

Archaeology Wales

Tyle Crwth, Ynysddu, Newport

Archaeological Watching Brief



By
Dan Moore & Philip Poucher

Report No. 1859

Archaeology Wales

Tyle Crwth, Ynysddu, Newport

Archaeological Watching Brief

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Summary

Archaeology Wales was commissioned by Constantine Wind Energy to undertake an archaeological watching brief during groundwork associated with the erection of a single wind turbine with associated track access, electric cabinet and crane pad at land at Tyle Crwth, Southwest of Ynysddu, Newport centred on ST 17348 91668. The associated Planning Application No. is 15/0774/FULL.

The development lies in close proximity to a number of burial monuments of prehistoric date, some of which are protected as Scheduled Ancient Monuments (SAM MM196, MM149 & MM033).

Three linear features were recorded during the groundworks. A wide gully lay on the hillslope to the east, interpreted as a drainage feature but undated. A further gully or ditch was identified on the hill crest, also undated but perpendicular to existing field boundaries, interpreted as a drainage or boundary feature. A further small drainage gully was also uncovered adjacent to an existing trackway. No features or finds of a prehistoric nature were encountered during the works.

The watching brief complied with the Chartered Institute for Archaeologists Standards and Guidance for an Archaeological Watching Brief (2014).

Crynodeb

*Comisiynwyd Archeoleg Cymru gan gwmni Constantine Wind Energy i gynnal briff gwyllo archeolegol yn ystod y gwaith tir sy'n gysylltiedig â chodi un tyrbîn gwynt gyda mynediad trac cysylltiedig, cwpwrdd trydan a phad craen ar dir yn Tyle Crwth, i'r De-orllewin o Ynysddu, Casnewydd **sydd wedi'i ganolbwyntio ar ST 17348 91668. Rhif y cais cynllunio cysylltiedig yw 15/0774/FULL.***

Mae'r datblygiad yn gorwedd yn agos at nifer o henebion claddu o'r dyddiad cynhanesyddol, y mae rhai ohonynt wedi eu diogelu fel Henebion Cofrestredig (SAM MM196, MM149 MM033).

Recordiwyd tair nodwedd linellol yn ystod y gwaith daear. Roedd ffos linellol lydan yn gorwedd ar y llethr i'r dwyrain, wedi'i dehongli fel nodwedd ddraenio ond heb ei dyddio. Nodwyd ffosydd arall ar gopa'r bryn, sydd hefyd heb ei dyddio ond sy'n berpendicwlar i ffiniau caeau presennol, wedi'u dehongli fel nodwedd ddraenio neu ffin. Hefyd, cafodd ffos ddraenio fach arall ei dadorchuddio wrth ymyl llwybr sy'n bodoli'n barod. Ni chafwyd unrhyw nodweddion na darganfyddiadau o natur cynhanesyddol yn ystod y gwaith.

Roedd y briff gwyllo yn cydymffurfio â Standards and Guidance for an Archaeological Watching Brief a rhoddwyd gan Sefydliad Siartredig yr Archeolegwyr (2014).

1. Introduction

1.1 Location and Scope of Work

Archaeology Wales Ltd (AW) was commissioned by Constantine Wind Energy to undertake an archaeological watching brief during groundworks associated with the erection of a single wind turbine with associated track access, electric cabinet and crane pad at land at Tyle Crwth, southwest of Ynysddu, Newport centred on ST 17348 91668 (Figure 1 and 2). The local planning authority is Caerphilly County Borough Council (CCBC). The associated Planning Application No. is 15/0774/FULL. The AW project number for the work is 2586, and the site code is TCYM/18/WB.

The development area lies within an enclosed upper valley side pastoral landscape, just below the ridgeline of Mynydd Bach / Mynydd y Grug. The development lies in close proximity to a number of burial monuments of prehistoric date, some of which are protected as Scheduled Ancient Monuments (SAM MM196, MM149 & MM033). Such sites will often appear as part of a group, and as such it was considered possible that remains of a similar date could be impacted upon by the proposed development.

Glamorgan-Gwent Archaeological Trust – Curatorial Division (GGAT-CD), in its capacity as archaeological advisors to the local planning authority CCBC, recommended that a programme of archaeological mitigation (watching brief) of the development area be undertaken during ground works to mitigate the impact of the development on the archaeological resource. The recommendations resulted in a Condition being attached to the planning permission for the development, which read:

(16) The developer shall ensure that a suitably qualified archaeologist is present during the undertaking of any ground disturbing works in the development area, so that an archaeological watching brief can be conducted. The archaeological watching brief shall be undertaken to the standards of the Institute for Archaeologists. The Local Planning Authority shall be informed, in writing, at least two weeks prior to the commencement of the development the name of the said archaeologist and no work shall begin until the Local Planning Authority has confirmed, in writing, that the proposed archaeologist is suitable. A copy of the watching brief report shall be submitted to the Local Planning Authority within two months of the fieldwork being completed by the archaeologist.

REASON: To identify and record any features of archaeological interest discovered during the works, in order to mitigate the impact of the works on the archaeological resource.

Prior to the works commencing an approved Written Scheme of Investigation for an archaeological watching brief was produced by AW in accordance with the Standard and Guidance for Archaeological Watching Briefs (CIfA 2014), which was designed to provide an approved scheme of archaeological investigation to be implemented during the groundworks. The purpose of the watching brief is to provide CCBC with sufficient

information regarding the nature of the archaeological remains in the development area, the requirements for which are set out in Planning Policy (revised edition 10, 2018), Section 6 and Technical Advice Note (TAN) 24: The Historic Environment (2017).

1.2 Topography and Geology

The development area is located at ST 17348 91668 within an enclosed upper valley side pastoral landscape, just below the ridgeline of Mynydd Bach / Mynydd y Grug. Coniferous plantations on the western slopes of the Sirhowy Valley form the immediate context of the site to the north, south and define its eastern boundary. To the west of the site is an area of open rough grazing land which forms part of Mynydd y Grug Common.

The site is located at approximately 320mOD, with the summit of the ridgeline lying at 332mOD around 400m to the southwest. The steep valley slopes fall away to the Sirhowy River which lies approximately 800m to the east. The settlement of Ynysddu lies around 1km to the northeast, with Cwmfelinfach 1km to the east.

The underlying geology of the area comprises sandstone of the Hughes Member, with bands of mudstone and siltstone occurring on lower slopes, and sandstone of the Brithdir Member in the valley base. No superficial geology is recorded in the site area (BGS 2018).

1.3 Archaeological and Historical Background

Within 200m to the south of the development area lies a well-defined round barrow (PRN 0079g). Such sites are typically found to represent Bronze Age burial and ritual monuments. Adjacent to the round barrow lies a small square enclosure (PRN 0683m) of uncertain origin, but *circa* 500m further along the ridgeline to the north lies a Bronze Age cairn (PRN0684m) and ring cairn (PRN 6002m), lying within a more extensive Bronze Age cairnfield (PRN 0687m). These sites indicate that this ridgeline was an area of funerary and ritual activity during the Bronze Age, with round barrow activity generally dated to between 4500 and 3500 years ago. Barrow sites frequently occur in groupings and could belong to larger complexes of ritual and burial activity, much of which may not now survive above ground. This highlights the potential for previously unrecorded remains to exist within the proposed development area.

Further afield the remnants of post-medieval agricultural and industrial activity have been recorded, in the form of farmstead, animal pounds and coal mines.

