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Land at Pentwmpath, Llandygai, Bangor, Gwynedd.
August 2016
V 1.0

Archaeological Evaluation

Project Code: A0078.1

Report no. 0098

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Archaeological Evaluation

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Project Code: A0078.1
Date: 24/08/2016
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REGISTERED ORGANISATION CIfA

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1.0 NON-TECHNICAL SUMMARY

Aeon Archaeology was commissioned by Carter Jonas LLP to carry out a programme of archaeological evaluation of a proposed residential development located on approximately c0.6 ha of land situated at Llandygai, Gwynedd, North Wales as a reserved matter of an application for full planning permission.

The archaeological evaluation identified a sub-circular gulley enclosing an area approximately 32.0m in length by 21.0m in width towards the south-western corner of the site. The fill of this gulley produced Roman ceramic dating to the late 1st century A.D. to the early 3rd century A.D. Radiocarbon dating of the gulley fill dated the charcoal inclusions to Cal AD 415 to 560 (Cal BP 1535 to 1390) suggesting that it had gone out of use by the beginning of the Post-Roman (Early Medieval) period.

Further features including a refuse pit and hearth were located towards the centre of the enclosure, the former of which produced Roman ceramic dating broadly to the 3rd to 4th-centuries A.D. and the 2nd to 3rd-centuries A.D. and the latter of which was radiocarbon dated to Cal AD 240 to 390 (Cal BP 1710 to 1560).

The archaeological evaluation has established that a period of Roman activity persisted at the site anywhere between the 1st and 4th Centuries A.D., perhaps with a focus around the 3rd Century A.D. which culminated with the site presumably going out of use by the start of the Post-Roman (Early Medieval) period. However, the evaluation has been unable to characterise the remains to establish the nature and function of the site, and it is unclear whether the Roman activity represents an area of occupation, religion, industry, agriculture, or some other ancillary activity. The discovery of fragments of undiagnostic slag, although indicative of iron-working, cannot be used to distinguish between smithing or smelting and were not found in an abundance to be conclusive of an industrial site.

The archaeological evaluation also identified two apparently isolated pits of Neolithic age. The first was located within the centre of the Roman enclosure gulley in close proximity to the central pits, but produced a single sherd of Peterborough ware vessel of Early to Middle Neolithic date. The ceramic sherd could be residual in nature thus explaining the close proximity of the Roman features, or the siting of the pit may be entirely by chance.

The second pit was located towards the east of the site and produced two ceramic sherds probably belonging to a single vessel, a bowl or jar-like bowl, in the Mortlake style of Peterborough ware dating to the Early to Middle Neolithic. The Neolithic pottery probably represents waste from domestic occupation rather than deliberate, or ritual, deposition.

The archaeological evaluation also identified a single pit of late Mesolithic date. This feature was located towards the northern part of the area enclosed by the Roman enclosure and continued beyond the limits of the evaluation trench. The pit did not produce any artefacts however radiocarbon dating established a date of Cal BC 4720 to 4550 (Cal BP 6670 to 6500).

2.0 INTRODUCTION

Aeon Archaeology was commissioned by Carter Jonas LLP (hereafter the Client) to carry out a programme of archaeological evaluation of a proposed residential development located on approximately c0.6 ha of land situated at Llandygai, Gwynedd, North Wales (**NGR: SH 5988 7075**) (figure 1). The archaeological evaluation was undertaken as a reserved matter of an application for full planning permission (**ref. C09A/0518/16/AM**) for the construction of 15 new residential buildings, vehicle and pedestrian access, circulation routes, and landscaping.

The Gwynedd Archaeological Planning Service (GAPS) did not produce a brief for the archaeological evaluation phase; however they highlighted issues which had to be addressed before the reserved matters of the application could be approved:

Whilst outline planning permission has already gained approval, a geophysical survey undertaken by The Gwynedd Archaeological Trust identified possible archaeological sites which have a realistic possibility of being of national importance and therefore merit preservation in situ. Trial trenching is therefore required at this stage (and before the reserved matters application is determined) in order that the proposed layout may be fully assessed and in order to discuss any potential modification required to accommodate significant remains.

A written Scheme of Investigation (WSI) was undertaken by Aeon Archaeology in March 2016 which outlined the principle aims of the evaluation and the methods by which they would be met. This formed the basis of a method statement submitted for the work. The archaeological evaluation trenching was undertaken in accordance with this document.

An archaeological assessment and geophysical survey (GAT report 943) was carried out by The Gwynedd Archaeological Trust (GAT) in 2011 which identified a range of buried remains of potential prehistoric origin and made recommendations for a phase of targeted archaeological evaluation. The assessment of the site through ten (20.0m x 2.0m) archaeological evaluation trenches was deemed adequate for the purposes intended as represented in the trench array reproduced in figures 2a and 2b.

The aim of this programme of archaeological evaluation was to establish the archaeological significance of the site, to assess the impact of the development proposals on surviving monuments or remains, and to help inform future decision making, design solutions and further potential mitigation strategies. This report includes an assessment of the potential for further investigative work if required, and where relevant give recommendations for an appropriate mitigation strategy.

Relevant UK legislation on heritage includes the Ancient Monuments and Archaeological Areas Act 1979, the Planning (Listed Buildings and Conservation Areas) Act 1990, and the Historic Environment Act (Wales) 2016. For archaeological sites that are not covered by the above Act, protection is afforded through development control, the Town and Country Planning Act 1990, the Welsh Government's Planning Policy Wales (PPW 2012), and Welsh Office Circular 60/96.

This report conforms to the guidelines specified in the *CIfA Standard and Guidance for Archaeological Evaluation* (Chartered Institute for Archaeologists 2014).

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Figure 01: Location of Site at Pentwmpath, Llandygai, Gwynedd. Scale 1:10,000 at A4.

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3.0 PROJECT AIMS

The aim of the evaluation work was to characterise the known, or potential, archaeological remains uncovered during the excavation of the archaeological evaluation trenches.

The broad aims of the archaeological evaluation trenches were:

- To determine, as far as is reasonably possible, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains on the site, the integrity of which may be threatened by development at the site.

- To establish the nature and extent of existing disturbance and intrusion to sub-surface deposits and, where the data allows, assess the degree of archaeological survival of buried deposits of archaeological significance.

- To enable the client to establish a schedule for archaeological risks.

- To allow the GAPS archaeologist to make an informed decision on the need for and scope of further evaluative and/or mitigatory archaeological works.

The detailed objectives of the archaeological evaluation trenches were:

- Insofar as possible within methodological constraints, to explain any temporal, spatial or functional relationships between the structures/remains identified, and any relationships between these and the archaeological and historic elements of the wider landscape.

- Where the data allows, identify the research implications of the site with reference to the regional research agenda and recent work in Gwynedd.

The broad characteristics of the number, size, orientation and distribution of the trenches were considered to be appropriate and were agreed with the Development Control Archaeologist at GAPS (J. Emmett). The trench array was proposed as part of the WSI prepared by Aeon Archaeology and was designed to characterise the features identified in the geophysical survey, with a contingent trenching facility designed for site characterisation, the characteristics of which were insufficiently resolved within the core trenching provision. Contingent trenching was optional, upon the discovery of archaeological artefacts, deposits, features or structures the characteristics of which could only be sufficiently determined upon further spatial investigation.

The archaeological evaluation trenches targeted the following anomalies as identified in the GAT geophysical survey of 2011:

Trench 1 – 10.0m x 2.0m: Targeting anomaly 1 sub-circular ditched enclosure, possibly a prehistoric defended enclosure.

Trench 2 – 10.0m x 2.0m: Targeting anomaly 1 sub-circular ditched enclosure, possibly a prehistoric defended enclosure.

Trench 3 – 10.0m x 2.0m: Targeting anomaly 2 weak anomalies, possibly settlement or other activity inside enclosure 1.

Trench 4 – 10.0m x 2.0m: Targeting anomaly 5 former field boundary, perhaps medieval. Visible as low earthwork.

Trench 5 - 10.0m x 2.0m: Targeting anomaly 3 ploughing aligned E-W, probably medieval ridge and furrow.

Trench 6 - 10.0m x 2.0m: Testing site for discreet features.

Trench 7 - 10.0m x 2.0m: Targeting anomalies 7 and 8, weak linear anomaly, perhaps a drain or agricultural feature and parallel anomalies, probably wheel ruts.

Trench 8 - 10.0m x 2.0m: Targeting anomaly 4, ploughing aligned N-W, probably medieval ridge and furrow. Eastern extent marked by a low earthwork.

Trench 9 – 10.0m x 2.0m: Testing site for discreet features.

Trench 10 - 10.0m x 2.0m: Targeting anomaly 6, former boundary ditch, probably associated with current boundary.

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; 2015), and in the *CIFA Standard and Guidance for Archaeological Evaluation* (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. The purpose of this phase is to carry out the analysis identified in phase 3 (the assessment of potential phase), to amalgamate the results of the specialist studies, if required, with the detailed site narrative and provide both specific and overall interpretations. 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 Gwynedd Historic Environment Record and the National Monuments Record retained by the Royal Commission on the Ancient and Historic Monuments in Wales (RCAHMW) 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.

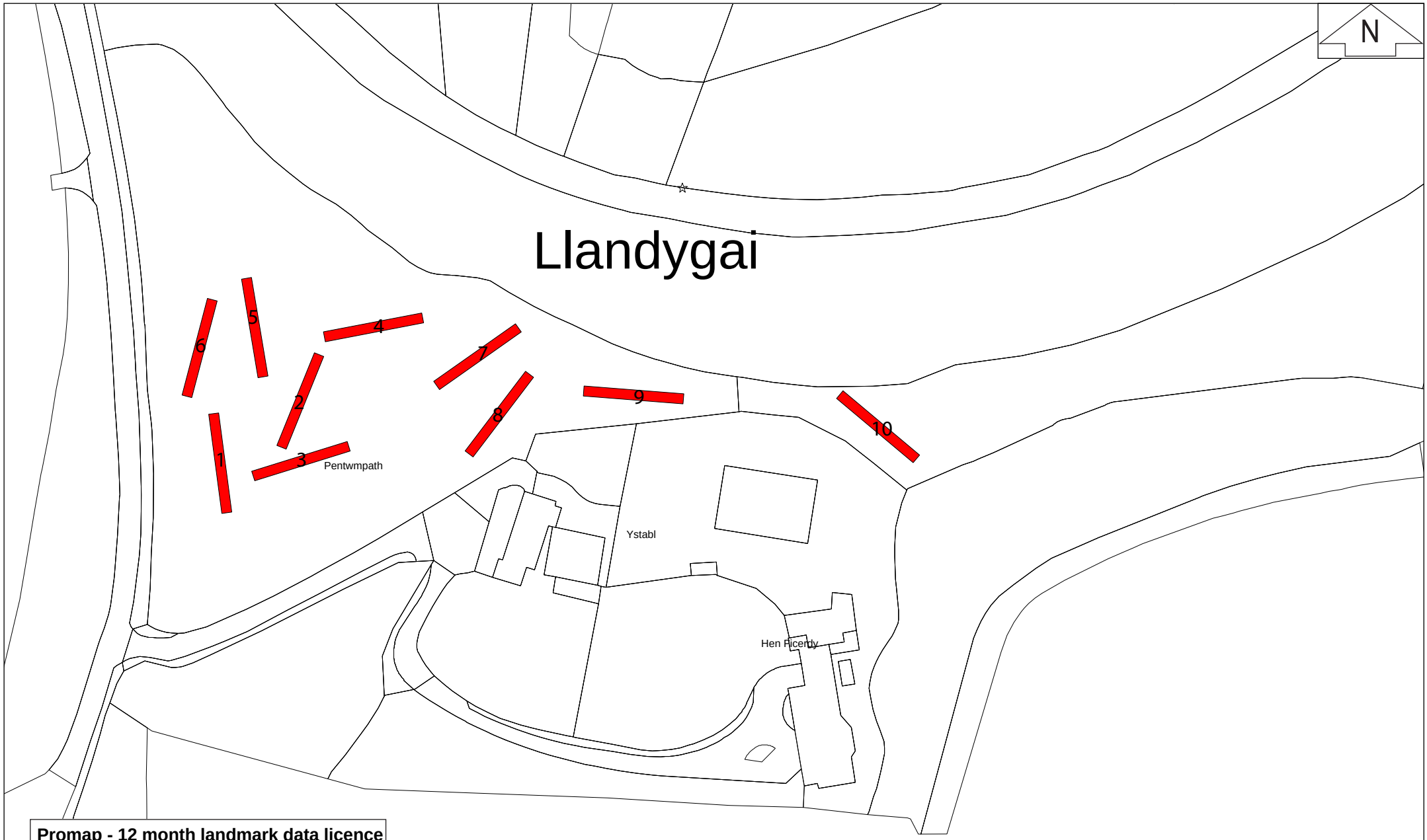

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Figure 02a: Location of trenches at Pentwmpath, Llandygai, Gwynedd.
Scale 1:1000 at A4.

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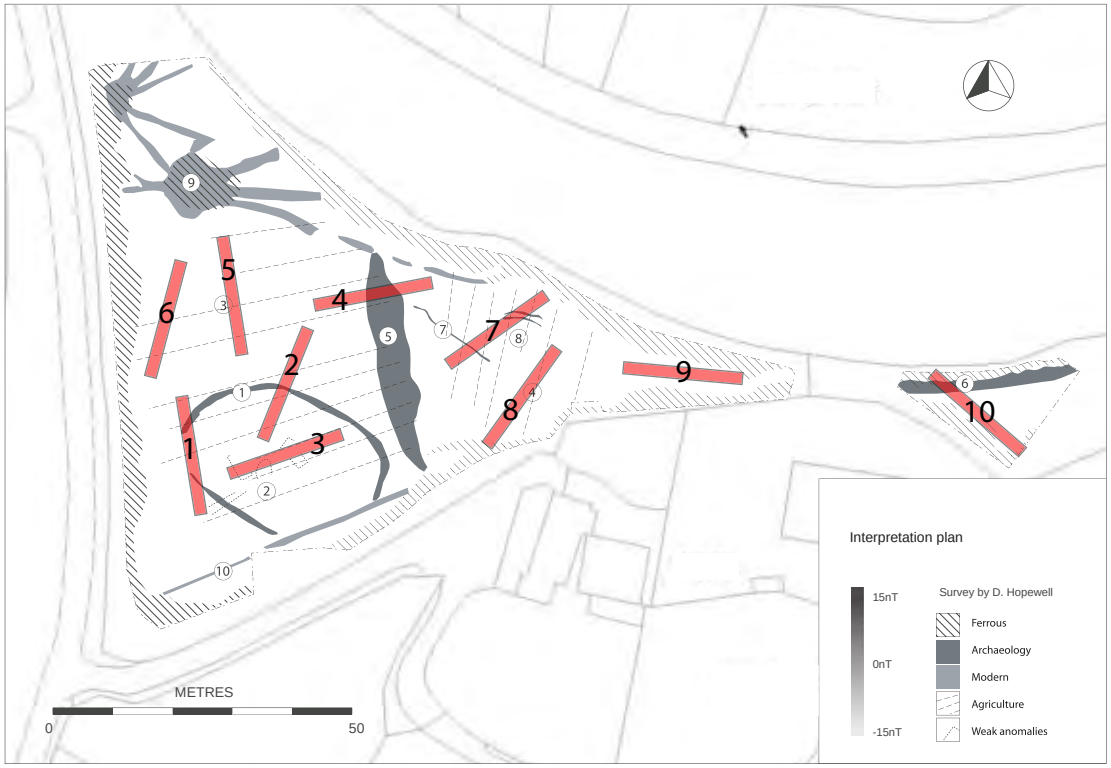

Reproduced from GAT report 943

Figure 02b: Fluxgate gradiometer survey and location of trenches at Pentwmpath, Llandygai, Gwynedd.

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4.0 METHODOLOGY

Before the evaluation trenching commenced an agreed programme of excavation timing, siting, duration, surface re-instatement and health and safety protection measures were agreed with the Client, and the GAPS Archaeologist.

4.1 Evaluation trenches

The evaluation trenching array was designed to investigate areas that may contain archaeological features. There was latitude on the location of each trench and slight repositioning to take account of buried services and other constraints was acknowledged as a possibility within the WSI.

A 13 ton tracked excavator with toothless ditching bucket equipped was used to open the trenches under constant archaeological supervision. Topsoil and overburden were to be removed by machine in spits down to archaeological deposits or natural sub-soils, whichever were encountered first. All uncovered archaeological features were to be excavated by hand.

A written record of the deposits and all identified features in each evaluation trench was completed via Aeon Archaeology pro-formas. All subsurface remains were to be recorded photographically, with detailed notations. The photographic record was completed using a digital SLR camera (Canon Eos 600D) set to maximum resolution.

Contingency provision was made for the following:

- Additional excavation of up to 100% of any given feature should the excavated sample prove to be insufficient to provide information on the character and date of the feature.

- Expansion of trench limits, to clarify the extent of features equivalent to an additional 20% of the core area.

The archaeological works were surveyed with respect to the nearest Ordnance Survey datum point and with reference to the Ordnance Survey National Grid. The trenches and archaeological features within them were accurately located on a site plan prepared at the most appropriate and largest scale.

All excavations were backfilled with the material excavated and upon departure the site was left in a safe and tidy condition.

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 cross-referenced to the digital photographic record so that they can be archived with the Gwynedd Historic Environment Record (HER).

4.3 Artefact Methodology

All artefacts were to be collected and processed including those found within spoil tips. Finds numbers would be attributed and 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 evaluation trenching. Any changes in recovery priorities would be made under guidance from an appropriate specialist and agreed with the Client and GAPS. 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 and written material resulting from the project was prepared. All plans, photographs and descriptions were labelled, and cross-referenced.

