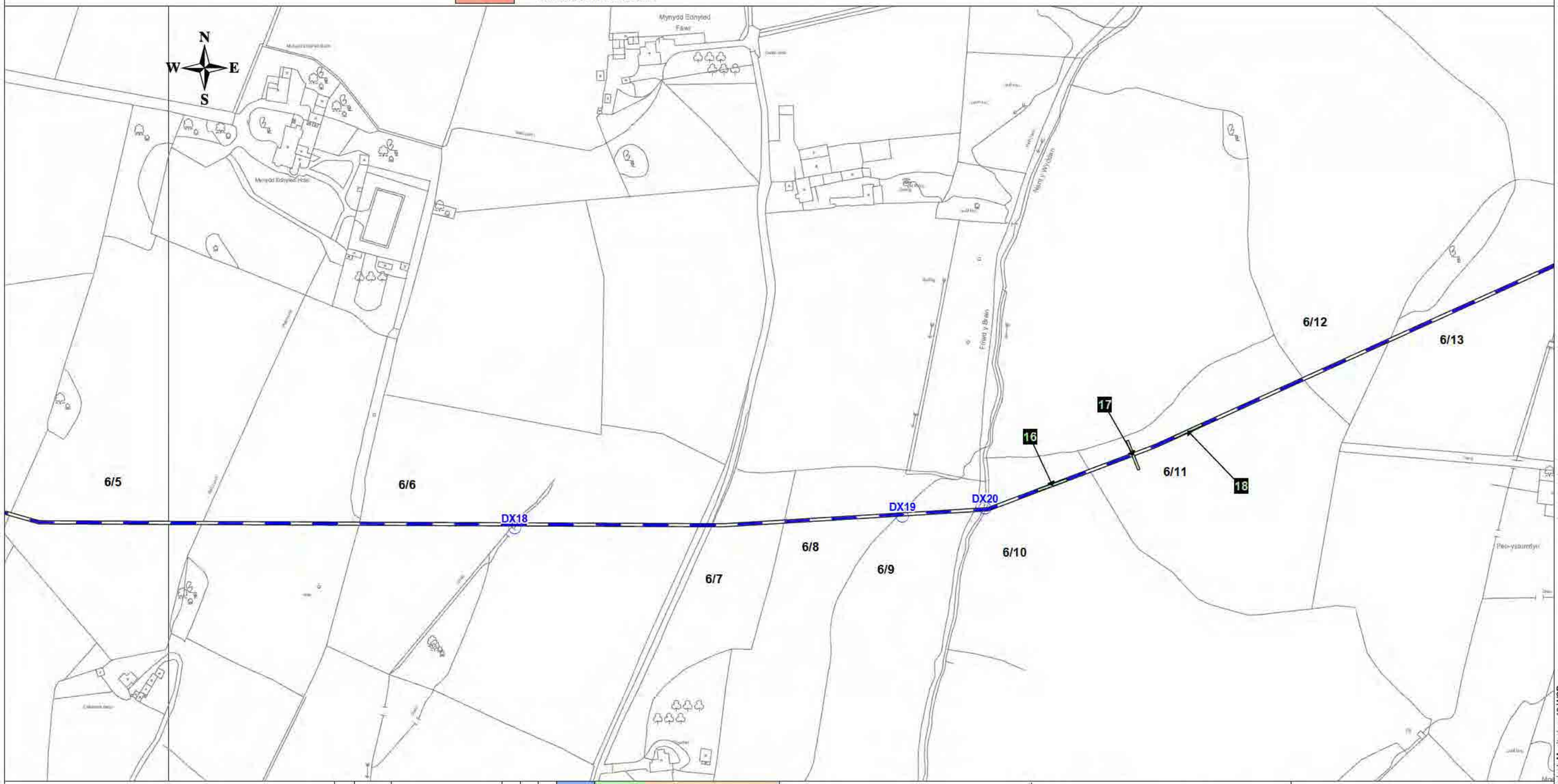

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TITLE: **Archaeological Monitoring Locations (Map 13 of 39)**

SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P4133004 GIS\Archaeological_Monitoring_13.WOR

Legend

- Proposed Pipeline Route
- Existing and Retained Pipeline Route
- RDX - Road Crossing
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  DRLX - Disused Rail Crossing
  RVX - River Crossing
  DX - Ditch Crossing
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- Existing Above Ground Installation (AGI)
- 1/8 Plot Number
- Early Works / Watching Brief / Controlled Strip
- Trial Trench Location
- Trial Trenches Will Not Be Undertaken Due to Sensitive Grassland

