



aeon archaeology

Glan Llyn Cycle Track, Llanuwchllyn, Bala, Gwynedd, LL23 7ST.

October 2018 - November 2018
V 1.0



Archaeological Watching Brief
Project Code: A0175.1
Report no. 0185



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Archaeological Watching Brief

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Project Code: A0175.1

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Client: Gwersyll yr Urdd Glanllyn
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1.0 NON-TECHNICAL SUMMARY

Llogwyd Aeon Archeology gan Gwersyll yr Urdd Glanllyn, o hyn ymlaen i Gleient, i gynnal gwylio archaeoleg, pan fydd gwaith tir yn dechrau gydag ymestyn y llwybr beic nesaf i'r A494, ger Glanllyn, Llanuwchllyn, y Bala, Gwynedd ac i mewn i Cenedlaethol Awdurdod Parc Eryri (SNPA).

Mae canlyniadau'r briff gwylio archeoleg wedi rhoi tystiolaeth sy'n ymateb i ddŵr sy'n sefyll dros y ddau faes a newidiwyd gan y llwybr beiciau. Ym maes un roedd ffos llinol a oedd yn ymestyn tua'r gogledd-orllewin i'r de-ddwyrain ac ym maes dau roedd draen o leinin carreg a hefyd ffos â cherrig, a oedd y ddau ohonynt hefyd wedi'u lleoli i'r gogledd-orllewin i'r de-ddwyrain. Mae'r dyddiadau posib arfaethedig ar gyfer y nodweddion archeolegol hyn yn ôl-ganoloesol, yn amrywio o ddiwedd y 19eg ganrif hyd at ganol yr 20fed ganrif, mae hyn oherwydd eu siâp a rhai o'r dystiolaeth ceramig a geir o fewn y nodweddion.

Aeon Archaeology was commissioned by Gwersyll yr Urdd Glanllyn to carry out an archaeological watching brief during groundworks associated with the extension of the existing cycle track alongside the A494, near Glanllyn, Llanuwchllyn, Bala, Gwynedd and within the Snowdonia National Park Authority (SNPA).

The results of the watching brief provided physical evidence which alluded to a preoccupation with the management of standing water across both of the fields altered by the extension of the cycle track. Within field 1 there was a tapering linear ditch which was aligned northwest to southeast and within field 2 there was a stone lined drain and a stone filled linear ditch both of which were also aligned northwest to southeast. The proposed dates for these features are post-medieval, possibly ranging from the late 19th century to the early-mid 20th century as suggested by their morphology and due to some ceramic evidence found in association with the features.

2.0 INTRODUCTION

Aeon Archaeology was commissioned by Gwersyll yr Urdd Glanllyn, hereafter the client, to carry out an archaeological watching brief during groundworks associated with the extension of the existing cycle track alongside the A494, near Glanllyn, Llanuwchllyn, Bala, Gwynedd and within the Snowdonia National Park Authority (SNPA).

The purpose of the works was to construct a 2.5m wide hard surfaced aggregate path that would be suitable for cyclists. The purpose of the works was to connect the existing cycle route (which ends at the Glanllyn Isa Access Track) with the Urdd Glanllyn Outdoor Activity Centre boundary.

The construction of the works involved the digging out of a 2.5m wide easement and the laying down of granite aggregate sub base, which was finished with a 20mm dust aggregate layer. The dust 'topdressing' was then compacted in order to form a smooth surface to the path, with a 1:80 cross gradient.

A mitigation brief was not prepared for this scheme by the Gwynedd Archaeological Planning Service (GAPS) Development Control Archaeologist but the following conditions were assigned to full planning permission (**NP5/71/39W**):

Condition 9

No work shall commence (including any ground disturbance works or ground clearance) until such time as the applicant has submitted to and had approval in writing from the Local Planning Authority for an archaeological specification for a programme of works which must meet all relevant archaeological standards.

Condition 10

The development hereby approved shall be carried out in strict accordance with the archaeological specification for a programme of works as approved in condition 9 above.

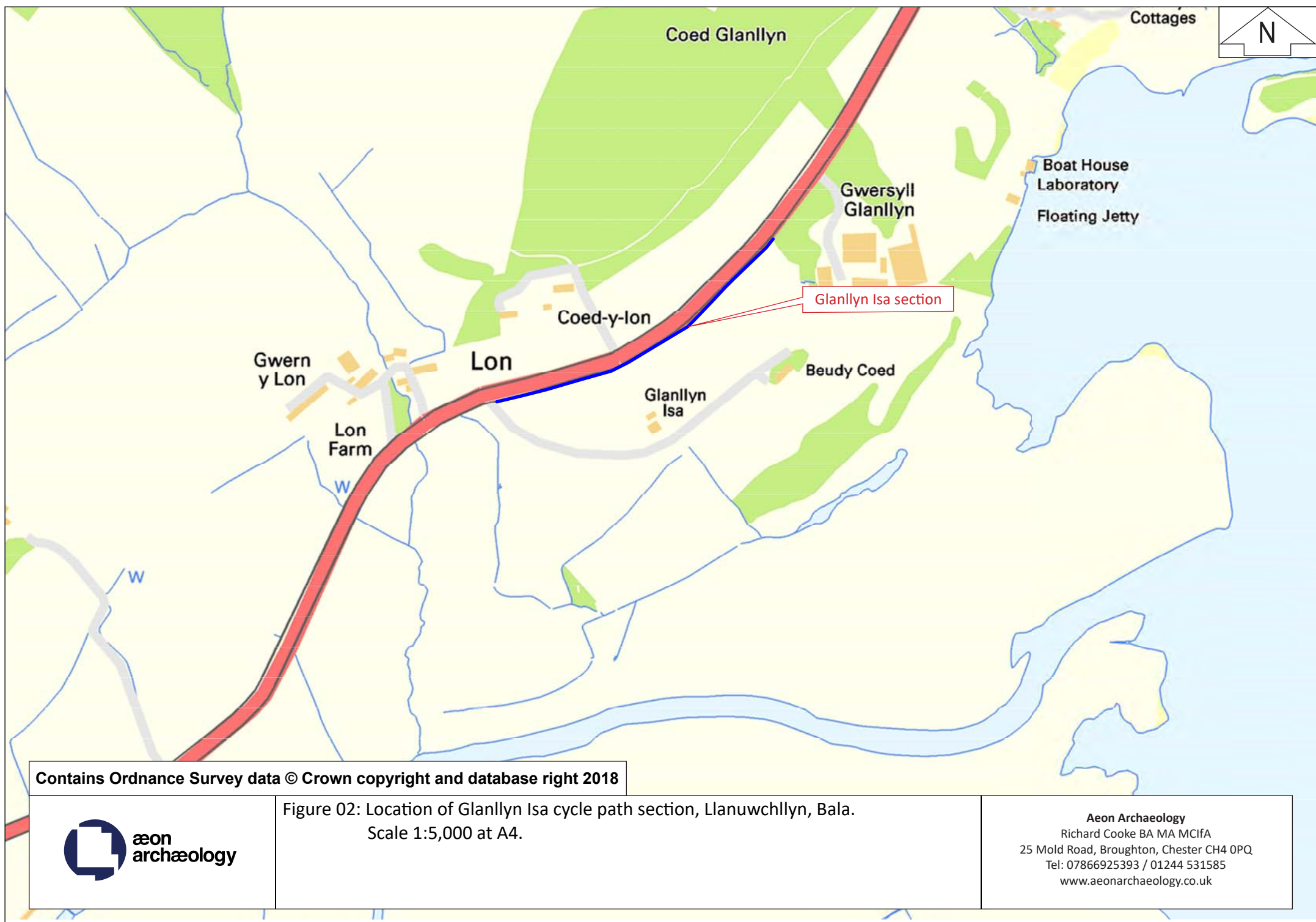
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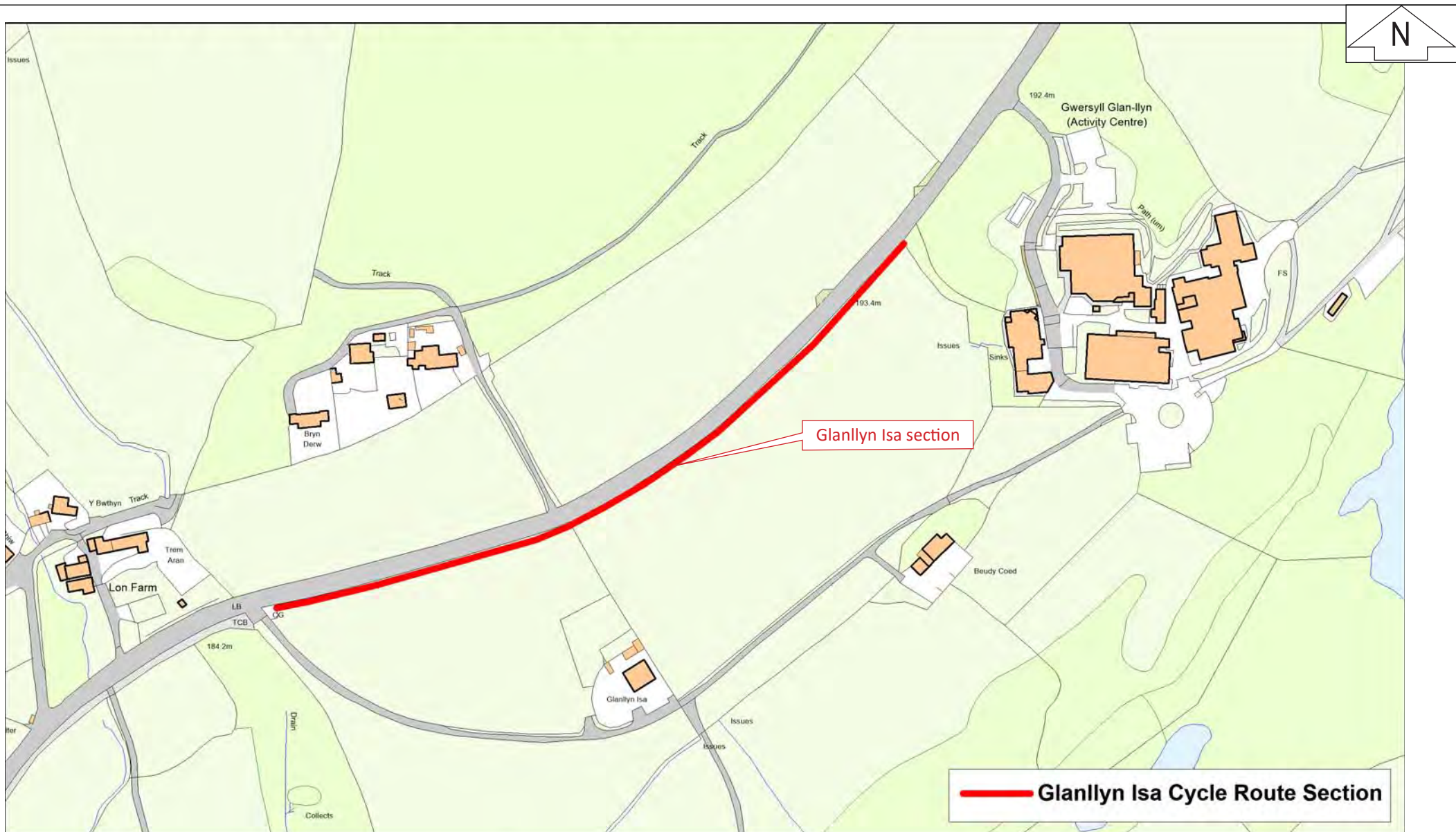
To ensure no matters of archaeological interest adversely affected as a result of this development and are satisfactory recorded.