Upon approval from the Client copies of the report will be sent to the Gwynedd Historic Environment Record, the GAPS Development Control Archaeologist, and the RCAHMW.

5.0 SITE LOCATION

(Reproduced from GAT report 943)

The proposed development site lies within the village of Llandygai and approximately 1.04km east of the city of Bangor, located between the village centre conservation area and the railway line. It is bounded on the west by a by-passed length of Telford's Holyhead road, to the south by a private access track and on the north by woodland which separates the plot from the Conwy road. The trapezoidal shaped site is located within the parish of Llandygai and lies at approximately 40.0m AOD sloping slightly eastwards towards the Afon Ogwen, which is approximately 300.0m to the east. It is characterised by rough pasture and is partly enclosed by belts of woodland.

The underlying geology is that of a band Ordovician rocks which are 'contiguous with the complex syncline of Snowdonia' flanked by outcrops of Cambrian rocks to the north and south (Bassett & Davies, 1977). The field is utilised as grazing pasture for sheep.

6.0 HISTORY OF THE SITE

The site is located within an area with an identified rich and diverse archaeological resource. The Prehistoric period is well represented, with stray finds including worked flint, stone hammers and bronze palstaves having been found, and a large Early Bronze Age burial cairn, known as Carnedd Howel (PRN 30), located 1.60km to the southwest. Nearly 4km to the south is the remains of a Neolithic chambered tomb at Sling and about 3km to the north there used to stand another chambered tomb. The site of this is now on the Lavan Sands and it has been entirely destroyed by the sea, but it was visible in 1805 (Williams 1806, 206). A burnt mound was found at Rhos Uchaf (PRN 815) 940m to the south-east, and some probably prehistoric hearths (PRN 877) 1.30km to the south on the line of the A55. Approximately 390m to the south of the site is a possible prehistoric settlement (PRN 29434) identified by crop-marks within the field.

The most significant archaeology was found 130.00m to the west of the proposed development site under the Bangor industrial estate. Here excavations in 1967-8 revealed the presence of a group of Later Neolithic ceremonial monuments of national significance (PRN 2314). These included two henges, large circles, about 90m in diameter, defined by banks and ditches, and a cursus, an embanked linear enclosure. Associated with them were two lesser circles and the complex was preceded by an earlier Neolithic building. The site was subsequently used for Early Bronze Age funerary activity, an Iron Age and Romano-British settlement, and an Early Medieval inhumation cemetery. The henge monument and cursus are Scheduled Ancient Monuments.

Excavations to the south of the industrial estate in 2005 by the Gwynedd Archaeological Trust revealed features dating from the Early Neolithic to the medieval period. The most significant discovery was the remains of an Early Neolithic rectangular timber building. It was well preserved with numerous related features and assemblages of artefacts and charred plant remains. This structure was radiocarbon dated to between 3760-3700 cal BC and 3670-3620 cal BC. There were several clusters of Mid to Late Neolithic pits, which contained a large assemblage of pottery and other artefacts. Sixteen burnt mounds were found, some very well preserved, dating from the Neolithic and Bronze Age. Furthermore, the remains of a Mid Iron Age ring-groove roundhouse were found, overlaid by early medieval smithing activity. Moreover, a Late Iron Age/Romano-British settlement was almost completely excavated and the associated finds included a Roman seal box and evidence for glass bead making.

The Roman road between Caerhun and Segontium probably passed about 790m to the south-east of the proposed development site, with the suspected site of a Roman fortlet at Tal-y-Bont. Furthermore, a Roman milestone was found 1.9km to the southwest, as was a Roman coin some 390m to the south.

Llandygai village has medieval origins. Its church dates to the 14th century but there are records of an earlier church, and earthwork hut platforms (PRN 6623) in Parc Penrhyn are probably medieval. Furthermore, a square barrow cemetery (PRN 24776) was discovered within the grounds of Penrhyn Castle.

An archaeological assessment and geophysical survey was carried out by GAT in 2011. These showed that the surrounding area is rich in sites of archaeological interest, and the geophysical survey identified anomalies which may be of prehistoric date.

The proposed development site appears to have historically been farmland and has never been developed; furthermore it is located within close proximity to many prehistoric features and find-spots. The land itself is flat and well-drained, and would have be an ideal location for occupation in the prehistoric period. Furthermore, the area is close to the possible Roman road between Caerhun and Segontium, with the suspected site of a Roman fortlet at Tal-y-Bont.

A geophysical survey of the proposed development site was carried out using a Bartington Grad601-2 dual Fluxgate Gradiometer. This uses a pair of Grad-01-100 sensors. These are high stability fluxgate gradient sensors with a 1.0m separation between the sensing elements, giving a strong response to deeper anomalies. Below is a summary of the findings of the geophysical survey, represented as a site gazetteer of geophysical anomalies.

Anomaly Number	**Interpretation**
1	Sub-circular ditched enclosure, possibly a prehistoric defended enclosure.
2	Weak anomalies, possibly settlement or other activity inside enclosure 1.
3	Ploughing aligned E-W, probably medieval ridge and furrow.
4	Ploughing aligned N-W, probably medieval ridge and furrow. Eastern extent marked by a low earthwork.
5	Former field boundary, perhaps medieval. Visible as low earthwork
6	Former boundary ditch, probably associated with current boundary.
7	Weak linear anomaly, perhaps a drain or agricultural feature
8	Parallel anomalies, probably wheel ruts
9	Modern pipes and manholes.
10	Modern pipe or cable

7.0 QUANTIFICATION OF RESULTS

7.1 The Documentary Archive

The following documentary records were created during the archaeological evaluation trenching:

Trench sheets	10
Digital photographs	124
Context Sheets	49
Drawings	16 on 6 sheets

7.2 Environmental Samples

Ten bulk samples were taken during the evaluation trenching. Two of these samples (no. 4 and 5) were discarded due to contamination between overlying fills and new samples taken. Three samples (no. 3, 6 and 8) were chosen to be wet sieved, processed and Carbon dated, this was deemed adequate to date features that did not produce artefact or stratigraphic evidence for relative dating – see section 9.0.

7.3 Artefacts

Eighteen individual artefact numbers were issued during the evaluation trenching phase, although some of these applied to several sherds of ceramic found within the same stratigraphic horizon. All finds were cleaned and preliminary identification made in-house at Aeon Archaeology, after which all artefacts were sent to relevant specialists for further analysis – see section 8.0.

8.0 SPECIALIST ANALYSIS

8.1 Ceramics

By Leigh Dodd

Trenches 1, 3 and 8 produced ceramic assemblages comprising 3 sherds of prehistoric pottery and 55 sherds of Roman pottery. In addition to the ceramic finds a small collection of undiagnostic slag and other non-ceramic finds were recovered also.

The artefacts, according to their unique identifying number, trench, context and type are quantified in the table below.

Bulk Finds Quantification					
Artefact No.	**Trench**	**Context**	**Artefact Type**	**Quantity**	**Weight (g)**
1	8	803	Neolithic pottery – Peterborough ware	1 x sherd	88
2	—	—	—	—	—
3	8	803	Neolithic pottery – Peterborough ware	1 x sherd	34
4	1	105	Roman pottery – Amphora D20	1 x sherd	57
5	1	105	Roman pottery – BB1 jar	1 x sherd	3
6	3	304	Roman pottery – Oxidised fabric jar	1 x sherd	32
7	3	304	Undiagnostic slag	6 x fragments	282
8	3	304	Roman pottery – BB1 jar	4 x sherds	10
9	3	304	Roman pottery – Oxidised fabric jar	8 x sherds	117
10	3	304	Roman pottery – BB1 jars	5 x sherds	49
11	3	304	Roman pottery – Oxidised fabric jar	15 x sherds	78
12	3	304	Charcoal fragment	1 x fragment	N/A
13	3	310	Neolithic pottery – ?Peterborough ware	1 x sherd	5
14	3	314	Non-ceramic mineralised material	4 x frags	6
15	—	—	—	—	—
16	3	304	Roman pottery – BB1 jar	7 x sherds	85
17	3	304	Roman pottery – Oxidised fabric jar	13 x sherds	240
18	3	304	Undiagnostic slag	3 x fragments	250

The Prehistoric Pottery

Trench 3

A single small sherd of prehistoric pottery was recovered from context (310). The small, rounded sherd has a dark red to black fabric with angular quartz inclusions. In light of the other sherds recovered from trench 8 (see below) and from sites of domestic occupation within the wider area (see Kenney & Davidson 2006, 15–18), this sherd probably derives from a Peterborough ware vessel of Early to Middle Neolithic date.

Trench 8

Two sherds of prehistoric pottery were recovered from context (803). The sherds comprised a large body sherd (No. 1) and a sherd from the base (No. 3) both perhaps from a single, thick-walled vessel. The fabric was dark red (at the core) to black and contained abundant inclusions of angular stone (including quartz) up to 13mm in size. The surface of the large body sherd was decorated with vertical lines of twisted cord or perhaps bone impressions. The base sherd indicates a vessel with a base diameter of no more than c. 100mm. These sherds probably belong to a single vessel, a bowl or jar-like bowl, in the Mortlake style of Peterborough ware dating to the Early to Middle Neolithic. The sherds probably represent disposal of domestic refuse rather than deliberate deposition.

The Roman Pottery

Fabric codes in brackets relate to those in the *National Roman Fabric Reference Collection* held by the Museum of London (see Tomber & Dore 1998)

Trench 1

Trench 1 produced a small sherd from the body of a Black Burnished ware jar (DOR BB 1) and a sherd from an amphora.

The amphora fabric was of Baetican (Late) type (BAT AM 2), a fabric generally restricted to Peacock & Williams Class 25 (Dressel 20) globular amphorae and associated with later rim forms within this class (Tomber & Dore 1998, 85). This type of amphora was principally used to ship olive-oil from southern Spain and in Britain is the most common amphora from the late 1st century A.D. to the early 3rd century (Peacock & Williams 1986, 137).

Trench 3

Context (304) produced 16 sherds from a minimum of 2 Black Burnished ware jars (DOR BB 1) and 37 sherds, possibly from a single large jar, in an oxidised fabric that is perhaps a Severn Valley ware rather than a Cheshire Plain ware fabric judging by its finer, less granular appearance.

The largest sherd of BB1 was from the central body area of a very thin-walled jar with obtuse lattice decoration dating this vessel broadly to the 3rd to 4th-century. The second BB1 vessel was a much smaller, thicker-walled jar or beaker with slightly obtuse lattice decoration dating this vessel to the later 2nd to 3rd-century. Unfortunately there were no rim sherds present amongst the assemblage of BB1 that may have been used to date the assemblage closer.

The 37 sherds of oxidised ware recovered from context (304) almost certainly represent a single large jar. Again, the lack of rim or similarly diagnostic sherds preclude any further identification of the finer details of the vessel's form; such as wide-mouthed or constricted neck. This jar may well have been a traded product (as with the BB1 jars) reaching the site from the Severn Valley area perhaps via the Segontium *vicus*. Storage and wide-mouthed jars were amongst the more widely distributed

Severn Valley ware forms during the 2nd to 3rd-centuries (Tyres 1996, 197) with examples known from the fort and *vicus* at Segontium (Caernarfon) (Webster 1993, 254).

The Industrial Waste/Slag Material

Trench 3

In addition to the abundant sherds of Roman pottery, context (304) produced fragments of undiagnostic slag. Such undiagnostic fragments, although indicative of iron-working, cannot be used to distinguish between smithing or smelting and are often the largest proportion of slags present in site assemblages (English Heritage 2001, 11).

8.**2 Flint**

By Oxford Archaeology

Context	**Small find**	**Description**	**Date**
Unstratified	15	Irregular debitage flake, relatively fresh condition, 40% thick chalky cortex, mottled grey-black flint, one hinge termination, one feather termination, no platform preparation, hard hammer struck, 51g	Not closely datable
103	2	Heavily rolled irregular waste, 20% irregular grey cortex with thin black layer beneath, some whitish patination, orange inclusion, 4g	Not closely datable

Discussion.

Two flints were recovered from the evaluation. One from the single fill of a roughly circular gulley some 30 metres in diameter, the other an unstratified find from a trench in the centre of the area enclosed by the gulley. The size and nature of the assemblage limits interpretation of the material. Neither flint shows any evidence of visible utilisation and neither retains any technologically diagnostic features that might aid dating. It is likely that the unstratified debitage flake, SF15, was struck in order to remove the large protrusion that forms its dorsal surface, during initial core preparation. The flint from the gulley fill, SF2, is possibly a knapping debitage flake but might also be the result of plough shatter or similar damage. The raw materials of both pieces are likely to have come from the Devensian sand and gravels and alluvial deposits of the area.

9.0 ENVIRONMENTAL SAMPLES

9.1 Bulk Soil Sample Wet-Sieving and Residue Sorting Methodology

By Brython Archaeology

The soil samples were processed by double floatation to recover charcoal, charred plant remains and small finds of archaeological interest.

Washing and Sieving

In line with current Historic England guidelines the un-processed samples were individually placed in a floatation tank in a 501Jm nylon mesh and washed with circulating water, floating material was sieved from run-off and collected in a 2501Jm mesh (flot).

The residue remaining in the 501Jm mesh was passed through a 1Omm sieve,to separate the coarse residue from the fine.

All residues and 'flots' were thoroughly air dried.

This process was then repeated with the fine residues to retrieve the optimum amount of charcoal and charred plants remains from the samples.

Sorting

The coarse residues were checked by eye for any archaeologically significant material. All recovered material was grouped by material or typology and stored in plastic finds bags marked with project, context and sample numbers. 100% of the coarse residues were checked.

The fine residues were checked for macroscopic artefacts and charred plant remains by eye and scanned with a powerful neodymium magnet for ferrous material related to metalworking. All recovered material was grouped by material or typology and stored in plastic finds bags marked with project, context and sample numbers.100% of the fine residues were checked.

9.2 Radiocarbon dating

By BETA Analytic

9.2.1 Methodology

Samples were received and cross-checked for accuracy between sample containers and documentation. They were logged into the system with bar coding for tracking of all chemical steps with regards to date, time and technician. This bar-coding is used In the event of an inquiry so we can track the movement of each sample through each chemical step. Pretreatment of the charcoal was as follows.

Each sample was first visually inspected for size and durability. They were then rinsed in de-ionized water and sieved to isolate the charcoal from adhering sediments and fibrous material. They were then gently crushed while wet to 1-2mm particles, sieved again and allowed to saturate in the de-ionized water while heating to 70C. 1 N HCl was then applied at 70C for 2 hours. After rinsing to neutral, 1-2% alkali was then applied (50/50 wt NaOH) at 70C until no color change was observed. After rinsing to neutral, a final hot acid wash (0.5 HCl) was applied at 70 C for 30 minutes to ensure the alkali was neutralized and once again rinsed to neutral. During this process any remaining roots and organic debris were eliminated. The samples were then dried at 100C for 12-24 hours, weighed,

microscopically examined for cleanliness, uniformity and where applicable appropriately sub-sampled for the measurements.

Each sample was then separately placed into a closed chemistry line which had been purged of any CO2 to a level below 10e-15 atoms (background levels). The line was filled with 100% oxygen and ignited at 900+C to combust the sample carbon to CO2. The CO2 was dried and introduced into a reaction vessel containing an aliquot of cobalt metal catalyst. Hydrogen was introduced such that when the cocktail was heated to 500C, the CO2 cracked to carbon (graphite). The graphite was pressed into a target for measurement in an accelerator mass spectrometer (AMS). The AMS was calibrated to provide an accurate ratio of the 14C/13C ratio between the sample graphite and a modern reference (NIST-4990C, Oxalic acid). Quality assurance samples were reacted simultaneously in the chemistry lab and measured simultaneously in the AMS. The analytical result was obtained as a fraction of the value of modern reference, corrected for isotopic fractionation using 13C/12C (d13C) and radiocarbon age calculated according to the conventions cited in Radiocarbon, Volume 19, Number 3, 1977. The QA samples were checked for accuracy and observed to fall within expectations for the laboratory to accept and report the sample results. Acceptance defined as being with 2 sigma of the known value, based on our total laboratory error known to be within 2 sigma. Characteristics of the equipment.

Chemistry: Custom vacuum lines for collection and transfer of CO2 to produce graphite.

AMS: Highly customized 250Kev NEC single stage particle accelerators – 4 on-site

IRMS: Thermo Delta-Plus isotope ratio mass spectrometers – 4 on site.

Accuracy of final results: Routinely within 1 sigma of known reference value. Total laboratory known to be within 2 sigma of known reference value.

Precision: AMS +/- 0.001 – 0.004 fraction modern; d13C +/- 0.3 o/oo, and where applicable; d15N +/- 0.5 o/oo, d18O +/- 0.3 o/oo, dD +/- 2 o/oo.

9.2.2 Results of the Radiocarbon dating

Sample Data	Measured Radiocarbon Age	Isotopes Results o/oo	Conventional Radiocarbon Age(*)
Beta – 442674 SAMPLE: A0078.1 Sample 06. Context **(103)** Analysis: AMS Standard Delivery MATERIAL/PRETREATMENT: (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 415 to 560 (Cal BP 1535 to 1390)	1570 +/- 30 BP	d13C= -24.9	1570 +/- 30 BP
Beta - 442675 SAMPLE: A0078.1 Sample 08. Context **(207)** ANALYSIS: AMS-Standard delivery MATERIAL/PRETREATMENT: (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal BC 4720 to 4550 (Cal BP 6670 to 6500)	5810 +/- 30 BP	d13C= -25.7	5800 +/- 30 BP
Beta - 442676 SAMPLE: A0078.1 Sample 03. Context **(316)** ANALYSIS: AMS-Standard delivery MATERIAL/PRETREATMENT: (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 240 to 390 (Cal BP 1710 to 1560)	1750 +/- 30 BP	d13C= -26.2	1730 +/- 30 BP

10.0 RESULTS OF THE ARCHAEOLOGICAL EVALUATION TRENCHES

The evaluation trenches were designed to evaluate and characterise the known, or potential, archaeological remains. Each trench is described and discussed separately. The location of the trenches can be found on figure 2a and are overlain on the geophysics survey on figure 2b. The location and orientation of photographs is shown on figure 26.