N W E S

Ancient Stone Land Drain to Horse Trough in roadway

Spring

6/19 6/20 6/21 6/22 6/23 6/24 6/25 6/26 6/27 6/28 6/29 6/30

19 20 21 22

DX25 DX26 DX27 DX28 DX29

Gate Gate

Steep Hill

Farm House

Pentrefelin AGI

252000 E

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WALES&WEST UTILITIES

MULTI TECH

RSK GROUP PLC

TITLE: Archaeological Monitoring Locations (Map 15 of 39)

SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P41330\04 GIS\Archaeological_Monitoring_15.WOR

Legend

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- Existing and Retained Pipeline Route
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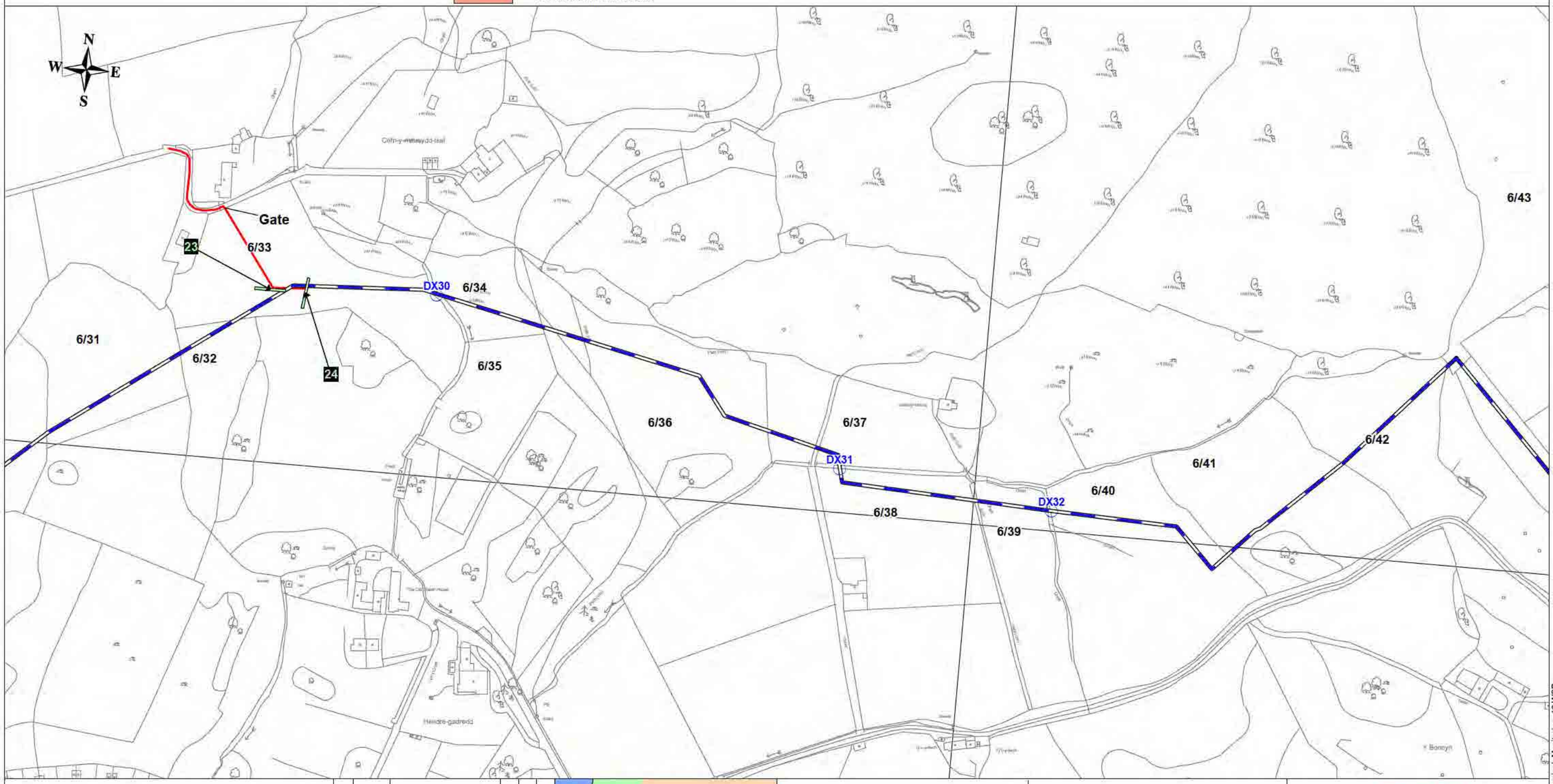
  DRLX - Disused Rail Crossing
  RVX - River Crossing
  DX - Ditch Crossing
- Proposed Trial Trench Access Route
- Proposed Above Ground Installation (AGI)
- Existing Above Ground Installation (AGI)
- 1/8 Plot Number
- Early Works / Watching Brief / Controlled Strip
- Trial Trench Location
- Trial Trenches Will Not Be Undertaken Due to Sensitive Grassland



