

ARCHAEOLOGICAL EVALUATION

Cae Gors, Tregarth, Llandygaï

ARS Report N°: 2021/145

OASIS ID: Archaeol5-502395

HER Event PGR: 46140



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Land adjacent to Cae Gors, Tregarth, Llandygai

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Date of compilation: 13/092021
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Planning Reference: C21/0617/16/LL
Local Authority: Gwynedd Council
Site central NGR: SH 60685 68297
OASIS ID: Archaeol5-502395
HER Event PRN: 46140

EXECUTIVE SUMMARY

Project Name: Land adjacent to Cae Gors, Tregarth, Llandygai, Gwynedd
Site Code: ECG21/CAEGORS21
Planning Authority: Gwynedd Archaeological Planning Service
Planning Reference: C21/0617/16/LL
Event PRN: 46140
Location: LL57 4ND
Parish: Llandygai
Hard Geology: Fachwen Formation: siltstone and limestone
Llanberis Slates Formation: mudstone and siltstone
Superficial Geology: Devensian Till and Devensian Glaciofluvial Sheet Deposits
Soil Type: Soilscape 6: Freely draining slightly acidic loamy soils
NGR: SH 60685 68297
Date of Fieldwork: 08/09/2021-10/09/2021
Date of Report: 30/09/21

In July 2021 Archaeological Research Services Ltd (ARS Ltd) was commissioned by MacLennan Construction Ltd to undertake a scheme of evaluation trenching on land adjacent to Cae Gors, Tregarth, Llandygai, Gwynedd. This work comprised the excavation of five evaluation trenches as requested by the Gwynedd Archaeological Planning Service (GAPS) as part of the consultation following the submission of a planning application for a housing development scheme. The evaluation was undertaken between 8/9/2021 and 10/9/2021 in accordance with a Written Scheme of Investigation (WSI) (Brown 2021a) agreed with the Gwynedd Development Control Archaeologist. A sign off phone call was held with the County Archaeologist on-site on 9/10/2021

No archaeological features were encountered in any of the 5 trenches, although one possible area of natural disturbance, initially appearing as a linear feature, was excavated and recorded. The position of the trenches allowed for an insight into the deposition of several layers of made-ground that occurred in post-medieval to modern times. This may have been intended to level up the base of the slope, making the field more useful as a paddock and mitigating against flooding. Some of the layers present here contained large quantities of slate rubble suggesting that this material may have derived from the nearby Penrhyn quarry.

This evaluation was undertaken by William Morris and Ionna Vassi, respectively an Assistant Project Officer and Trainee Archaeological Officer at Archaeological Research Services Ltd. The Project was managed by Dr David Underhill, a Project Manager at Archaeological Research Services Ltd.

Ym mis Gorffennaf 2021, comisiynwyd Archaeological Research Services Cyf. (ARS Cyf.) gan MacLennan Construction Cyf. i ymgymryd â chynllun ffosydd gwerthuso ar dir cyfagos i Gae Gors, Tre-garth, Llandygái, Gwynedd. Roedd y gwaith hwn yn cynnwys cloddio pum ffos werthuso yn unol â chais Gwasanaeth Cynllunio Archaeolegol Gwynedd, fel rhan o'r ymgynghoriad yn dilyn cyflwyno cais cynllunio am gynllun datblygu tai. Gwnaethpwyd y gwaith gwerthuso rhwng 8/9/2021 a 10/9/2021 yn unol â Chynllun Ymchwilio Ysgrifenedig (Brown 2021a) y cytunwyd arno ag Archaeolegydd Rheoli Datblygu Gwynedd. Cafwyd galwad cau-pen-y-mwdwl â'r Archaeolegydd Sirol ar y safle 9/10/2021.

Ni ddaethpwyd ar draws unrhyw nodweddion archaeolegol mewn unrhyw un o'r 5 ffos, er bod un ardal lle gwelir ymyrraeth naturiol bosibl, a ymddangosodd i ddechrau fel nodwedd linellol, wedi'i chloddio a'i chofnodi. Roedd trefn y ffosydd yn caniatáu cipolwg ar ddyddodiad sawl haen o dir gwneuthuredig a ddigwyddodd rhwng yr oes ôl-ganoloesol a modern. Efallai fod hyn wedi'i fwriadu i lefelu gwaelod y llethr gan wneud y cae'n fwy defnyddiol fel padog ac i liniaru rhag llifogydd. Roedd rhai o'r haenau a gafwyd yma yn cynnwys llawer o rwbel llechi gan awgrymu bod y deunydd hwn efallai wedi dod o chwarel y Penrhyn gerllaw.

Ymgwymerwyd â'r gwerthusiad yma gan y Swyddog Prosiect Cynorthwyol, William Morris a'r Swyddog Archaeolegol dan Hyfforddiant, Ionna Vassi yn Archaeological Research Services Cyf. Rheolwyd y prosiect gan David Underhill, Rheolwr Prosiect yn Archaeological Research Services Cyf.