Where relevant context numbers have been assigned and are shown enclosed within brackets. Details of all contexts used can be found in appendix I.

Trench 01 (Plates 1-6, figures 2-7)

Discussion

Trench 1 measured 20.0m in length north to south by 2.0m in width and was located at the south-western part of the site targeting a sub-circular ditched enclosure (anomaly 1), NGR SH 59861 70755 – SH 59864 70735.

The trench was excavated through a 0.2m deep firm grey-brown silt-clay topsoil deposit with occasional small rounded pebbles (100) and a 0.3m deep firm mid-brown with yellow mottling silt-clay subsoil deposit with frequent small rounded pebbles and cobbles (101). This lay above a firm dark-brown to mid-grey clay natural glacial substrata with occasional concreted manganese outcrops and infrequent small rounded gravel and cobble inclusions (102).

The targeted enclosure gulley was encountered at the northern and southern ends of the trench, separated by at least 5.2m. The northernmost gulley [104] measured >2.5m in length by 0.77m in width by 0.27m in depth, orientated northwest to southeast and cut into the natural glacial substrata (102). The gulley continued into both the eastern and western trench limits of excavation. An exploratory sondage measuring 1.0m in length was excavated across the feature. The sides of the gulley were concaved with a slightly concaved base and was filled with a firm mid brown-grey silt-clay (103) with occasional small rounded pebble and cobble inclusions.

Fill (103) produced a flint, SF2, possibly a knapping debitage flake but might also be the result of plough shatter or similar damage, and is likely to have come from the Devensian sand and gravels and alluvial deposits of the area.

A bulk sample (06) was taken from context (103), processed and radiocarbon dated showing that the infill contained charcoal dating to AD 415 to 560 (Cal BP 1535 to 1390) with a 95% certainty, at the start of the Post-Roman (Early Medieval) period.

The southernmost gulley [106] measured >2.5m in length by 0.78m in width by 0.1m in depth (maximum), orientated southwest to northeast and cut into the natural glacial substrata (102). The gulley continued into both the eastern and western trench limits of excavation. An exploratory sondage measuring 1.0m in length was excavated across the feature. The sides of the gulley were slightly concaved and gently sloping, with a slightly concaved to flat base - and was filled with a firm mid brown silt-clay (105) with occasional small rounded pebble, concreted manganese fragments, and charcoal fleck inclusions.

Fill (105) produced a small sherd from the body of a Roman Black Burnished ware jar (DOR BB 1) (SF5) and a sherd from an amphora (SF4). The amphora fabric was of Baetican (Late) type (BAT AM 2), a fabric generally restricted to Peacock & Williams Class 25 (Dressel 20) globular amphorae and associated with later rim forms within this class (Tomber & Dore 1998, 85). This type of amphora was principally used to ship olive-oil from southern Spain and in Britain is the most common amphora from the late 1st century A.D. to the early 3rd century (Peacock & Williams 1986, 137).

The trench was recorded using digital photographs, context sheets and a trench sheet pro-forma. Measurements were taken by hand and a scale plan of the trench produced as shown in figure 3. The trench was backfilled using the excavated material upon departure.

Interpretation

Trench 1 was targeting anomaly 1 sub-circular ditched enclosure measuring 32.0m in length by 21.0m in width orientated northwest to southeast, suspected to be a prehistoric defended enclosure. Trial excavation of the enclosure feature showed that it was in fact a relatively shallow gulley, even when taking into account potential truncation via post-medieval ploughing. This would suggest that it was utilised for drainage or the demarcation of an area, perhaps as a boundary or to retain livestock. The lack of any clear silt build-up within the gulley would suggest that the latter interpretation is more probable, and the single fill would suggest that the feature had been deliberately infilled during a single episode.

The northernmost arm of the gulley produced a flint (SF2) however it was not clear whether it had been worked or was merely the result of an impact, perhaps via ploughing or some other activity, and could not be attributed to any particular time period. Moreover, the southernmost arm produced two sherds of Roman ceramic broadly dated to the late 1st century A.D. to the early 3rd century.

Radiocarbon dating of the southernmost gulley showed that its infill contained charcoal dating between AD 415 to 560 (Cal BP 1535 to 1390) at the start of the Post-Roman (Early Medieval) era.

Plate 01: Trench 1, from the north. Scale 2 x 1.0m.

Plate 02: Trench 1, from the south. Scale 2 x 1.0m.

Plate 03: Southeast facing section of gulley [104] trench 1, from the southeast. Scale 0.5m.

Plate 04: Gulley [104] trench 1, from the southeast. Scale 0.5m.

Plate 05: Northeast facing section of gulley [106] trench 1, from the northeast. Scale 0.5m.

Plate 06: Gulley [106] trench 1, from the northeast. Scale 0.5m.

Figure 03: Plan of trench 1, scale 1:100 at A4. Located on figure 02.

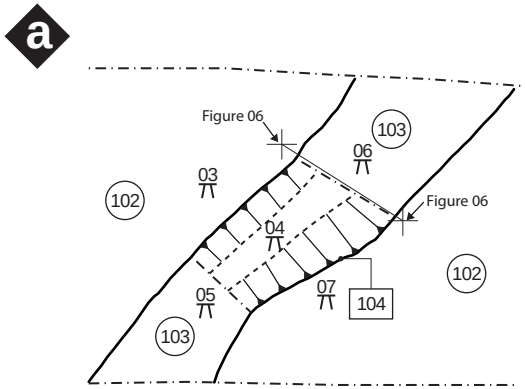

Figure 04: Plan of gulley [104] trench 1, scale 1:50 at A4. Located on figure 03.

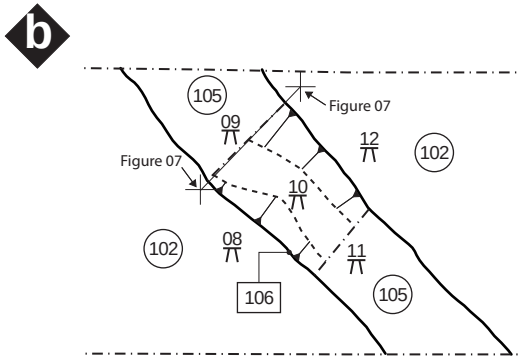

Figure 05: Plan of gulley [106] trench 1, scale 1:50 at A4. Located on figure 03.

Spot Heights - reduced level OD (m)			
1= 41.59	5 = 41.06	9 = 41.38	14 = 41.44
2 = 41.09	6 = 41.10	10 = 41.26	13 = 41.05
3 = 41.07	7 = 41.11	11 = 41.36	
4 = 40.84	8 =41.31	12 =41.37	

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Figures 03, 04 and 05.

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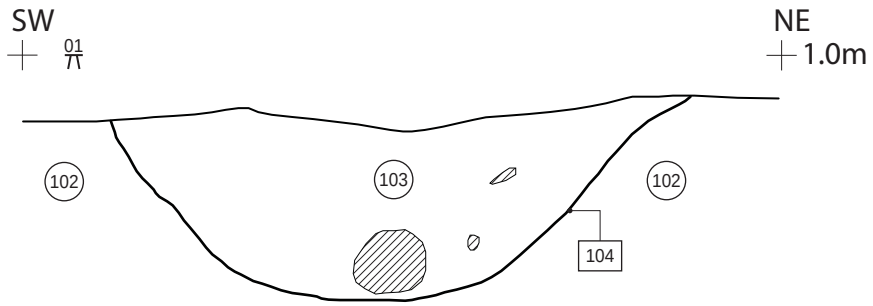
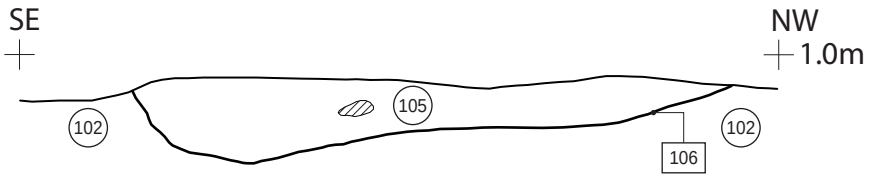
Spot Heights (reduced level OD (m)
1 = 41.17m

Figure 06: Southeast facing section of gulley [104].



Located on figure 04. 1:10 at A4

Figure 07: Northeast facing section of gulley [106].



Located on figure 05. 1:10 at A4

Spot Heights (reduced level OD)
1 = 41.41m

Figures 06 and 07.

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Trench 02 (Plates 7-14, figures 2, 8-12)

Discussion

Trench 2 measured 20.0m in length northeast to southwest by 2.0m in width and was located at the south-western part of the site targeting a sub-circular ditched enclosure (anomaly 1), NGR SH 59882 70767 – SH 59874 70748.

The trench was excavated through a 0.35m deep soft dark red-brown silt-clay topsoil deposit with occasional charcoal fragment inclusions (201) and a 0.35m deep soft light/mid red-brown silt-clay subsoil deposit with occasional small rounded pebble inclusions (202). This lay above a firm, light red-orange sand-clay natural glacial substrata with fairly frequent small and medium sub-rounded cobble inclusions (203).

The targeted enclosure gulley [208] was encountered towards the centre of the trench and measured >2.0m in length by 0.52m in width by 0.20m in depth, orientated northwest to southeast and cut into the natural glacial substrata (203). The gulley continued into both the north-western and south-eastern trench limits of excavation. An exploratory sondage measuring 2.0m in length was excavated across the feature. The sides of the gulley were straight to slightly concaved with a tapering base and was filled with a soft mid grey-brown silt-clay (209) with occasional small sub-rounded cobble and charcoal fleck inclusions. The fill did not produce any artefacts. A bulk environmental sample (09) was taken of fill (209) but was not processed and is retained at the Aeon Archaeology office, Chester.

Approximately 3.5m to the southwest of gulley [208] an ovoid pit [204] measuring 0.7m in length by 0.62m in width by 0.13m in depth and orientated northeast to southwest was located. The pit was cut into the natural glacial substrata (203) and had concaved sides and a slightly concaved base. It had a single fill of soft, mid to dark red-brown silt-clay (205) with occasional small sub-rounded pebble and charcoal fleck inclusions. The fill did not produce any artefacts. A bulk environmental sample (07) was taken of fill (205) but was not processed and is retained at the Aeon Archaeology office, Chester.

Approximately 0.2m to the northwest of pit [204] a second ovoid pit [206] was identified that continued into the north-western limit of excavation. It measured 1.34m in length by 0.36m in width by 0.2m in depth, orientated northeast to southwest and cut into the natural glacial substrata (203). It had a single fill of loose mid grey-brown silt-clay (207) with infrequent small angular cobble and occasional charcoal fleck inclusions. The fill did not produce any artefacts. A bulk environmental sample (08) was taken of fill (207) and was processed and sent for radiocarbon dating. The results showed a 95% certainty that the pit infill contained charcoal dating between BC 4720 to 4550 (Cal BP 6670 to 6500) towards the end of the Mesolithic period.

The trench was recorded using digital photographs, context sheets and a trench sheet pro-forma. Measurements were taken by hand and a scale plan of the trench produced as shown in figure 8. The trench was backfilled using the excavated material upon departure.

Interpretation

Trench 2 was targeting anomaly 1 sub-circular ditched enclosure, possibly a prehistoric defended enclosure. The feature, as with trench 1, was found to be a relatively shallow gulley possibly for drainage or the demarcation of an area, perhaps as a boundary or to retain livestock. No dating evidence was retrieved from the gulley however artefactual evidence from trench 1 and associated radiocarbon dating shows that the feature is Roman in origin and was infilled at the start of the Post-Roman (Early Medieval) period.

Pit [204] was located within the ditched enclosure but towards the northern limit and as such it is not clear whether it was associated with activity linked with the enclosure or is situated there merely by chance. The pit did not produce any artefactual evidence and as such remains undated.

Pit [206] was only partially revealed by the evaluation with the rest of the pit continuing beyond the trench limit. The pit did not produce any artefactual evidence however radiocarbon dating has shown that its infill contained charcoal dating between BC 4720 to 4550 (Cal BP 6670 to 6500) towards the end of the Mesolithic period. The function of the pit remains unclear, perhaps it was a refuse pit or associated with a temporary camp. Moreover, due to the nature of evaluation trenching it is not clear whether this is an isolated feature or part of a larger area of Mesolithic activity.

Plate 07: Trench 2, from the southwest. Scale 2 x 1.0m.

Plate 08: Trench 2, from the northeast. Scale 2 x 1.0m.

Plate 09: Northwest facing section of trench 2, from the northwest. Scale 0.5m.

Plate 10: Southeast facing section of pit [204] trench 2, from the southeast. Scale 0.5m.

Plate 11: Pit [204] trench 2, from the southeast. Scale 0.5m.

Plate 12: Southeast facing section of pit [206] trench 2, from the southeast. Scale 0.5m.

Plate 13: Southeast facing section of gulley [208] trench 2, from the southeast. Scale 0.5m.

Plate 14: Gulley [208] trench 2, from the southeast. Scale 0.5m.

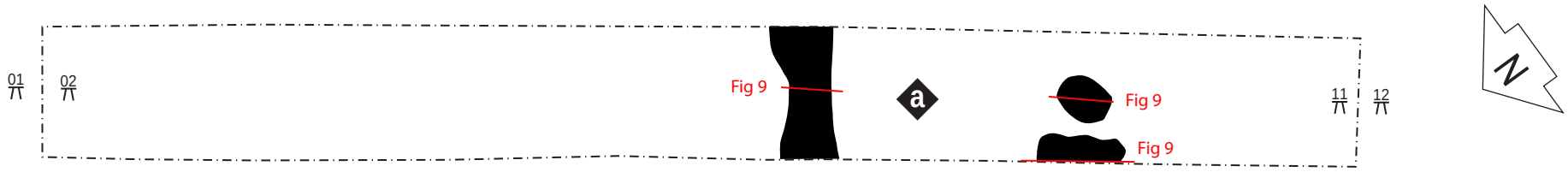

Figure 08: Plan of trench 2, scale 1:100 at A4. Located on figure 02.

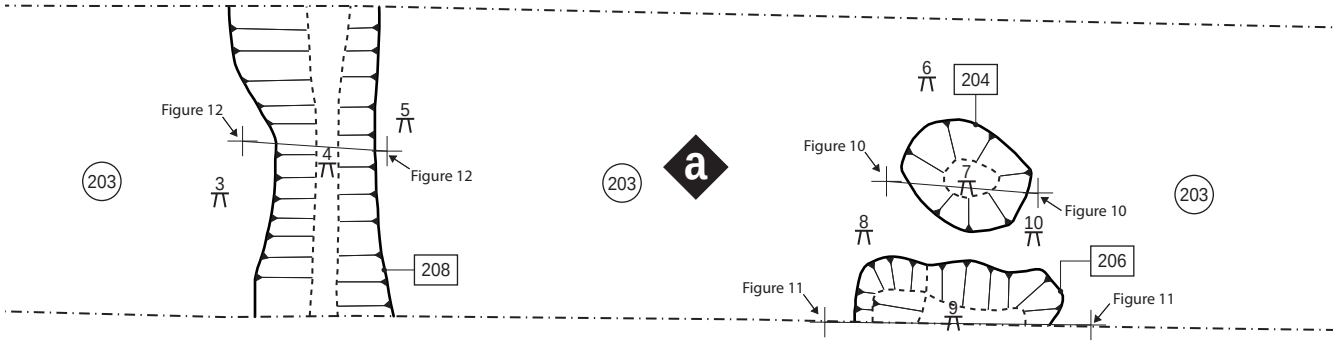

Figure 09: Plan of gulley [208], pits [204] and [206] trench 2, scale 1:50 at A4. Located on figure 08.

Spot Heights - reduced level OD (m)		
1= 41.78	5 = 41.07	9 = 40.85
2 = 41.28	6 = 41.00	10 = 41.02
3 = 41.08	7 = 40.86	11 = 41.01
4 = 40.88	8 =41.07	12 =41.68

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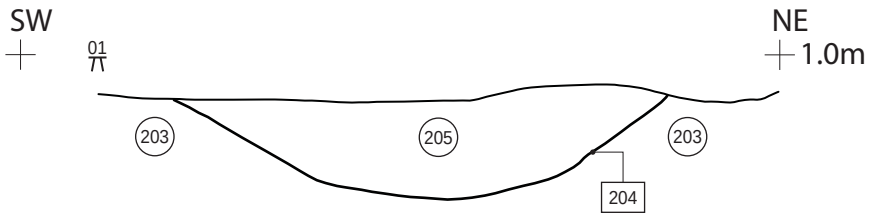
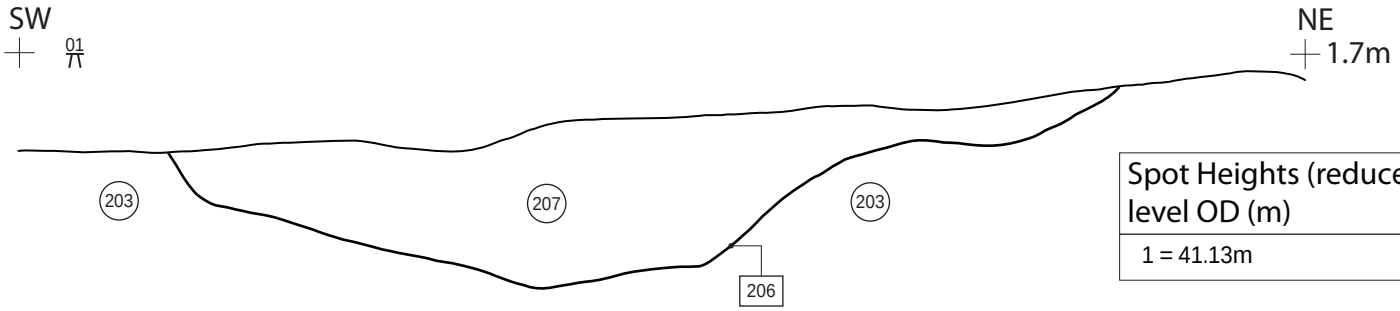
Spot Heights (reduced level OD (m)
1 = 41.07m

Figure 10: Southeast facing section of pit [204].