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PWLLHELI CITY GATE PRI TO
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WALES&WEST UTILITIES

MULTI TECH

RSK GROUP PLC

TITLE: **Archaeological Monitoring Locations (Map 16 of 39)**

SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P41330\04 GIS\Archaeological_Monitoring_16.WOR

Legend

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- Existing and Retained Pipeline Route
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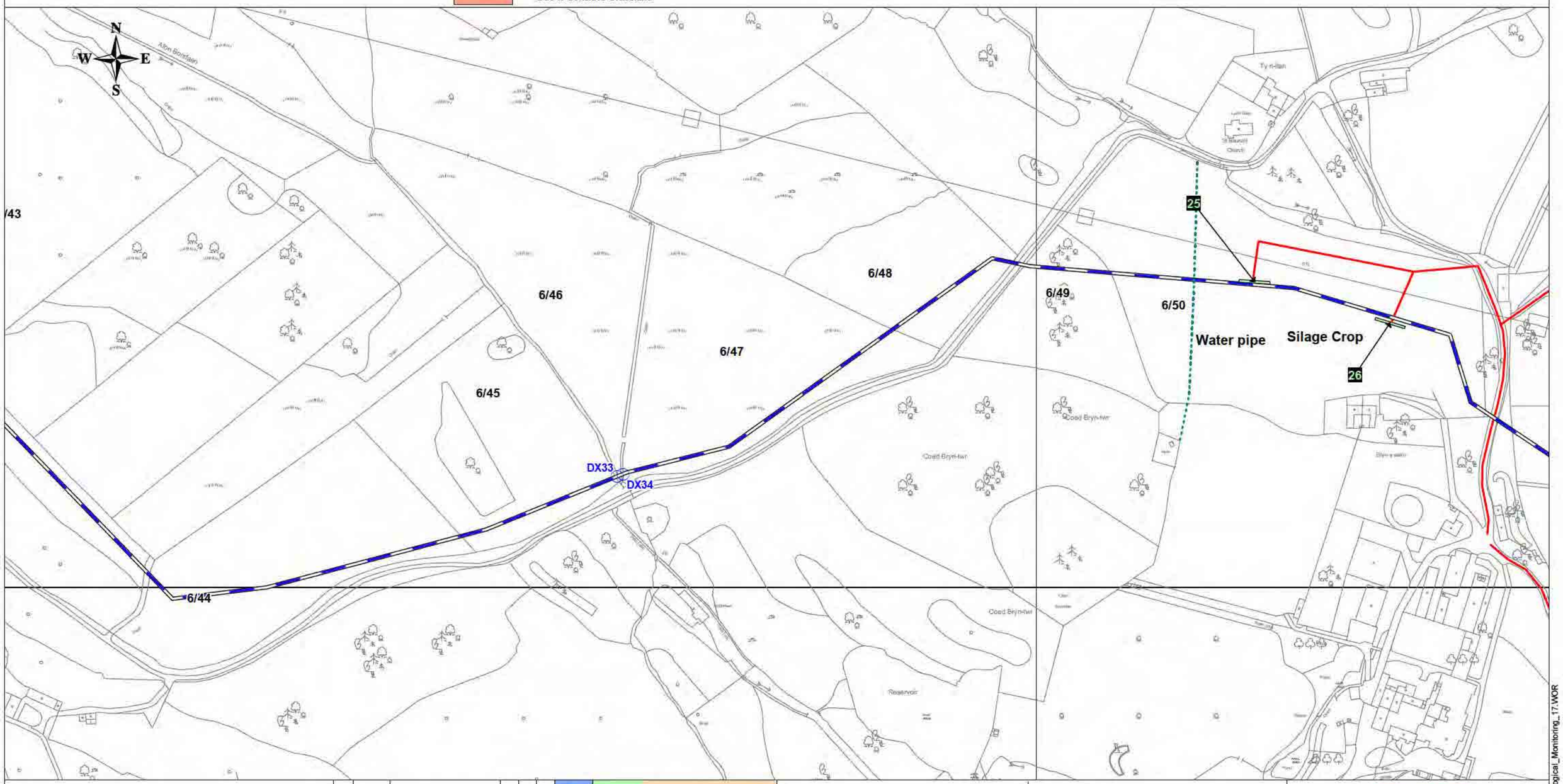
  RLX - Rail Crossing
  DRLX - Disused Rail Crossing
  RVX - River Crossing
  DX - Ditch Crossing
- Proposed Trial Trench Access Route
- Proposed Above Ground Installation (AGI)
- Existing Above Ground Installation (AGI)
- 1/8 Plot Number
- Early Works / Watching Brief / Controlled Strip
- Trial Trench Location
- Trial Trenches Will Not Be Undertaken Due to Sensitive Grassland



