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BNRG RENEWABLES LTD

LAND AT BRYN BACHAU FARM, CHWILOG, GWYNEDD

ARCHAEOLOGICAL TRIAL TRENCHING REPORT

NOVEMBER 2015

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archaeology

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BNRG Renewables Ltd

Land at Bryn Bachau Farm, Chwilog, Gwynedd

Archaeological Trial Trenching Report

November 2015

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SUMMARY

Wardell Armstrong Archaeology was commissioned by BNRG Renewables Ltd., to undertake archaeological trial trenching of land at Bryn Bachau Farm, Chwilog, Gwynedd (Centred on SH 4285 3725). This work was undertaken in relation to a planning application (C15/0571/41/LL) for a proposed new solar development.

The archaeological trial trenching was undertaken over five days from the 2nd to the 6th of November 2015 and involved the excavation of ten trenches. Six of the ten trenches were devoid of archaeological features. Archaeological features were observed in four trenches, but no finds were recovered from any of the features to date them.

There were two shallow ditches, one each in Trenches 7 and 8. The ditches had similar fills and profiles that appeared to be contemporary and part of an earlier field system that had been detected during a previous geophysical survey.

Two shallow ditches, were also revealed in Trenches 1 and 5. The ditches also appeared to part of earlier field systems and but may not be contemporary. The ditch in Trench 1 was one detected during the geophysical survey mentioned above.

ACKNOWLEDGEMENTS

Wardell Armstrong Archaeology (WAA) thank BNRG Renewables Ltd. for commissioning the project, and for all assistance throughout the work. Thanks also to Jenny Emmett, Planning Archaeologist, Gwynedd Archaeological Trust, for all her assistance throughout the project.

Wardell Armstrong Archaeology also thanks D W Jones Plant Hire and their staff for their help during this project.

The archaeological evaluation was undertaken by Mike McElligott assisted by Sean Johnson and Ron Brown. The report was written by Mike McElligott and the drawings were produced by Helen Phillips and Adrian Bailey. The environmental assessment was undertaken by Don O'Meara, WAA Environmental Officer.

The report was edited by Richard Newman, Post excavation Manager for WAA. The project was managed by Martin Railton, Senior Project Manager for WAA.

1 INTRODUCTION

1.1 Circumstances of the Project

1.1.1 In November 2015, WAA was invited by BNGR Renewables Ltd. to undertake archaeological trial trenching on land at Bryn Bachau Farm, Chwilog, Gwynedd (Centred on SH 4285 3725), in support relation to a planning application (C15/0571/41/LL) for a proposed new solar development. Following a geophysical survey undertaken in July 2015, Jenny Emmett, Planning Archaeologist, Gwynedd Archaeological Trust requested a programme of archaeological investigation to test the results of the geophysical survey.

1.1.2 The geophysical survey indicated that there a number of former field boundaries which corresponded to those depicted on the 1841 Tithe Map and later Ordnance Survey maps along were several other linear anomalies interpreted as soil-filled ditches.

1.1.3 This report outlines the evaluation works undertaken on-site, the subsequent programme of post-fieldwork analysis and the results of this scheme of archaeological works.

2 METHODOLOGY

2.1 Written Scheme of Investigation

2.1.1 Upon request from BNGR Renewables Ltd., Wardell Armstrong Archaeology (WAA) was commissioned to prepare a Written Scheme of Investigation (WSI) for archaeological trial trenching. Following consultation with Jenny Emmett, Planning Archaeologist, Gwynedd Archaeological Trust, a WSI was submitted to GAT for approval. Should significant archaeological deposits or features be revealed it will provide a sufficient a level of archaeological information to enable the Local Planning Authority (LPA) to consider potential additional mitigation strategies and/or preservation *in situ*. This is in line with government advice as set out in Planning Policy Wales (Seventh Edition July 2014), and the supporting Welsh Office Circular 60/96, Planning and the Historic Environment: Archaeology. Wardell Armstrong Archaeology subsequently was commissioned to undertake this work by BNGR Renewables Ltd.

2.1.2 The archaeological evaluation was undertaken following the Chartered Institute for Archaeologists *Standard and Guidance for Archaeological Field Evaluation* (CIfA 2014a), The fieldwork programme was followed by an assessment of the data as set out in the *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (CIfA 2014b) and in accordance with the WAA Excavation Manual (2012).

2.2 The Archaeological Trial Trenching

2.2.1 The trial trenching consisted of the excavation of ten trenches within the proposed development area. The purpose of the trenching was to establish the nature and extent of below ground archaeological remains within the vicinity. The results of the mitigation trenching was to be used to inform the Local Planning Authority and allow an informed decision to be made upon the requirement for any further archaeological work and/or mitigation, should significant archaeological deposits and features be revealed by this work

2.2.2 In summary, the main objectives of the field evaluation were to:

- determine the presence or absence of buried archaeological remains within the proposed development site
- determine the character, date, extent and distribution of any archaeological deposits and their potential significance

- determine levels of disturbance to any archaeological deposits from plough damage or from any other agricultural/industrial practices or later building activities
- investigate and record all deposits and features of archaeological interest within the areas to be disturbed by the current development
- determine the likely impact on archaeological deposits from the proposed development
- disseminate the results of the fieldwork through an appropriate level of reporting.

2.2.3 Topsoil was removed by mechanical excavator under close archaeological supervision. The trial trenches were subsequently cleaned by hand and all features were investigated and recorded according to the Wardell Armstrong Archaeology standard procedure as set out in the Excavation Manual (WAA 2012).

2.2.4 The ten evaluation trenches were backfilled following excavation and recording.

2.3 The Archive

2.3.1 A full professional archive has been compiled according to the Archaeological Archives Forum recommendations (Brown 2011). The archive will be deposited with Amgueddfa Gwynedd Museum, Gwynedd, where viewing will be available upon request. The archive can be accessed under the unique project identifier WAA15 BCG-A, CP 11495/15.