A Written Scheme of Investigation (WSI) was produced by Aeon Archaeology in August 2018 (appendix I) and submitted to the Development Control Archaeologist at GAPS in order to satisfy condition 9 of the permission. The WSI was subsequently approved in writing and the watching brief undertaken in order to satisfy condition 10 of the permission between October and November 2018. This document reports on the results of the archaeological watching brief and addresses condition 10 of the permission.

The work adhered to the guidelines specified in Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2014).







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Figure 03: Location of Glanllyn Isa cycle path section, Llanuwchllyn, Bala.
Scale 1:2,500 at A4.

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3.0 PROJECT AIMS

The aim of the watching brief works was to characterise the known, or potential, archaeological remains uncovered during groundworks associated with the extension of the existing cycle track alongside the A494, near Glanllyn, Llanuwchllyn, Bala, Gwynedd. The broad aims of the archaeological watching brief were to:

The broad aims of the archaeological watching brief were to:

- To allow, within the resources available, the opportunity to gain information about and record the presence/absence, nature and date of archaeological remains on the Site affected by excavations and groundworks, the presence and nature of which could not be established with sufficient confidence in advance of works which may disturb them.
- To provide the facility to signal to the relevant authorities, before irreversible impact to remains that an archaeological and/or historic find has been made for which the resources allocated to the watching brief itself are inadequate to support their treatment to an adequate and satisfactory standard.

The detailed objectives of the archaeological watching brief were to:

- To observe and recover any artefacts of archaeological significance.
- To record the location, dimensions and nature of any deposits, features, structures or artefacts of archaeological significance.
- To recover samples of any deposits considered to have potential for analysis for palaeoenvironmental data should the opportunity arise.

The management of this project has followed the procedures laid out in the standard professional guidance *Management of Research Projects in the Historic Environment Project Manager's Guide* (English Heritage 2006; rev 2015), and in the Chartered Institute for Archaeologists *Archaeological Watching Brief* (Chartered Institute for Archaeologists, 2014). Five stages are specified:

Phase 1: project planning

Phase 2: fieldwork

Phase 3: assessment of potential for analysis and revised project design

Phase 4: analysis and report preparation

Phase 5: dissemination

The current document reports on the phase 4 analysis and states the means to be used to disseminate the results. In this instance it was not necessary to prepare a revised project design as alluded to in Phase 3; as there was a paucity of evidence recovered in Phase 2 in terms of archaeological features and therefore did not warrant any alteration to the initial project design.

The site is to be set in its landscape context so that its full character and importance can be understood. All the information is to be presented in a report that will be held by the Historic Environment Record (HER) and the National Monument Record of the Royal Commission on the

Ancient and Historic Monuments of Wales (RCAHMW) for long term archiving so that it can be accessible to the public and future researchers. This phase of work also includes archiving the material and documentary records from the project.

4.0 METHODOLOGY – ARCHAEOLOGICAL WATCHING BRIEF

4.1 Watching Brief

The CIfA maintains a standard for archaeological watching brief which states that:

An archaeological watching brief will record the archaeological resource during development within a specified area using appropriate methods and practices. These will satisfy the stated aims of the project, and comply with the Code of conduct and other relevant by-laws of CIfA.

An archaeological watching brief is defined by the CIfA as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons (CIfA 2014a). The watching brief will take place within a specified area within the Site where there is a possibility that archaeological deposits may be disturbed or destroyed.

The CIfA further identifies the purpose of a watching brief as allowing, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established in advance of development or other potentially disruptive works.

It is also important to note that a watching brief provides an opportunity, if needed, for a signal to be made to all interested parties, before the destruction of the archaeological materials, 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.

A watching brief is, therefore, not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

All excavations were undertaken using a mechanical excavator fitted with a toothless ditching bucket. A photographic record was maintained throughout, using a digital SLR camera (Canon 6000D) set to maximum resolution and any subsurface remains were to be recorded photographically, with detailed notations and measured drawings being undertaken if required.

In the event of archaeological discovery features were to be excavated by hand and fully recorded using Aeon Archaeology pro-formas, digital photographs, and plan and section drawings taken at a suitable scale (usually 1:20 for plan drawings and 1:10 for section drawings).

The archive produced is held at Aeon Archaeology under the project code **A0175.1**.

4.2 Data Collection from Site Records

A database of the site photographs was produced to enable active long-term curation of the photographs and easy searching. The site records were checked and cross-referenced and photographs were cross-referenced to contexts. These records were used to write the site narrative and the field drawings and survey data were used to produce an outline plan of the site.

All paper field records were scanned to provide a backup digital copy. The photographs were organised and precisely cross-referenced to the digital photographic record so that the Gwynedd Archaeological Trust (GAT) HER can curate them in their active digital storage facility.

4.3 Artefact Methodology

All artefacts were to be collected and processed including those found within spoil tips. They would be bagged and labelled as well any preliminary identification taking place on site. After processing, all artefacts would be cleaned and examined in-house at Aeon Archaeology. If required artefacts would be sent to a relevant specialist for conservation and analysis.

The recovery policy for archaeological finds was kept under review throughout the archaeological watching brief. Any changes in recovery priorities would be made under guidance from an appropriate specialist and agreed with the Client and the Gwynedd Archaeological Planning Service (GAPS) Development Control Archaeologist. There was a presumption against the disposal of archaeological finds regardless of their apparent age or condition.

4.4 Environmental Samples Methodology

The sampling strategy and requirement for bulk soil samples was related to the perceived character, interpretational importance and chronological significance of the strata under investigation. This ensured that only significant features would be sampled. The aim of the sampling strategy was to recover carbonised macroscopic plant remains, small artefacts particularly knapping debris and evidence for metalworking.

Advice and guidance regarding environmental samples and their suitability for radiocarbon dating, as well as the analysis of macrofossils (charcoal and wood), pollen, animal bones and molluscs would be obtained from Oxford Archaeology if required.

4.5 Report and dissemination

A full archive including plans, photographs, written material and any other material resulting from the project was prepared. All plans, photographs and descriptions were labelled, and cross-referenced, and will be lodged within a suitable repository to be agreed with the archaeological curator within six months of the completion of the project.

A draft copy of the report has been sent to the client and upon written approval from them paper and digital copies of the report will be sent to the regional HER, the GAPS Development Control Archaeologist, and will be logged with the RCAHMW. Copies of all notes, plans, and photographs arising from the watching brief will be stored at Aeon Archaeology under the project code **A0175.1** with the originals being lodged in a suitable repository to be agreed with the archaeological curator.

5.0 ARCHAEOLOGICAL BACKGROUND

The cycle track location lies approximately 580.0m east of the Roman auxiliary fort of Caer Gai, garrisoned c. AD 75-80 to 130, that stands on a rounded spur on the left bank of the River Dee close to the southwest end of Llyn Tegid. The name is Welsh and taken from the legend of the giant Cai Hir: the Roman name is unknown.

Aerial photography has revealed evidence of road systems running from the southeast and northwest gates, along with a road running diagonally from the northeast gate. The outline of a building at the southwest end of Cae Capel could also be seen in enough detail to interpret it as a bathhouse (St Joseph, 1977). Recent geophysical survey work by the Gwynedd Archaeological Trust (Hopewell, 2006) has provided further evidence of the roads running from the fort and has shown ribbon development in the form of a possible vicus, or settlement, running alongside the road to the northeast. The vicus appears to include a shrine and an extensive complex of buildings of unknown date and function. A variety of specifically military features are also clustered around the fort and include a bathhouse, a parade ground and a possible mansio.

In preparation for the submission of an Outline Planning Application, Gwynedd Archaeological Trust (GAT) undertook an archaeological assessment in May 2012 for the first proposed cycle route (GAT report 1055). This concluded that the postulated line of the Roman Road between the forts at Caer Gai and Caersws would intersect the line of the proposed cycle route. As a result, the eastern end of the cycle route was subsequently modified and a desktop assessment undertaken in January 2015.

The report identified a previously unrecorded banked earthwork enclosure located at the southwestern end of the proposed development near Glanllyn Isa. This feature was visible on a 1948 RAF aerial photograph and measured 75m square, with two rounded corners, which can be indicative of a Roman military site. At this point the walkover assessment of the site identified two low parallel banks with possible associated ditches (GAT report 1227). There is some historical evidence that the earthwork may have been from 20th century agriculture of the Welsh Agricultural Sub-Committee.

An archaeological evaluation of the earthwork was undertaken by Archaeology Wales in 2015 (report 1379) and concluded that the feature was of post-medieval agricultural origin. The report however also concluded that given the proximity of the assessment area to the purported line of the Roman road and the fort at Caer Gai, it remains possible that previously unrecorded Roman archaeology survives nearby.

6.0 QUANTIFICATION OF RESULTS

6.1 The Documentary Archive

The following documentary records were created during the archaeological watching brief:

Watching brief day sheets	17
Context Sheets	5
Digital photographs	60

6.2 Environmental Samples

Bulk environmental samples were taken from the fill (1005) of linear ditch/hedgerow [1004], and from the fill (1007) of stone-lined ditch [1006]. However these bulk samples were not processed as part of the post-excavation works as fill (1005) produced a fragment of post-medieval pipe stem, and stone-lined ditch [1006] has been interpreted as a post-medieval drainage ditch.