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00	02.07.10	First Draft	CS	HK	HK

GAS PIPELINE REPLACEMENT PWLLHELI CITY GATE PRI TO BLAENAU FFESTINIOG PRI

WALES&WEST UTILITIES

MULTI TECH

RSK GROUP PLC

TITLE: **Archaeological Monitoring Locations (Map 17 of 39)**

SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P4133004 GIS\Archaeological_Monitoring_17.WOR

Legend

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- Existing and Retained Pipeline Route
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  RLX - Rail Crossing
  DRLX - Disused Rail Crossing
  RVX - River Crossing
  DX - Ditch Crossing
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- Existing Above Ground Installation (AGI)
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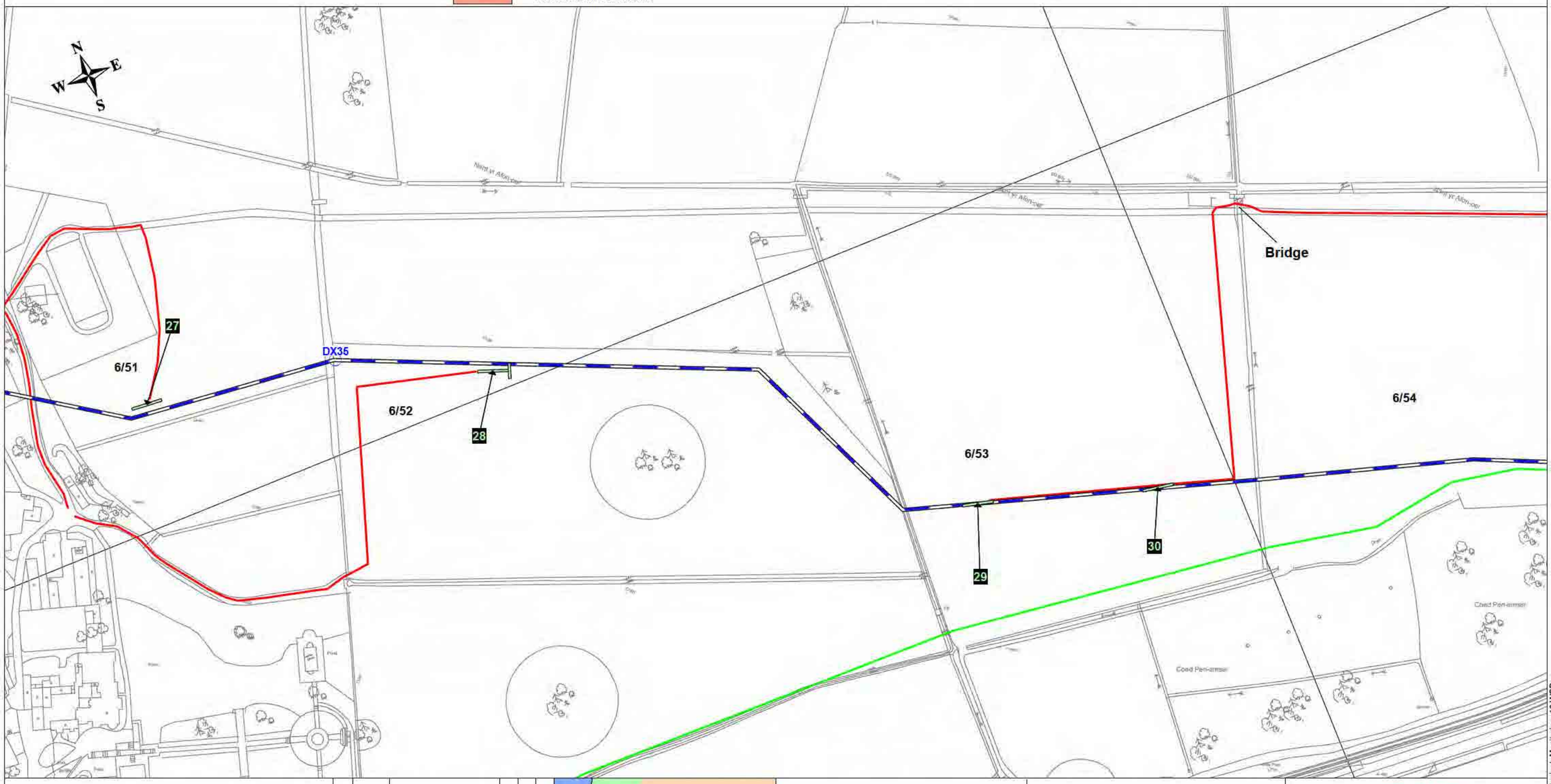