3 BACKGROUND

3.1 Location and Geological Context

3.1.1 The proposed new solar development lies within agricultural land situated to the northeast of Pwllheli and to the northwest of Hafan Y Môr caravan site, north of the A497, on the Llŷn Peninsula (Figure 1), centred on Ordnance Survey grid reference SH 4285 3725. The area of investigation measured approximately 14.22ha of rough pasture, bounded by hedgerows, areas of woodland, drystone walls and some post and wire fences.

3.1.2 The underlying solid geology of the site consists of Dwyfach Formation sandstone, Cwim Eigiau Formation siltstone and Nant Ffrancon mudstone all of which formed in the Ordovician Period (454 – 457 million years ago). There were further isolated bedrock deposits of Fawr Rhyolitic Tuff Formation and Pen-ychain Rhyolitic Complex (451 – 461 million years ago) towards the western side of the site. The superficial deposits consist of Devensian – Diamiction glacial till that formed during the Quaternary Period (up to 2 million years ago) (BGS 2015).

3.2 Historic and Archaeological Background

3.2.1 ***Introduction***: this background is compiled mostly from secondary sources, and the records consulted during the desk-based assessment that was previously under taken by Wardell Armstrong (2015). It is intended only as a summary of historical developments around the study area, in order to assess the archaeological potential.

3.2.2 ***Prehistoric (up to c.AD 72):*** A possible unenclosed settlement that consisted of a burnt mound and four small pits / postholes dated to the mid to late Bronze Age were identified to the south of the site, along the route of the A497. This possible settlement appeared to have been used in the Iron Age as sherds of coarse Iron Age pottery were recovered from postholes also.

3.2.3 ***Roman (c.AD 72 – c.410):*** Two hut circles that consisted of circular banks in a low-lying marshy area by the stream were recorded 55m to the southwest of the site at Pont Llwyn Gwyn. They may represent Romano-British or earlier roundhouses. A spindal whorl dated to the Roman period was recovered from within the site.

3.2.4 ***Medieval (c.410 – c.1540):*** Medieval townships surround the site; Penychen to the south, Pennarth to the north and Chwilog to the northeast. A visible Holloway east

of Glan Morfa farm was identified as a medieval route that predated the 19th century road which the modern A497 now follows.

3.2.5 ***Post-Medieval and Modern (c.1540 – present):*** The John Evans 1795 map of North Wales shows the route of the medieval Holloway, to the south of the site. The 1841 Tithe map of Llarmon shows the site subdivided into ten separate fields at this time. The first edition 1888 OS map shows a more regular field pattern with some sub-division of the earlier field system to the north of Bryn Bachau. Subsequent Ordnance Survey maps show little change to the site and its surroundings.

3.3 Previous Archaeological Work

3.3.1 A geophysical survey was undertaken by WAA in July 2015 (2015). The majority of the geophysical anomalies detected are believed to be associated with the agricultural use of the site, including former boundaries, plough furrows and possible land drains.

3.3.2 Previous geophysical surveys and trial trenching was undertaken along the A497 during a road improvement scheme to the south of the site. The surveys identified a buried pipeline to the southwest of the site close to the recorded hut circles. A curvilinear feature was identified, with several linear features located within and beyond the feature, which were possibly extending northwards. Trenching identified four post-medieval drainage features (GAT Report 573 2005).

4 ARCHAEOLOGICAL RESULTS

4.1 Introduction

4.1.1 The trial trenching was undertaken from the 2nd to the 6th of November 2015 and comprised the excavation of 10 trenches (Figure 2). The topsoil was stripped by a 6.5 tonne tracked 360 excavator with a toothless bucket to the level of the natural substrate. The areas under investigation were subsequently cleaned by hand and potential archaeological features were investigated. The trenches measured 30m in length and were 1.55m wide. The summaries of the trenches are in Appendix 1. The areas refer to the previous geophysical survey areas.

4.2 Results

4.2.1 **Area 1**: Area 1 was located to the northwest of Bryn Bachau Farm (Figure 2) and contained a number of possible soil filled features.

4.2.2 ***Trench 6:*** Trench 6 was located near the centre of Area 1 and was aligned northeast-southwest (Figure 2) (Plate 1). The trench was excavated to a maximum depth of 0.40m, revealing a friable light yellowish-brown natural clay (**601**) below *c*.0.35m of a loose mid brown, silty clay topsoil (**600**). A possible ditch and pit were observed in the trench but after investigation, were found to be a former hedgerow and tree bole respectively.

4.2.3 **Area 2**: Area 2 was located to the west of Bryn Bachau Farm (Figure 2) and contained Trenches 7 and 8, located to target possible soil-filled ditches.

4.2.4 ***Trench 7:*** Trench 7 was located on the western side of Area 2 and was aligned northeast-southwest (Figure 5) (Plate 2). The trench was excavated to a maximum depth of 0.40m, revealing a friable light yellowish-brown natural clay (**701**) below *c*.0.29m of a loose mid brown, silty clay topsoil (**700**).

4.2.5 Ditch [**702**] was located in the southwestern end of the trench and was aligned northwest-southeast (Figure 5) (Plate 3). It was straight with a moderately steep sloping southwest side, a gradual sloping northeast side and a concave base. It measured 1.30m wide by 0.22m deep. The single fill (**703**) was a loose light brown silty clay that contained moderate small stones. No finds were recovered. The ditch was detected in the geophysical survey that took place in July (WAA 2015) and appeared to be part of a medieval/post-medieval field system. This was believed to be associated with ditch [**802**] in Trench 8. A possible ditch and pit that appeared as an anomaly in the geophysical survey, were observed in the

northeast end of the trench but after investigation, were found to be variation in the natural soil strata.

4.2.6 ***Trench 8:*** Trench 8 was located near the centre of Area 2 and was aligned northwest-southeast (Figure 6) (Plate 4). The trench was excavated to a maximum depth of 0.35m, revealing a friable light grey-yellow-brown sandy clay (**801**) below *c*.0.30m of a loose darkish mid brown, silty clay topsoil (**800**). Two land drains were observed near the centre of the trench.