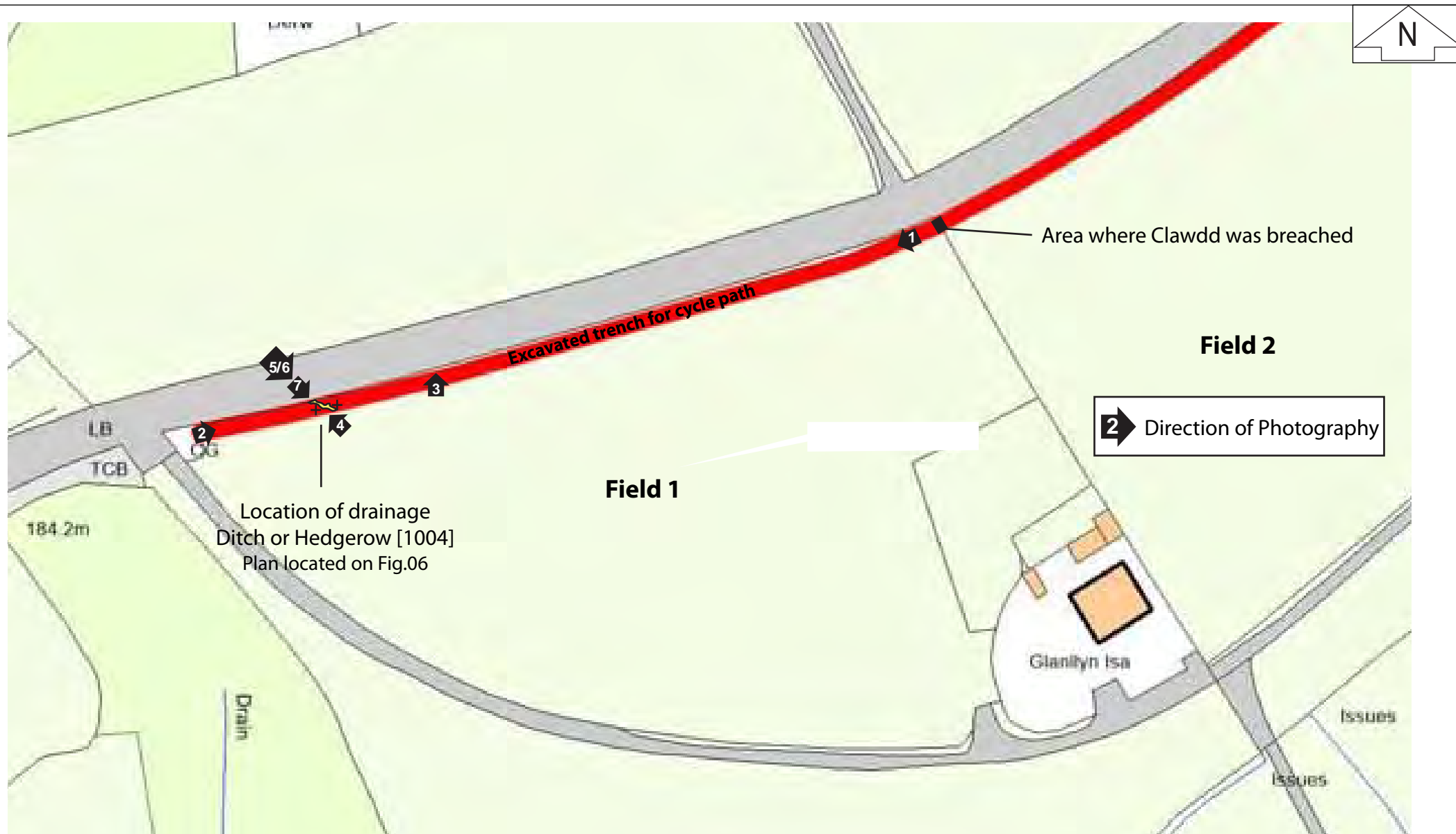
6.3 Artefacts

The artefacts recovered consisted of a collection of post medieval ceramic sherds which were collected almost entirely from the subsoil (1002), with only a fragment of pipe stem being recovered from fill (1005) of linear ditch feature [1004]. The most interesting examples of post medieval ceramic were two sherds from a commemorative cup celebrating a children's nursery rhyme originally published in *'Aunt Mavor's Picture Books for little readers: The Cat's Tea-Party'* the date for this verse was at sometime during the middle of the 19th century (Hope 2016). The fragments of the cup bear the caption

“quarrel betwee... Captain Black and Sir Cla...”

Which no doubt refers to the characters present in the nursery rhyme (see bibliography for website reference). Below is a small tabulation of ceramic sherds found during the works at Glan Llyn.

Post medieval pipe stem	1
Annular ware (late)	4
Transfer printed ware	3
Mid Victorian earthenware	2

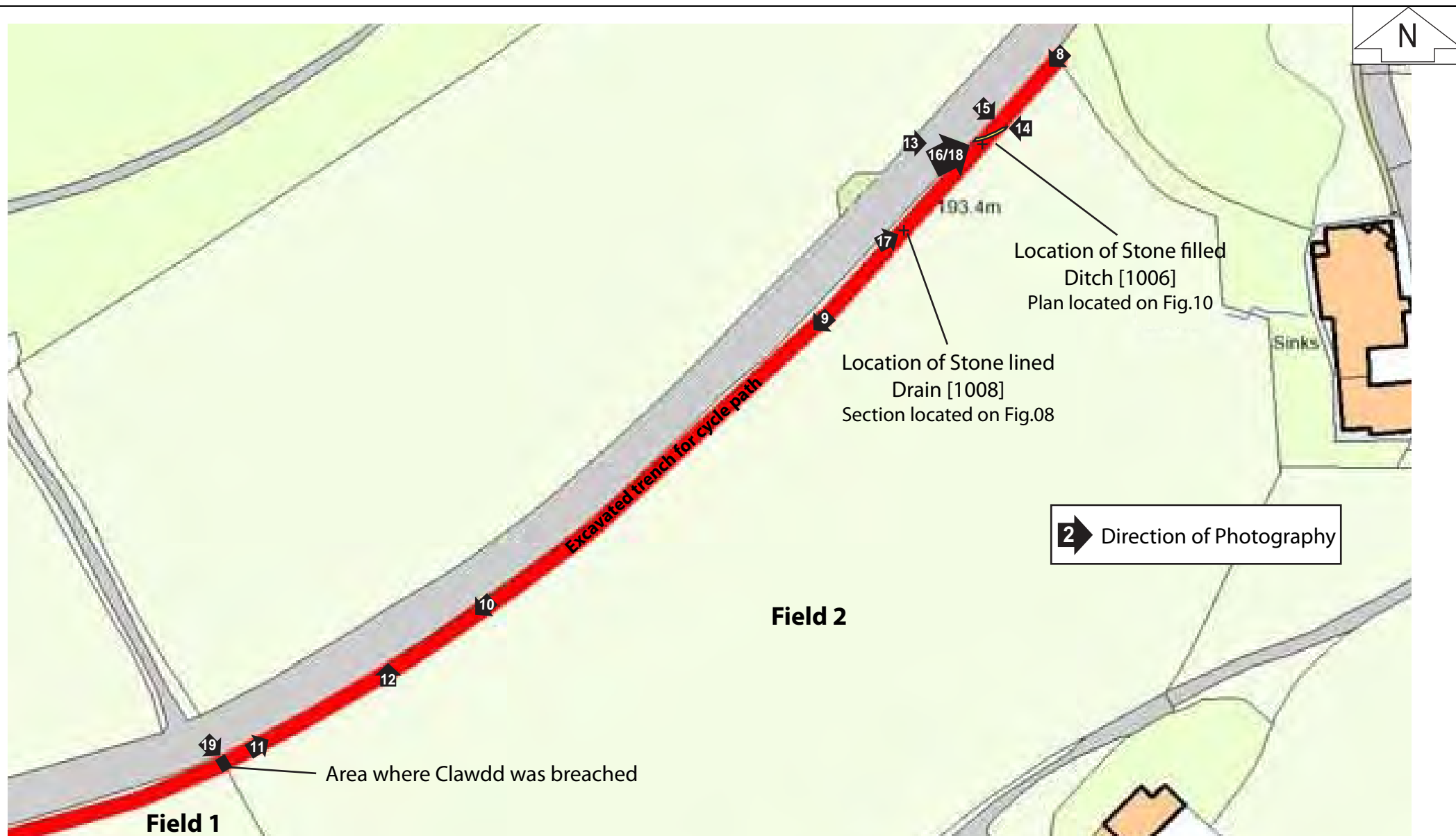


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Figure 04: Plan of excavations in Field 1 at Glan Llyn, Llanuwchllyn, Bala showing locations of archaeological features and direction of photography

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Figure 05: Plan of excavations in Field 2 at Glan Llyn, Llanuwchllyn, Bala showing locations of archaeological features and direction of photography

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7.0 RESULTS OF THE ARCHAEOLOGICAL WATCHING BRIEF

7.1 Overview

The archaeological watching brief was maintained by Josh Dean BA ACIfA, archaeological contractor at Aeon Archaeology. The site was attended from the 24-26th and 29th-31st of October and 1st, 2nd, 7th, 12th-13th, 16th, 19-21st and 23rd November 2018 and the weather conditions varied between bright sunshine, overcast with persistent rain to heavy rain.

The watching brief was maintained during the excavation of a trench for the new cycle path which measured 2.50m in width by 350m in length which was orientated northeast to southwest. The trench was excavated to a maximum depth of 0.55m through a 0.15m deep soft, dark grey-brown sand-silt topsoil (1001) with occasional sub rounded/sub angular pebble inclusions. This lay above a 0.30m deep friable, mid orange-brown, clay-silt subsoil (1002) with infrequent rounded and sub-rounded pebble inclusions and occasional sherds of post medieval pottery. Beneath this it cut into >0.10 deep layer of mid orange-brown (with grey mottling) natural clay (1003). There were only very occasional hints of plough scars across the fields and the ceramics finds within the topsoil and subsoil were typical of the late 19th century to the early-mid 20th century.

There were three archaeological features encountered during the watching brief; within field 1 there was linear feature tapering in width from northwest to southeast and within field 2 there was a stone lined drain and a stone filled linear ditch both of which were also aligned northwest to southeast. z

7.2 Field 1 (Closest to Lon Farm)

Located to the western end of field 1 there was a single linear ditch which measured 3.25m long by 1.82m wide (max width at south eastern extent) and 0.23m deep at its maximum depth (this depth was much reduced in the northwest). The sides of the cut [1004] in the northwest were very slight to almost imperceptible whereas this became much more defined in the south eastern extent of the feature moving from gradual in the centre to quite steep in the south. The base of the feature was concave in the southeast but became softly undulating and shallow toward the northwest.

The linear was filled by a single (1005) deposit which was 0.23m and consisted of quite soft, mid grey-brown, clay-silt with very frequent small sub rounded/angular pebble and occasional small sub-angular cobble inclusions. Within the central area of the feature the fill produced a single fragment of clay pipe stem (*see 6.3 Artefacts*) dating somewhere between the late 19th to early 20th century.

Discussion

The linear [1004] was probably associated with drainage and had been effected by heavy root activity, this was cut into the natural clay (1003) although there was a hint of a cut in the subsoil (1002) above suggesting that the feature may have come into existence following a build-up of subsoil perhaps through a combination of manuring practices and very light ploughing – judging by the general age of the ceramics found in the topsoil and subsoil deposits the land has possibly been cultivated in this manner since the mid-19th century.

The fill (1005) of the ditch [1004] was at first very apparent when viewed in plan towards the north western extent of the feature however it proved to be exceptionally shallow when trowelled away. A possible explanation for the meagre depth of the deposit could be that the field may have once sloped

upwards into a bank or ridge of material at the perimeter of the field (within 0.40/50m of the northern boundary) near to the A494, but may have since been ploughed flat following advances in agricultural technology. Therefore the exposed shallow remnant of the ditch recorded in the northernmost 0.50m (approx.) of the trench perhaps represents the very base of a ditch which was originally cut into a bank or ridge of material located along the northern perimeter of the field, this material could then have been removed or ploughed away. The slope created by this material would have levelled off to the current level of the field, therefore the full depth of the cut was preserved to the south of the removed ridge and subsequently found during this watching brief. Alternatively the feature may represent a previous hedgerow which was removed, although this is not supported by any mapping evidence that may have recorded such a boundary.