2. Methodology

A watching brief complying with the Chartered Institute for Archaeologists (CIfA) *Standard and Guidance for an Archaeological Watching Brief* (2014) was undertaken during all intrusive ground work on the site.

The watching brief was undertaken to allow the preservation by record of any archaeological deposits, the presence and nature of which could not be in advance of works. The watching brief also provided an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief itself are not sufficient to support treatment to a satisfactory and proper standard (CIfA, 2014).

The watching brief was carried out in 4 phases under the supervision of Dan Moore, Susan Stratton and Rhiannon Joyce between 9th March 2018 and 7th July 2018. The project was managed by Phil Poucher (AW Project Manager).

The four phases are described in more detail within the results section below. Groundworks were carried out using a tracked mechanical excavator equipped with toothless buckets, although toothed buckets were required in areas where bedrock was encountered. Observed groundworks included the stripping of topsoil and subsoil for the establishment of trackways and cabling runs, deeper stripping prior to the excavation for the turbine base, and the excavation of cable trenches. Sections and plans of the excavation were photographed using a 12MP digital camera. All the deposits encountered were recorded by means of a continuous context numbering system and recorded on pro-forma context sheets. All features and deposits are described in accordance with CIfA conventions. A register of all contexts and photographs was also made.

3. Watching Brief Results

Phase 1

Trench 1

The initial phase of groundworks covered by the archaeological watching brief comprised the establishment of a cabling route (Trench 1) up the hillside, to the northeast of the turbine location. In most areas this involved following and widening an existing trackway by excavating into the hillside. In other areas it included creating a new trackway. The trench, which zig zagged its way up the wooded hillside, measured *circa* 686m in length, *circa* 1.3m in width and 0.3m to 1.5m in depth.

A consistent sequence of deposits was revealed throughout this route. Located towards the higher ground at the western end of the route up the hillside was basal deposit (007) which was characterized as a moderately compact mid to light orange-brown clayey-sand with common stone inclusions. The deposit was visible at a depth of 0.6m below pre-existing ground level. It measured in excess of 2m in length, 1m in width and 0.1m in depth. Deposit (007) was overlaid by deposit (003).

Deposit (003) was characterized as a mid to light brown-orange clayey-sand with common stone inclusions, albeit more compact in nature. This deposit was visible at a depth of between 0.3m and 0.5m below pre-existing ground level. It measured in excess of 686m in length, 1.3m in width and 0.4m in depth. No archaeological material was recovered from deposits (007) or (003) and both were interpreted as natural geological soils. Deposit (003) was cut by [004].

Cut [004] was a roughly North - South orientated linear cut, visible in the north facing section only and tentatively interpreted as a drainage gully. It measured 1.5m wide, and 0.25m deep with moderately steep sides. It was located *circa* 20m uphill from deposit (006) (see below). The cut contained fill (005) which comprised loosely compacted angular stones that measured *circa* 0.18m by 0.1m by 0.07m (on average). Fill (005) was overlaid by deposit (002).

Deposit (002) was a subsoil characterized as compact, mid to light orange-brown clayey-sand with common stone inclusions. This deposit was superficially similar to the underlying natural geological deposits but with a high frequency of rooting activity. It measured in excess of 686m in length, 1.3m in width and was *circa* 0.5m in depth. The deposit contained no archaeological material. Deposit (002) was overlaid by deposit (001).

Deposit (001) represented the general woodland topsoil deposit. It was characterized as a compact dark grey brown loam, with common stone inclusions. It measured in excess of 686m in length, 1.3m in width and was *circa* 0.2m in depth. The deposit contained no archaeological material. Set within deposit (001) was deposit (006). This was an area characterized as a compact dark loam with a high frequency of angular and sub angular stones that measured 0.2m by 0.15m by 0.05m (on average). It was located *circa* 7m below a stone outcrop that was situated beyond the limit of excavation. The deposit is likely to have occurred naturally but could represent quarrying activity. The deposit measured in excess of 0.5m in length, 1m in width and was 0.5m in depth.

Phase 2

Trench 2

The second phase of groundworks was the excavation of Trench 2, which was for a trackway, a crane pad and wind turbine foundation. The trackway extended on an ESE orientation from an existing NNW-SSE orientated trackway. Halfway along was an SSW

orientated extension for vehicle turning. The trackway measured *circa* 100m in length, *circa* 4.1m in width and 0.2m to 0.6m in depth. The SSW orientated extension measured *circa* 21m in length, 5.7m in width and 0.3m in depth. The crane pad was located at the ESE end of the trackway. It measured *circa* 35m in length (orientated ESE-WNW), *circa* 20m in width (orientated NNE-SSW) and 0.3m to 1.2m in depth. The wind turbine pad was located at the ESE end of the crane pad. It measured *circa* 16m in length, *circa* 16m in width and 0.2m to 0.6m in depth. This revealed undisturbed natural ground, therefore deep foundations excavations were not observed.

Basal deposit (003b) was characterized as a compact mid brown-orange clayey-sand with shale bedrock below. The deposit measured in excess of 172m in length, 20m in width and 0.4m in depth. The deposit was interpreted as a natural deposit. Deposit (003b) was cut by cut [004b].

Cut [004b] was an ENE-WSW orientated linear feature with moderately step sided cut located *circa* 27m from the north – south orientated turning spur. The cut measured in excess of 5.3m in length and was 1.2m in width and 0.3m in depth. The cut contained fill (005b) which was characterized as a compact mid to dark black brown silt. No finds were recovered. The feature was interpreted as a drainage gully or boundary ditch, running perpendicular to the existing field boundary. Fill (005b) was overlaid by deposit (002b).

Deposit (002b) was characterized as a compact mid grey-brown (with patches of mid brown-orange) silt. The deposit measured in excess of 172m in length, 20m in width and was 0.1m in depth. No archaeological material was recovered. Deposit (002b) was overlaid by deposit (001b).

Deposit (001b) was a topsoil characterized as a compact mid to dark grey brown silt. The deposit extended over the entire site and measured 0.1m in depth. No archaeological material was recovered from the deposit.

Phase 3

Trench 3

The third phase of groundworks was the excavation of Trench 3. The purpose of this was to join Trench 2 with Trench 1 and continue the establishment of a cabling route. The trench extended in an NNE direction from the southeast end (northern edge) of Trench 2 to the southwest end of Trench 1 at the top of the hill. The trench measured *circa* 270m in length and 0.6m in width.

Basal deposit (003c) was characterized as a compact mid orange-brown silty-sand. The deposit measured in excess of 270m in length, 0.6m in width and 0.15m in depth. No archaeological material was recovered. The deposit was interpreted as a naturally-occurring subsoil. Deposit (003c) was overlaid by deposit (002c).

Deposit (002c) was characterized as a compact mid grey-brown silty-sand. The deposit measured in excess of 270m in length, 0.6m in width and was *circa* 0.3m in depth. No archaeological material was recovered. Deposit (002c) was overlaid by deposit (001c).

Deposit (001c) was a topsoil characterized as a loose dark orange-brown silt with frequent sub-angular stone inclusions. The deposit extended over the entire site and measured *circa* 0.22m in depth.

Phase 4

The fourth phase of groundworks was the expansion of the NNW-SSE orientated trackway to enable larger vehicles access to the wind turbine site (Trench 2). This phase comprised three trenches, Trenches 4a, 4b, 4c. In any given area, these trenches were located on one of either side of the trackway. Combined these trenches in total measured *circa* 1km in length, between 0.3m to 0.6m in width and 0.3m to 0.5m in depth.