4.2.7 Ditch [**802**] was located near the centre of the trench and was aligned northeast-southwest (Figure 6) (Plate 5). It was straight with a sharp steep sloping northwest side, a gradual sloping southeast and a flat base. It measured 1.1m wide by 0.09m deep. The single fill (**803)** was a friable mid brown silty clay that contained occasional small stone and very occasional large stones. The ditch was also detected in the geophysical survey that took place in July (WAA 2015) and appeared to be part of a medieval/post-medieval field system.

4.2.8 A possible ditch was also observed in near the centre of the trench. This contained a friable mid brown silty clay (**804**) within an imperceptible cut that was 0.04m thick and heavily disturbed by root activity. This was interpreted as a former hedgerow that was marked as an anomaly on the geophysical survey.

4.2.9 **Area 3**: Area 3 was located to the south of Bryn Bachau Farm (Figure 2) and contained Trenches 9 and 10. The two trenches were devoid of any archaeological features.

4.2.10 ***Trench 9:*** Trench 9 was located northern side of Area 3 to sample an apparently 'blank' area and was aligned northwest-southeast (Figure 2) (Plate 6) The trench was excavated to a maximum depth of 0.40m, revealing a friable light yellowish-brown natural clay (**901**) below *c*.0.15m of a loose light brown, silty clay subsoil (**902**) and *c*.0.10m of a loose mid brown, silty clay topsoil (**900**). A modern land drain was observed on the eastern side of the trench.

4.2.11 ***Trench 10:*** Trench 10 was located in the southwest corner of Area 3 to sample a possible soil-filled ditch and was aligned north-northwest to south-southeast (Figure 2) (Plate 7). The trench was excavated to a maximum depth of 0.40m, revealing a friable light yellowish-brown natural clay (**1001**) below *c*.0.20m of a loose light brown, silty clay subsoil (**1002**) and *c*.0.17m of a loose mid brown, silty clay topsoil (**1000**). The possible soiled-filled ditch was revealed to be a land drain.

4.2.12 **Area 4**: Area 4 was located to the west of Bryn Bachau Farm (Figure 2) and contained Trenches 1, 2, 3, 4 and 5. Trenches 1 and 5 contained archaeological features whilst Trenches 2, 3 and 4 were devoid of any archaeological features.

4.2.13 ***Trench 1:*** Trench 1 was located near the centre of Area 1 to target a possible former field boundary and was aligned northwest-southeast (Figure 3) (Plate 8). The trench was excavated to a maximum depth of 0.47m, revealing a friable light yellowish-brown natural clay (**101**) below *c*.0.20m of a loose light brown clayey silt subsoil (**102**) and *c*.0.15m of a loose mid brown silty clay topsoil (**100**).

4.2.14 Ditch [**103**] was located in the southern end of the trench (Figure 3) and it was aligned northeast-southwest (Plate 9). It was straight with gradual sloping sides and a flat base that measured 0.85m wide by 0.35m deep. The lower fill (**105**) was a friable light grey clay that was 0.11m thick. The upper fill (**104**) was a loose mid brown clayey silt with orange flecking that contained occasional small stone and measured 0.24m thick. The ditch was detected in the geophysical survey and appeared to be part of a medieval/post-medieval field system.

4.2.15 ***Trench 2:*** Trench 2 was located in the western side of Area 4 to target the same former field boundary and an intersection with a boundary to the south (Figure 2) (Plate 10). The trench was aligned northwest-southeast that was excavated to a maximum depth of 0.55m, revealing a friable light yellowish-brown natural clay (**201**) below *c*.0.23m of a loose light brown clayey silt subsoil (**202**) and *c*.0.15m of a loose mid brown, silty clay topsoil (**200**). No features were detected.

4.2.16 ***Trench 3:*** Trench 3 was located in the southern end of Area 4 to sample a possible ditch (Figure 2) (Plate 11). The trench was aligned northwest-southeast that was excavated to a maximum depth of 0.45m, revealing a friable light yellowish-brown natural clay (**301**) below *c*.0.20m of a loose light brown clayey silt subsoil (**302**) and *c*.0.08m of a loose mid brown, silty clay, topsoil (**300**). No features were detected.

4.2.17 ***Trench 4:*** Trench 4 was located in the northern end of Area 4 to sample a possible soil-filled ditch (Figure 2) (Plate 12). The trench was aligned north-south and was excavated to a maximum depth of 0.50m, revealing a friable light yellowish-brown natural clay (**401**) below *c*.0.19m of a loose light brown clayey silt subsoil (**402**) and *c*.0.20m of a loose mid brown, silty clay topsoil (**400**). A land drain was observed in the southern end of the trench.

4.2.18 ***Trench 5:*** Trench 5 was located in the eastern side of Area 4 to sample a possible soil-filled ditch (Figure 4) (Plate 13). The trench was aligned northeast-southwest

that was excavated to a maximum depth of 0.55m, revealing a friable light yellowish-brown natural clay (**501**) below *c*.0.19m of a loose light brown clayey silt subsoil (**502**) and *c*.0.20m of a loose mid brown, silty clay topsoil (**500**).

4.2.19 Ditch [**503**] was located near the centre of the trench and was aligned northwest-southeast (Figure 4) (Plate 14). It was straight with a sharp, steep sloping northeast side, a gradual sloping southwest side and a flat base. It measured 0.6m wide by 0.30m deep. The single fill (**504**) was a loose mid to light brown silty clay that contained occasional small stones. No finds were recovered. It appeared to be an old field boundary.

5 ENVIRONMENTAL ASSESSMENT

5.1 Introduction

5.1.1 During the course of the archaeological trial trenching five samples were taken for the purposes of archaeobotanical analysis. The samples were taken to extract material that will aid the understanding of the depositional history of these contexts, as well as understand the levels of organic preservation found within the excavated area. In this case the procedures followed the recommendations and advice as per Historic England recommendations (2011), though respecting the position of the evaluated area within Wales.