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GAS PIPELINE REPLACEMENT
PWLLHELI CITY GATE PRI TO
BLAENAU FFESTINIOG PRI

WALES&WEST UTILITIES

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RSK GROUP PLC

TITLE: **Archaeological Monitoring Locations (Map 18 of 39)**

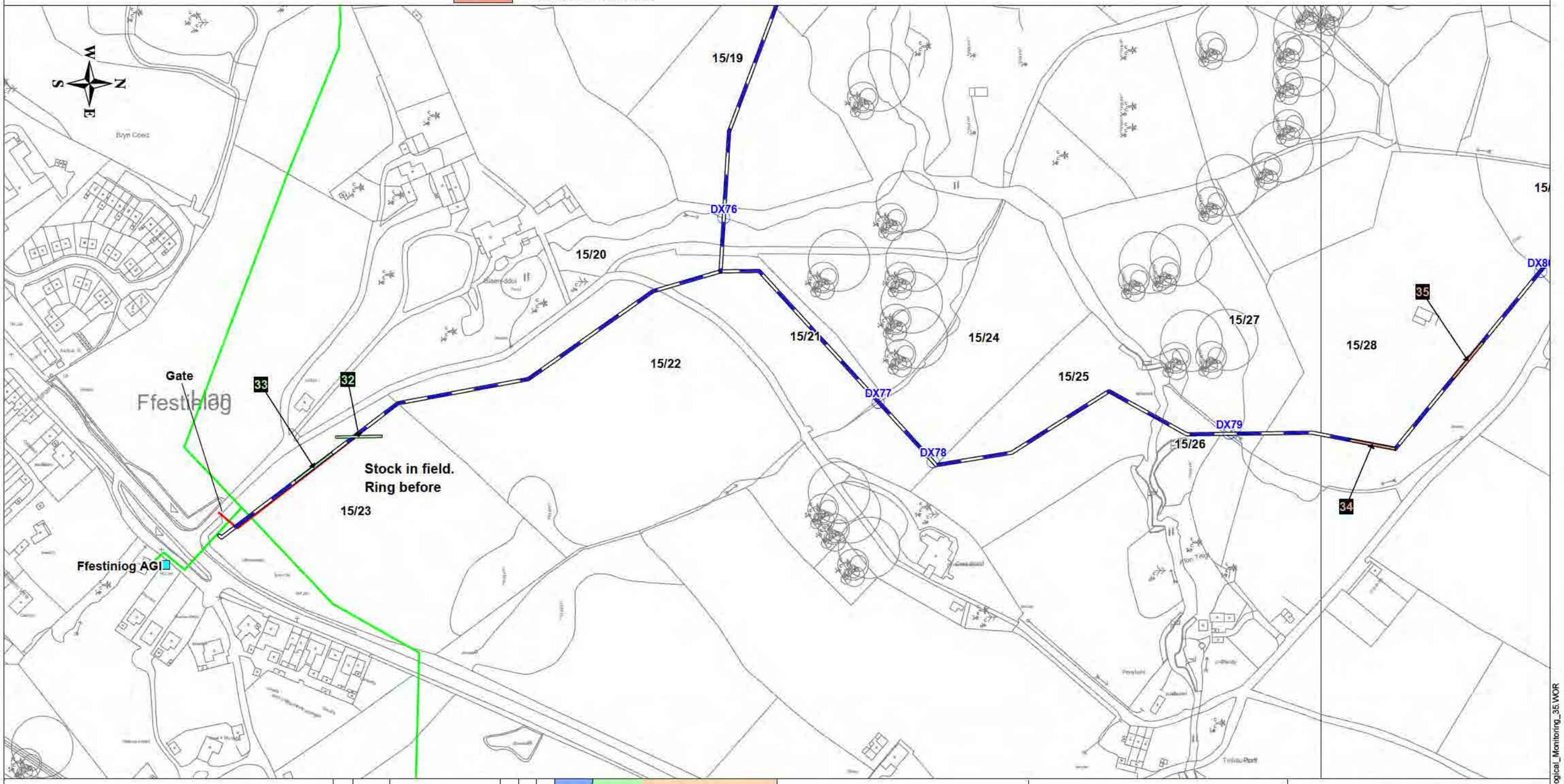
SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P41330\04 GIS\Archaeological_Monitoring_18.WOR