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I INTRODUCTION

1.1 Background and Scope of Work

1.1.1 A planning application (C21/0617/16/LL) was submitted to Gwynedd Council for the erection of 12 affordable dwellings, new access and associated works at land adjacent to Cae Gors, Tregarth, Llandygai, Gwynedd (Figure 1).

1.1.2 Gwynedd Archaeological Planning Service and Cadw were consulted and both requested an evaluation of the site, highlighting a plethora of both scheduled and undesignated monuments in the area.

1.1.3 Archaeology is a material consideration in the planning process under paragraph 189 of the *National Planning Policy Framework* (NPPF 2020), *where a site on which development is proposed includes, or has the potential to include, heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.*

1.1.4 In accordance with the NPPF, Archaeological Research Services Ltd (ARS Ltd) was commissioned by MacLennan Construction Ltd to undertake both a Setting Study and an evaluation on Land adjacent to Cae Gors, Tregarth, Llandygai (Figure 1), centred on NGR SH 60685 68297.

1.1.5 A Desk Based Assessment (DBA) has previously been completed (Brown 2021), outlining the known archaeological monuments within a 1km study area and demonstrating the sites potential for surviving archaeological deposits, with known Iron-Age and Romano-British remains nearby. Indeed, the topographic setting of the site, along the edge of a tributary of the River Ogwen, corresponds with that seen at these known locations.

1.1.6 The evaluation aspect of this commission, detailed here, comprised the excavation and recording of 5 trenches, 3 20x2m and 2 10x2m. (Figure 2)

1.1.7 Works were undertaken in compliance with the Written Scheme of Investigation (WSI) (See Appendix III) approved by Gwynedd Council and took place between 8/9/2021 and 10/9/2021.

1.2 Site Location and Description

1.2.1 The 'red line boundary' of the proposed development area (hereafter 'PDA') is depicted by a red polygon on figure 1, and covers an area of c.0.51 ha, centred on NGR SH 60685 68297. It is bounded along its north-eastern edge by an un-named lane that runs from a junction with Tal Gae at the north-north-east before joining the B4409 at Tregarth, c.500m to the south-south-east. To the north-west the PDA abuts the curtilages of properties accessed off Bro Syr Ifor, and is unbounded to the south-west and south-east.

1.2.2 The topography of the PDA is governed by it occupying the southern slope of a small valley. It slopes steeply down from c.102m above ordnance datum (aOD) at its south-eastern corner, before plateauing out towards the centre of the site and reaching its lowest point at c.92.5m aOD, in the north-western part of the site where a small tributary of the Afon Ogwen flows across in a north-easterly direction. The topography slopes up again gently to the north-west of the stream where the valley side rises to c.94m aOD along the North-eastern edge of the PDA.

1.2.3 The PDA is largely under improved pasture. There are a number of scattered trees along the north-eastern boundary of the site and a denser band of broad-leaved woodland to the north-east of the stream. There is further broad-leaved woodland along the south-western edge of the PDA and this area is strewn with a number of large boulders that are visible through the undergrowth (See Figure 2). towards the south-western corner a number of rock patches appear to be buried boulders but there are also numerous small areas of rock protruding through the grass across the PDA that may be projecting bedrock. Some of the boulders in the Southern corner appear to form an 'L' shaped feature (See Figure 2) Whilst there are no structures or field boundaries recorded on any historic mapping the possibility existed that these were the buried foundations of an unrecorded enclosure.

1.3 Geology and Soils

1.3.1. The underlying solid geology across the majority of the PDA comprises interbedded siltstone and limestone of the *Fachwen Formation*, detrital sedimentary rocks of fluvial origin ranging from coarse to fine grained, forming beds and lenses that reflect the channels, floodplains and levees of a palaeo-river (BGS 2021). There is also a narrow band of marine mudstone and siltstone belonging to the *Llanberis Slates Formation* occupying a narrow band along the northeastern edge of the PDA.

1.3.2. A superficial deposit of *Devensian Till (Diamicton)* occupies much of the western half of the PDA, an unsorted gravel in a fine mud matrix laid down during the last glaciation. This deposit is also overlying earlier Devensian *Glaciofluvial Sheet Deposits* (BGS 2021).

1.3.3. The surface soils of the PDA are classified as *Soilscape 6; freely draining slightly acid loamy soils*, which are characterized as having a low fertility (Cranfield University 2021).

1.3.4. Ground investigations in the lower area of the site around the watercourse, by Caulmert Ltd (2021), encountered a firm to stiff, grey mottled orange, slightly sandy very gravelly clay at 1.2m below ground level (BGL), almost certainly being the *Devensian Till* which overlies the earlier sand and gravel sheet deposits. This was covered by a c.0.25m of blackish brown peat of unknown date, with a deposit of brown silty sandy gravel above, at c.1m BGL. Above this deposit was a brown silty gravelly sand with frequent cobbles and occasional brick, evidently a 'made ground' likely to be post-medieval and/or modern. Groundwater was encountered in these excavations at depths between 0.4m and 1.1m BGL.