7.3 Field 2 (Closest to Glan Llyn)

Within field 2 there were two separate features located to the northeast of the field and closer to the centre of the field. The linear ditch [1006] was located at the north eastern end of field 1 (**NGR SH88591 31842 – SH 88597 31848**) and was aligned northwest to southeast. The feature measured >8.97m long by 0.84m and 0.87m deep at its maximum depth. The sides of the cut [1006] were very steep and the base was uniformly concave along its length. The linear was filled by a single deposit (1007) which was 0.68m deep and consisted of quite soft, mid grey-brown, clay-silt with very frequent small sub rounded/angular boulders and occasional large sub-rounded cobble inclusions.

The second feature was a probable linear drain (1008) which was only visible in section. It was located just to the northeast of the central point of the trench (**NGR SH88569 31818**). It appeared to be generally aligned northwest to southeast and 0.35m in height and 0.45m wide. The drain was formed from two upright sub rounded cobbles which created the drain's sides and a single sub rounded cobble laid horizontally across the two uprights which formed a cap to the drain. The base of the drain was slightly concave which allowed water to pass through freely although it had experienced some mild silting. The silt at the base of the drain was 0.03m deep which was a soft, mid yellow-brown, clay-silt with very frequent small sub rounded/angular pebble inclusions.

Discussion

The field boundary with Glan Llyn located along the north eastern edge of field 2 is fenced, but was formerly probably a clawdd wall, surviving to one course in height. To the immediate east of this wall is a long drainage ditch which respects the topography of the hill to fall southeast towards the lake serves to channel run off from the surrounding fields into Llyn Tegid below. The orientation (northwest to southeast) of the ditch [1006] combined with the fall across its length (0.17m) suggests that it was used as a drainage ditch to channel water toward the field boundary with Glan Llyn.

The drain (1008) was located very close to a drain outlet which was apparently channelling water from the field north of field 2 and underneath the A494. The area around this drain was severely waterlogged and bounded by a curving low earthen bank which was originally observed during the archaeological assessment (Flook 2015). The bank was almost entirely covered in turf and spread out, with large stones visible which may have represented attempts at field clearance. The area of water logging was located to the southwest and upslope of [1006] the sinuous bank almost certainly represented an attempt to contain the outflow or runoff water from under the road both the stone filled ditch [1006] and the stone lined drain (1008) represent attempts at trying to channel this water away from the area.

7.4 Clawdd boundary (Between Field 1 & Field 2)

The trench for the cycle track extension breached the boundary (at its most northerly point **SH 88450 31726**) between the fields which consisted of a very low ruinous Clawdd wall. The Clawdd was mostly turfed over in the centre and was surmounted with a well maintained hedge. The wall consisted of two courses of dry stone walling with some small sub rounded/angular boulders which had been placed on edge, these appeared to act as facing for the Clawdd which were most prominently visible from the northeast. The cycle track removed 2.60m wide section of the Clawdd and its hedge; the view of the wall from the southwest appeared to have very few stones, however when breached the stones appeared lower in the stratigraphy when viewed in section. The turf for the mound consisted of a 0.14m deep deposit of soft, dark grey-black, clay-silt which lay above a 0.40m deep deposit of quite firm, mid orange-brown, clay-silt with dark brown striations within its matrix. The mound was flanked by large sub-rounded cobbles to both the east and west. This morphological configuration is typical of post medieval field boundaries found throughout North Wales.



Plate 01: Post excavation of trench within Field 1 from boundary (clawdd) between fields - from the northeast - scale 1m



Plate 02: Post excavation of trench within Field 1 from Lon Farm end - from the west - scale 1m



Plate 03: Generic section of trench edge within Field 1 - from the southeast - scale 0.50m



Plate 04: Linear ditch [1004] half excavated - from the southeast - scale 1m



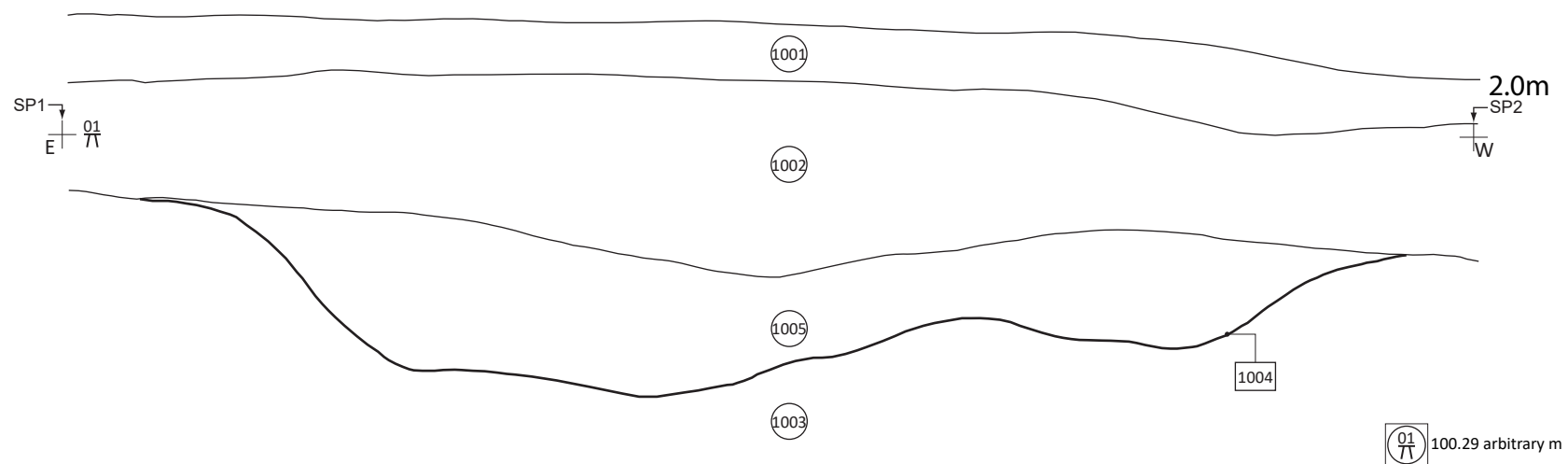
Plate 05: Northwest facing section of linear ditch [1004] - from the northwest - scale 0.50m



Plate 06: Linear ditch [1004] fully excavated - from the southeast - scale 0.50m



Plate 07: Section showing the depth of deposit at the north western extent of [1004] - from the southeast - scale 0.50m

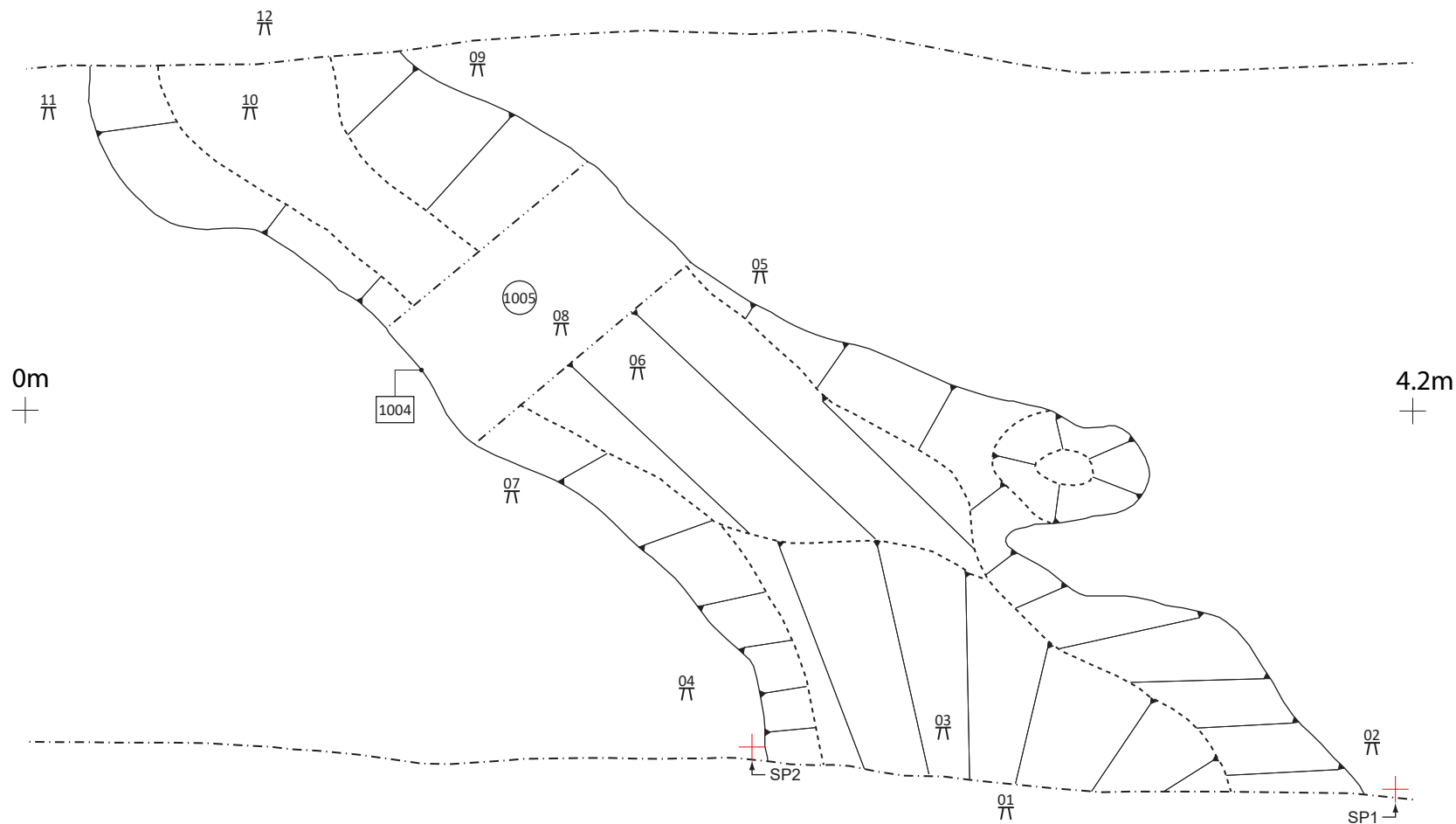


0 1m



Figure 07: North facing section of linear ditch / hedgerow [1004] within field 1.
Scale 1:10 at A4. Located on figure 6.

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Spot Heights - (arbitrary m)

1 = 100.39
2 = 100.20
3 = 99.97
4 = 100.06
5 = 100.09
6 = 100.01
7 = 100.05
8 = 100.05
9 = 100.11
10 = 100.02
11 = 100.03
12 = 100.51



Figure 06: Plan showing linear ditch / hedgerow [1004] within field 1. Scale 1:20 at A4.
Located on figure 04.