5.2 Archaeobotancial Analysis

5.2.1 The samples were manually floated and sieved through a Siraf style flotation tank. In this case the residue and the flot are retained while the sand-silt-clay components are filtered out. The sample was flotted over a 1mm plastic mesh and the washover collected in a 250-micron geological sieve. The heavy residue was air-dried and sorted by eye for any material that may aid our understanding of the deposit; no such material was recovered from the samples however. The residue samples were also scanned with a hand magnet to retrieve forms of magnetic material. This was done to retrieve residues of metallurgical activity, in particular hammer scale, spheroid hammer scale, fuel-ash slag and vitrified material which might be indicative of other high temperature non-metallurgical processes. Processing procedures and nomenclature follows the conventions set out by the Historic England (2015); though in this case no anthropogenic metallurgical material was recovered.

5.2.2 The washover was dried slowly and scanned at x40-60 magnification for charred and uncharred botanical remains. Identification of these reference material held in the Environmental Laboratory at Wardell Armstrong Archaeology and by reference to relevant literature (Cappers et al. 2010; Jacomet 2006). Plant taxonomic nomenclature follows Stace (2010), except in the case of the cereal remains where Zohary et al. was used (Zohary et al. 2013, Table 3).

5.2.3 The table which accompanies this report contains counts for all of the identified plant material, with an asterisk '*' to denote where this material was recovered in a charred condition. Material from the heavy residue is recorded on an abundance scale, or using weights in grams

5.3 Discussion of the Remains

5.3.1 The ecofactual evidence recovered from the soil samples all contained low amounts of plant remains. The recovered plant remains consisted mainly of desiccated seeds of common wild species such as goosefoot (*Chenopodiaceae* species), and buttercup seeds (*Ranunculus species*). The remains are summarised in Table 1 below. The desiccated nature of most of these remains, and the absence of waterlogging, suggests they may be modern intrusive material.

5.3.2 Charred cereal grain was recovered in one sample, <**5**> (**703**), and consisted of a single hulled barley type grain, as well as this the wood from this sample had many heather fragments.

5.3.3 The charcoal, and charred seeds (a barley grains, and a charred seed of heath-grass), suggest low levels of human activity within the evaluated area, and possibly this material was brought to this area via manuring activity. Only context (**703**) demonstrated moderately frequent remains which might be associated with manuring, or local burning of heather vegetation.

Sample	1	2	3	4	5
Context	504	104	803	804	703
Cut	503	103	802	/	702
Feature	Linear	Linear	Linear	Linear	Linear
Volume processed (litres)	20	20	20	20	20
Weight of retent (kgs)	3.9	3.9	7.4	5.9	6.3
Weight of flot (grams)	>10	>10	>10	>10	>10
Residue contents (1-Low; 2-Moderately present; 3-Dominant)				-	-
Charcoal	1	1	1	1	1
Magnetic residue	3	1	1	1	1
Stones/gravel	3	3	3	3	3
Charred cereal grains (Total counts)	-	-	-	-	-
Hordeum species (Barley; hulled)					1
Flot matrix (relative abundance 1-3)	-	-	-	-	-
Charcoal	2	2	2	1	2
Modern roots	3	2	2	3	2
Other plant remains (Total Counts)	-	-	-	-	-
Betula pendula (Birch)	1	2			1
Chenopodioideae (goosefoots)	1	5	13	3	6
Danthonia decumbens (Heath grass)	1*				
Euphorbia helioscopia (Sun Spurge)			1		
Cardus/Cirsium species (Thistle family)					1
Polygonaceae (Knotweed family)					1
Potentilla species (Cinquefoils)			1		1

Ranunculus species (Buttercups)		1	11	7	5
Persicaria species (Smartweeds)				1	10
Stachys species (Woundwort)					7
Rubus cf. fructicosus (Bramble berry family)			1		1
*Taraxacum officinale (*Common Dandelion)			1		
Trifolium species (Clovers)			1		1

Table 1: Summary of the remains from environmental samples

6 CONCLUSIONS

6.1 Evaluation results

6.1.1 During the archaeological trial trenching of land at Bryn Bachau Farm, 10 trenches were excavated totaling 465m^2 of excavation in total. The aim was to identify the presence or absence of archaeological remains, targeting features identified in a previous geophysical survey.

6.1.2 Six of the ten trenches were devoid of archaeological features. Shallow ditches were observed in Trenches 7 and 8, and appeared to be part of an earlier field system that was detected during the geophysical survey and were noted on old Ordnance Survey maps. The two ditches had similar profiles and fills but no finds were recovered from either ditch.

6.1.3 Shallow ditches were also observed in Trenches 1 and 5. The ditch in Trench 1 was detected during the geophysical survey whereas the ditch in Trench 5 was not. But both ditches appeared to part of an earlier field system, of possible medieval or post-medieval date.

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APPENDIX 1: TRENCH DESCRIPTIONS

Trench 1 (Area 4)

Length: 30m
Width: 1.55m
Maximum Depth: 0.47m
Minimum Depth: 0.32m
Orientation: NW-SE
OS Co-ordinates: (E) 242610 (N) 337342
(E) 242632 (N) 337322

Context Number	Context Type	Description	Maximum Thickness/Depth
(100)	Topsoil	Loose mid brown silty clay	0.15m
(101)	Natural Substrate	Friable light yellowish brown	**N/A**
(102)	Subsoil	Loose light brown clayey silt	0.20m
[103]	Cut	Linear feature	0.35m
(104)	Deposit	Mid brown clayey silt upper fill of [103]	0.24m
(105)	Deposit	Light grey clay lower fill of [103]	0.11m

Trench 2 (Area 4)

Length: 30m
Width: 1.55m
Maximum Depth: 0.55m
Minimum Depth: 0.45m
Orientation: NW-SE
OS Co-ordinates: (E) 242629 (N) 337315
(E) 242650 (N) 337293

Context Number	Context Type	Description	Maximum Thickness/Depth
(200)	Topsoil	Loose mid brown silty clay	0.15m
(201)	Natural Substrate	Friable light yellowish brown clay	**N/A**
(202)	Subsoil	Loose light brown clayey silt	0.23m

Trench 3 (Area 4)