Located on figure 09. 1:10 at A4

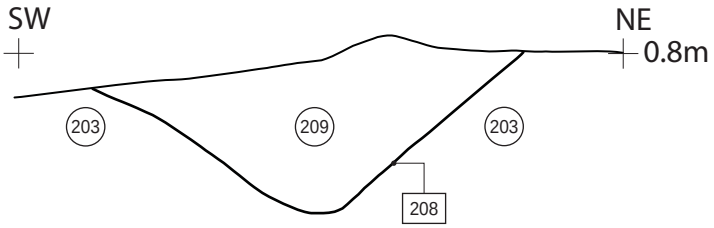
Figure 11: Southeast facing section of pit [206].



Spot Heights (reduced level OD (m)
1 = 41.13m

Located on figure 09. 1:10 at A4

Figure 12: Southeast facing section of gulley [208].



Located on figure 09. 1:10 at A4

Spot Heights (reduced level OD)
1 = 41.10m

Figures 10, 11 and 12.

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Trench 03 (Plates 15-25, figures 2, 13-17)

Discussion

Trench 3 measured 20.0m in length northeast to southwest by 2.0m in width and was located at the south-western part of the site targeting weak anomalies, possibly settlement or other activity inside enclosure 1 (anomaly 2), NGR SH 59888 70748 – SH 59869 70742.

The trench was excavated through a 0.39m deep soft mid grey-brown silt-clay topsoil deposit with infrequent small sub-angular cobble inclusions (301) and a 0.38m deep soft mid red-brown silt-clay subsoil deposit with infrequent small sub-rounded cobble inclusions (302). This lay above a firm, mid yellow-brown/ mid-brown clay-silt natural colluvium substrata (314) which appeared in a thin 0.5m deep spread across the trench and overlaid a moderate, mid/light orange-brown slightly sandy-clay natural glacial substrata with fairly frequent small and medium sub-rounded cobble inclusions (303).

At the north-eastern end of the trench a sub-rounded pit [305] was located measuring 0.98m in length by 0.95m in width by 0.22m in depth, orientated north to south and cut into the natural colluvium substrata (314). The sides of the pit were concaved with a flat base and was filled by a loose, dark grey-brown clay-silt (304) with frequent small angular cobble, small sub-angular pebble, charcoal fleck, and a singular large angular cobble inclusions. Context (304) produced 16 sherds from a minimum of 2 Black Burnished ware jars (DOR BB 1) and 37 sherds, possibly from a single large jar, in an oxidised fabric that is perhaps a Severn Valley ware rather than a Cheshire Plain ware fabric judging by its finer, less granular appearance.

The largest sherd of BB1 was from the central body area of a very thin-walled jar with obtuse lattice decoration dating this vessel broadly to the 3rd to 4th-century. The second BB1 vessel was a much smaller, thicker-walled jar or beaker with slightly obtuse lattice decoration dating this vessel to the later 2nd to 3rd-century. Unfortunately there were no rim sherds present amongst the assemblage of BB1 that may have been used to date the assemblage closer.

The 37 sherds of oxidised ware recovered from context (304) almost certainly represent a single large jar. Again, the lack of rim or similarly diagnostic sherds preclude any further identification of the finer details of the vessel's form; such as wide-mouthed or constricted neck. This jar may well have been a traded product (as with the BB1 jars) reaching the site from the Severn Valley area perhaps via the Segontium *vicus*. Storage and wide-mouthed jars were amongst the more widely distributed Severn Valley ware forms during the 2nd to 3rd-centuries (Tyres 1996, 197) with examples known from the fort and *vicus* at Segontium (Caernarfon) (Webster 1993, 254).

A bulk environmental sample (10) was taken of fill (304) but was not processed and is retained at the Aeon Archaeology office, Chester.

Approximately 4.8m to the southwest of pit [305] and towards the centre of the trench, a small sub-circular pit or possibly post-hole [307] measuring 0.4m in diameter by 0.09m in depth was located. The feature was cut into the natural colluvium (314) and had slightly concaved sides and a concaved base. It had a single fill of firm, dark-brown silt-clay (308) with frequent charcoal fleck inclusions. The fill did not produce any artefacts.

Approximately 0.7m to the southwest of pit/ post-hole [307] an ovoid pit or possibly gulley [311] measuring >1.5m in length by 0.8m in width by 0.1m in depth was located. The feature was orientated northwest to southeast and continued beyond the south-eastern limit of excavation. It was cut into the natural colluvium (314) and had mildly concaved sides and a relatively flat base. The pit/gulley had a single fill of firm, mid-brown silt-clay (310) with very frequent lenses of burnt clay. A single small sherd of prehistoric pottery was recovered from context (310). The small, rounded sherd has a dark red to black fabric with angular quartz inclusions. In light of the other sherds recovered from trench 8

(see below) and from sites of domestic occupation within the wider area (see Kenney & Davidson 2006, 15–18), this sherd probably derives from a Peterborough ware vessel of Early to Middle Neolithic date. The fill was cut on its south-western edge by a sub-circular pit or possibly post-hole [309].

Pit/post-hole [309] measured 0.3m in diameter by 0.14m in depth. It had a single fill of firm, dark-brown silt-clay (308) with frequent charcoal fleck inclusions. The fill did not produce any artefacts.

Approximately 0.05m to the southwest of pit/post-hole [309] a large sub-circular pit [313] measuring >1.2m in length by 1.2m in width by 0.3m in depth, orientated north to south was located. The feature appeared to continue into the south-eastern limit of excavation and had been cut into the natural colluvium (314). It had concaved sides and a concaved base and had been successively filled by no less than five separate and individual fill horizons. The primary fill consisted of a 0.17m deep soft light grey-brown silt-clay (312) with occasional charcoal fleck inclusions which filled the entirety of the pit base. A second fill measuring 0.06m in depth and of soft, mixed mid-red and black silt-clay (315) with very frequent charcoal fleck and fragment inclusions then overlaid the primary fill at the north-eastern end of the pit to a width of 0.64m. This in turn had been overlaid by a 0.4m wide by 0.14m deep fill of soft, dark grey-brown silt-clay (316) with 80-90% medium rounded burnt cobbles within the centre of the pit. The cobbles were butted by a limited fill on the south-western edge of reasonably firm, light brown-yellow clay (317) measuring 0.16m in width by 0.06m in depth. The pit had lastly been filled by a soft, mid grey-brown silt-clay (318) with occasional charcoal fleck inclusions, measuring 0.77m in width by 0.08m in depth and located within the centre of the pit. None of the fills produced any artefacts.

A bulk environmental sample (03) was taken of fill (316) and was processed and sent for radiocarbon dating. The results showed a 95% certainty that the pit infill contained charcoal dating between Cal AD 240 to 390 (Cal BP 1710 to 1560) within the Roman period.

The trench was recorded using digital photographs, context sheets and a trench sheet pro-forma. Measurements were taken by hand and a scale plan of the trench produced as shown in figure 13. The trench was backfilled using the excavated material upon departure.

Interpretation

Trench 3 was targeting anomaly 2 - weak anomalies, possibly settlement or other activity inside enclosure 1.

Pit [305] produced 64 sherds of Roman pottery fragments and appears to have been a refuse pit associated with Roman activity within the enclosure. The inclusion of metal working slag within the fill may indicate that this activity was industrial in nature.

The origin and nature of feature [307] remains unclear but may be a post-hole associated with the activity.

Large pit [309] appears to have been a hearth although for what purpose is unclear. The several fills suggest that it became infilled via its associated activity rather than a deliberate backfill episode. Radiocarbon dating of fill (316) has shown that it contains charcoal dating to between Cal AD 240 to 390 (Cal BP 1710 to 1560) within the Roman period. This suggests that the hearth and refuse pit were contemporary in date and associated with the same activity.

The function of ovoid pit or gulley [311] is unclear but it produced a single sherd of Peterborough ware vessel of Early to Middle Neolithic date. This sherd may be residual in nature and the close proximity of the feature to the Roman hearth and pit may suggest that it is in fact from this time

period. The discovery of a single pit in trench 8 that produced Neolithic pottery however may indicate that this feature is part of a wider area of prehistoric activity and was located towards the centre of the later enclosure gulley merely by chance.

Plate 15: Trench 3, from the northeast. Scale 2 x 1.0m.

Plate 16: Trench 3, from the southwest. Scale 2 x 1.0m.

Plate 17: Northwest facing section of trench 3, from the northwest. Scale 1.0m.

Plate 18: West facing section of pit [305] trench 3, from the west. Scale 1.0m.

Plate 19: Pit [305] trench 3, from the west. Scale 0.5m.

Plate 20: East facing section of pit / post-hole [307] trench 3, from the east. Scale 0.5m.

Plate 21: Northwest facing sections of pit [311], pit / post-hole [309], and pit / hearth [313] trench 3, from the northwest. Scale 1.0m.

Plate 22: Pit [311] trench 3, from the northwest. Scale 0.5m.

Plate 23: Pit / post-hole [309] trench 3, from the northwest. Scale 0.5m.

Plate 24: Pit / hearth [313] trench 3, from the northwest. Scale 1.0m.

Plate 25: Pit [311], pit/ post-hole [309] and pit / hearth [313] trench 3, from the northwest. Scale 1.0m.

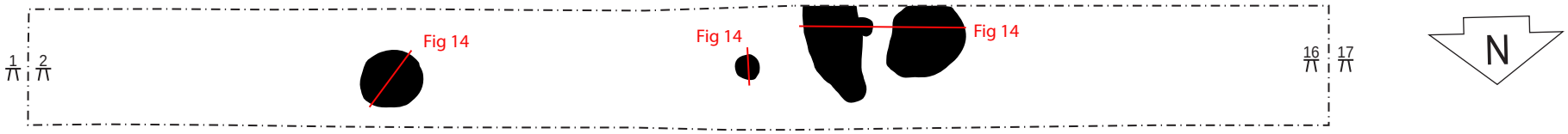

Figure 13: Plan of trench 3, scale 1:100 at A4. Located on figure 02.

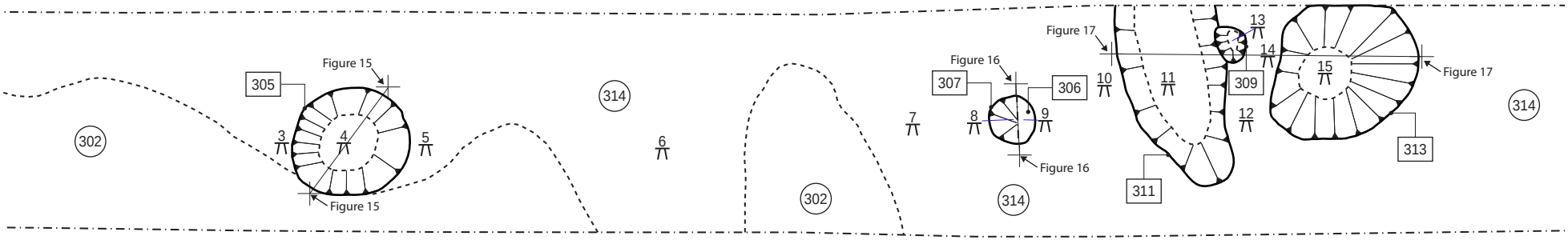

Figure 14: Plan of Pits [305], [306], [311], [313], and post-hole [309] trench 3, scale 1:50 at A4. Located on figure 013.

Spot Heights - reduced level OD (m)				
1= 41.55	5 = 40.72	9 = 40.83	13 = 40.78	17 = 41.54
2 = 40.90	6 = 40.70	10 = 40.92	14 = 40.90	
3 = 41.50	7 = 40.71	11 = 40.84	15 = 40.63	
4 = 40.94	8 =40.73	12 =40.92	16 =40.86	

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Figures 13 and 14.

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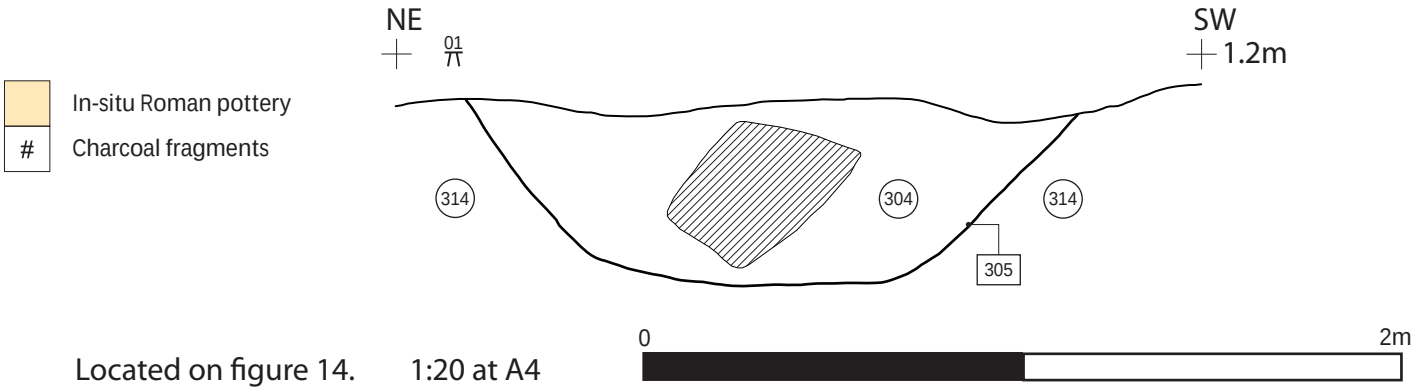
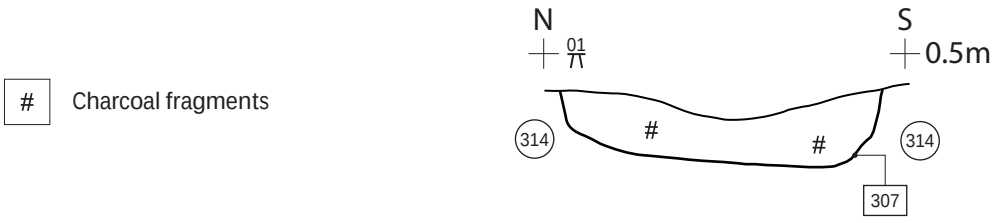
Spot Heights (reduced level OD (m)
1 = 40.99m

Figure 15: Southeast facing section of pit [305].



Located on figure 14. 1:20 at A4

Figure 16: West facing section of pit [307].



Spot Heights (reduced level OD (m)
1 = 40.89m

Located on figure 14. 1:10 at A4

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Figures 15 and 16.

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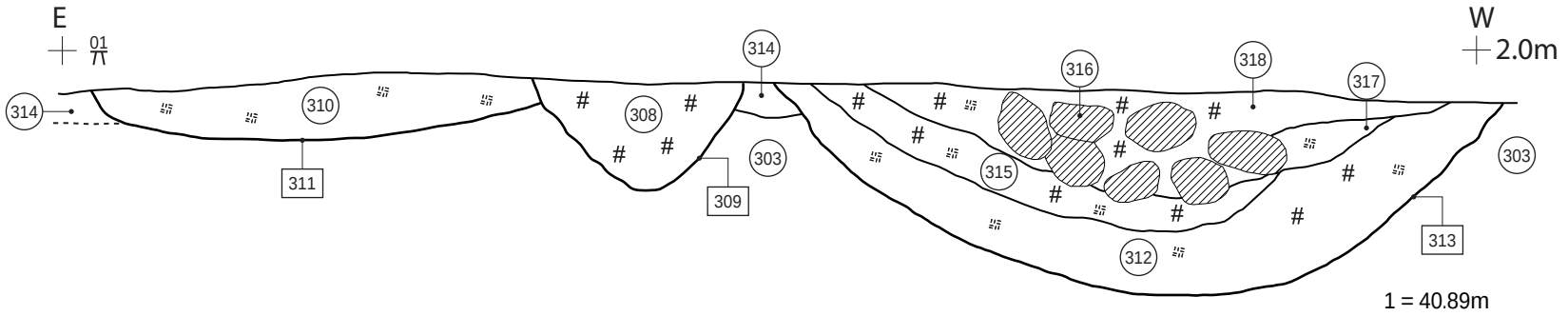
Spot Heights (reduced level OD (m)
1 = 40.96m

Figure 17: North facing section of post-hole [309], pit [311], and pit [313].



Charcoal fragments

Clay

Located on figure 14. 1:10 at A4

0 1m

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Trench 04 (Plates 26-30, figures 2, 18-20)

Discussion

Trench 4 measured 20.0m in length east to west by 2.0m in width and was located towards the centre of the site targeting a former field boundary, perhaps medieval in date (anomaly 5), NGR SH 59903 70774 – SH 59883 70770.