Legend

- Proposed Pipeline Route
- Existing and Retained Pipeline Route
- RDX - Road Crossing
  RLX - Rail Crossing
  DRLX - Disused Rail Crossing
  RVX - River Crossing
  DX - Ditch Crossing
- Proposed Trial Trench Access Route
- Proposed Above Ground Installation (AGI)
- Existing Above Ground Installation (AGI)
- 1/8 Plot Number
- Early Works / Watching Brief / Controlled Strip
- Trial Trench Location
- Trial Trenches Will Not Be Undertaken Due to Sensitive Grassland



Rev	Date	Description	Dm	Chk	App
00	02.07.10	First Draft	CS	HK	HK

GAS PIPELINE REPLACEMENT
PWLLHELI CITY GATE PRI TO
BLAENAU FFESTINIOG PRI

WALES&WEST UTILITIES

MULTI TECH

RSK GROUP PLC

TITLE: Archaeological Monitoring Locations (Map 35 of 39)

SCALE: 1:2,500 @A3, 1:1,250 @A1

REV 00

FILE NAME: P413300\04 GIS\Archaeological_Monitoring_35.WOR

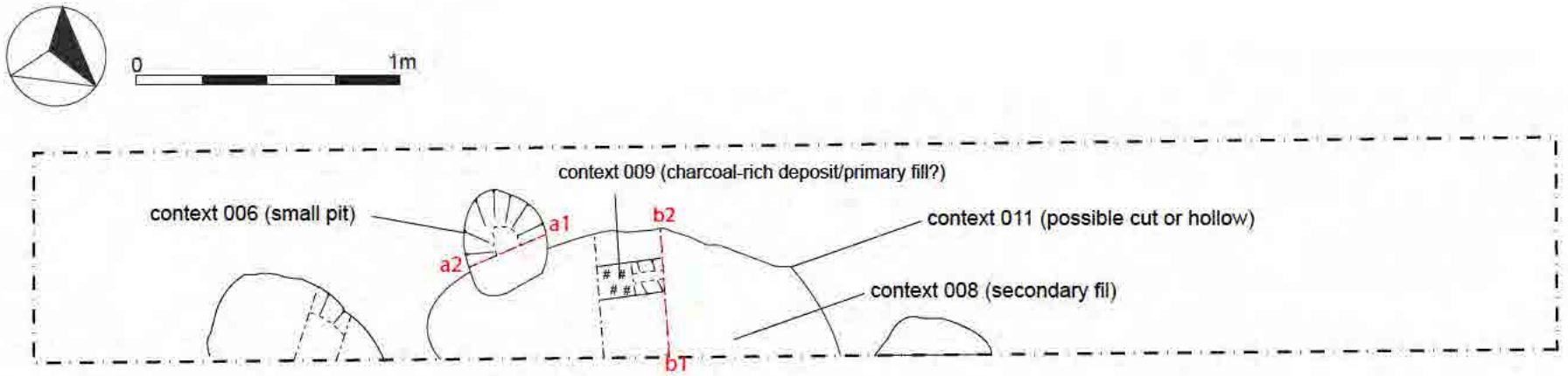


Figure 14a: Trench 17 - Plan (Scale: 1:50@A4)

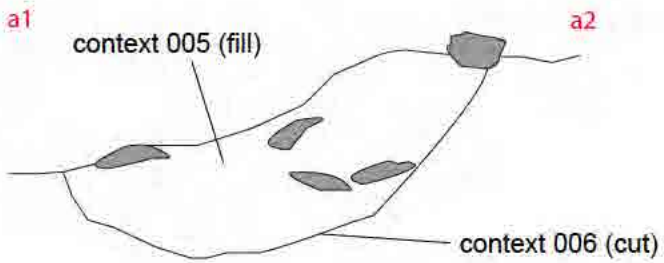


Figure 14b: Trench 17 - Pit (Context 006): south facing section (Scale: 1:10@A4)

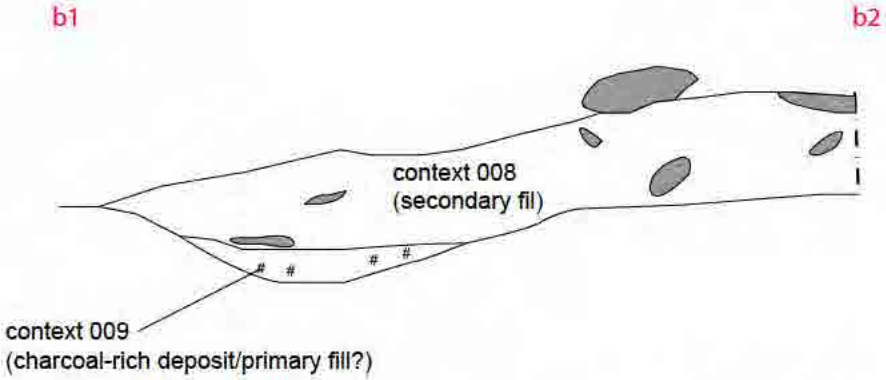


Figure 14b: Trench 17 - possible cut or hollow (Context 011): southeast facing section (Scale: 1:10@A4)