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Plate 08: Post excavation of trench within Field 2 from Glan Llyn end - from the northeast - scale 1m



Plate 09: Post excavation of trench within Field 2 from halfway (northeast of rise) - from the northeast - scale 1m



Plate 10: Post excavation of trench within Field 2 from halfway (southwest of rise) - from the southwest - scale 1m



Plate 11: Post excavation of trench within Field 2 from Clawdd - from the southwest - scale 1m



Plate 12: Generic section of trench edge within Field 2 - from the southeast - scale 0.50m



Plate 13: Stone filled linear ditch [1006] - from the west - scale 0.50m



Plate 14: Stone filled linear ditch [1006] - from the east - scale 0.50m



Plate 15: North western facing section of linear ditch [1006] - from the northwest - scale 0.50m



Plate 16: Focus on stony fill of linear ditch [1006] - from the west - scale 0.50m



Plate 17: Section shot of stone lined drain [1008] - from the west - scale 0.50m



Plate 18: Post-ex shot of stone filled drain [1008] following removal of stone - from the west - scale 1m

Figure 08: West facing section of stone-lined drain (1008) within field 2.
Scale 1:10 at A4. Located on figure 5.

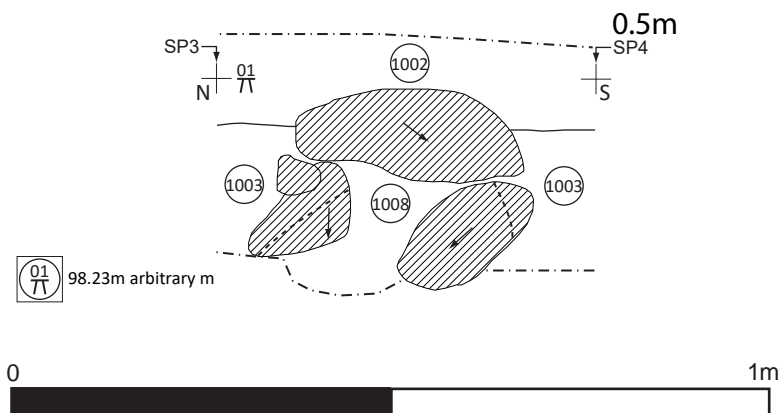
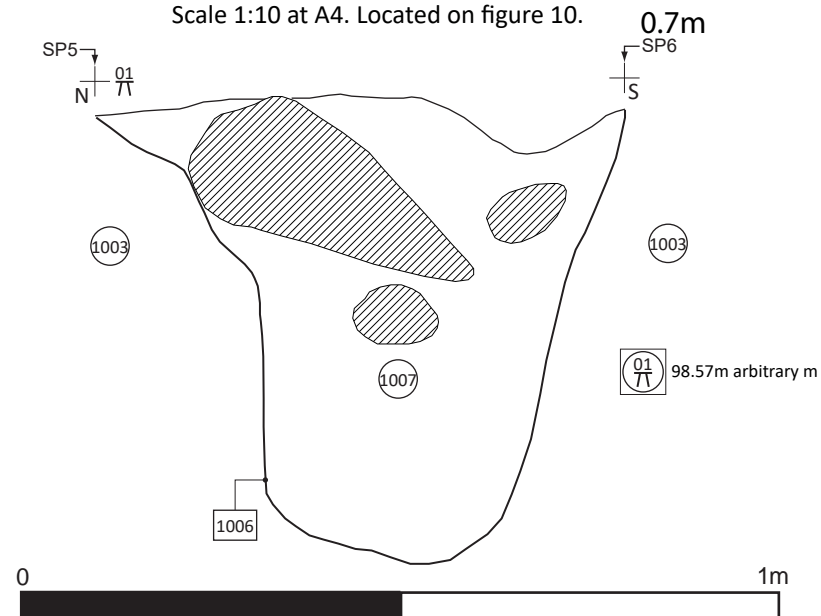


Figure 09: West facing section of stone-filled ditch [1006] within field 2.
Scale 1:10 at A4. Located on figure 10.



Spot Heights - (arbitrary m)

1 = 98.66
2 = 98.22
3 = 98.42
4 = 98.34
5 = 98.53
6 = 98.67
7 = 98.47
8 = 98.31
9 = 98.50
10 = 98.51
11 = 98.56
12 = 98.55
13 = 98.51
14 = 98.45
15 = 98.58
16 = 98.58

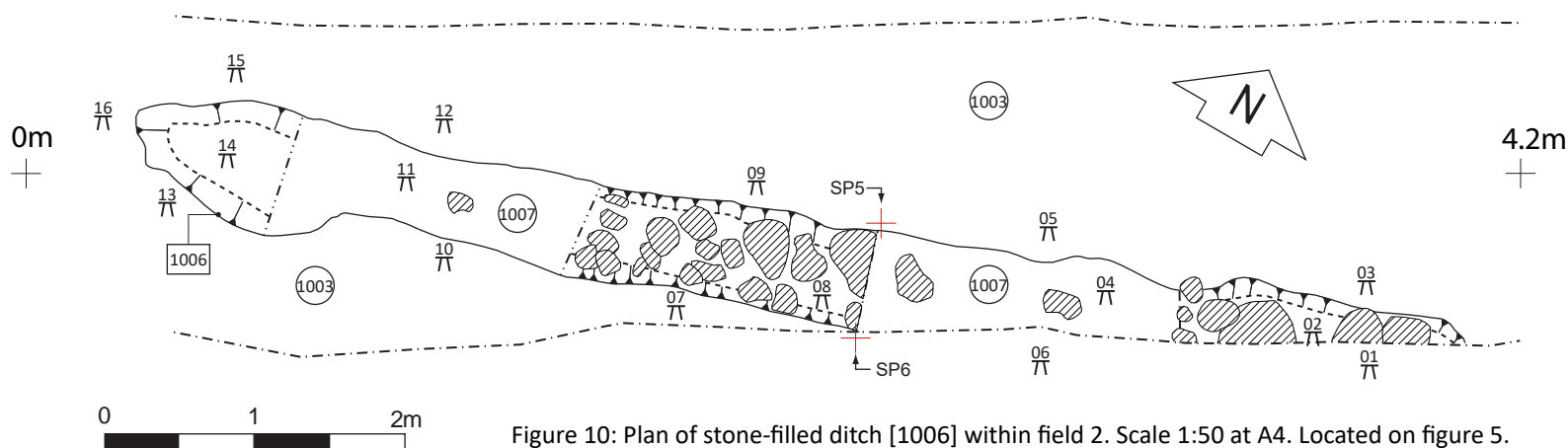


Figure 10: Plan of stone-filled ditch [1006] within field 2. Scale 1:50 at A4. Located on figure 5.



Plate 19: Section across the breached Clawdd (located between fields 1 & 2) - from the northwest - scale 0.50m

8.0 CONCLUSION AND RECOMMENDATIONS

The archaeological watching brief undertaken during the extension of the cycle track alongside the A494, near Glanllyn, Llanuwchllyn, Bala, Gwynedd revealed that the fields affected by these works had experienced multiple attempts at trying to control waterlogging throughout the post medieval period, this is true of both field 1 and field 2. Primarily the natural clay geology allows for very poor drainage and multiple areas of saturated ground were observed along the route of the cycle track.

The clawdd field boundary that was breached between the two fields is a typical example of post medieval land division, with low stone walls flanking a turf mound surmounted by a hedgerow. The feature in field 1 appeared to respect the topography of the land (orientated with the fall away to the southeast) and could have acted as a channel for water. Similarly accounting for the evidence of root activity within the feature it could have been the 'root bole' of a hedgerow which was subsequently removed although this is not supported by map research as any such boundary was not recorded on the available maps (OS maps; *6 inch* 1887, 1901, 1949 & *25 inch* 1901), the fragment of clay pipe stem alludes to a date sometime in the late 19th to early 20th century.

Within field 2 the area in which the features were found forms a narrow plateau onto which water is deposited from a large clay drain which runs under the A494, this area is heavily waterlogged. The ditch [1006] appears to be an attempt at trying to drain this area of particularly heavy water saturation; the area was bounded by a linear turf bank where a small pool of water (perhaps to prevent runoff across the field) had formed. The stone filled ditch [1006] which falls from northwest to southeast towards a deeper drain along the field boundary, represents a concerted effort at trying to drain this waterlogged area. The stone lined drain (1008) was also channeling away water from the clay drain towards the southeast, although it appears as if both of these drains were easily overwhelmed during heavy periods of rain. All of the features encountered were almost certainly post-medieval in date and are associated with water management; furthermore none of the archaeological artefacts or features relate to the prehistoric or Roman period and are post medieval in date.

9.0 SOURCES

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Hope 2016. Website accessed 7/12/2018 at; <https://www.carolinehope.co.uk/2016/08/10/miss-pusseycats-tea-party/>

A Apple Pie and Other Nursery Tales, read at; <http://www.gutenberg.org/files/24117/24117-h/24117-h.htm>

The Chartered Institute for Archaeologists (2014) Standard and Guidance for Archaeological Watching Brief.

**APPENDIX I: WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL
WATCHING BRIEF**



aeon archaeology

**Glanllyn Cycle Track, Llanuwchllyn,
Bala, Gwynedd LL23 7ST.**

**Written Scheme of Investigation
for Archaeological Watching Brief.**

August 2018 v1.0



Project Code: A0175.1
Planning Ref: NP5/71/39W

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1.0 INTRODUCTION

Aeon Archaeology has been commissioned by Gwersyll yr Urdd Glanllyn, hereafter the Client, to provide a written scheme of investigation (WSI) for carrying out an archaeological watching brief during the groundworks associated with the extension of the existing cycle track alongside the A494, near Glanllyn, Llanuwchllyn, Bala, Gwynedd and within the Snowdonia National Park Authority (SNPA) (**NGR SH 88308 31685 – SH 88611 31859**).

The purpose of the proposed works is to construct a 2.5m wide hard surfaced aggregate path that will be suitable for cyclists. The proposed works will connect the existing cycle route (which ends at the Glanllyn Isa Access Track) with the Urdd Glanllyn Outdoor Activity Centre boundary.

The construction of the proposed works will involve the digging out of a 2.5m wide tray and the infill of the tray with granite aggregate sub base, finished with a 20mm to dust aggregate layer. The 20mm to dust 'topdressing' will be compacted in order to form a smooth surface to the path, with a 1:80 cross gradient.

A mitigation brief was not prepared for this scheme by the Gwynedd Archaeological Planning Service (GAPS) Development Control Archaeologist but the following conditions were assigned to full planning permission (**NP5/71/39W**):

Condition 9

No work shall commence (including any ground disturbance works or ground clearance) until such time as the applicant has submitted to and had approval in writing from the Local Planning Authority for an archaeological specification for a programme of works which must meet all relevant archaeological standards.