The trench was excavated through a 0.2m deep soft dark red-brown silt-clay topsoil deposit with occasional small sub-rounded cobble inclusions (401) and a 0.4m deep soft mid red-brown silt-clay subsoil deposit with infrequent small sub-rounded cobble inclusions (402). This lay above a reasonably firm, light orange-brown clay natural glacial substrata with fairly frequent small and medium rounded cobble inclusions (403).

Towards the centre of the trench a ditch [404] was located measuring >2.0m in length by 0.81m in width by 0.3m in depth, orientated north to south and cut into the natural glacial substrata (403). The sides of the ditch were slightly concaved as was the base, and was filled by a soft, mid red-brown silt-clay (405) with occasional small rounded pebble and frequent root inclusions. The fill did not produce any artefacts.

The trench was recorded using digital photographs, context sheets and a trench sheet pro-forma. Measurements were taken by hand and a scale plan of the trench produced as shown in figure 18. The trench was backfilled using the excavated material upon departure.

Interpretation

Trench 4 was targeting a former field boundary, perhaps medieval in date (anomaly 5). This feature was observed and recorded towards the centre of the trench as a linear ditch [404]. The ditch fill did not produce any artefactual evidence however the frequent inclusion of roots within the homogenous fill suggested that it was in fact of post-medieval date, possibly related to agricultural disturbance.

Plate 26: Trench 4, from the west. Scale 2 x 1.0m.

Plate 27: Trench 4, from the east. Scale 2 x 1.0m.

Plate 28: South facing section of trench 4, from the south. Scale 0.5m.

Plate 29: South facing section of ditch [404] - trench 4, from the south. Scale 0.5m.

Plate 30: Ditch [404] - trench 4, from the south. Scale 0.5m.

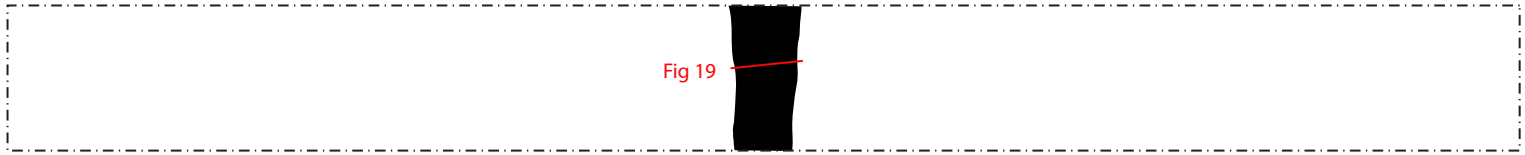

Figure 18: Plan of trench 4, scale 1:100 at A4. Located on figure 02.

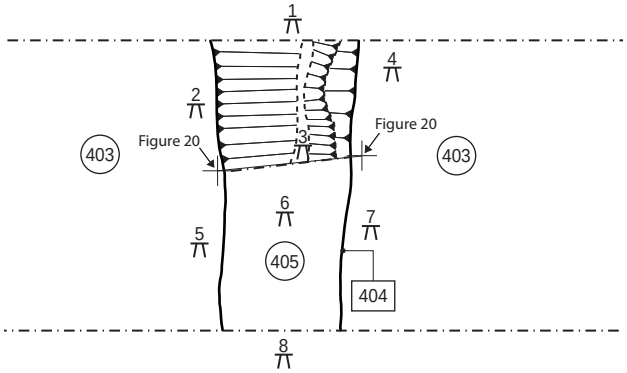

Figure 19: Plan of ditch [404] trench 4, scale 1:50 at A4.
Located on figure 018.

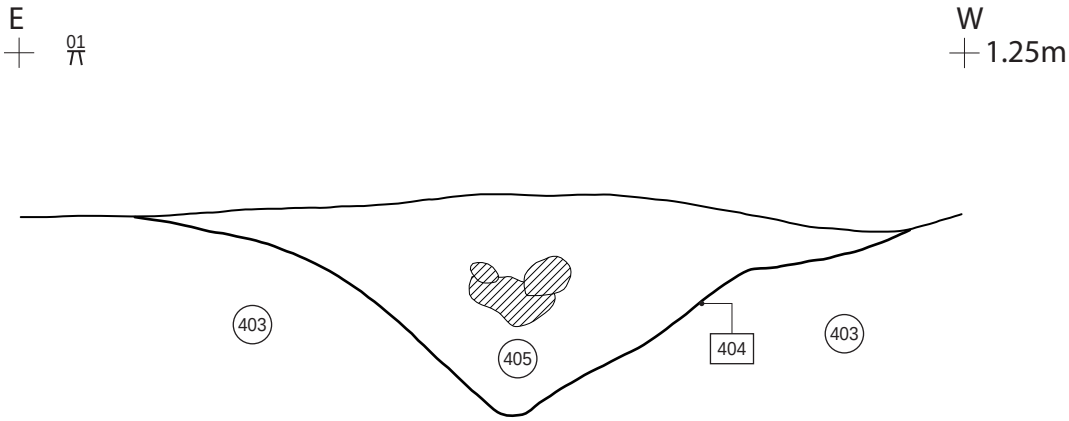

Figure 20: North facing section of ditch [404] trench 4.
Located on figure 018.

Spot Heights - reduced level OD (m)	
1= 42.00	5 = 41.41
2 = 41.41	6 = 41.38
3 = 41.18	7 = 41.37
4 = 41.38	8 =42.00

Located on figure 19. 1:10 at A4

Spot Heights (reduced level OD (m)
1 = 41.60m

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Figures 18, 19 and 20.

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Trench 05 (Plates 31-33, figure 2)

Discussion

Trench 5 measured 20.0m in length north to south by 2.0m in width and was located towards the northwest of the site targeting ploughing aligned E-W, probably medieval ridge and furrow (anomaly 3), NGR SH 59867 70782 – SH 59871 70762.

The trench was excavated through a 0.2m deep soft dark red-brown silt-clay topsoil deposit with occasional small sub-rounded cobble inclusions and a 0.4m deep soft mid red-brown silt-clay subsoil deposit with infrequent small sub-rounded cobble inclusions. This lay above a reasonably firm, light orange-brown clay natural glacial substrata with fairly frequent small and medium rounded cobble inclusions.

No archaeological features were identified within the trench limits and no artefacts or samples recovered. The trench was recorded using digital photographs, context sheets and a trench sheet pro-forma. The trench was backfilled using the excavated material upon departure.

Interpretation

Trench 5 was targeting ploughing aligned E-W, probably medieval ridge and furrow (anomaly 3), however no archaeological remains were observed within the trench. This may be because the geophysical data was misinterpreted or as medieval ridge and furrow earthworks are notoriously difficult to detect in trench sections or bases when not observed at the surface, it is possible that the remains were simply too ephemeral to identify.

Plate 31: Trench 5, from the south. Scale 2 x 1.0m.

Plate 32: Trench 5, from the north. Scale 2 x 1.0m.

Plate 33: West facing section of trench 5, from the west. Scale 1.0m.

Trench 06 (Plates 34-36, figure 2)

Discussion

Trench 6 measured 20.0m in length north to south by 2.0m in width and was located towards the northwest of the site targeting the site for discreet features, NGR SH 59861 70778 – SH 59855 70758.

The trench was excavated through a 0.2m deep soft dark red-brown silt-clay topsoil deposit with occasional small sub-rounded cobble inclusions and a 0.4m deep soft mid red-brown silt-clay subsoil deposit with infrequent small sub-rounded cobble inclusions. This lay above a reasonably firm, light orange-brown clay natural glacial substrata with fairly frequent small and medium rounded cobble inclusions.

No archaeological features were identified within the trench limits and no artefacts or samples recovered. The trench was recorded using digital photographs, context sheets and a trench sheet pro-forma. The trench was backfilled using the excavated material upon departure.

Interpretation

Trench 6 was targeting any discreet features that may have not been detected during the geophysical survey within this part of the site, however no features were identified.

Plate 34: Trench 6, from the south. Scale 2 x 1.0m.

Plate 35: Trench 6, from the north. Scale 2 x 1.0m.

Plate 36: West facing section of trench 6, from the west. Scale 1.0m.

Trench 07 (Plates 37-39, figure 2)

Discussion

Trench 7 measured 20.0m in length northeast to southwest by 2.0m in width and was located towards the east of the site targeting a weak linear anomaly, perhaps a drain or agricultural feature and parallel anomalies, probably wheel ruts (anomalies 7 and 8), NGR SH 59922 70772 – SH 59905 70760.

The trench was excavated through a 0.2m deep soft dark red-brown silt-clay topsoil deposit with occasional small sub-rounded cobble inclusions and a 0.4m deep soft mid red-brown silt-clay subsoil deposit with infrequent small sub-rounded cobble inclusions. This lay above a reasonably firm, light orange-brown clay natural glacial substrata with fairly frequent small and medium rounded cobble inclusions.

No archaeological features were identified within the trench limits and no artefacts or samples recovered. The trench was recorded using digital photographs, context sheets and a trench sheet pro-forma. The trench was backfilled using the excavated material upon departure.

Interpretation

Trench 7 was targeting a weak linear anomaly, perhaps a drain or agricultural feature and parallel anomalies, probably wheel ruts (anomalies 7 and 8) however no archaeological features were identified within the trench. This is probably due to the features being post-medieval / modern in date and as such located quite high in the stratigraphy. Such features are difficult to see in plan and are usually only recognised in the trench section, however if they are relatively shallow or ephemeral then they can easily be missed.

Plate 37: Trench 7, from the northeast. Scale 2 x 1.0m.

Plate 38: Trench 7, from the southwest. Scale 2 x 1.0m.

Plate 39: Northwest facing section of trench 7, from the northwest. Scale 1.0m.

Trench 08 (Plates 40-44, figures 2, 21-25)

Discussion

Trench 8 measured 20.0m in length northeast to southwest by 2.0m in width and was located at the eastern part of the site targeting ploughing aligned north to west, probably medieval ridge and furrow (anomaly 4), NGR SH 59924 70763 – SH 59912 70747.

The trench was excavated through a 0.2m deep soft dark-brown clay-silt topsoil deposit (800) and a 0.4m deep soft mid/dark brown clay-silt subsoil deposit with infrequent small sub-rounded cobble and small angular pebble inclusions (801). This lay above a moderate, mid/light orange-brown slightly sandy-clay natural glacial substrata with fairly frequent small and medium sub-rounded cobble inclusions (802).

Towards the centre of the trench a sub-rounded pit [804] was located against, and continued into, the northwest limit of excavation, measuring 1.15m in length by >0.56m in width by 0.22m in depth orientated northeast to southwest and cut into the natural glacial substrata (802). The sides of the pit were concaved with a flat/ mildly undulating base and was filled by a loose, red-brown sand-silt (803) with occasional small fire-cracked angular cobbles and charcoal fleck inclusions. Two sherds of prehistoric pottery were recovered from context (803). The sherds comprised a large body sherd (No. 1) and a sherd from the base (No. 3) both perhaps from a single, thick-walled vessel. The fabric was dark red (at the core) to black and contained abundant inclusions of angular stone (including quartz) up to 13mm in size. The surface of the large body sherd was decorated with vertical lines of twisted cord or perhaps bone impressions. The base sherd indicates a vessel with a base diameter of no more than c. 100mm. These sherds probably belong to a single vessel, a bowl or jar-like bowl, in the Mortlake style of Peterborough ware dating to the Early to Middle Neolithic. The sherds probably represent disposal of domestic refuse rather than deliberate deposition.

A bulk environmental sample (01) was taken of fill (803) but was not processed and is retained at the Aeon Archaeology office, Chester.

Approximately 0.65m to the east of pit [804] a small sub-circular pit [809] measuring >0.25m in diameter by 0.08m in depth was located. The feature was cut into the natural colluvium (802) and had concaved sides and a concaved base. It had a single fill of firm, dark red-brown silt-clay (808) with frequent burnt clay and charcoal fleck inclusions. The fill did not produce any artefacts and remains undated.

To the immediate east pit [809] had been cut away on its eastern edge by a large ovoid pit [807] measuring >6.0m in length by >1.8m in width by 1.0m in depth which continued into the south-eastern and north-eastern limits of excavation. Upon examination of the south-eastern trench baulk it was found that the pit had been cut from relatively high in the stratigraphic matrix into subsoil (801) and due to its depth had continued into the natural glacial substrata horizon (802). The pit had concaved sides and a flat base and had been partially in-filled around its perimeter by a 0.8m wide by a 0.46m deep firm, mid-brown clay-silt (806) with infrequent small rounded cobble inclusions. The pit had then be entirely in-filled by a >0.6m wide by 1.0m deep loose green-grey sand (805). The fills did not produce any artefacts.

The trench was recorded using digital photographs, context sheets and a trench sheet pro-forma. Measurements were taken by hand and a scale plan of the trench produced as shown in figure 13. The trench was backfilled using the excavated material upon departure.

Interpretation

Trench 8 was targeting ploughing aligned north to west, probably medieval ridge and furrow (anomaly 4) however no features related to this geophysical anomaly were identified. Ridge and furrow earthworks are difficult to observed within evaluation trenches, especially when there are no visible remains at ground level. As such it is possible that these remains were simply not identified.

The trench did however produce a single pit [804] that produced two sherds of Early to Middle Neolithic ceramic. The single fill would suggest that this feature had been deliberately infilled within a single episode. The presence of two pottery sherds makes it less likely that these are residual artefacts that have found their way into the infill by accident and it is likely that this is a Neolithic refuse pit. Similar features were identified during the excavation of the industrial estate in 2005 where several clusters of Mid to Late Neolithic pits, which contained a large assemblage of pottery and other artefacts were found. It is possible that this pit is an isolated feature although the identification of a second possible Neolithic pit at the southern end of the site suggests that further Neolithic remains at the site are a distinct likelihood.

Pit [809] is of unknown function and origin and remains undated. The proximity to Neolithic pit [804] and post-medieval pit [807] means that identification by proximity is not possible, although pit [807] partially cuts it away and as such is later in date.

Large pit [807] almost certainly represents a sand-clay extraction pit and may date to the construction of the property to the immediate northeast. There were no artefacts recovered from the pit fills however upon examination of the south-eastern trench baulk it was found that the pit had been cut from relatively high in the stratigraphic matrix into subsoil (801), suggesting that it was relatively modern in date.

Plate 40: Trench 8, from the southwest. Scale 2 x 1.0m.

Plate 41: Trench 8, from the northeast. Scale 2 x 1.0m.

Plate 42: Southeast facing section of pit [804] and trench 8, from the southeast. Scale 1.0m.

Plate 43: North facing section of pits [807] and [809] - trench 8, from the north. Scale 1.0m.

Plate 44: northwest facing section of pit [807] - trench 8, from the northwest. Scale 1.0m.

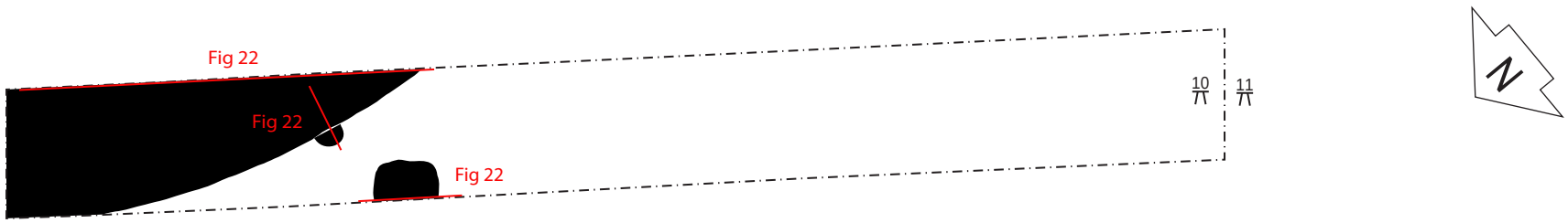

Figure 21: Plan of trench 8, scale 1:100 at A4. Located on figure 02.

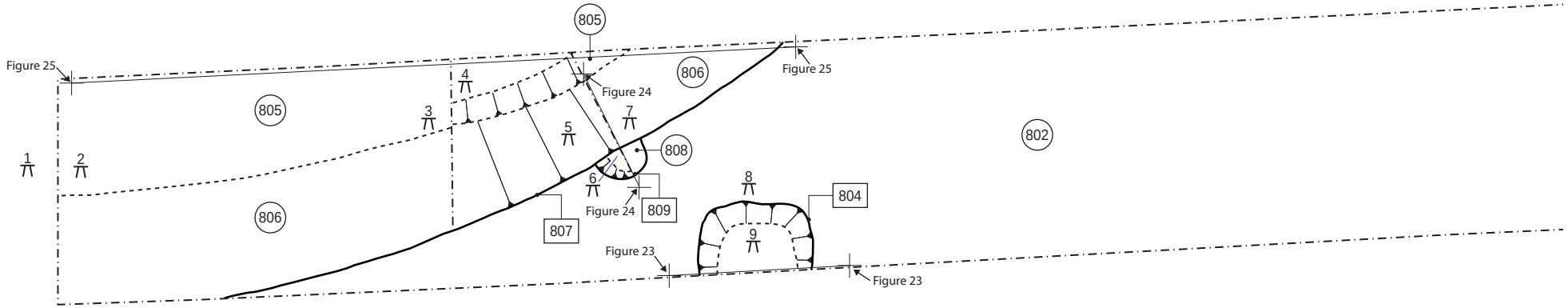

Figure 22: Plan of Pits [804], [807], and [809] trench 8, scale 1:50 at A4.
Located on figure 021.

Spot Heights - reduced level OD (m)		
1= 41.93	5 = 41.01	9 = 41.09
2 = 41.25	6 = 41.19	10 = 40.96
3 = 41.21	7 = 41.23	11 = 41.73
4 = 40.77	8 =41.27	

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Figures 21 and 22.