Trench 4a

Basal deposit (006c) was characterized as a compact mid orange-brown silty-sand. The deposit measured in excess of 0.3m in depth. No archaeological material was recovered. The deposit was interpreted as the same as deposit (003c). Deposit (006c) was overlaid by deposit (005c).

Deposit (005c) was characterized as a compact mid grey-brown silty-sand. The deposit measured *circa* 0.25m in depth. No archaeological material was recovered. The deposit was interpreted as the same as deposit (002c). Deposit (005c) was overlaid by deposit (004c).

Deposit (004c) was characterized as a loose dark orange-brown silt. The deposit measured *circa* 0.2m in depth. No archaeological material was recovered.

Trench 4b

Basal deposit (009c) was characterized as a compact mid orange-brown silty-sand. The deposit measured in excess of 0.3m in depth. No archaeological material was recovered. The deposit was interpreted as the same as deposit (006c). Deposit (009c) was overlaid by deposit (008c).

Deposit (008c) was characterized as a compact mid grey-brown silty-sand. The deposit measured *circa* 0.25m in depth. No archaeological material was recovered. The deposit was interpreted as the same as deposit (005c). Deposit (008c) was overlaid by deposit (007c).

Deposit (007c) was characterized as a loose dark orange-brown silt. The deposit measured *circa* 0.2m in depth. The deposit was interpreted as the same as deposit (004c).

Trench 4c

Basal deposit (012c) was characterized as a compact mid orange-brown silty-sand. The deposit measured in excess of 0.3m in depth. The deposit was interpreted as the same as deposit (009c). Deposit (012c) was cut by cut [013c].

Cut [013c] was an NNW-SSE orientated linear cut with moderately steep sides. The cut extended along the NNE edge of the NNW-SSE orientated trackway. The cut measured in excess of 300m in length and was 0.1m in width and 0.07m in depth. The cut contained fill (014c) which was characterized as a compact dark brown-grey silty-clay with moderately frequent angular and sub-angular stone inclusions. No archaeological material was recovered. Due to its shared alignment the feature was interpreted as a drainage gully for the trackway. Deposit (014c) was overlaid by deposit (011c).

Deposit (011c) was characterized as a compact mid grey-brown silty-sand. The deposit measured *circa* 0.25m in depth. No archaeological material was recovered. The deposit was interpreted as the same as deposit (005c). Deposit (011c) was overlaid by deposit (012c).

Deposit (012c) was characterized as a loose dark orange-brown silt. The deposit measured *circa* 0.2m in depth. No archaeological material was recovered.

4. Finds

No finds of archaeological significance were recovered during the excavation of Trenches 1, 2, 3 and 4.

5. Conclusion

An archaeological watching brief was undertaken between March and July 2018 during groundwork associated with the construction of a wind turbine at Tyle Crwth, southwest of Ynysddu, Newport. The work was undertaken as a condition of the planning permission for the development (Planning Application No. 15/0774/FULL).

The development lies in close proximity to a number of burial monuments of prehistoric date, as such it was considered possible that remains of a similar date could be impacted upon by the development.

Naturally occurring subsoils and areas of bedrock were revealed throughout the observed groundworks. Three, potentially four, features were identified cutting into these deposits, all linear in nature.

In Trench 1 towards the top of the hill slope linear cut [004] was interpreted as a possible drainage gully. No finds were discovered to date the feature, but it was

overlain by both a subsoil and topsoil deposit. Deposit (006), which was located below a stone outcrop and contained a high concentration of angular and sub-angular stone inclusions, is likely to have occurred naturally but may represent infill following quarrying activity. No finds were discovered to date the deposit, but it was contained within the topsoil material suggesting a relatively recent event.

In Trench 2, located on the approach to the turbine area on the hill crest, linear cut [004b] was interpreted as a possible drainage gully or boundary ditch. It does not appear on any historic mapping back to the late 19th century, but it does lie perpendicular to the existing field boundary, suggesting some connection. It was overlaid by a subsoil and topsoil deposit and again, no finds were discovered, which would suggest limited activity within the immediate area of the watching brief.

In Trench 4, linear cut [013] was interpreted as a drainage gully and likely associated with the present trackway. No dating material was identified.

6. Bibliography

CIfA. (2014) *Standard and Guidance for an Archaeological Watching Brief* (Unpublished Guidance accessible at www.archaeologists.net)

NERC. (2016) British Geological Survey Maps (accessed at www.bgs.ac.uk)