Condition 10

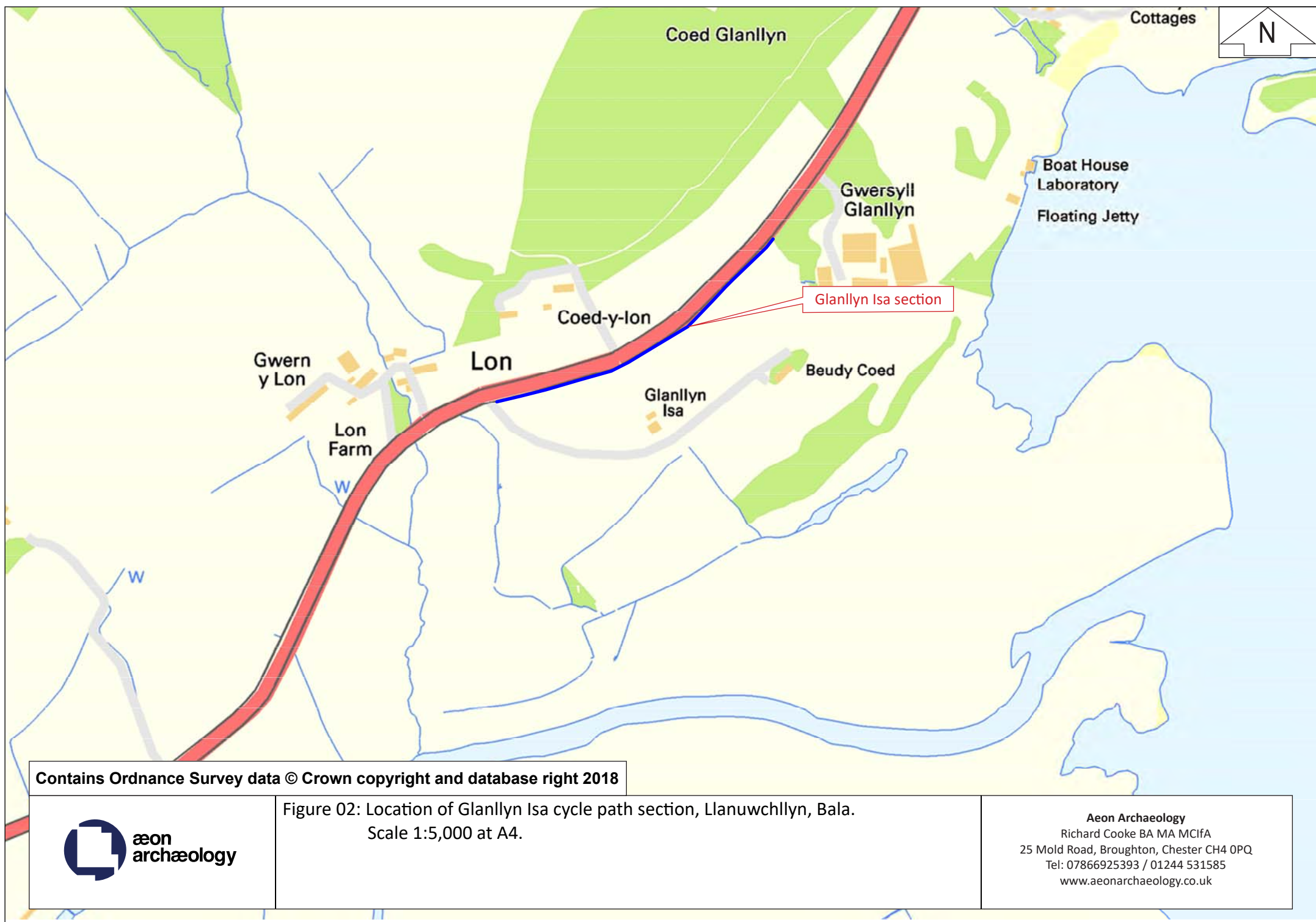
The development hereby approved shall be carried out in strict accordance with the archaeological specification for a programme of works as approved in condition 9 above.

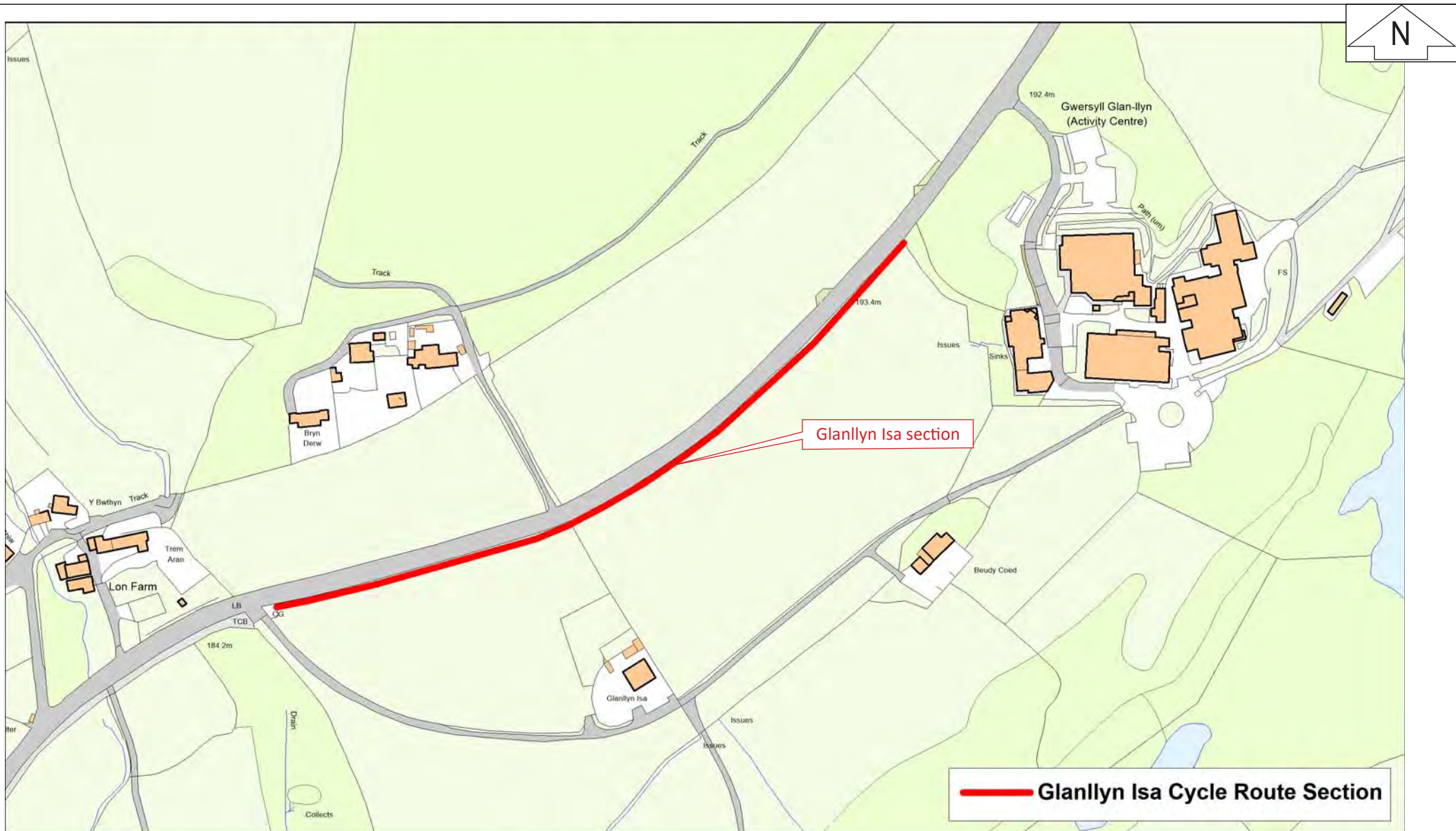
Reason

To ensure no matters of archaeological interest adversely affected as a result of this development and are satisfactory recorded.

The work will adhere to the guidelines specified in Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2014).







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Figure 03: Location of Glanllyn Isa cycle path section, Llanuwchllyn, Bala.
Scale 1:2,500 at A4.

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2.0 POLICY CONTEXT

At an international level there are two principal agreements concerning the protection of the cultural heritage and archaeological resource – the UNESCO Convention Concerning the Protection of World Cultural and Natural Heritage and the European Convention on the Protection of the Archaeological Heritage, commonly known as the Valetta Convention. The latter was agreed by the Member States of the Council of Europe in 1992, and also became law in 1992. It has been ratified by the UK, and responsibility for its implementation rests with Department for Culture Media and Sport.

The management and protection of the historic environment in Wales is set out within the following legislation:

- The Planning (Listed Buildings and Conservation Areas) Act 1990 (As amended)
- The Historic Environment (Wales) Act 2016
- The Town and Country Planning Act 1990
- The Ancient Monuments and Archaeological Areas Act 1979
- The Town and Country Planning (General Permitted Development Order) 1995 (As amended)

The Historic Environment (Wales) Act is the most recent legislation for the management of the Historic Environment and amends two pieces of UK legislation – the Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Listed Buildings and Conservation Areas) Act 1990. The new Act has three main aims:

- to give more effective protection to listed buildings and scheduled monuments;
- to improve the sustainable management of the historic environment; and
- to introduce greater transparency and accountability into decisions taken on the historic environment.

With respect to the cultural heritage of the built environment the Planning (Conservation Areas and Listed Buildings) Act 1990 applies. The Act sets out the legislative framework within which works and development affecting listed buildings and conservation areas must be considered. This states that:-

“In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses” (s66(1))

Other known sites of cultural heritage/archaeological significance can be entered onto county-based Historic Environment Records under the Town and Country Planning 1995.

Planning Policy Wales sets out the land use planning policies of the Welsh Government. Chapter 6 covers the historic environment and emphasises that the positive management of change in the historic environment is based on a full understanding of the nature and significance of historic assets and the recognition of the benefits that they can deliver in a vibrant culture and economy.

Various principles and policies related to cultural heritage and archaeology are set out in the Planning Policy Wales which guide local planning authorities with respect to the wider historic environment.

The following paragraphs from Planning Policy Wales are particularly relevant and are quoted in full:

Paragraph 6.5.5 concerns planning applications:

The conservation of archaeological remains is a material consideration in determining a planning application, whether those remains are a scheduled monument or not. Where nationally important archaeological remains, whether scheduled or not, and their settings are likely to be affected by proposed development, there should be a presumption in favour of their physical protection in situ. It will only be in exceptional circumstances that planning permission will be granted if development would result in an adverse impact on a scheduled monument (or an archaeological site shown to be of national importance) or has a significantly damaging effect upon its setting. In cases involving less significant archaeological remains, local planning authorities will need to weigh the relative importance of the archaeological remains and their settings against other factors, including the need for the proposed development.