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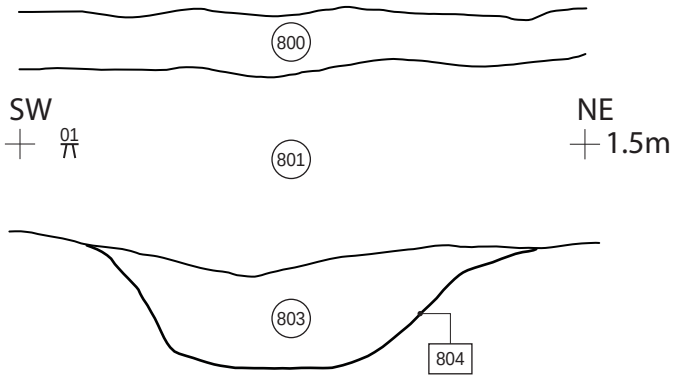
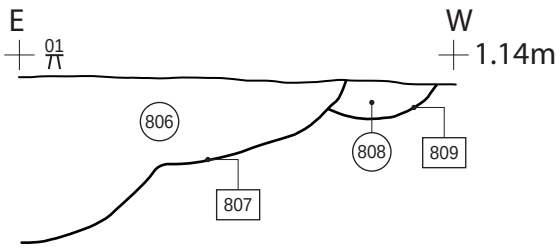
Spot Heights (reduced level OD (m)
1 = 41.64m

Figure 23: Southeast facing section of pit [804].



Located on figure 22. 1:20 at A4

Figure 24: North facing section of pits [807] and [809].



Spot Heights (reduced level OD (m)
1 = 41.29m

Located on figure 22. 1:20 at A4

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Figures 23 and 24.

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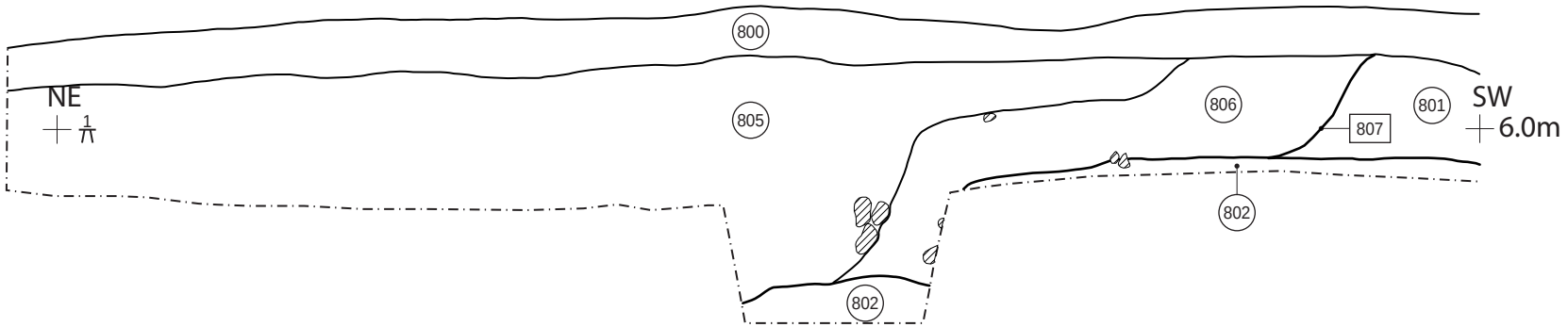
Spot Heights (reduced level OD (m)
1 = 41.46m

Figure 25: Southeast facing section of pit [807], trench 08.



Located on figure 22. 1:30 at A4

æon archæology	Figure 25.	**Aeon Archaeology** Richard Cooke BA MA MCIfA 25 Mold Road, Broughton, Chester CH4 0PQ Tel: 07866925393 / 01244 531585 www.aeonarchaeology.co.uk

Trench 09 (Plates 45-47, figure 2)

Discussion

Trench 9 measured 20.0m in length east to west by 2.0m in width and was located towards the east of the site targeting the site for discreet features NGR SH 59935 70759 – SH 59955 70758.

The trench was excavated through a 0.2m deep soft dark red-brown silt-clay topsoil deposit with occasional small sub-rounded cobble inclusions and a 0.4m deep soft mid red-brown silt-clay subsoil deposit with infrequent small sub-rounded cobble inclusions. This lay above a reasonably firm, light orange-brown clay natural glacial substrata with fairly frequent small and medium rounded cobble inclusions.

No archaeological features were identified within the trench limits and no artefacts or samples recovered. The trench was recorded using digital photographs, context sheets and a trench sheet pro-forma. The trench was backfilled using the excavated material upon departure.

Interpretation

Trench 9 was targeting any discreet features that may have not been detected during the geophysical survey within this part of the site, however no features were identified.

Plate 45: Trench 9, from the east. Scale 2 x 1.0m.

Plate 46: Trench 9, from the west. Scale 2 x 1.0m.

Plate 47: North facing section of trench 9, from the north. Scale 1.0m.

Trench 10 (Plates 48-50, figure 2)

Discussion

Trench 10 measured 20.0m in length southeast to northwest by 2.0m in width and was located towards the east of the site targeting a former boundary ditch, probably associated with the current boundary (anomaly 6), NGR SH 59986 70759 – SH 60002 70745.

The trench was excavated through a 0.2m deep soft dark red-brown silt-clay topsoil deposit with occasional small sub-rounded cobble inclusions and a 0.4m deep soft mid red-brown silt-clay subsoil deposit with infrequent small sub-rounded cobble inclusions. This lay above a reasonably firm, light orange-brown clay natural glacial substrata with fairly frequent small and medium rounded cobble inclusions.

No archaeological features were identified within the trench limits and no artefacts or samples recovered. The trench was recorded using digital photographs, context sheets and a trench sheet pro-forma however due to damage caused by the racked excavator slipping into the trench only 4.0m of the excavated trench was visible to record. The trench was backfilled using the excavated material upon departure.

Interpretation

Trench 10 was targeting former boundary ditch, probably associated with the current boundary (anomaly 6) however no archaeological features were identified within the trench. This is probably due to the features being post-medieval / modern in date and as such located quite high in the stratigraphy. Such features are difficult to see in plan and are usually only recognised in the trench section, however if they are relatively shallow or ephemeral then they can easily be missed.

Plate 48: Trench 10, from the northwest. Scale 2 x 1.0m.

Plate 49: Trench 10, from the southeast. Scale 2 x 1.0m.

Plate 50: Southwest facing section of trench 10, from the southwest. Scale 1.0m.

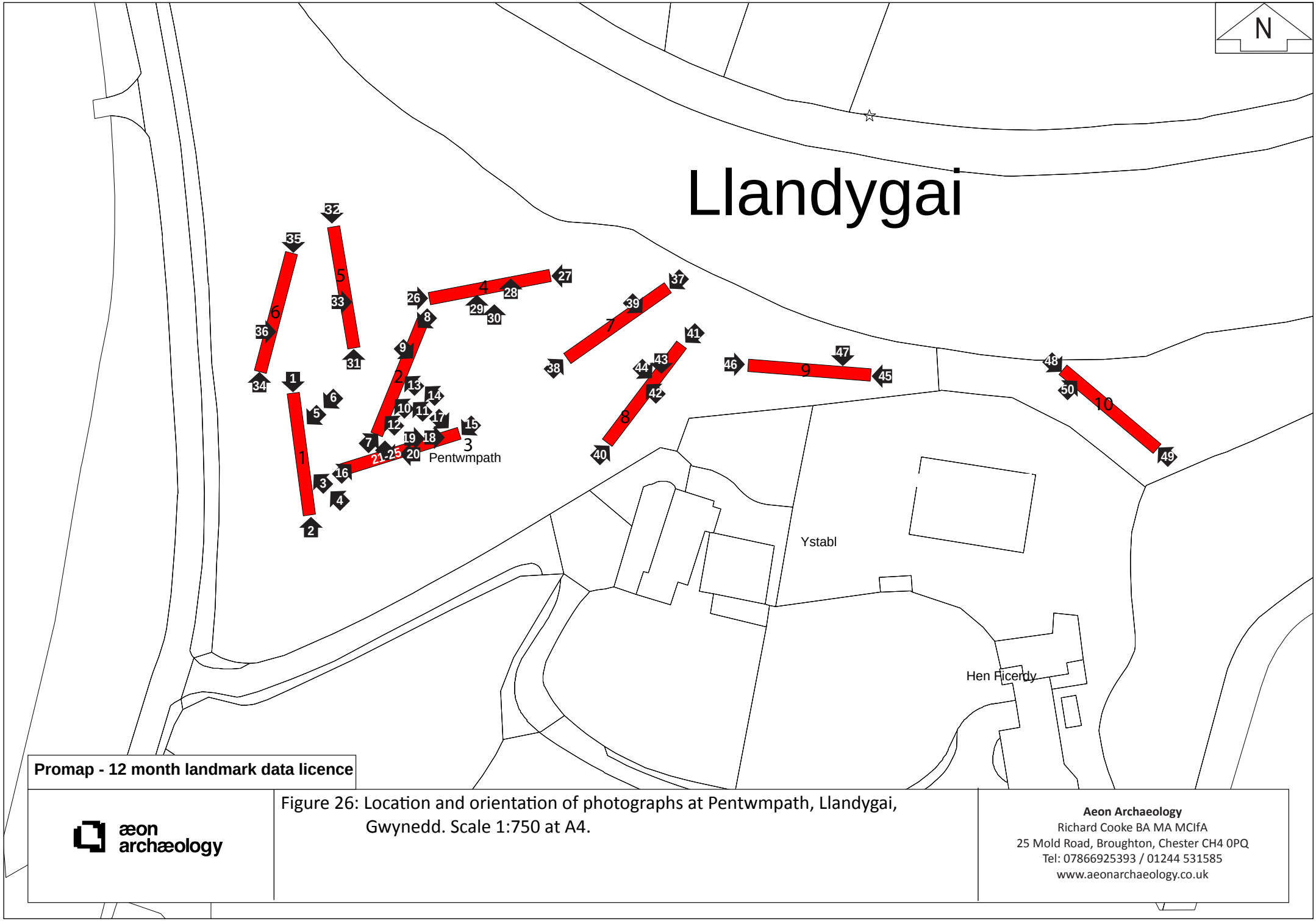


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Figure 26: Location and orientation of photographs at Pentwmpath, Llandygai, Gwynedd. Scale 1:750 at A4.

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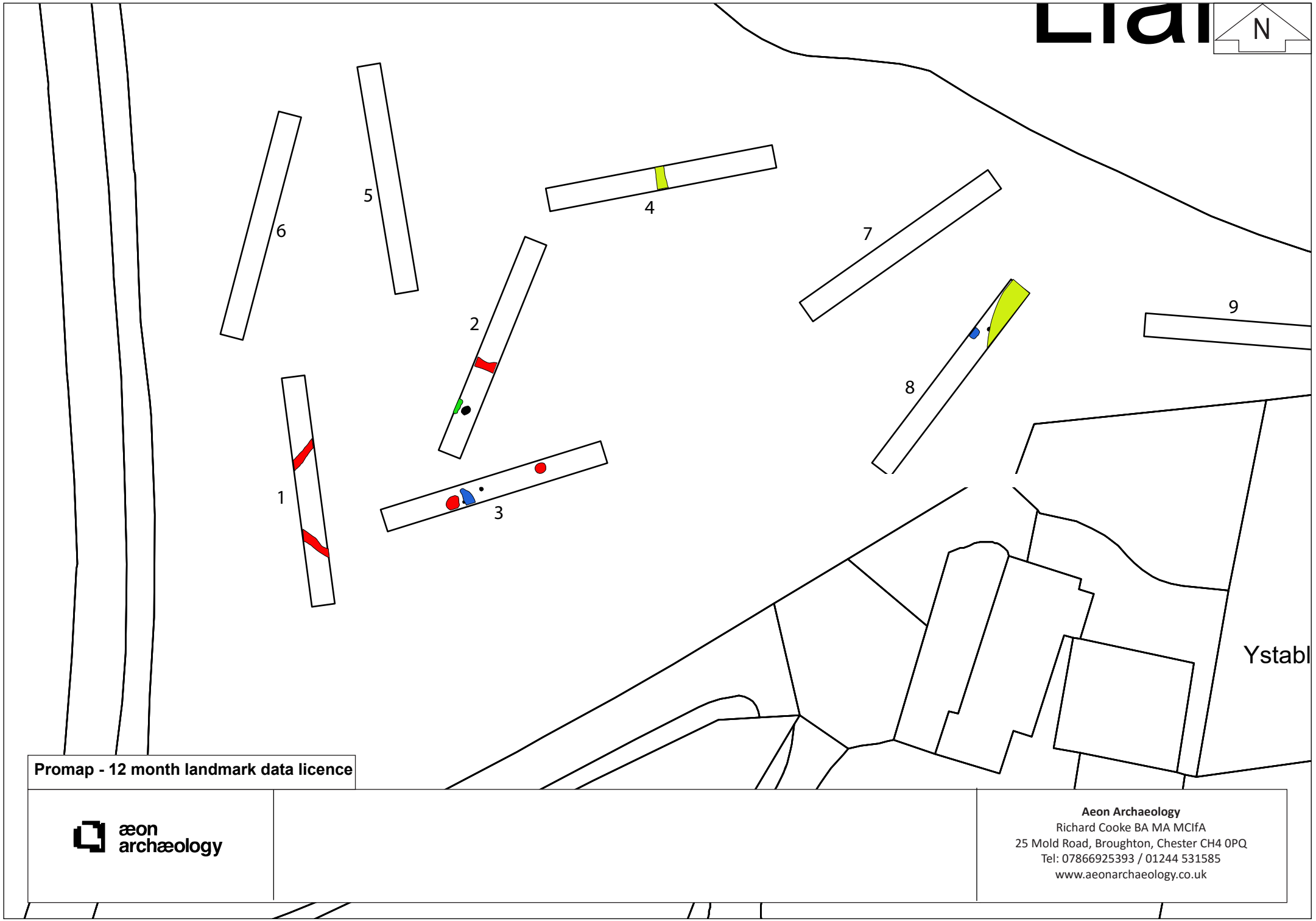

Promap - 12 month landmark data licence

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11.0 CONCLUSION

The archaeological evaluation at Pentwmpath, Llandygai has identified an area of Roman activity focused towards the south-western end of the site. This primarily consisted of a 32.0m long by 21.0m wide sub-circular enclosure gulley that produced Roman ceramic dating to the late 1st century A.D. to the early 3rd century A.D. Radiocarbon dating of the gulley fill dated the charcoal inclusions to Cal AD 415 to 560 (Cal BP 1535 to 1390) suggesting that it had gone out of use by the beginning of the Post-Roman (Early Medieval) period.

Further features discovered towards the centre of the enclosure included a refuse pit that produced Roman ceramic dating broadly to the 3rd to 4th-centuries A.D. and the 2nd to 3rd-centuries A.D. as well as a large hearth of which radiocarbon dating of the charcoal rich fill established a date of Cal AD 240 to 390 (Cal BP 1710 to 1560).

The Roman pottery was in good condition with some large sherds present. The condition of the Roman pottery has allowed a degree of certainty that these sherds represent a minimum of four vessels – jars and a single ampohora – discarded during the 3rd century or later. This date is in keeping with many sites in north Wales where the pottery is usually of Hadriannic or later date and BB1 forms the major component of assemblages (Evans 2012, 187).

The archaeological evaluation has established that a period of Roman activity persisted at the site anywhere between the 1st and 4th Centuries A.D., perhaps with a focus around the 3rd Century A.D. which culminated with the site presumably going out of use by the start of the Post-Roman (Early Medieval) period. However, the evaluation has been unable to characterise the remains to establish the nature and function of the site, and it is unclear whether the Roman activity represents an area of occupation, religion, industry, agriculture, or some other ancillary activity. The discovery of fragments of undiagnostic slag, although indicative of iron-working, cannot be used to distinguish between smithing or smelting and were not found in an abundance to be conclusive of an industrial site.

The date ranges provided by the ceramic analysis and the radiocarbon dates suggest that this phase of activity may be contemporary with the Late Iron Age/Roman settlement excavated as part of the Llandygai industrial estate by the Gwynedd Archaeological Trust in 2005. This activity however was located approximately 900.0m to the southwest and as such is unlikely to be directly associated.

The archaeological evaluation also identified two apparently isolated pits of Neolithic age. The first was located within the centre of the Roman enclosure gulley in close proximity to the central pits, but produced a single sherd of Peterborough ware vessel of Early to Middle Neolithic date. The ceramic sherd could be residual in nature thus explaining the close proximity of the Roman features, or the siting of the pit may be entirely by chance.

The second pit was located towards the east of the site and produced two ceramic sherds probably belonging to a single vessel, a bowl or jar-like bowl, in the Mortlake style of Peterborough ware dating to the Early to Middle Neolithic. The Neolithic pottery probably represents waste from domestic occupation rather than deliberate, or ritual, deposition. The assemblage is clearly too small to be certain of this but in light of the occupation deposits and features encountered close by at the industrial estate site there seems little to otherwise doubt this.

The archaeological evaluation also identified a single pit of late Mesolithic date. This feature was located towards the northern part of the area enclosed by the Roman enclosure and continued beyond the limits of the evaluation trench. The pit did not produce any artefacts however radiocarbon dating established a date of Cal BC 4720 to 4550 (Cal BP 6670 to 6500).

Traces of Mesolithic activity were found at the nearby Llandygai industrial estate excavation in 2005 where several Late Mesolithic microliths were found within pit features and during the wet sieving of

bulk soil samples. This evidence was however sparse as was the case with the excavations undertaken in 1966 and 1967 by Christopher Houlder at the existing Llandygai industrial estate, which produced a number of Mesolithic style flints and a microlith. Mesolithic groups do seem to have been present in the area but the results of these two large excavations demonstrate that their occupation sites were elsewhere (Kenney & Davidson 2006).