Ordnance Survey (1876) County Series Maps, 1:2500, Monmouthshire

Ordnance Survey (1901) County Series Maps, 1:2500, Glamorganshire

Ordnance Survey (1920) County Series Maps, 1:2500, Glamorganshire

Ordnance Survey (1962) 1:2500 plan

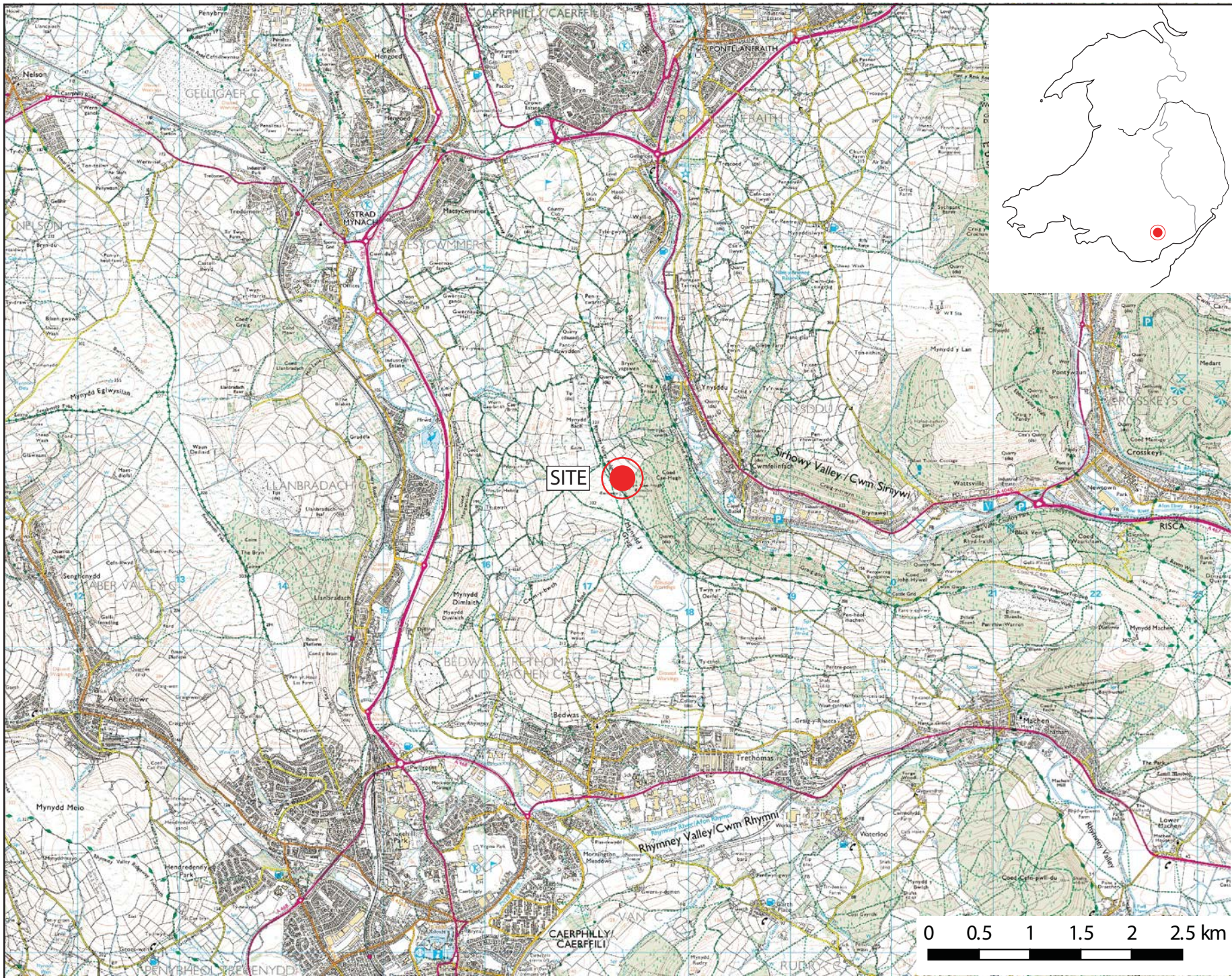
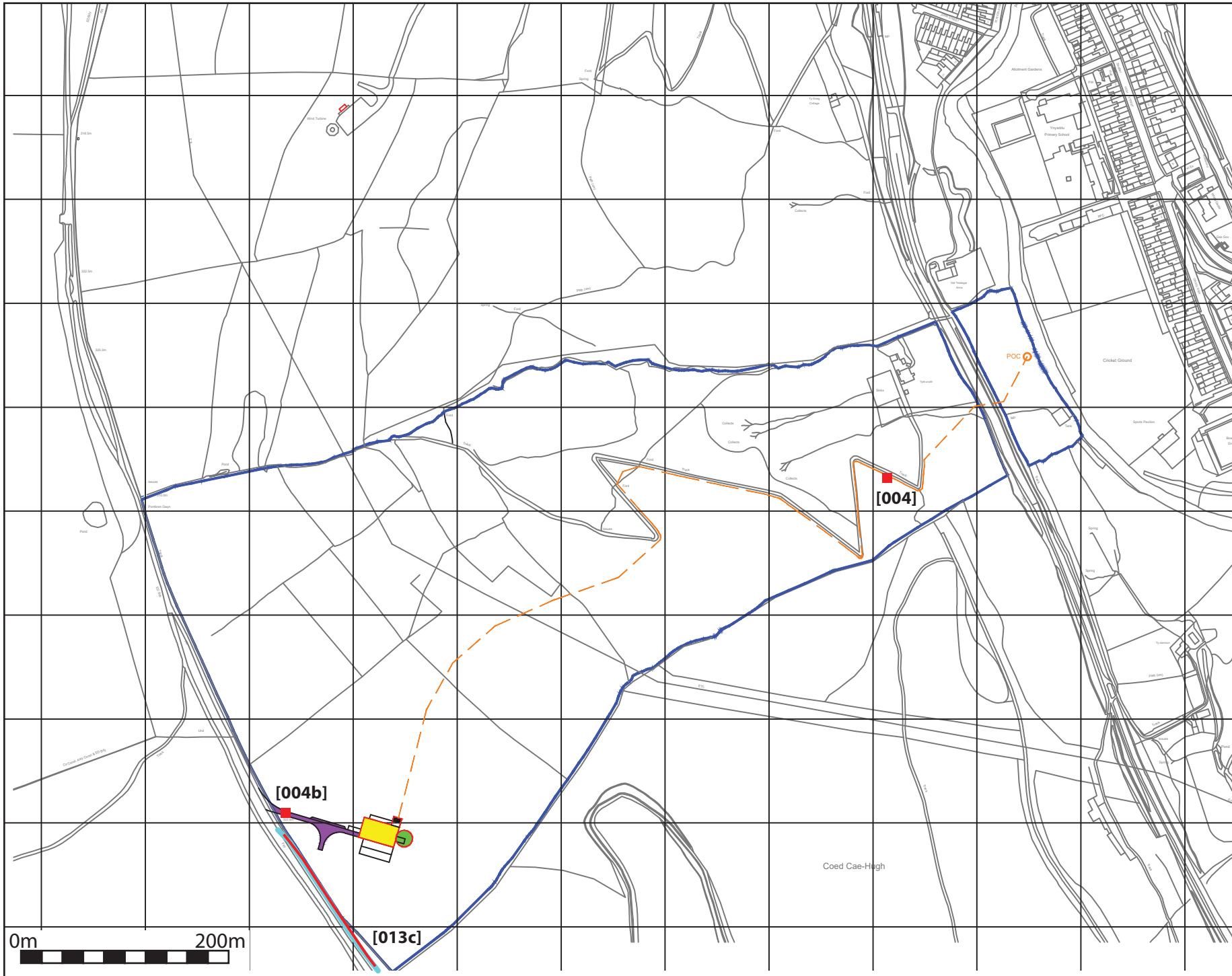


Figure 1: Location map, 1:50,000 @ A4

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- - - Cabling route
- New access track
- Wind turbine foundation
- Crane pad
- Track widening
- Archaeological feature

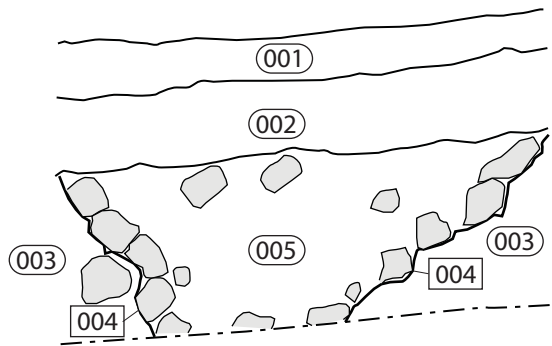
Figure 2: Location and site layout plan. Amended from plan provided by the developer, produced by Constantine Wind Energy, drawing no. Tyle Crwth Lease 102/B, 06/11/17.

1:5000 @ A4

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North facing section of ditch [004] @ 1:20