Planning Policy Wales is supplemented by a series of Technical Advice Notes (TAN). Technical Advice Note 24: The Historic Environment contains detailed guidance on how the planning system considers the historic environment during development plan, preparation and decision making on planning and listed building consent applications. TAN 24 replaces the following Welsh Office Circulars:

- 60/96 Planning and the Historic Environment: Archaeology
- 61/96 Planning and the Historic Environment: Historic Buildings and Conservation Areas
- 1/98 Planning and the Historic Environment: Directions by the Secretary of State for Wales

3.0 SITE LOCATION

The proposed work outlined within this document is situated at the southern end of Llyn Tegid, with the proposed path connecting the Glanllyn Outdoor Activity Centre with the existing cycle path which currently terminates at the Glanllyn Isaf roadside (A494) entrance (NGR SH 88308 31685 – SH 88611 31859).

4.0 ARCHAEOLOGICAL BACKGROUND

The cycle track location lies approximately 580.0m east of the Roman auxiliary fort of Caer Gai, garrisoned c. AD 75-80 to 130, that stands on a rounded spur on the left bank of the River Dee close to the southwest end of Llyn Tegid. The name is Welsh and taken from the legend of the giant Cai Hir: the Roman name is unknown.

The earliest part of the fort is a rectangular turf rampart that has been dated to AD 70-85. The rampart is best-preserved on the southwest side where it stands almost complete in the form of a bank 8.0m wide. Both the south and southwest corners are excellently preserved with the ditch curved around them. The bank is surmounted by a modern field wall, probably partly overlying the foundations of the original Roman stone wall that surrounded the whole area, and incorporates a few of its squared stones. The original southwest gateway is in the centre of this side below the disused avenue, which leads up to the enclosure. It is marked by a rampart about 4.0m wide. Round the west corner the rampart and ditch are well-preserved and on the north side there is a low bank on the outside edge of the ditch. The existing wall on the southeast side is certainly of Roman workmanship but may have been incorporated into a stone retaining wall.

Excavations in the southern part of the fort in 1965 revealed three additional phases of activity within the main visible rampart. Two phases of wooden barracks were identified, with a later anomalous phase of building on a different axis. Investigations on the northwest rampart of the fort revealed three phases of defences; the turf rampart identified in 1965, a mid 2nd -century stone rampart cut into the original rampart and a massive, possibly post-Roman, earth rampart (White, 1985).

A description of the fort in the Report of the Annual Meeting of the Cambrian Archaeological Association in 1884 has been interpreted as suggesting the presence of a post-Roman citadel that extends outside the ramparts visible on the ground today. The report states that 'At a little distance [from the vallum] an outer dyke encloses a considerable circuit, probably 6 or 8 acres; and on the northwestern side are large quantities of boulders, some standing as if they formed a scarp or chevaux-de-frise, and others dispersed as if they had been the foundations of some primitive buildings'. The boulders mentioned are thought to be associated with the field name Wern Dwyndir (rough or hummocky land).

A wide range of extramural activity has been identified at this site. Robert Vaughan of Hengwrt (1592-1666) recorded the discovery of a coin of Domitian and an early Christian stone with the inscription HEC [sic] IACET SALVIANVS BVRS (? or G) OCAVI(s) FILIUS CVPETIAN[I] (Nash-Williams 1950). Edward Lhuyd recorded in Parochialia (c.1665) that 'There was a chapel formerly in the field known as Kae'r Kapele, where there is a pavement when dug up'. In 1885 D R Thomas records that 'Bones have been dug up lately in this plot of ground, near the traces of the foundations of a building about 15 feet square, near the centre of the field. The outlines of the building are visible on the surface when the grass is scorched. This field is also called 'Y Fynwent' or the graveyard'. A shrine

consisting of a burnt square structure and part of an inscription in the name of the First Cohort of the Nervii, possibly dating from the early to mid 2nd -century was discovered to the northeast of the fort in 1885. Flavian burials were also found to the north-east of the fort (Nash-Williams 1950).

Aerial photography has revealed evidence of road systems running from the southeast and northwest gates, along with a road running diagonally from the northeast gate. The outline of a building at the southwest end of Cae Capel could also be seen in enough detail to interpret it as a bathhouse (St Joseph, 1977). Recent geophysical survey work by the Gwynedd Archaeological Trust (Hopewell, 2006) has provided further evidence of the roads running from the fort and has shown ribbon development in the form of a possible vicus, or settlement, running alongside the road to the northeast. The vicus appears to include a shrine and an extensive complex of buildings of unknown date and function. A variety of specifically military features are also clustered around the fort and include a bathhouse, a parade ground and a possible mansio.

In preparation for the submission of an Outline Planning Application, Gwynedd Archaeological Trust (GAT) undertook an archaeological assessment in May 2012 for the first proposed cycle route (GAT report 1055). This concluded that the postulated line of the Roman Road between the forts at Caer Gai and Caersws would intersect the line of the proposed cycle route. As a result, the eastern end of the cycle route was subsequently modified and a desktop assessment undertaken in January 2015.

The report identified a previously unrecorded banked earthwork enclosure located at the south-western end of the proposed development near Glanllyn Isa. This feature was visible on a 1948 RAF aerial photograph and measured 75m square, with two rounded corners, which can be indicative of a Roman military site. At this point the walkover assessment of the site identified two low parallel banks with possible associated ditches (GAT report 1227). There is some historical evidence that the earthwork may have been from 20th century agriculture of the Welsh Agricultural Sub-Committee.

An archaeological evaluation of the earthwork was undertaken by Archaeology Wales in 2015 (report 1379) and concluded that the feature was of post-medieval agricultural origin. The report however also concluded that given the proximity of the assessment area to the purported line of the Roman road and the fort at Caer Gai, it remains possible that previously unrecorded Roman archaeology survives nearby.

5.0 WATCHING BRIEF - ARCHAEOLOGICAL AIMS

The archaeological watching brief shall be maintained:

1. During the groundworks associated with the cycle track extension.

The ClfA maintains a standard for archaeological watching brief which states that:

An archaeological watching brief will record the archaeological resource during development within a specified area using appropriate methods and practices. These will satisfy the stated aims of the project, and comply with the Code of conduct and other relevant by-laws of ClfA.

An archaeological watching brief is defined by the ClfA as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons (ClfA 2014). The watching brief will take place within a specified area within the Site where there is a possibility that archaeological deposits may be disturbed or destroyed.

The ClfA further identifies the purpose of a watching brief as allowing, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established in advance of development or other potentially disruptive works.

It is also important to note that a watching brief provides an opportunity, if needed, for a signal to be made to all interested parties, before the destruction of the archaeological materials, 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.

A watching brief is, therefore, not intended to reduce the requirement for excavation or preservation of known or inferred deposits, and it is intended to guide, not replace, any requirement for contingent excavation or preservation of possible deposits.

The aims of the watching brief are:

- To allow, within the resources available, the opportunity to gain information about and record the presence/absence, nature and date of archaeological remains on the Site affected by excavations and groundworks, the presence and nature of which could not be established with sufficient confidence in advance of works which may disturb them.
- To provide the facility to signal to the relevant authorities, before irreversible impact to remains that an archaeological and/or historic find has been made for which the resources allocated to the watching brief itself are inadequate to support their treatment to an adequate and satisfactory standard.

The specific objectives of the watching brief are:

- To observe and recover any artefacts of archaeological significance.
- To record the location, dimensions and nature of any deposits, features, structures or artefacts of archaeological significance.
- To recover samples of any deposits considered to have potential for analysis for palaeoenvironmental data should the opportunity arise.

6.0 METHODOLOGY

6.1 Archaeological Watching Brief

The methodology for the watching brief has been prepared with reference to the ClfA's document Standards and Guidance for Archaeological Watching Brief (2014) and will be kept under constant review during the project, in order to see how far it is meeting the terms of the aims and objectives, and in order to adopt any new questions which may arise.

Curatorial monitoring of the archaeological work on behalf of the SNPA will be carried out by the GAPS Development Control Archaeologist (Jenny Emmett). To facilitate the curatorial monitoring, the officer shall be provided with a minimum of two weeks' notice of the start of the archaeological work.

A suitably qualified and experienced archaeologist(s) from Aeon Archaeology will be commissioned for the maintenance of the watching brief. On arrival on site, the archaeologist(s) will report to the site manager and conform to the arrangements for notification of entering and leaving site. The archaeologist(s) will keep a record of the date, time and duration of all attendances at site, the names and numbers of archaeologists deployed and any actions taken. The archaeologist will be provided with a Health & Safety Induction by the construction contractor and wear a safety helmet, safety footwear and high visibility jacket/vest at all times.

If deposits and or artefacts are exposed during excavations for the development which require recording and recovery, it may be necessary to delay works whilst the proper investigation and recording takes place. Watching brief recording can often be undertaken without delay to groundworks, depending upon the specific circumstances and flexibility of all the staff on site.

Within the constraints of the terms of the watching brief work, the archaeologist will not cause unreasonable disruption to the maintenance of the work schedules of other contractors on site. In the event of archaeological discoveries the treatment of which (either arising from the volume/quantity of material and/or the complexity/importance of the material) is beyond the resources deployed the Client will be notified and a site meeting/telephone consultation arranged with the GAPS Archaeologist. The aim of the meeting will be to confirm 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 and identify measures which would be sufficient to support treatment to a satisfactory and proper standard prior to destruction of the material in question.

Any archaeological deposits, features and structures identified which can be investigated and recorded under the terms of the watching brief will be excavated manually in a controlled and stratigraphic manner sufficient to address the aims and objectives of the project – subject to the limitations on site access.

It may not be necessary to excavate the complete stratigraphic sequence to geologically lain deposits but the inter-relationships between archaeological deposits, features and structures will be investigated sufficient to address the aims and objectives of the project and the complete stratigraphic sequence to geologically lain deposits will be investigated where practicable.

The method of recording will follow the normal principles of stratigraphic excavation and the stratigraphy will be recorded in written descriptions even where no archaeological deposits have been identified. The archaeologist will record archaeological deposits using proformae recording forms and locate them on a large-scale site plan related to the Ordnance Survey National Grid and Datum references.

The groundworks excavations shall be undertaken using a mechanical excavator fitted with a toothless ditching bucket.

The drawn record will comprise plans at scale 1:20 and sections at scale 1:10; propriety electronic hardware and software to prepare site drawings may be used as appropriate.

The photographic record will be maintained throughout using a digital SLR camera (Canon 600D) set to maximum resolution (72 dpi) and all archaeological features will be recorded photographically with photographs taken in RAW format and later converted to TIFF format for long-term storage and JPEG format for presentation and inclusion in the archive. The standards for the digital archive will adhere to those set out in '*Guidelines for Digital Archaeological Archives*' (RCAHMMW, 2015).

The archive produced will be held at Aeon Archaeology under the project code **A0175.1**.

6.2 Watching brief report

6.2.1 Post-excavation Assessment

A report on the results of the watching brief, in accordance with the recommendations in *Management of Research Projects in the Historic Environment Project Manager's Guide* (English Heritage 2006; 2015), and in the Chartered Institute for Archaeologists *Standard and Guidance for an archaeological watching brief* (2014) will be required to be produced upon conclusion of the archaeological fieldwork. The report will be completed within a maximum of two months of completion of work on site and may include examination and quantification leading to the identification of function, form, date, method of manufacture, material/fabric type, source, parallels, attributes and condition of artefacts; of the exploitation of wild or domesticated resources; the reconstruction of environments; and the nature of human populations.