This evaluation enables an informed, sustainable and responsible approach to the development of a new residential estate at Pentwmpath, Llandygai. The information provided meets the expectations of legislation in that the applicant has evaluated the presence of archaeological assets that may be affected by proposed development. It is considered that the level of detail provided is proportionate to the assets' importance and provides sufficient information to understand the potential impact of the proposal on the significance of archaeological remains. Ultimately, therefore, and without prejudice to the findings of any future archaeological, or other investigations at the Site, it is considered that the archaeological interest at the Site could be safeguarded by the imposition of a suitably worded condition on consent, should it be forthcoming for the application. The condition should require the applicant, or the successors in title, to record and advance understanding of the significance of any archaeological assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. This recommendation is in line with the relevant provisions in current legislation.

12.0 SOURCES

OS Maps

OS 1:10 000 Series sheet SH 57 NE, SH 57 SE, SH 57 SW and SH 57 NW.

Promap Mastermap Data: 12 month licence.

Published sources

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APPENDIX I – DETAILS OF ARCHAEOLOGICAL CONTEXTS

Context	Trench	Description
100	1	Topsoil
101	1	Subsoil
102	1	Natural
103	1	Fill of [104]
104	1	Cut of enclosure gulley
105	1	Fill of (106)
106	1	Cut of enclosure gulley
201	2	Topsoil
202	2	Subsoil
203	2	Natural
204	2	Cut of pit
205	2	Fill of [204]
206	2	Cut of pit
207	2	Fill of [206]
208	2	Cut of enclosure gulley
209	2	Fill of [208]
301	3	Topsoil
302	3	Subsoil
303	3	Natural
304	3	Fill of [305]
305	3	Cut of pit
306	3	Fill of [307]
307	3	Cut of posthole/pit
308	3	Fill of [309]
309	3	Pit or posthole
310	3	Fill of [311]
311	3	Cut of pit/gulley
312	3	Primary fill of [313]
313	3	Cut of pit/hearth
314	3	Colluvium
315	3	Secondary fill of [313]
316	3	Fill of [313]
317	3	Fill of [313]
318	3	Fill of [313]
401	4	Topsoil
402	4	Subsoil
403	4	Natural
404	4	Cut of ditch
405	4	Fill of [404]
800	8	Topsoil
801	8	Subsoil
802	8	Natural
803	8	Fill of pit [804]
804	8	Cut of pit
805	8	Secondary fill of [807]
806	8	Primary fill of [807]
807	8	Cut of pit
808	8	Fill of (809)
809	8	Cut of pit

APPENDIX II – BETA ANALYTIC FULL RADIOCARBON DATING REPORT

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www.radiocarbon.com

Consistent accuracy delivered on time

August 17, 2016

Mr. Richard Cooke
Aeon Archaeology
25 Mold Road
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Chester, CH4 0PQ
United Kingdom

RE: Radiocarbon Dating Results.

Dear Mr. Cooke:

Enclosed are the radiocarbon dating results for three samples recently sent to us. The report sheet contains the Conventional Radiocarbon Age (BP), the method used, material type, and applied pretreatments, any sample specific comments and, where applicable, the two-sigma calendar calibration range. The Conventional Radiocarbon ages have been corrected for total isotopic fractionation effects (natural and laboratory induced).

All results (excluding some inappropriate material types) which fall within the range of available calibration data are calibrated to calendar years (cal BC/AD) and calibrated radiocarbon years (cal BP). Calibration was calculated using the one of the databases associated with the 2013 INTCAL program (cited in the references on the bottom of the calibration graph page provided for each sample.) Multiple probability ranges may appear in some cases, due to short-term variations in the atmospheric 14C contents at certain time periods. Looking closely at the calibration graph provided and where the BP sigma limits intercept the calibration curve will help you understand this phenomenon.

Conventional Radiocarbon Ages and sigmas are rounded to the nearest 10 years per the conventions of the 1977 International Radiocarbon Conference. When counting statistics produce sigmas lower than +/- 30 years, a conservative +/- 30 BP is cited for the result.

All work on these samples was performed in our laboratories in Miami under strict chain of custody and quality control under ISO/IEC 17025:2005 Testing Accreditation PJLA #59423 accreditation protocols. Sample, modern and blanks were all analyzed in the same chemistry lines by qualified professional technicians using identical reagents and counting parameters within our own particle accelerators. A quality assurance report is posted to your directory for each result.

As always, your inquiries are most welcome. If you have any questions or would like further details regarding the analyses, please do not hesitate to contact us.

The cost of the analysis was charged to the VISA card provided. Thank you. As always, if you have any questions or would like to discuss the results, don't hesitate to contact me.

Sincerely ,

Beta Analytic Inc.
DR. M.A. TAMERS and MR. D.G. HOOD
4985 S.W. 74 COURT
MIAMI, FLORIDA, USA 33155
PH: 305-667-5167 **FAX:** 305-663-0964
beta@radiocarbon.com

REPORT OF RADIOCARBON DATING ANALYSES

Mr. Richard Cooke

Report Date: 8/17/2016

Aeon Archaeology

Material Received: 8/1/2016

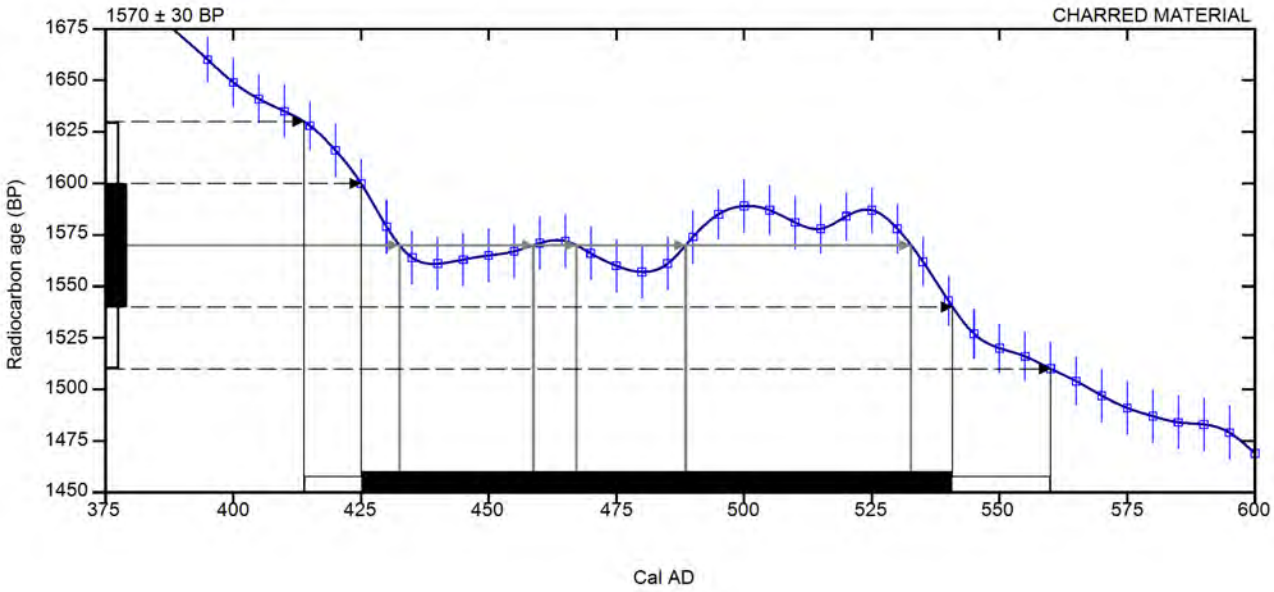
Sample Data	Measured Radiocarbon Age	Isotopes Results o/oo	Conventional Radiocarbon Age(*)
Beta - 442674	1570 +/- 30 BP	d13C= -24.9	1570 +/- 30 BP
SAMPLE: A0078.1 Sample 06. Context (103)			
ANALYSIS: AMS-Standard delivery			
MATERIAL/PRETREATMENT: (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 415 to 560 (Cal BP 1535 to 1390)			
Beta - 442675	5810 +/- 30 BP	d13C= -25.7	5800 +/- 30 BP
SAMPLE: A0078.1 Sample 08. Context (207)			
ANALYSIS: AMS-Standard delivery			
MATERIAL/PRETREATMENT: (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal BC 4720 to 4550 (Cal BP 6670 to 6500)			
Beta - 442676	1750 +/- 30 BP	d13C= -26.2	1730 +/- 30 BP
SAMPLE: A0078.1 Sample 03. Context (316)			
ANALYSIS: AMS-Standard delivery			
MATERIAL/PRETREATMENT: (charred material): acid/alkali/acid			
2 SIGMA CALIBRATION : Cal AD 240 to 390 (Cal BP 1710 to 1560)			

Results are ISO-17025 accredited. AMS measurements were made on one of 4 in-house NEC SSAMS accelerator mass spectrometers.The reported age is the "Conventional Radiocarbon Age", corrected for isotopic fraction using the d13C. Age is reported as RCYBP (radiocarbon years before present, abbreviated as BP, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C signature of NBS SRM-4990C (oxalic acid) and calculated using the Libby 14C half life (5568 years). Quoted error on the BP date is 1 sigma (1 relative standard deviation with 68% probability) of counting error (only) on the combined measurements of sample, background and modern reference standards. Total error at Beta (counting + laboratory) is known to be well within +/- 2 sigma. d13C values are reported in parts per thousand (per mil) relative to PDB-1 measured on a Thermo Delta Plus IRMS. Typical d13C error is +/- 0.3 o/oo. Percent modern carbon (pMC) and Delta 14C (D14C) are not absolute. They equate to the Conventional Radiocarbon Age. Calendar calibrated results were calculated the material appropriate 2013 database (INTCAL13, MARINE13 or SHCAL13). See graph report for references.

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12 = -24.9 o/oo : lab. mult = 1)

Laboratory number	**Beta-442674 : A0078.1 SAMPLE 06. CONTEXT (103)**
Conventional radiocarbon age	**1570 ± 30 BP**
Calibrated Result (95% Probability)	**Cal AD 415 to 560 (Cal BP 1535 to 1390)**
Intercept of radiocarbon age with calibration curve	Cal AD 435 (Cal BP 1515) Cal AD 460 (Cal BP 1490) Cal AD 465 (Cal BP 1485) Cal AD 490 (Cal BP 1460) Cal AD 535 (Cal BP 1415)
Calibrated Result (68% Probability)	Cal AD 425 to 540 (Cal BP 1525 to 1410)



Database used

INTCAL13

References

Mathematics used for calibration scenario

A Simplified Approach to Calibrating C14 Dates, Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322

References to INTCAL13 database

Reimer PJ et al. IntCal13 and Marine13 radiocarbon age calibration curves 0–50,000 years cal BP. Radiocarbon 55(4):1869–1887., 2013.

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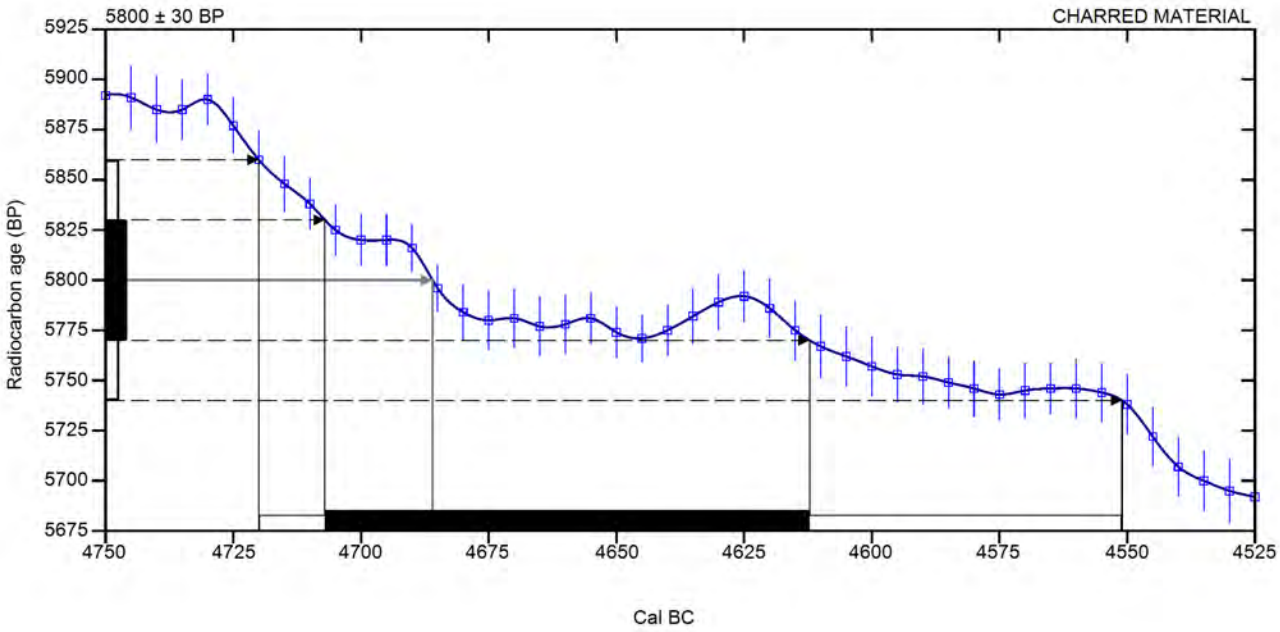
CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12 = -25.7 o/oo : lab. mult = 1)

Laboratory number	**Beta-442675 : A0078.1 SAMPLE 08. CONTEXT (207)**
Conventional radiocarbon age	**5800 ± 30 BP**
Calibrated Result (95% Probability)	**Cal BC 4720 to 4550 (Cal BP 6670 to 6500)**
Intercept of radiocarbon age with calibration curve	Cal BC 4685 (Cal BP 6635)
Calibrated Result (68% Probability)	Cal BC 4705 to 4610 (Cal BP 6655 to 6560)



Database used

INTCAL13

References

Mathematics used for calibration scenario

A Simplified Approach to Calibrating C14 Dates, Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322

References to INTCAL13 database

Reimer PJ et al. IntCal13 and Marine13 radiocarbon age calibration curves 0–50,000 years cal BP. Radiocarbon 55(4):1869–1887., 2013.

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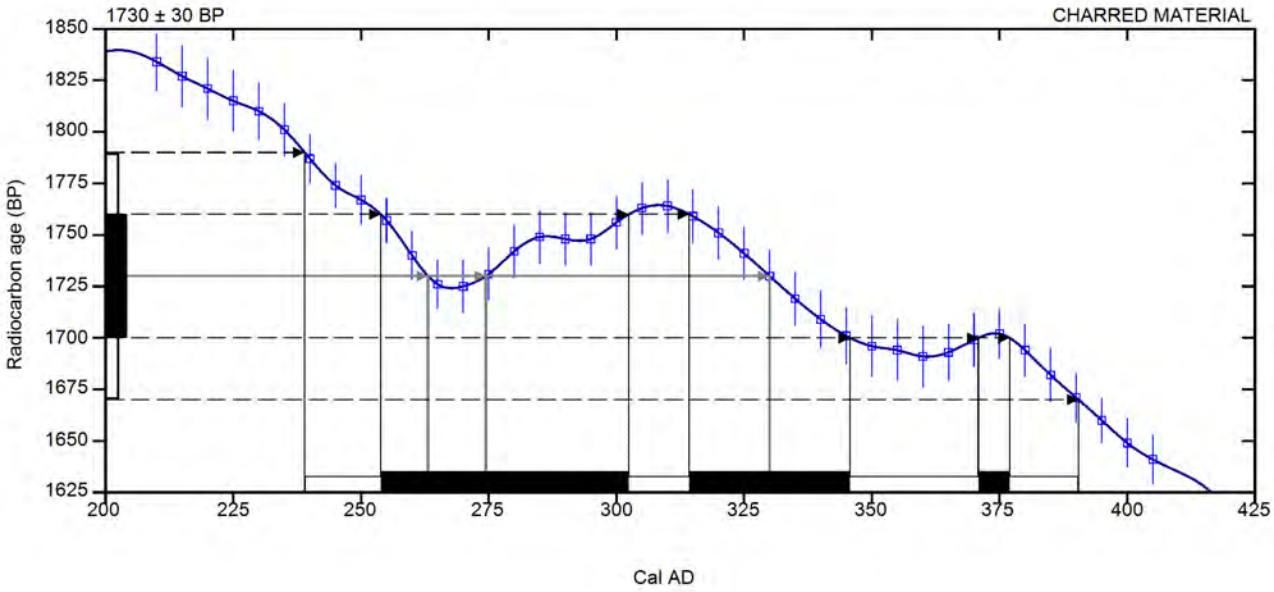
CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12 = -26.2 o/oo : lab. mult = 1)

Laboratory number	**Beta-442676 : A0078.1 SAMPLE 03. CONTEXT (316)**
Conventional radiocarbon age	**1730 ± 30 BP**
Calibrated Result (95% Probability)	**Cal AD 240 to 390 (Cal BP 1710 to 1560)**
Intercept of radiocarbon age with calibration curve	Cal AD 265 (Cal BP 1685) Cal AD 275 (Cal BP 1675) Cal AD 330 (Cal BP 1620)
Calibrated Result (68% Probability)	Cal AD 255 to 300 (Cal BP 1695 to 1650) Cal AD 315 to 345 (Cal BP 1635 to 1605) Cal AD 370 to 375 (Cal BP 1580 to 1575)



Database used

INTCAL13

References

Mathematics used for calibration scenario

A Simplified Approach to Calibrating C14 Dates, Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322

References to INTCAL13 database

Reimer PJ et al. IntCal13 and Marine13 radiocarbon age calibration curves 0–50,000 years cal BP. Radiocarbon 55(4):1869–1887., 2013.