ENE facing section of ditch [004b] @ 1:20

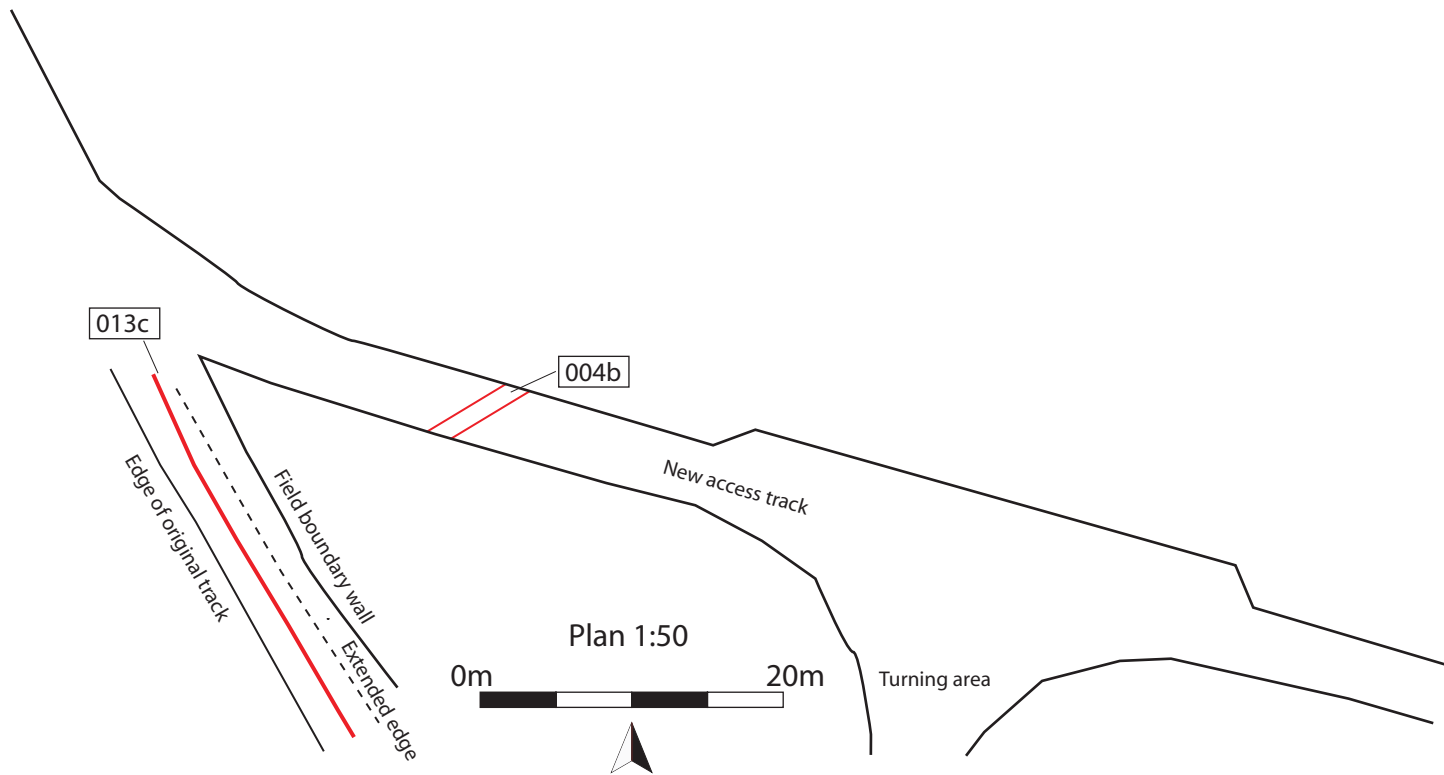
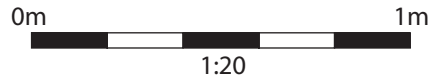
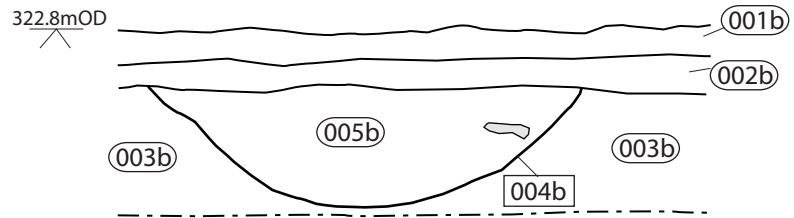


Figure 3: Sections and plan of identified archaeological features



Photo 1: View west along the Phase 1 cabling route. 1m scale.



Photo 2: North facing section along the Phase 1 cabling route, showing deposits (007), (003) and (001). 1m scale.



Photo 3: North facing of Phase 1 cabling route, showing feature [004]. 1m scale.



Photo 4: View west along the Phase 1 cabling route, with feature [004] visible. 1m scale.



Photo 5: View south of Phase 1 cabling route, showing outcropping bedrock. 1m scale.



Photo 6: North facing section of deposits (007), (003) and (001). 0.5m scale.



Photo 7: Northeast facing section of Phase 2 deposits (002b) and (001b). 1m scale.

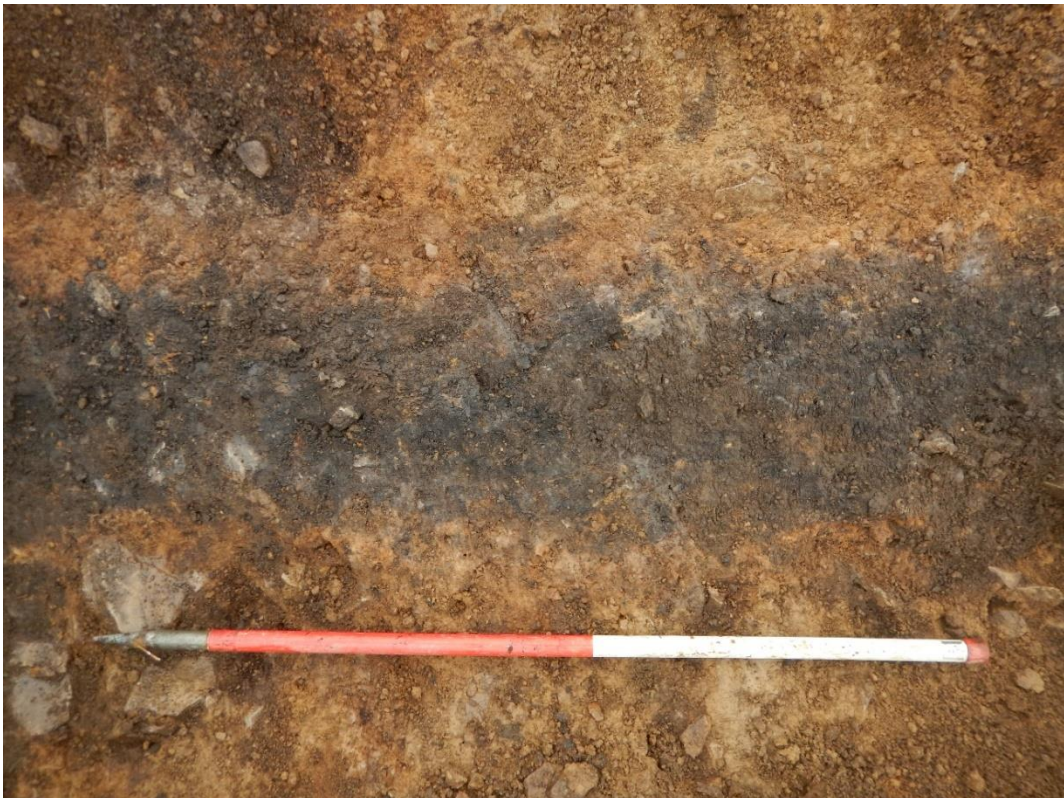


Photo 8: Pre-excavation shot of linear feature [004b]. 1m scale.



Photo 9: East facing section of linear feature [004b]. 1m scale.



Photo 10: South facing shot of Phase 2 groundworks.



Photo 11: North facing section of deposits (003b), (002b) and (001b). 1m scale.



Photo 12: North facing shot of Phase 3 groundworks.



Photo 13: North facing shot of Phase 4 groundworks, showing deposits (006c), (005c) and (004c).



Photo 14: West facing shot of excavated drainage gully [013c].