Figure 14: Trench 17 - Plan and Sections (For the location of trench 17, cf. RSK Archaeological Monitoring Locations Map 13, Reproduced as Figure 8)

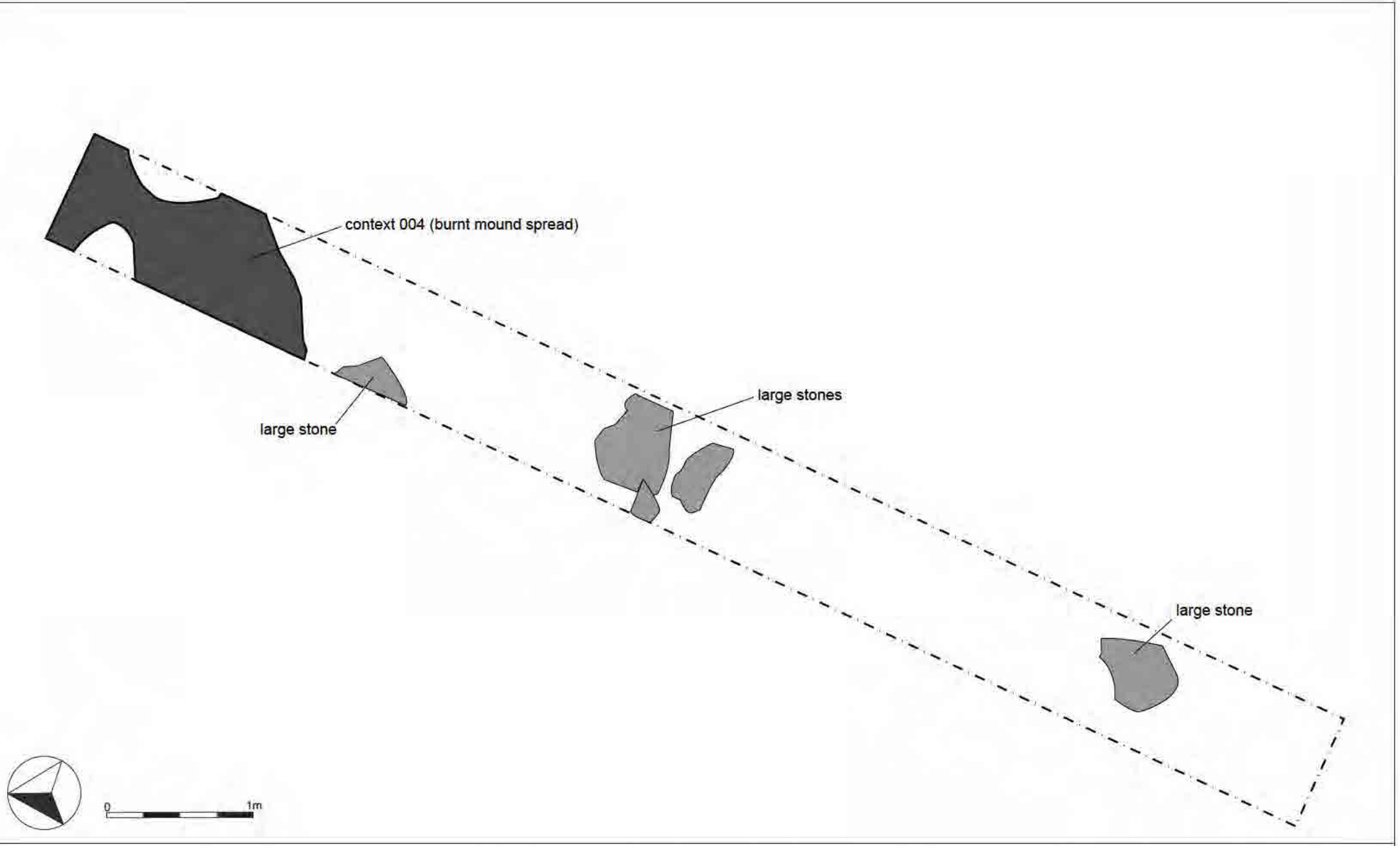


Figure 15: Trench 24 - Plan with assocaiated archaeological features (For the location of trench 17, cf. RSK Archaeological Monitoring Locations Map 16; Reproduced as Figure 10). Scale: as indicated