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APPENDIX III – WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL EVALUATION

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Pentwmpath, Llandygai, Gwynedd.
Written Scheme of Investigation for Archaeological Evaluation.

Archaeological WSI

Project Code: A0078.1

1.0 INTRODUCTION

Carter Jonas LLP (hereafter the Client) is seeking planning consent for development of land at Llandygai, Gwynedd, North Wales (ref. C09A/0518/16/AM) (centred on **NGR: SH 5988 7075**) (figure 1). The proposed development includes 15 new residential buildings, vehicle and pedestrian access, circulation routes, and landscaping.

The Site extends over c. 0.6ha and in plan form is an approximate, elongated trapezoid accessed via Pentwmpath to the south, the thoroughfare of which defines the southern boundary of the Site. It is bounded on the west by a by-passed length of Telford's Holyhead Road and to the north by woodland which separates the plot from the Conwy Road.

An archaeological assessment and geophysical survey (GAT report 943) was carried out by The Gwynedd Archaeological Trust (GAT) in 2011 which identified a range of buried remains of potential prehistoric origin and made recommendations for a phase of targeted archaeological evaluation.

The Gwynedd Archaeological Planning Service (GAPS) have not produced a specification for the archaeological evaluation phase however they have highlighted issues which must be addressed before the reserved matters of the application can be approved:

Whilst outline planning permission has already gained approval, a geophysical survey undertaken by The Gwynedd Archaeological Trust identified possible archaeological sites which have a realistic possibility of being of national importance and therefore merit preservation in situ. Trial trenching is therefore required at this stage (and before the reserved matters application is determined) in order that the proposed layout may be fully assessed and in order to discuss any potential modification required to accommodate significant remains.

The evaluation will consist of the excavation of 10 archaeological trenches measuring 20.0m by 2.0m to evaluate the features identified within the geophysical survey. The topsoil and any overburden will be removed by mechanical excavator, and any archaeological features encountered will be sample excavated by hand in order to determine their character and date. The location of the trenches is shown on Figure 2.

The current design conforms to the guidelines specified in the *CIFA Standard and Guidance for Archaeological Evaluation* (Chartered Institute for Archaeologists, 2014).

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Figure 01: Location of Site at Pentwmpath, Llandygai, Gwynedd. Scale 1:10,000 at A4.

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2.0 BACKGROUND

(Reproduced from GAT report 943)

The proposed development site lies within the village of Llandygai and approximately 1.04km east of the city of Bangor, located between the village centre conservation area and the railway line. It is bounded on the west by a by-passed length of Telford's Holyhead road, to the south by a private access track and on the north by woodland which separates the plot from the Conwy road. The trapezoidal shaped site is located within the parish of Llandygai and lies at approximately 40.0m AOD sloping slightly eastwards towards the Afon Ogwen, which is approximately 300.0m to the east. It is characterised by rough pasture and is partly enclosed by belts of woodland.

The underlying geology is that of a band Ordovician rocks which are 'contiguous with the complex syncline of Snowdonia' flanked by outcrops of Cambrian rocks to the north and south (Bassett & Davies, 1977). The field is utilised as grazing pasture for sheep.

The site is located within an area with an identified rich and diverse archaeological resource. The Prehistoric period is well represented, with stray finds including worked flint, stone hammers and bronze palstaves having been found, and a large Early Bronze Age burial cairn, known as Carnedd Howel (PRN 30), located 1.60km to the southwest. Nearly 4km to the south is the remains of a Neolithic chambered tomb at Sling and about 3km to the north there used to stand another chambered tomb. The site of this is now on the Lavan Sands and it has been entirely destroyed by the sea, but it was visible in 1805 (Williams 1806, 206). A burnt mound was found at Rhos Uchaf (PRN 815) 940m to the south-east, and some probably prehistoric hearths (PRN 877) 1.30km to the south on the line of the A55. Approximately 390m to the south of the site is a possible prehistoric settlement (PRN 29434) identified by crop-marks within the field.

The most significant archaeology was found 130.00m to the west of the proposed development site under the Bangor industrial estate. Here excavations in 1967-8 revealed the presence of a group of Later Neolithic ceremonial monuments of national significance (PRN 2314). These included two henges, large circles, about 90m in diameter, defined by banks and ditches, and a cursus, an embanked linear enclosure. Associated with them were two lesser circles and the complex was preceded by an earlier Neolithic building. The site was subsequently used for Early Bronze Age funerary activity, an Iron Age and Romano-British settlement, and an Early Medieval inhumation cemetery. The henge monument and cursus are Scheduled Ancient Monuments.

Excavations to the south of the industrial estate in 2005 by the Gwynedd Archaeological Trust revealed features dating from the Early Neolithic to the medieval period. The most significant discovery was the remains of an Early Neolithic rectangular timber building. It was well preserved with numerous related features and assemblages of artefacts and charred plant remains. This structure was radiocarbon dated to between 3760-3700 cal BC and 3670-3620 cal BC. There were several clusters of Mid to Late Neolithic pits, which contained a large assemblage of pottery and other artefacts. Sixteen burnt mounds were found, some very well preserved, dating from the Neolithic and Bronze Age. Furthermore, the remains of a Mid Iron Age ring-groove roundhouse were found, overlaid by early medieval smithing activity. Moreover, a Late Iron Age/Romano-British settlement was almost completely excavated and the associated finds included a Roman seal box and evidence for glass bead making.

The Roman road between Caerhun and Segontium probably passed about 790m to the south-east of the proposed development site, with the suspected site of a Roman fortlet

at Tal-y-Bont. Furthermore, a Roman milestone was found 1.9km to the southwest, as was a Roman coin some 390m to the south.

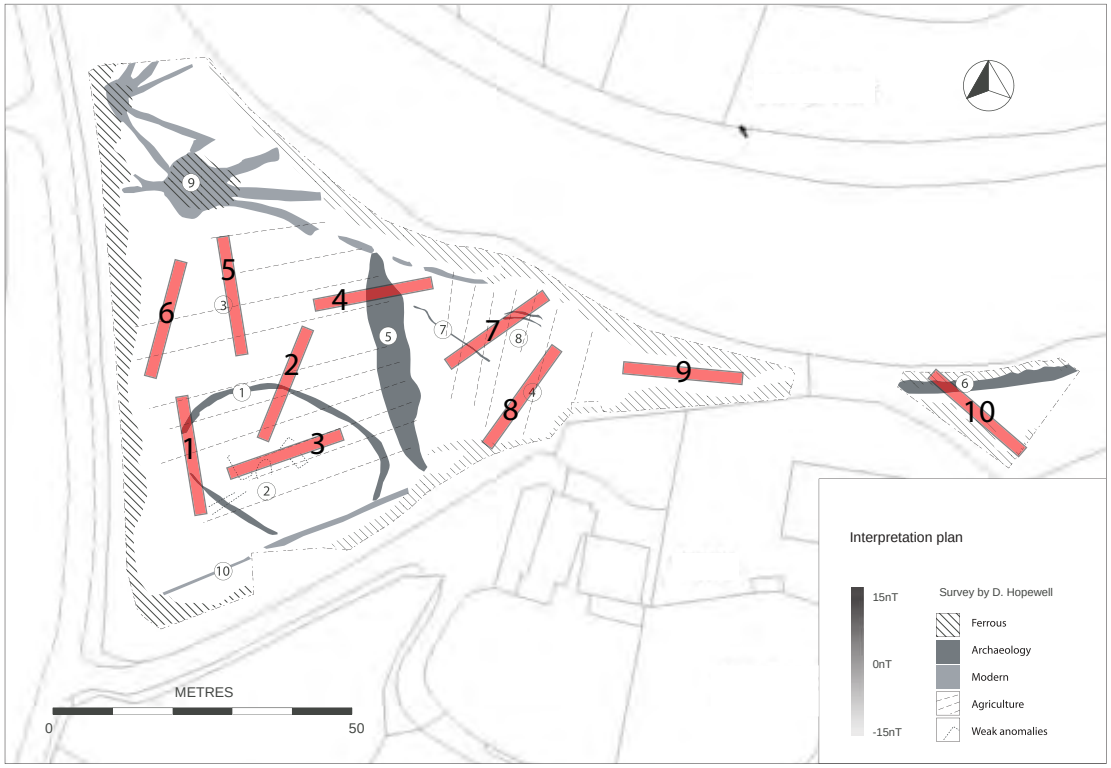
Llandygai village has medieval origins. Its church dates to the 14th century but there are records of an earlier church, and earthwork hut platforms (PRN 6623) in Parc Penrhyn are probably medieval. Furthermore, a square barrow cemetery (PRN 24776) was discovered within the grounds of Penrhyn Castle.

An archaeological assessment and geophysical survey was carried out by GAT in 2011. These showed that the surrounding area is rich in sites of archaeological interest, and the geophysical survey identified anomalies which may be of prehistoric date.

The proposed development site appears to have historically been farmland and has never been developed; furthermore it is located within close proximity to many prehistoric features and find-spots. The land itself is flat and well-drained, and would have be an ideal location for occupation in the prehistoric period. Furthermore, the area is close to the possible Roman road between Caerhun and Segontium, with the suspected site of a Roman fortlet at Tal-y-Bont.

A geophysical survey of the proposed development site was carried out using a Bartington Grad601-2 dual Fluxgate Gradiometer. This uses a pair of Grad-01-100 sensors. These are high stability fluxgate gradient sensors with a 1.0m separation between the sensing elements, giving a strong response to deeper anomalies. Below is a summary of the findings of the geophysical survey, represented as a site gazetteer of geophysical anomalies.

Anomaly Number	**Interpretation**
1	Sub-circular ditched enclosure, possibly a prehistoric defended enclosure.
2	Weak anomalies, possibly settlement or other activity inside enclosure 1.
3	Ploughing aligned E-W, probably medieval ridge and furrow.
4	Ploughing aligned N-W, probably medieval ridge and furrow. Eastern extent marked by a low earthwork.
5	Former field boundary, perhaps medieval. Visible as low earthwork
6	Former boundary ditch, probably associated with current boundary.
7	Weak linear anomaly, perhaps a drain or agricultural feature
8	Parallel anomalies, probably wheel ruts
9	Modern pipes and manholes.
10	Modern pipe or cable



Reproduced from GAT report 943

Figure 02: Fluxgate gradiometer survey and location of proposed trenches at Pentwmpath, Llandygai, Gwynedd.

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3.0 ARCHAEOLOGICAL EVALUATION AIMS

Before trial trenching commences an agreed programme of excavation timing, siting, duration, surface re-instatement and health and safety protection measures will be agreed with Carter Jonas LLP and the GAPS archaeologist.

The number, size, orientation and distribution of trenches will be agreed in advance so as to best target areas that may contain the archaeological features within the development footprint.

The broad aims of the archaeological evaluation are:

- To determine, as far as is reasonably possible, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains on the site, the integrity of which may be threatened by development at the site.

- To establish the nature and extent of existing disturbance and intrusion to sub-surface deposits and, where the data allows, assess the degree of archaeological survival of buried deposits of archaeological significance.

- To enable the client to establish a schedule for archaeological risks.

- To allow the GAPS archaeologist to make an informed decision on the need for and scope of further evaluative and/or mitigatory archaeological works.

The detailed objectives of the archaeological evaluation are:

- Insofar as possible within methodological constraints, to explain any temporal, spatial or functional relationships between the structures/remains identified, and any relationships between these and the archaeological and historic elements of the wider landscape.

- Where the data allows, identify the research implications of the site with reference to the regional research agenda and recent work in Gwynedd.

The archaeological evaluation trenches will target the following anomalies as identified in the GAT geophysical survey of 2011:

Trench 1 – 10.0m x 2.0m: Targeting anomaly 1 sub-circular ditched enclosure, possibly a prehistoric defended enclosure.

Trench 2 – 10.0m x 2.0m: Targeting anomaly 1 sub-circular ditched enclosure, possibly a prehistoric defended enclosure.

Trench 3 – 10.0m x 2.0m: Targeting anomaly 2 weak anomalies, possibly settlement or other activity inside enclosure 1.

Trench 4 – 10.0m x 2.0m: Targeting anomaly 5 former field boundary, perhaps medieval. Visible as low earthwork.

Trench 5 - 10.0m x 2.0m: Targeting anomaly 3 ploughing aligned E-W, probably medieval ridge and furrow.

Trench 6 - 10.0m x 2.0m: Testing site for discreet features.

Trench 7 - 10.0m x 2.0m: Targewting anomalies 7 and 8, weak linear anomaly, perhaps a drain or agricultural feature and parallel anomalies, probably wheel ruts.

Trench 8 - 10.0m x 2.0m: Targeting anomaly 4, ploughing aligned N-W, probably medieval ridge and furrow. Eastern extent marked by a low earthwork.

Trench 9 – 10.0m x 2.0m: Testing site for discreet features.

Trench 10 - 10.0m x 2.0m: Targeting anomaly 6, former boundary ditch, probably associated with current boundary.

4.0 METHOD STATEMENT – ARCHAEOLOGICAL EVALUATION

If archaeological deposits are identified they will be manually cleaned, excavated and recorded to determine extent, function, date and relationship to adjacent features.

Contingency provision will be made for the following:

- Additional excavation of up to 100% of any given feature should the excavated sample prove to be insufficient to provide information on the character and date of the feature.

- Expansion of evaluation trench limits, to clarify the extent of features equivalent to an additional 20% of the core trench area.

The archaeological works will be surveyed with respect to the nearest Ordnance Survey datum point and with reference to the Ordnance Survey National Grid. The trenches, deposits, features and structures within them will be accurately located on a site plan prepared at most appropriate and largest scale.

A written record of the trench content and all identified features will be completed via Aeon Archaeology pro-formas.

Any subsurface remains will be recorded photographically, with detailed notations, measured drawings, and a measured survey. The photographic record will be maintained using a digital SLR camera (Canon 550D) set to maximum resolution (72dpi) 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. Photographic identification boards will also be used.

All trenches will be opened with a mechanical excavator fitted with a toothless ditching bucket.

Trenches and spoil heaps will be routinely investigated through the use of a metal detector and any finds/artefacts collected and processed as outlined in section 8.0.

To prevent any potential health and safety risk to the public and staff the trenches will require cordoning with orange mesh fencing secured with road pins.

All excavations will be backfilled with the material excavated and upon departure Aeon Archaeology will leave the site in a safe and tidy condition. Aeon Archaeology has not been requested to re-lay turf/lawn surface nor reinstate hard standing surfaces as found.

Aeon Archaeology will not be held responsible for delays and subsequent costs incurred through the onset of adverse weather. If such conditions occur additional costs may be incurred.

The archive produced will be held at Aeon Archaeology under the project code **A0078.1**. Artefacts and ecofacts will be archived in the Gwynedd Museum, Bangor. Drawn, written and photographic records will be archived in the National Monument Record, RCAHMW, Aberystwyth.

4.1 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 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

Provision will also be made for all archaeological work on site, including the post-excavation analysis, conservation of artefacts, any supplementary scientific analysis and for the subsequent publication of results in an appropriate journal.

The project will be monitored by the Curatorial Archaeologist at The Gwynedd Archaeological Planning Service.

4.2 Archive

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 in an appropriate place (to be decided in consultation with the regional Historic Environment Record) within six months of the completion of the project.

5.0 FURTHER ARCHAEOLOGICAL WORKS

The identification of significant archaeological features during the evaluation stage may necessitate further archaeological works. This will require the submission of new cost estimates to the Client and may be subject to a separate WSI, to be agreed by the GAPS Archaeologist prior to implementation.

This design does not include a methodology or cost for examination of, conservation of, or archiving of finds discovered during the evaluation, nor of any radiocarbon dates required, nor of examination of palaeoenvironmental samples associated with any peat deposits. The need for these will be identified in the post-fieldwork programme (if required), and a new design will be issued for approval by the GAPS Archaeologist.

6.0 ENVIRONMENTAL SAMPLES

If necessary, 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 liner 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)

7.0 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.

8.0 SMALL FINDS

The vast majority of finds recovered from archaeological excavations comprise pottery fragments, bone, environmental and charcoal samples, and non-valuable metal items such as nails. Often many of these finds become unstable (i.e. they begin to disintegrate) when removed from the ground. All finds are the property of the landowner; however, it is recommended that all finds are donated to an appropriate museum where they can receive specialist treatment and study. Access to finds must be granted to Aeon Archaeology for a reasonable period to allow for analysis and for 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 fieldwork phase. 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 with the exception of unstratified items dating to the twentieth or twenty-first centuries AD which will be recorded by material, type, form, identification and weight, and discarded.

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 finds 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.

8.1 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.

9.0 STAFF & TIMETABLE

9.1 Staff

The work will be managed and undertaken by Richard Cooke BA MA MCIfA, Archaeological Contractor and Consultant at Aeon Archaeology. A second archaeologist (Tbc) will also be utilised on site to excavate and record the archaeological trenches.

9.2 Timetable

The evaluation work can currently be undertaken from 14th March 2016, although the client is encouraged to give as much notice as possible to Aeon Archaeology as project commitments are currently high.

10.0 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.

11.0 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 07/09/16

Professional Indemnity Insurance – Insignia Underwriting Policy 347002

- Limit of Indemnity £500,000 any one claim

The current period expires 07/09/16

12.0 GENERAL

All project staff will adhere to the Code of Conduct of the Chartered Institute of Field Archaeologists.

The project will follow the requirements set down in the Standard and Guidance for Archaeological Excavation prepared by the Chartered Institute of Field Archaeologists.

A Method Statement and Risk Assessment will be prepared prior to the commencement of fieldwork and circulated to all staff concerned.