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APPENDIX I: Context List

APPENDIX 1

Trench 1

No	Type	Description	Relationship
001	Deposit	Compact dark grey brown loam (topsoil)	Above (002)
002	Deposit	Compact mid to light orange brown clayey sand (subsoil)	Below (001)
003	Deposit	Mid to light brown orange clayey sand (natural)	Cut by [004]
004	Cut	N-S aligned linear cut. Contained fill (005)	Cuts (003)
005	Fill	Loosely compacted angular stones within cut [004]	Below (002)
006	Deposit	Compact dark brown loam with very high frequency of angular and sub angular stones inclusions. Set in deposit (001)	Above (001)
007	Deposit	Compact mid to light orange brown clayey silt (natural)	Below (003)

Trench 2

No	Type	Description	Relationship
001b	Deposit	Compact dark grey brown silt topsoil	Above (002b)
002b	Deposit	Compact mid grey brown (patches of mid brown orange) sandy silt (subsoil)	Above (005b)
003b	Deposit	Compact mid brown orange clayey sand (natural)	Cut by [004b]
004b	Cut	ENE-WSW aligned linear cut. Contained fill (005b)	Cuts (003b)
005b	Fill	Compact mid to dark grey brown silt within cut [004b]	Below (002b)

Trench 3

No	Type	Description	Relationship
001c	Deposit	Loose dark orange brown loam (topsoil)	Above (002c)
002c	Deposit	Compact mid grey brown silty sand (subsoil)	Above (003c)
003c	Deposit	Compact mid brown orange silty sand (natural)	Below (002c)

Trench 4

No	Type	Description	Relationship
004c	Deposit	Loose dark orange brown silt (topsoil)	Above (005c)
005c	Deposit	Compact mid grey brown silty sand (subsoil)	Above (006c)
006c	Deposit	Compact mid orange brown silty sand (natural)	Below (005c)
007c	Deposit	Loose dark orange brown silt (topsoil)	Above (008c)
008c	Deposit	Compact mid grey brown silty sand (subsoil)	Above (009c)
009c	Deposit	Compact mid orange brown silty sand (natural)	Below (008c)
010c	Deposit	Loose dark orange brown silt (topsoil)	Above (011c)
011c	Deposit	Compact mid grey brown silty sand (subsoil)	Above (012c)
012c	Deposit	Compact mid orange brown silty sand (natural)	Cut by [013c]
013c	Cut	NNW-SSE aligned linear cut. Contained fill (014c)	Cuts (012c)
014c	Fill	Compact dark brown grey silty clay within cut [013c]	Below (011c)

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APPENDIX II
Written Scheme of Investigation

WRITTEN SCHEME OF INVESTIGATION
FOR AN ARCHAEOLOGICAL
WATCHING BRIEF
AT TYLE CRWTH, NEAR YNYSDDU, NEWPORT

Prepared for:

Constantine Wind Energy

Planning Application Number: 15/0774/FULL

Project No: 2586

January 2018



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Figure 1. Site location

Figure 2. Detailed plan of the site, showing areas of proposed development

Summary

This Written Scheme of Investigation (WSI) details a programme of archaeological mitigation to be undertaken by Archaeology Wales at the request of Constantine Wind Energy.

The archaeological mitigation will consist of a watching brief, and will be undertaken during ground works associated with the proposed erection of a single wind turbine with associated track access, electric cabinet and crane pad at land at Tyle Crwth, Southwest of Ynysddu, Newport centred on ST 17348 91668. The associated Planning Application No. is 15/0774/FULL.

The proposed development lies in close proximity to a number of burial monuments of prehistoric date, some of which are protected as Scheduled Ancient Monuments (SAM MM196, MM149 & MM033). Such sites will often appear as part of a group, and as such it is possible that remains of a similar date could be impacted upon by the proposed development.

All work will be undertaken in accordance with the standards and guidelines of the Chartered Institute for Archaeologists (2014).

1. Introduction and planning background

This WSI details the methodology for a programme of archaeological mitigation (watching brief) to be undertaken in association with the proposed erection of a single wind turbine with associated track access, electric cabinet and crane pad at land at Tyle Crwth, Southwest of Ynysddu, Newport centred on ST 17348 91668 (Figure 1 and 2). The associated Planning Application No. is 15/0774/FULL.

The proposed development lies in close proximity to a number of burial monuments of prehistoric date, some of which are protected as Scheduled Ancient Monuments (SAM MM196, MM149 & MM033). Such sites will often appear as part of a group, and as such it is possible that remains of a similar date could be impacted upon by the proposed development.

This WSI has been prepared by Philip Poucher MCIfA, Project Manager, Archaeology Wales Ltd (henceforth - AW) at the request of Constantine Wind Energy.

The methodology set out in this WSI has been agreed with Glamorgan-Gwent Archaeological Trust – Curatorial Division (GGAT-CD) in its capacity as archaeological advisors to the local planning authority, Caerphilly County Borough Council (CCBC). GGAT-CD has recommended that an archaeological mitigation (watching brief) of the development area is undertaken during ground works to mitigate the impact of the proposed development on the archaeological resource.

The recommendations have resulted in a Condition being attached to the planning permission for the development, which reads:

(16) The developer shall ensure that a suitably qualified archaeologist is present during the undertaking of any ground disturbing works in the development area, so that an archaeological watching brief can be conducted. The archaeological watching brief shall be undertaken to the standards of the Institute for Archaeologists. The Local Planning Authority shall be informed, in writing, at least two weeks prior to the commencement of the development the name of the said archaeologist and no work shall begin until the Local Planning Authority has confirmed, in writing, that the proposed archaeologist is suitable. A copy of the watching brief report shall be submitted to the Local Planning Authority within two months of the fieldwork being completed by the archaeologist.

REASON: To identify and record any features of archaeological interest discovered during the works, in order to mitigate the impact of the works on the archaeological resource.

The purpose of the archaeological mitigation (watching brief) is to provide the local planning authority with sufficient information regarding the nature of archaeological remains on the site of the development, the requirements for which are set out in Planning Policy (revised edition 9, 2016), Section 6.5 and Technical Advice Note (TAN) 24: The Historic Environment (2017). The work is to ensure that all buried artefacts and deposits are fully investigated and recorded if they are disturbed or revealed as a result of activities associated with the development.

All work will be undertaken to the standards and guidance set by the Chartered Institute for Archaeologists (2014). AW is a Registered Organisation with the CIFA.

2. Site Description

The development area is located at ST 17348 91668 within an enclosed upper valley side pastoral landscape, just below the ridgeline of Mynydd Bach / Mynydd y Grug. Coniferous plantations on the western slopes of the Sirhowy Valley form the immediate context of the site to the north, south and define its eastern boundary. To the west of the site is an area of open rough grazing land which forms part of Mynydd y Grug Common.

The site is located at approximately 320mOD, with the summit of the ridgeline lying at 332mOD around 400m to the southwest. The steep valley slopes fall away to the Sirhowy River which lies approximately 800m to the east. The settlement of Ynysddu lies around 1km to the northeast, with Cwmfelinfach 1km to the east.

The underlying geology of the area comprises sandstone of the Hughes Member, with bands of mudstone and siltstone occurring on lower slopes, and sandstone of the Brithdir Member in the valley base. No superficial geology is recorded in the site area (BGS 2018).

3. Archaeological background

Within 200m to the south of the development area lies a well-defined round barrow (PRN 0079g). Such sites are typically found to represent Bronze Age burial and ritual monuments. Adjacent to the round barrow lies a small square enclosure (PRN 0683m) of uncertain origin, but *circa* 500m further along the ridgeline to the north lies a Bronze Age cairn (PRN0684m) and ring cairn (PRN 6002m), lying within a more extensive Bronze Age cairnfield (PRN 0687m). These sites indicate that this ridgeline was an area of funerary and ritual activity during the Bronze Age, with round barrow activity generally dated to between 4500 and 3500 years ago. Barrow sites frequently occur in groupings and could belong to larger complexes of ritual and burial activity, much of which may not now survive above ground. This highlights the potential for previously unrecorded remains to exist within the proposed development area.