Length: 30m
Width: 1.55m
Maximum Depth: 0.45m
Minimum Depth: 0.33m
Orientation: NW-SE
OS Co-ordinates: (E) 242664 (N) 337282
(E) 242686 (N) 337262

Context Number	Context Type	Description	Maximum Thickness/Depth
(300)	Topsoil	Loose mid brown silty clay	0.08m
(301)	Natural Substrate	Friable light yellowish brown clay	**N/A**
(302)	Subsoil	Loose light brown clayey silt	0.20m

Trench 4 (Area 4)

Length: 30m
Width: 1.55m
Maximum Depth: 0.50m
Minimum Depth: 0.40m
Orientation: N-S
OS Co-ordinates: (E) 242662 (N) 337366
(E) 242663 (N) 337336

Context Number	Context Type	Description	Maximum Thickness/Depth
(400)	Topsoil	Loose mid brown silty clay	0.20m
(401)	Natural Substrate	Friable light yellowish brown clay	**N/A**
(402)	Subsoil	Loose light brown clayey silt	0.19m

Trench 5 (Area 4)

Length: 30m

Width: 1.55m

Maximum Depth: 0.55m

Minimum Depth: 0.45m

Orientation: NE-SW

OS Co-ordinates: (E) 242681 (N) 337323
(E) 242706 (N) 337340

Context Number	Context Type	Description	Maximum Thickness/Depth
(500)	Topsoil	Loose mid brown silty clay	0.20m
(501)	Natural Substrate	Firm mid greyish yellow brown clay	**N/A**
(502)	Subsoil	Loose light brown clayey silt	0.19m
[503]	Cut	Linear feature	0.30m
(504)	Deposit	Loose light/mid brown silty clay fill of [503]	0.30m

Trench 6 (Area 1)

Length: 30m

Width: 1.55m

Maximum Depth: 0.40m

Minimum Depth: 0.28m

Orientation: N-S

OS Co-ordinates: (E) 242984 (N) 337474
(E) 243005 (N) 337495

Context Number	Context Type	Description	Maximum Thickness/Depth
(600)	Topsoil	Loose mid brown silty clay	0.35m
(601)	Natural Substrate	Friable light yellowish brown clay	**N/A**

Trench 7 (Area 2)

Length: 30m

Width: 1.55m

Maximum Depth: 0.40m

Minimum Depth: 0.25m

Orientation: NE-SW

OS Co-ordinates: (E) 243026 (N) 337423
(E) 243050 (N) 337440

Context Number	Context Type	Description	Maximum Thickness/Depth
(700)	Topsoil	Loose mid brown silty clay	0.30m
(701)	Natural Substrate	Friable light yellowish brown clay	**N/A**
[702]	Cut	Linear feature	0.22m
(703)	Deposit	Loose light brown silty clay fill of [702]	0.22m

Trench 8 (Area 2)

Length: 30m

Width: 1.55m

Maximum Depth: 0.95m

Minimum Depth: 0.60m

Orientation: E-W OS Co-ordinates: (E) 243067 (N) 337432
(E) 243085 (N) 337408

Context Number	Context Type	Description	Maximum Thickness/Depth
(800)	Topsoil	Loose darkish mid brown silty clay	0.30m
(801)	Natural Substrate	Friable light grey/yellow/brown sandy clay	**N/A**
[802]	Cut	Linear feature	0.09m
(803)	Deposit	Friable mid brown silty clay fill of [802]	0.09m
(804)	Deposit	Friable mid brown silty clay fill of a hedgerow	0.04m

Trench 9 (Area 3)

Length: 30m Width: 1.55m

Maximum Depth: 0.40m Minimum Depth: 0.25m

Orientation: NE-SW OS Co-ordinates: (E) 242863 (N) 337151
(E) 242891 (N) 337162

Context Number	Context Type	Description	Maximum Thickness/Depth
(900)	Topsoil	Loose mid brown silty clay	0.10m
(901)	Natural Substrate	Friable light yellowish brown clay	**N/A**
(902)	Subsoil	Loose light brown silty clay	0.15m

Trench 10 (Area 3)

Length: 30m Width: 1.55m

Maximum Depth: 0.60m Minimum Depth: 0.40m

Orientation: NNW-SSE OS Co-ordinates: (E) 242832 (N) 336997
(E) 242835 (N) 336967

Context Number	Context Type	Description	Maximum Thickness/Depth
(1000)	Topsoil	Loose mid brown silty clay	0.17m
(1001)	Natural Substrate	Friable mid brown sandy silt	**N/A**
(1002)	Subsoil	Firm mid yellow brown clay	0.27m

APPENDIX 2: PLATES

Plate 1: Trench 6, looking south

Plate 2: Trench 7, looking southwest

Plate 3: Ditch [702], looking northwest

Plate 4: Trench 8, looking southeast

Plate 5: Ditch [802], looking northeast

Plate 6: Trench 9, looking northeast

Plate 7: Trench 10, looking northeast

Plate 8: Trench 1, looking west

Plate 9: Ditch [102], looking northeast

Plate 10: Trench 2, looking southeast

Plate 11: Trench 3, looking northeast

Plate 12: Trench 4, looking north

Plate 13: Trench 5, looking northeast

Plate 14: Ditch [502], looking northwest

APPENDIX 3: FIGURES

PROJECT:	Bryn Bachau Farm, Chwilog, Gwynedd
SCALE:	1:25,000 at A4
REPORT No:	CP11495
CLIENT:	BNRG Renewables Ltd
DRAWN BY:	AB
DATE:	November 2015
FIGURE:	1

KEY:

Site location

Wardell Armstrong Archaeology 2015

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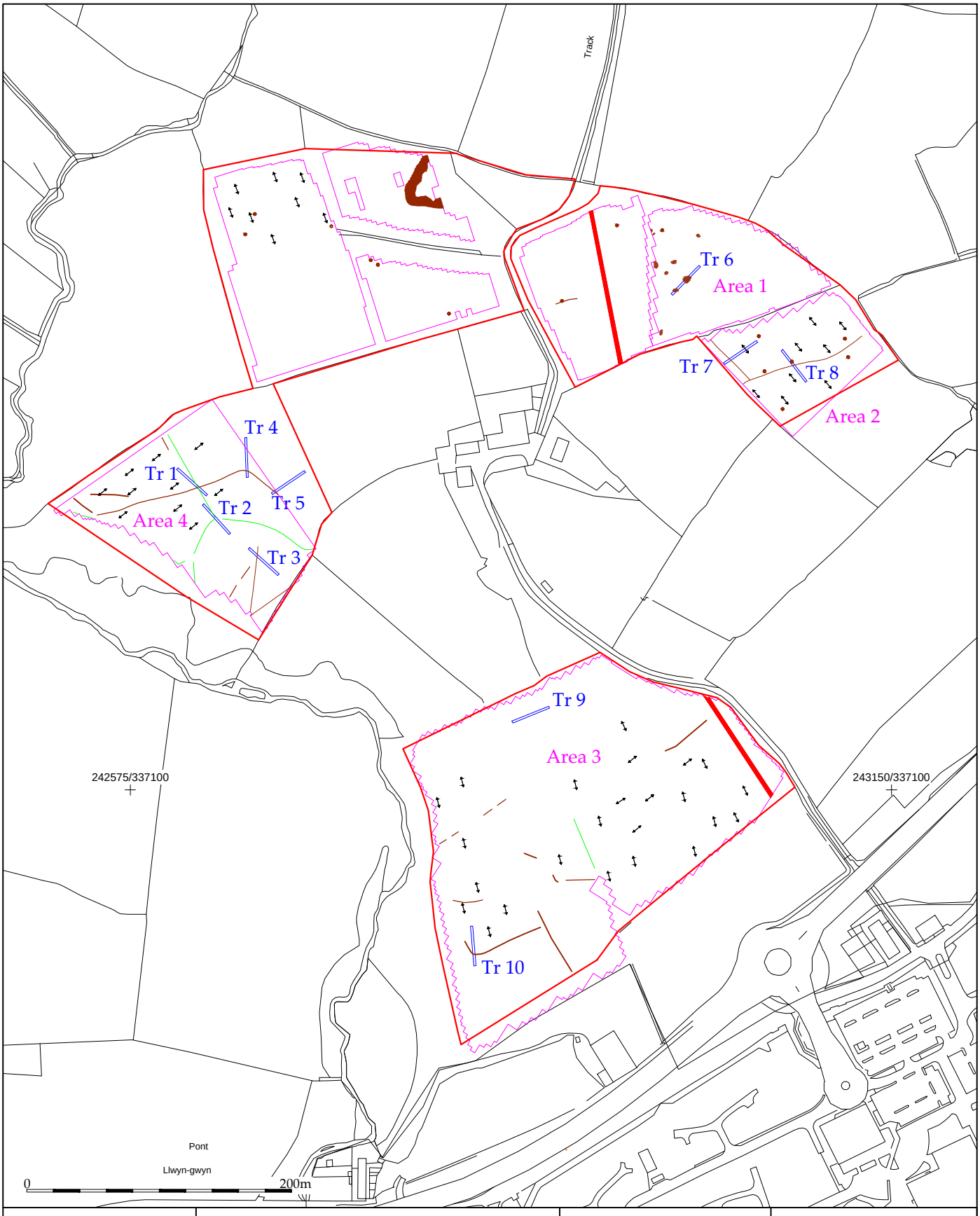
Figure 1: Site location.



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Wardell Armstrong Archaeology 2015

PROJECT:	Bryn Bachau Farm, Chwilog, Gwynedd
SCALE:	1:4,000 at A4
REPORT No:	CP11495
CLIENT:	BNRG Renewables Ltd
DRAWN BY:	HP
DATE:	November 2015
FIGURE:	2

KEY:

- Site location
- Outline of geophysical survey area
- Direction of ploughing
- Possible soil-filled features
- Possible field boundary
- Services

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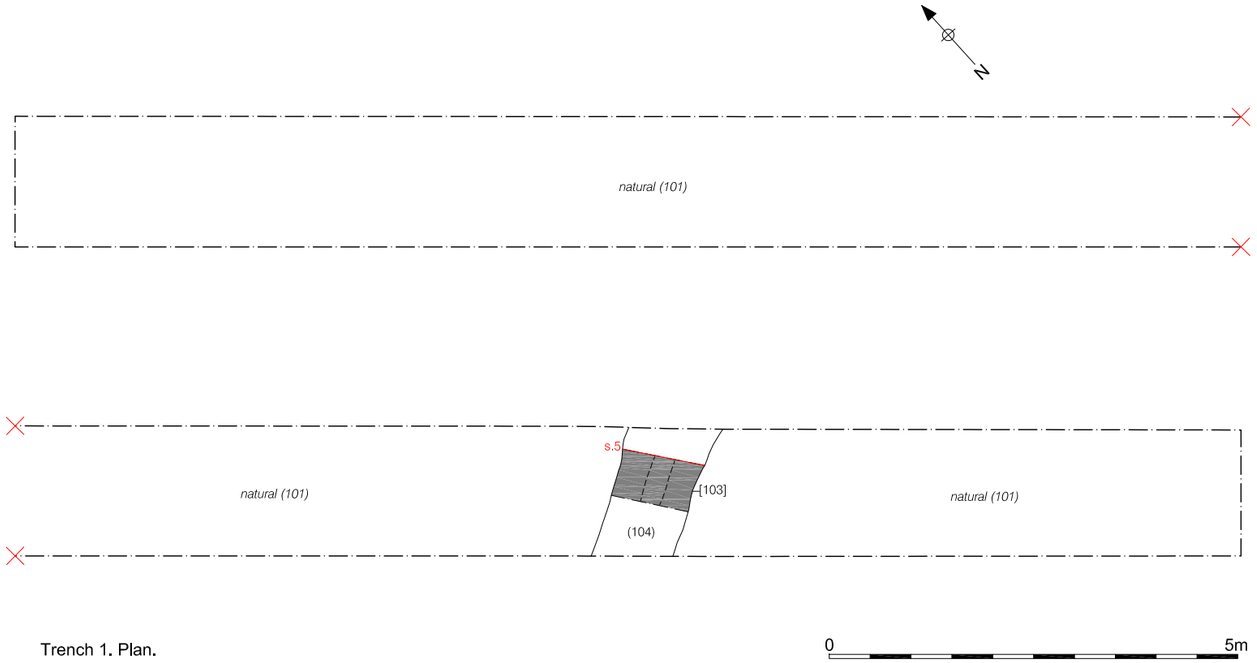
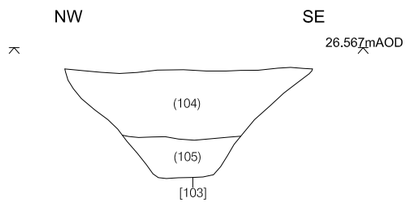
Figure 2: Location of evaluation trenches, showing the results of the previous geophysical survey.