Full analysis of the results of the project, including: dating and interpretation of excavated features; pottery and other finds analysis; analysis of industrial residues by an appropriate specialist or specialists; analysis of samples for environmental data (including pollen, plant macrofossils and beetles) by an appropriate specialist or specialists; radiocarbon dating; discussion of the results in their local, regional and national context, including relating the excavated features and palaeoenvironmental data to evidence from nearby sites, and discussion of the results in their local, regional and national context may be required.

The scope of post-excavation assessment will subject to a specification for approval by the GAPS Archaeologist, upon the conclusion of the fieldwork project and preliminary report.

6.2.2 Post-excavation Report

Following completion of the stages outlined above, a report will be produced that will include:

- A non-technical summary.
- A table of contents.
- An introduction with acknowledgements, including a list of all those involved in the project and the location and description of the site.
- A statement of the project aims.
- An account of the project methodology undertaken, with an assessment of the same to include a statement on preservation bias and the means of data collection and sampling strategies.
- A factual summary of the history, development and use of the site.
- A statement setting out the nature, quantity and condition of the material archive (artefacts and ecofacts) including commentary on any bias observed due to collection and sampling strategies and commentary on long-term storage requirements.
- A statement setting out the nature and quantity of the documentary archive (notes, photographs, drawings, digital data).
- A general site plan indicating the position and size of the areas subject to watching brief and the locations of archaeological deposits identified and recorded during the works.
- Plans and sections at appropriate scales, augmented with appropriate photographs. All plans and sections will be related to the Ordnance Survey datum levels and to the National Grid.
- Other maps, plans, drawings, stratigraphic matrices and photographs as appropriate.
- Summary assessment reports on the artefact, bio-archaeological, dating and other assessments/analyses.
- A discussion of the location, extent, date, nature, condition, quality and significance of any archaeological deposits and finds identified during the project.
- A discussion of any research implications arising from the archaeological work.
- Notes on consultations with conservators and the nominated archive repository related to the immediate and long-term conservation and storage requirements for the data held in the site archive and recommendations of retention/discard of artefacts and ecofacts.
- A bibliography of sources consulted.
- Appendices to the report will include artefact catalogues, reports on assessments/analyses and an index to the project archive and a statement on its location/proposed repository.
- In addition the post-excavation report will summarise and draw together the findings of all of the phases of work.

Illustrations will include plans of the location of the study area and archaeological sites. Historical maps, when appropriate and if copyright permissions allow, will be included. Photographs of relevant sites and of the study area where appropriate will be included.

A draft copy of the report will be sent to the GAPS Archaeologist and to the client for comment and approval prior to production of the final report.

7.0 FURTHER ARCHAEOLOGICAL WORKS DESIGNS (FAWDs)

The discovery of substantial archaeological remains and/or features during the archaeological works may result in the requirement for an extended programme of archaeological mitigation. This may require the submission of revised quotes to the client as well as a new specification which will be required to be approved by the GAPS archaeologist prior to implementation.

8.0 ENVIRONMENTAL SAMPLES

Relevant archaeological deposits will be sampled by taking bulk samples (a minimum of 10.0 litres and maximum of 30.0 litres) for flotation of charred plant remains. Bulk samples will be taken from waterlogged deposits for macroscopic plant remains. Other bulk samples, for example from middens, may be taken for small animal bones and small artefacts.

Bulk environmental samples will also be taken from any fills, deposits or structures which yield archaeological artefacts, charcoal flecks/ fragments, bone, or any other historic remains.

Advice and guidance regarding environmental samples and their suitability for radiocarbon dating, as well as the analysis of macrofossils (charcoal and wood), pollen, animal bones and molluscs will be obtained from Oxford Archaeology.

For guidance purposes the following volume criteria represent the minimum feature sampling requirements:

- 50% of each discrete feature (e.g. pits and postholes)
- 25% of the exposed areas of each linear feature and all terminals/intersections
- 50% of structural features (e.g. beamslots, ring-ditches)
- 50%-100% of domestic/industrial working features (e.g. hearths and ovens)

9.0 HUMAN REMAINS

Any finds of human remains will be left *in-situ*, covered and protected, and both the coroner and the GAPS Archaeologist informed. If removal is necessary it will take place under appropriate regulations and with due regard for health and safety issues. In order to excavate human remains, a licence is required under Section 25 of the Burials Act 1857 for the removal of any body or remains of any body from any place of burial. This will be applied for should human remains need to be investigated or moved.

10.0 ARTEFACTS

All artefacts and ecofacts will be retrieved for identification and recording and will be treated in accordance with ClfA 2008 Guidelines for the collection, documentation, conservation and research of archaeological materials (Chartered Institute for Archaeologists, 2014).

All artefacts are the property of the landowner but it is recommended that finds are deposited with the rest of the project archive within an appropriate museum. Furthermore, the client agrees to granting access to all artefacts recovered by Aeon Archaeology for analysis, study and publication as necessary. All finds would be treated according to advice provided within *First Aid for Finds* (Rescue

1999). Aeon Archaeology staff will undertake initial identification, but any additional advice would be sought from a wide range of consultants.

The recovery policy for archaeological finds will be kept under review throughout the archaeological works. Any changes in recovery priorities will be under guidance from an appropriate specialist and agreed with the GAPS Archaeologist. There will be a presumption against the disposal of archaeological finds regardless of their apparent age or condition.

All finds will be collected and processed including those found within spoil tips. Their location and height will be plotted; finds numbers attributed, bagged and labelled as well any preliminary identification taking place on site. Where specialist advice is required provision will be made to do so at the earliest possible convenience.

After processing, artefacts which are suitable will be cleaned and conserved in-house. Artefacts requiring specialist cleaning and conservation will be sent to the relevant specialist. All artefacts will then be sent to a specialist for analysis, the results of which will then be assessed to ascertain the potential of the finds assemblage to meet the research aims of the project. The value of the finds will also be assessed in terms of the wider educational and academic contributions.

Depending upon the material of the remains the following experts will be consulted regarding the conservation of waterlogged material:

- Organic material: Mr Phil Parkes, Cardiff Conservation Services (tel: +44(0)29 2087 5628)
- Non-organic material: Mr Phil Parkes, Cardiff Conservation Services (tel: +44(0)29 2087 5628)

Depending upon the material of the remains the following experts will be consulted regarding the conservation and analysis of artefacts:

- Bone: Nora Bermingham
- Glass: Hilary Cool, Barbican Research Associates.
- Metal artefacts: Phil Parkes, Cardiff Conservation Services, Cardiff.
- Slag, burnt clay, hammerscale: Dr. Tim Young, Geoarch, Cardiff.
- Stone artefacts: George Smith, Gwynedd Archaeological Trust, Bangor.
- Wood artefacts: Jane Foley, Foley Conservation, Builth Wells.
- Leather: Quita Mould, Barbican Research Associates.
- Environmental Material: Dr Mike Allen, Allen Environmental Archaeology.
- Numismatics: Peter Guest, Barbican Research Associates.
- Ceramics: Leigh Dodd

If well preserved materials are found it may be necessary to employ additional staff. Furthermore, it may be necessary to suspend work within a specific region of the site, or across the whole site, while conservation and excavation/recording takes place. Aeon Archaeology accepts no responsibility for any costs incurred from delays as a result of unexpected archaeological finds.

11.0 UNEXPECTED DISCOVERIES: TREASURE TROVE

Treasure Trove law has been amended by the Treasure Act 1996. The following are Treasure under the Act:

- *Objects other than coins* any object other than a coin provided that it contains at least 10% gold or silver and is at least 300 years old when found.
- *Coins* all coins from the same find provided they are at least 300 years old when found (if the coins contain less than 10% gold or silver there must be at least 10. Any object or coin is part of the same find as another object or coin, if it is found in the same place as, or had previously been left together with, the other object. Finds may have become scattered since they were originally deposited in the ground. Single coin finds of gold or silver are not classed as treasure under the 1996 Treasure Act.
- *Associated objects* any object whatever it is made of, that is found in the same place as, or that had previously been together with, another object that is treasure.
- *Objects that would have been treasure trove* any object that would previously have been treasure trove, but does not fall within the specific categories given above. These objects have to be made substantially of gold or silver, they have to be buried with the intention of recovery and their owner or his heirs cannot be traced.

The following types of finds are not treasure:

- Objects whose owners can be traced.
- Unworked natural objects, including human and animal remains, even if they are found in association with treasure.
- Objects from the foreshore which are not wreck.

All finds of treasure must be reported to the coroner for the district within fourteen days of discovery or identification of the items. Items declared Treasure Trove become the property of the Crown.

The British Museum will decide whether they or any other museum may wish to acquire the object. If no museum wishes to acquire the object, then the Secretary of State will be able to disclaim it. When this happens, the coroner will notify the occupier and landowner that he intends to return the object to the finder after 28 days unless he receives no objection. If the coroner receives an objection, the find will be retained until the dispute has been settled.

12.0 ARCHIVING

A full archive including plans, photographs, written material and any other material resulting from the project will be prepared. All plans, photographs and descriptions will be labelled, and cross-referenced, and lodged with the National Monument Record, RCAHMW within six months of the completion of the project.

A draft copy of the report will be produced within six months of the completion of the fieldwork and sent to the Client and the GAPS Archaeologist for comment prior to finalisation of the report and dissemination. Bound copies of the report and an archive CD will be sent to the regional HER, the GAPS archaeologist and to National Monument Record, of the Royal Commission on the Ancient and Historic Monuments of Wales (RCAHMW) for long term archiving. Furthermore, a summary of the project will be sent to *Archaeology in Wales* for publication. Copies of all digital files (inc. photos,

report as PDF and Word, spreadsheets, databases, survey data etc) to be presented to each of above on optical disc (ie DVD).

13.0 PERSONNEL

The work will be managed by Richard Cooke BA MA MCIfA, Archaeological Contractor and Consultant at Aeon Archaeology.

14.0 MONITORING AND LIAISON

Regular liaison and site monitoring meetings will take place during all stages of work. The GAPS Archaeologist will be informed of the start date and of discreet subsequent stages.

15.0 HEALTH AND SAFETY

Aeon Archaeology has a Health and Safety Policy Statement which can be supplied upon request. Furthermore, site-specific Risk Assessments and Method Statements are compiled and distributed to every member of staff involved with the project prior to the commencement of works.

16.0 INSURANCE

Liability Insurance – Insignia Underwriting Policy 347002

Employers' Liability: Limit of Indemnity £10m in any one occurrence

Public Liability: Limit of Indemnity £2m in any one occurrence

Legal Defence Costs (Health and Safety at Work Act): £250,000

The current period expires 07/09/18

Professional Indemnity Insurance – Insignia Underwriting Policy 347002

Limit of Indemnity £500,000 any one claim

The current period expires 07/09/18