Further afield the remnants of post-medieval agricultural and industrial activity has been recorded, in the form of farmstead, animal pounds and coal mines.

4. Objectives

This WSI sets out a program of works to ensure that the mitigation (watching brief) will meet the standard required by The Chartered Institute for **Archaeologist's Standard and Guidance for Archaeological Watching Briefs (2014)**.

The objective of the watching brief will be:

- to allow a rapid investigation and recording of any archaeological features that are uncovered during the proposed groundworks within the application area.
- to provide the opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the watching brief are not sufficient to support the treatment to a satisfactory or proper standard.

A written report will be compiled following the fieldwork. Sufficient desk-top research will be undertaken to ensure that the results of this work are properly understood, interpreted and reported.

The report will include a comprehensive assessment of the historic context within which the archaeological evidence rests and will aim to highlight any relevant research issues within regional, national and, if relevant, international research frameworks.

4.1. Site Specific Research Aims

It is important to recognize that whilst primarily designed to mitigate impacts, developer-led archaeology is also regarded as research activity with an academic basis, the aim of which is to add to the sum of human knowledge. Curators

recognize the desirability of incorporating agreed research priorities as a means of enhancing the credibility of the development control process, ensuring cost-effectiveness and legitimately maximizing intellectual return.

A research framework for the archaeology of Wales has been produced, which has been under review since 2009. The main archaeological potential of this area could contribute to themes laid out in A Research Framework for the Archaeology of Wales Version 03, Final Refresh Document February 2017: Neolithic and Earlier Bronze Age (Pannett 2017). For example, the need to increase an understanding of monuments of this period (section 3.3) is highlighted, particularly as recent research is felt to have focused too much on early Neolithic monuments. There is also the potential, given that funerary monuments are recorded in the area, that archaeological remains may contribute to our understanding of human remains from this period (section 3.2).

5. Timetable of works

5.1. Fieldwork

The programme of mitigation will be undertaken during ground works associated with the proposed development. No start date for the work has yet been established, although it is anticipated that the work may commence in the first quarter of 2018. Archaeology Wales will update GGAT-CD with the exact date.

5.2. Report delivery

The report will be submitted to the client and to GGAT-CD within two months of the completion of the fieldwork. A copy of the report will also be sent to the regional HER.

6. Fieldwork

6.1. Detail

The work will be undertaken to meet the standard required by **The Chartered Institute for Archaeologists' Standard and Guidance for Watching Briefs (2014)**.

The watching brief will be carried out by a suitably qualified archaeologist on groundworks associated with the proposed development and associated works where sub-surface deposits are likely to be exposed or cut into. It is anticipated that such work will include stripping, levelling, foundation excavation, drainage and service excavation associated with the establishment of the access track, improvement of existing tracks, site compound, sub-station foundations, crane pad and turbine foundations.

Mechanical excavations will be undertaken by a tracked excavator using a toothless ditching bucket wherever possible.

The site archaeologist undertaking the watching brief will be afforded the required access by the main contractor in order to observe and where necessary to record

any archaeological remains revealed. Groundwork will not be undertaken without the presence of the site archaeologist. The site archaeologist will record finds and less significant archaeological deposits and features without significant delay to the work program.

Where significant or complex archaeological deposits or features are encountered there will be a requirement for those areas to be fenced off and highlighted to all contractors employed on the site. Machines or contractors shall not enter this area until archaeological recording has been completed. If significant archaeological features are revealed during the work a meeting between the client, GGAT-CD and AW will be called at the earliest convenience.

To comply with professional guidelines, a contingency for additional uninterrupted access to each such area and for a suitably sized team of archaeologists to be employed should be provided. Contingency costs will be agreed in advance before any extension to the programme commences and will follow a site meeting between Archaeology Wales, the client and GGAT-CD.

6.2. Recording

Recording will be carried out using AW recording systems (pro-forma context sheets etc) using a continuous number sequence for all contexts.

Plans and sections will be drawn to a scale of 1:50, 1:20 and 1:10 as required and related to Ordnance Survey datum and published boundaries where appropriate.

All features identified will be tied in to the OS survey grid and fixed to local topographical boundaries.

Photographs will be taken in digital format with an appropriate scale, using a 12MP camera with photographs stored in Tiff format.

The archaeologist undertaking the watching brief will have access to the AW metal detector and be trained in its use.

6.3. Finds

The professional standards set in the Chartered Institute for **Archaeologists'** *Standard and guidance for the collection, documentation, conservation and research of archaeological (2014)* will form the basis of finds collection, processing and recording.

All manner of finds regardless of category and date will be retained.

Finds recovered that are regarded as Treasure under *The Treasure Act 1996* will be reported to HM Coroner for the local area.

Any finds which are considered to be in need of immediate conservation will be referred to a UKIC qualified conservator (normally Phil Parkes at Cardiff University).

6.4. Environmental sampling strategy

Deposits with a significant potential for the preservation of palaeoenvironmental material will be sampled, by means of the most appropriate method (bulk, column etc). Where sampling will provide a significant contribution to the understanding of the site AW will draw up a site-specific sampling strategy alongside a specialist environmental archaeologist. All environmental sampling and recording and will **follow English Heritage's *Guidelines for Environmental Archaeology*** (2nd Edition 2011).

6.5. Human remains

In the event that human remains are encountered, their nature and extent will be established and the coroner informed. All human remains will be left *in situ* and protected during backfilling. Where preservation *in situ* is not possible the human remains will be fully recorded and removed under conditions that comply with all current legislation and include acquisition of licenses and provision for reburial following all analytical work. Human remains will be excavated in accordance with the Chartered **Institute for Archaeologist's *Excavation and Post-Excavation Treatment of Cremated and Inhumed Human Remains: Technical Paper Number 13*** (1993).

A meeting with GGAT-CD, the client and AW will be called if the human remains uncovered are of such complexity or significance that the contingency arrangement (6.1 above) would not be of sufficient scope.

6.6. Specialist advisers

In the event of certain finds, features or sites being discovered, AW will seek specialist opinion and advice. A list of specialists is given in the table below although this list is not exhaustive.

Artefact type	Specialist
Flint	Kate Pitt (Archaeology Wales)
Animal bone	Richard Madgwick (Cardiff University)
CBM, heat affected clay, Daub etc.	Rachael Hall (APS)
Clay pipe	Hilary Major (Freelance)
Glass	Rowena Hart (Archaeology Wales)
Cremated and non-cremated human bone	Malin Holst (University of York)/Richard Madgwick (Cardiff University)

Metalwork	Kevin Leahy (University of Leicester)/ Quita Mold (Freelance)
Metal work and metallurgical residues	Dr Tim Young (GeoArch)
Neo/BA pottery	Dr Alex Gibson (Bradford University)
IA/Roman pottery	Jane Timby (Freelance)
Roman Pottery	Rowena Hart (Archaeology Wales)/ Peter Webster (Freelance)
Post Roman pottery	Stephen Clarke (Monmouthshire Archaeology)
Charcoal (wood ID)	John Carrot (Freelance)
Waterlogged wood	Nigel Nayling (University of Wales – Lampeter)
Molluscs and pollen	Dr James Rackham
Charred and waterlogged plant remains	Wendy Carruthers (Freelance)

6.6.1. Specialist reports

Specialist finds and palaeoenvironmental reports will be written by AW specialists, or sub-contracted to external specialists when required.