PLATES

Plate 1: Trench 14 - This trench was positioned to target "uncertain/unknown" geophysics and was located on the lower area of field 6/1. At the centre of the trench there was a deposit of large stones, initially thought to be the remains of a field boundary, within a matrix of grey clay with orange mottling.
Further investigation showed voids in the stones and edges indicating that this feature was quite a large stone filled drain. (cf. Plate 2). Scales: 2 x 2.0m

Plate 2: Trench 14 - Detail of large stone filled drain: interpreted as post-medieval.
(cf. Plate 1). Scales: 1 x 2.0m

Plate 3: Trench 15a - This trench was positioned to target "mainly geological" geophysics on a relatively steep SE-NW slope. At the NW end of the trench a possible field boundary ditch was identified, filled by a light orange brown sand-rich clay silt. This ditch appeared just below the topsoil and matched the alignment of a modern boundary wall located on the other side of the field wall, suggesting the feature was part of a modern boundary alignment.

Plate 4: Trench 15a - This trench was positioned to target "mainly geological" geophysics on a relatively steep SE-NW slope. At the SE end of the trench a former field boundary was noted, although its full width was not assessed as it was outside of the investigative area (about 0.50m was visible), running at a right angle to the trench. Visible on the 1st Edition 25" Ordnance Survey Map of the area

Plate 5: Trench 17. This trench was positioned across the steep west-facing slope of field 6/11 and targeted "geological and uncertain/unknown" geophysics. Two archaeological features were identified within the confines of the trench: a small pit and a larger pit or hollow.

Plate 6: Trench 17 - detail of the silt-rich pit or hollow (context 011). The feature measured 1.10m (w) and 0.15m (d) and was filled by a semi-circular deposit of a brown silt containing stones and charcoal; the pit/hollow and associated fill were only partly extant within the trench. A 0.50m wide slot was cut through the fill, identifying a sealed band of charcoal-rich silt (context 009), which was atop the natural. It could not be determined within the confines of the trench whether the larger feature was a deliberately cut pit or a natural scoop or hollow.

Plate 7: Trench 17 - detail of the small pit (context 006); the pit measured 0.60m (w) and 0.20m (d) and cut both the natural (context 003) and a larger silt-rich pit or hollow (context 011). no datable artefacts were identified within this feature or the larger pit/hollow

Plate 8: Trench 21- this trench was located to target "mainly geological" geophysics and was positioned at the edge of a boggy patch of ground. Two post-medieval stone-filled field drains were noted cut into the subsoil.

Plate 9: Trench 24 - The trench was located to target "geological and uncertain/unknown" geophysics and was positioned near a gate in the stone wall at the top of the slope above a boggy and marshy area. Large flat slabs were found at 10.0m along the trench and seem to be natural, although this could not be confirmed. Further towards the NNE a deposit of burnt stone and charcoal was found which continued to the end of the trench. This deposit is typical of burnt mound material.

Plate 10: Trench 24 - detail of burnt mound during initial exposure and investigation. The total exposed burnt mound area within the trench was 5.0m x 1.60m (trench width). The mound appeared to continue outside the trench. No associated trough or hearth were identified within the confines of the trench. The depth of the material at the outer edge of the mound was 0.20m. Scale: 2 x 1.0m

Plate 11: Trench 24 - detail of large flat slabs located at 10.0m along the trench. Interpreted as a natural formation. Scale: 1 x 1.0m.

Plate 12: Trench 27 - this trench was located to target "mainly geological" geophysics and was positioned on the re-claimed land of Traeth Mawr. Evidence for localised drainage was indicated by a series of 5 ceramic field drains within the trench. Scale: 2 x 1.0m

Plate 13: Trench 29 - this trench was located to target "possibly geological" geophysics. The trench was cut into soft and wet ground, with a dark brown topsoil with a depth of 0.20m overlying a pale grey sand with a depth of 0.10m. A ceramic field drain was found within the trench, which was blocked with silt and not working, and also a stone filled field drain was exposed which began to fill the trench with water. Scale: 1 x 1.0m.

Plate 14: Trench 30 - this trench was positioned across a low lying channel between two higher areas. The topsoil had a depth of 0.20m and overlay a subsoil of pale grey sand that reached a maximum depth of 0.20m. Two ceramic land drains found within the first 6.60m from the east and another just over half way in the trench. A test pit was excavated to confirm the nature of the natural: a narrow band of a natural peaty organic material was seen in this area, but the trench began to flood and the excavation discontinued. Scale 2 x 1.0m.

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