Trench 1. Plan.



Section 5. South-west facing section across [103].

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Archaeology
2015

PROJECT:

Bryn Bachau Farm, Chwilog, Gwynedd

CLIENT:

BNRG Renewables LTD

SCALE: Plan 1:75/Sections 1:20 at A3

DRAWN BY: HP

DATE: November 2015

KEY:

(101) Context number

Height mAOD

Section location

Limit of excavation

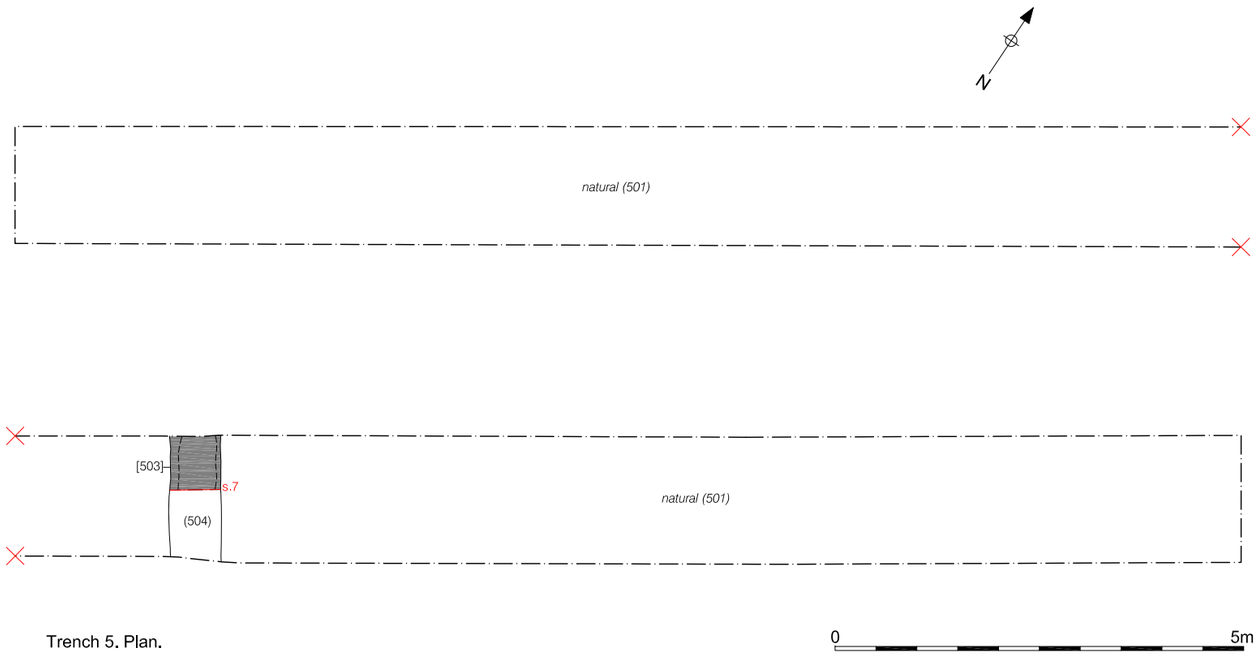
REPORT No:

CP11495

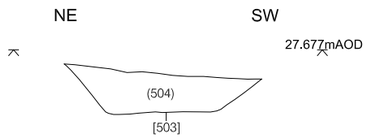
FIGURE:

3

Figure 3: Trench 1; plan and section.



Trench 5. Plan.



Section 7. North-west facing section across [503].

0 1m

Wardell Armstrong Archaeology 2015

PROJECT:

Bryn Bachau Farm, Chwilog, Gwynedd

CLIENT:

BNRG Renewables LTD

SCALE: Plan 1:75/Sections 1:20 at A3

DRAWN BY: HP

DATE: November 2015

KEY:

(101) Context number

Height mAOD

Section location

Limit of excavation

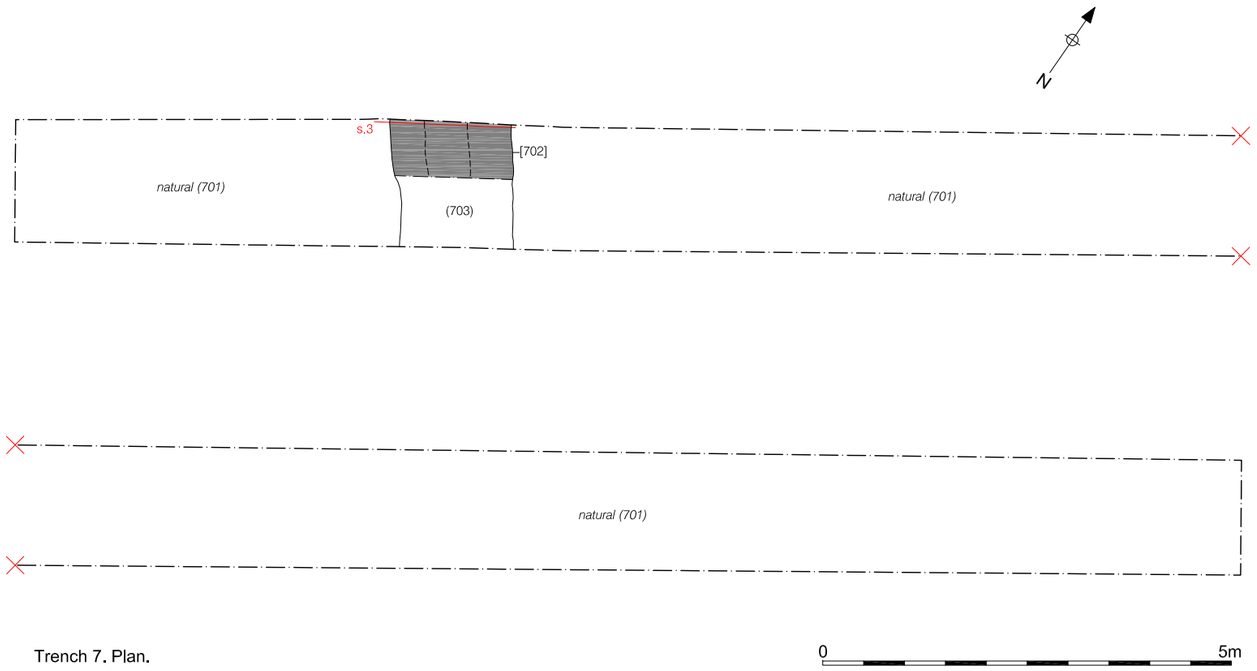
REPORT No:

CP11495

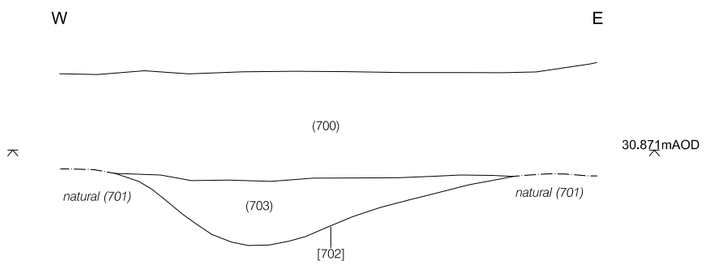
FIGURE:

4

Figure 4: Trench 5; plan and section.



Trench 7. Plan.



Section 3. South facing section across [702].

0 1m

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PROJECT:

Bryn Bachau Farm, Chwilog, Gwynedd

CLIENT:

BNRG Renewables LTD

SCALE: Plan 1:75/Sections 1:20 at A3

DRAWN BY: HP

DATE: November 2015

KEY:

(101) Context number

Height mAOD

Section location

Limit of excavation

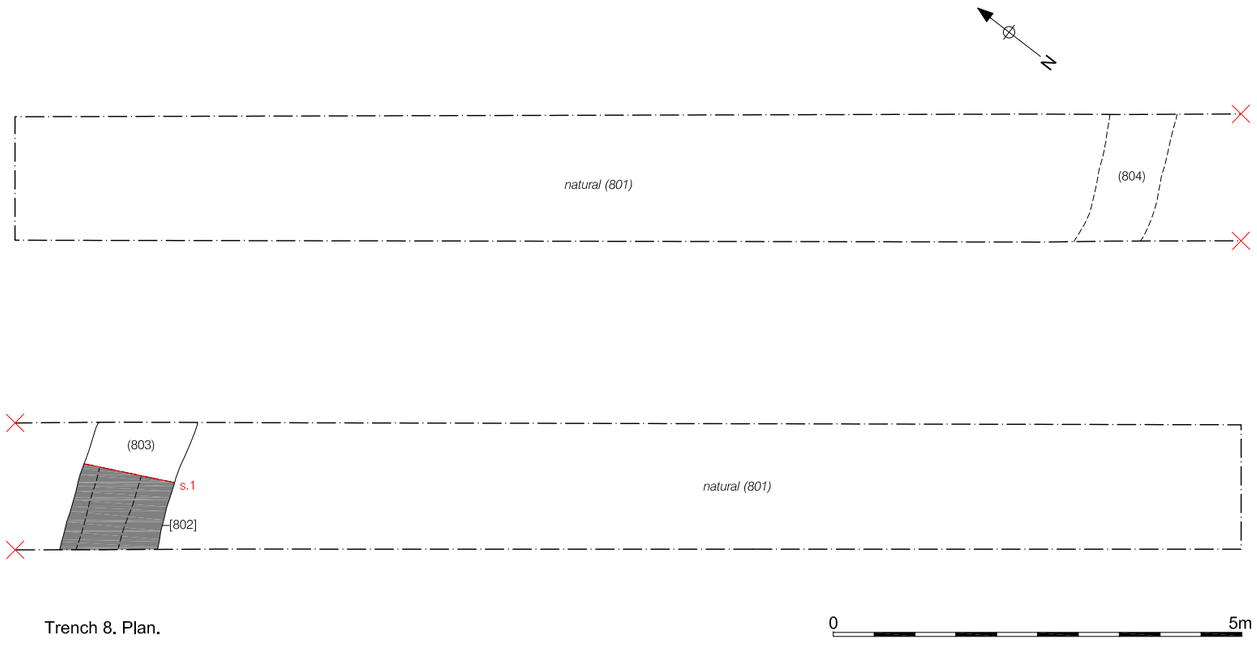
REPORT No:

CP11495

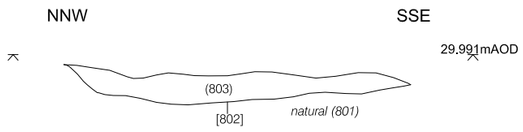
FIGURE:

5

Figure 5: Trench 7; plan and section.



Trench 8. Plan.



Section 1. WSW facing section across [802].

Wardell Armstrong Archaeology 2015

PROJECT:

Bryn Bachau Farm, Chwilog, Gwynedd

CLIENT:

BNRG Renewables LTD

SCALE: Plan 1:75/Sections 1:20 at A3

DRAWN BY: HP

DATE: November 2015

KEY:

(101) Context number

Height mAOD

Section location

Limit of excavation

REPORT No:

CP11495

FIGURE:

6

Figure 6: Trench 8; plan and section.

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