7. Monitoring

GGAT-CD will be contacted approximately five days prior to the commencement of archaeological site works, and subsequently once the work is underway.

Any changes to the WSI that AW may wish to make after approval will be communicated to GGAT-CD for approval on behalf of Planning Authority.

Representatives of GGAT-CD will be given access to the site so that they may monitor the progress of the field evaluation. No area will be back-filled, until GGAT-CD has had the opportunity to inspect it, unless permission has been given in advance. GGAT-CD will be kept regularly informed about developments, both during the site works and subsequently during post-excavation.

8. Post-fieldwork programme

8.1. Archive assessment

8.1.1. Site archive

An ordered and integrated site archive will be prepared in accordance with: Management of Research Projects in the Historic Environment (MoRPHE) (Historic England 2006) upon completion of the project.

The site archive (including artefacts and samples) will be prepared in accordance with the National Monuments Record (Wales) agreed structure and deposited with an appropriate receiving organisation, in compliance with ClFA Guidelines (*Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives*, 2014). The legal landowners consent will be gained for deposition of finds.

8.1.2. Analysis

Following a rapid review of the potential of the site archive, a programme of analysis and reporting will be undertaken. This will result in the following inclusions in the final report:

- Non-technical summary
- Location plan showing the area/s covered by the watching brief, all artefacts, structures and features found
- Plan and section drawings (if features are encountered) with ground level, ordnance datum and vertical and horizontal scales.
- Written description and interpretation of all deposits identified, including their character, function, potential dating and relationship to adjacent features. Specialist descriptions and illustrations of all artefacts and soil samples will be included as appropriate.
- An indication of the potential of archaeological deposits which have not been disturbed by the development
- A discussion of the local, regional and national context of the remains by means of reviewing published reports, unpublished reports, historical maps, documents from local archives and the regional HER as appropriate.
- A detailed archive list at the rear listing all contexts recorded, all samples finds and find types, drawings and photographs taken. This will include a statement of the intent to deposit, and location of deposition, of the archive.

8.2. Reports and archive deposition

8.2.1. Report to client

Copies of all reports associated with the mitigation (watching brief), together with inclusion of supporting evidence in appendices as appropriate, including photographs and illustrations, will be submitted to the client and GGAT-CD upon completion.

8.2.2. Additional reports

After an appropriate period has elapsed, copies of all reports will be deposited with the relevant county Historical Environment Record, the National Monuments Record and, if appropriate, Cadw.

8.2.3. Summary reports for publication

Short archaeological reports will be submitted for publication in relevant journals; as a minimum, a report will be submitted to the annual publication of the regional CBA group or equivalent journal.

8.2.4. Notification of important remains

Where it is considered that remains have been revealed that may satisfy the criteria for statutory protection, AW will submit preliminary notification of the remains to Cadw.

8.2.5. Archive deposition

The final archive (site and research) will, whenever appropriate, be deposited with a suitable receiving institution. The Local Authority museums service does not have appropriate storage facilities, therefore if artefacts are recovered the final archive will be deposited at Amgueddfa Cymru – National Museum Wales, Cathays Park, Cardiff, CF10 3NP. If no artefacts are retrieved then the final archive will be deposited with the *National Monuments Record*, RCAHMW, Aberystwyth. Arrangements will be made with the receiving institution before work starts.

Although there may be a period during which client confidentiality will need to be maintained, copies of all reports and the final archive will be deposited no later than six months after completion of the work.

Copies of all reports, the digital archive and an archive index will be deposited with the *National Monuments Record*, RCAHMW, Aberystwyth.

Wherever the archive is deposited, this information will be relayed to the HER. A summary of the contents of the archive will be supplied to GGAT-CD.

8.2.6. Finds deposition

The finds, including artefacts and ecofacts, excepting those which may be subject to the Treasure Act, will be deposited with the same institution, subject to the agreement of the legal land owners.

9. Staff

The project will be managed by Philip Poucher MCI fA (AW Project Manager) and the fieldwork undertaken by suitably qualified and experienced AW staff. Any alteration to staffing before or during the work will be brought to the attention of GGAT-CD and the client.

Additional Considerations

10. Health and Safety

10.1. Risk assessment

Prior to the commencement of work AW will carry out and produce a formal Health and Safety Risk Assessment in accordance with *The Management of Health and Safety Regulations 1992*. A copy of the risk assessment will be kept on site and be available for inspection on request. A copy will be sent to the client (or their agent as necessary) for their information. All members of AW staff will adhere to the content of this document.

10.2. Other guidelines

AW will adhere to best practice with regard to Health and Safety in Archaeology as set out in the FAME (Federation of Archaeological Managers and Employers) health and safety manual *Health and Safety in Field Archaeology (2002)*.

11. Community Engagement and Outreach

Wherever possible, AW will ensure suitable measures are in place to inform the local community and any interested parties of the results of the site investigation work. This may occur during the site investigation work or following completion of the work. The form of any potential outreach activities may include lectures and talks to local groups, interested parties and persons, information boards, flyers and other forms of communication (social media and websites), and press releases to local and national media.

The form of any outreach will respect client confidentiality or contractual agreements. As a rule, outreach will be proportional to the size of the project.

Where outreach activities have a cost implication these will need to be negotiated in advance and in accordance with the nature of the desired response and learning outcomes.

12. Insurance

AW is fully insured for this type of work, and holds Insurance with Aviva Insurance Ltd and Hiscox Insurance Company Limited through Towergate Insurance. Full details of these and other relevant policies can be supplied on request.

13. Quality Control

13.1. Professional standards

AW works to the standards and guidance provided by the *Chartered Institute for Archaeologists*. AW fully recognise and endorse the Chartered Institute for Archaeologists' *Code of Conduct*, *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* and the *Standard and Guidance for archaeological watching briefs* currently in force. All employees of AW, whether

corporate members of the Chartered Institute for Archaeologists or not, are expected to adhere to these Codes and Standards during their employment.

13.2. Project tracking

The designated AW manager will monitor all projects in order to ensure that agreed targets are met without reduction in quality of service.

14. Arbitration

Disputes or differences arising in relation to this work shall be referred for a decision **in accordance with the Rules of the Chartered Institute of Arbitrators' Arbitration Scheme for the Institute for Archaeologists** applying at the date of the agreement.

15. References

British Geological Survey 2018

<http://mapapps.bgs.ac.uk/geologyofbritain/home.html> (Accessed 29.01.18)

Pannett, A 2017 A Research Framework for the Archaeology of Wales Version 03, Final Refresh Document February 2017: Neolithic and Earlier Bronze Age

Archaeology
Wales

APPENDIX III:
Archive Cover Sheet

ARCHIVE COVER SHEET

Tyle Crwth, Ynysddu, Newport

Site Name:	Tyle Crwth
Site Code:	TCYM/18/WB
PRN:	-
NPRN:	-
SAM:	-
Other Ref No:	-
NGR:	NGR ST 17348 91668
Site Type:	Construction of a single wind turbine and ancillary works in upland enclosed farmland.
Project Type:	Watching Brief
Project Manager:	Philip Poucher
Project Dates:	March - July 2018
Categories Present:	None
Location of Original Archive:	AW
Location of duplicate Archives:	RCAHMW, Aberystwyth
Number of Finds Boxes:	-
Location of Finds:	-
Museum Reference:	-
Copyright:	AW
Restrictions to access:	None

Archaeology Wales

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