1.3.5. The geological trial pits in the more elevated areas of the site to the southeast (the pink polygons labelled as TP01/TP03 on Figure 2) encountered strong slightly weathered, grey, finely laminated mudstone bedrock at between 0.6m to 1.7m BGL. This was overlain by subsoil deposits recorded variously as greyish brown very sandy slightly silty gravel, and orange brown silty very gravelly sand, beneath a 0.2m thick topsoil comprising a brown sandy gravelly silt. The results from TP0103 indicate that both the glacio-fluvial sheet deposits and Llanberis Slates Formation appear to extend further to the southeast than mapped on the BGS 1:50k mapping.

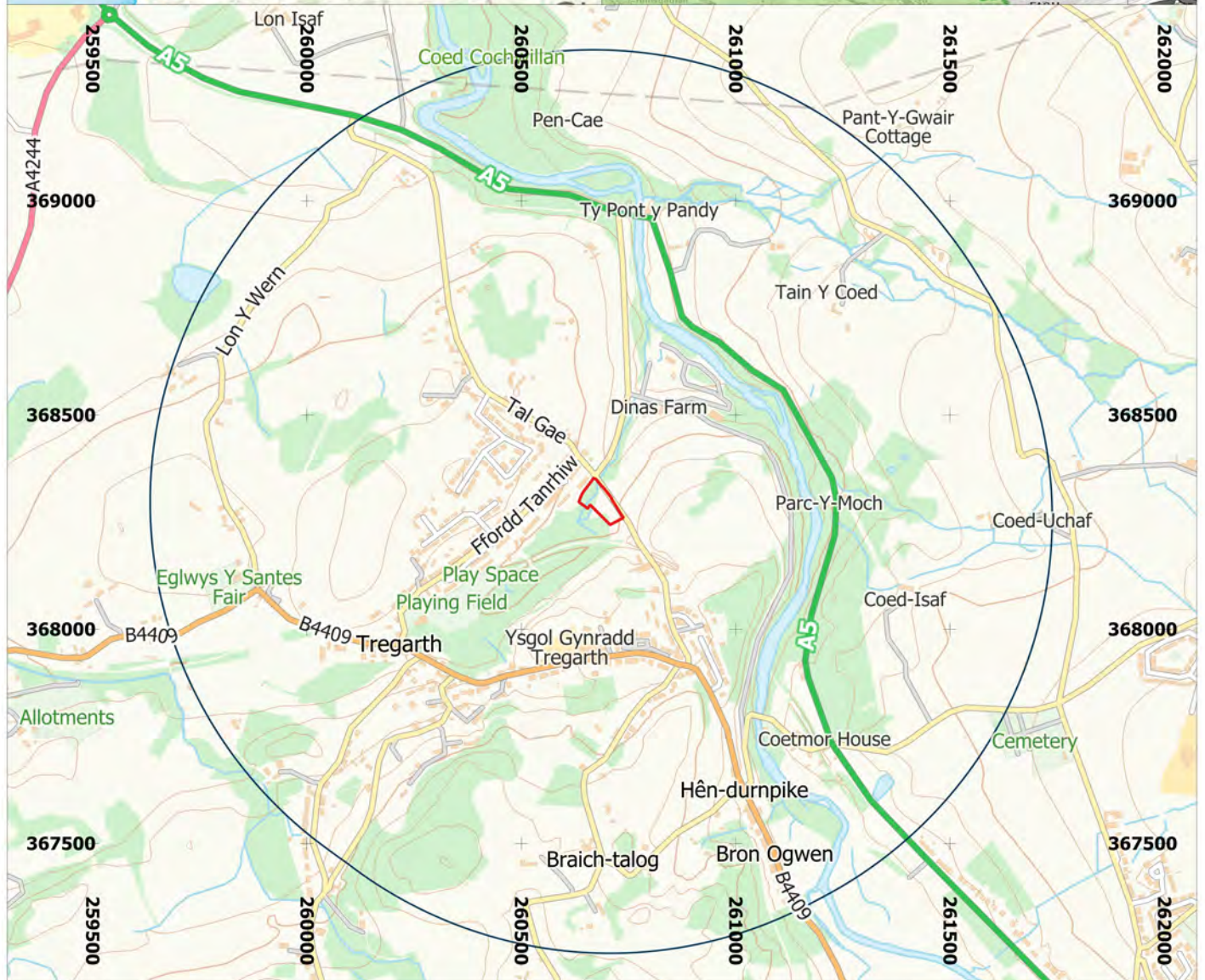
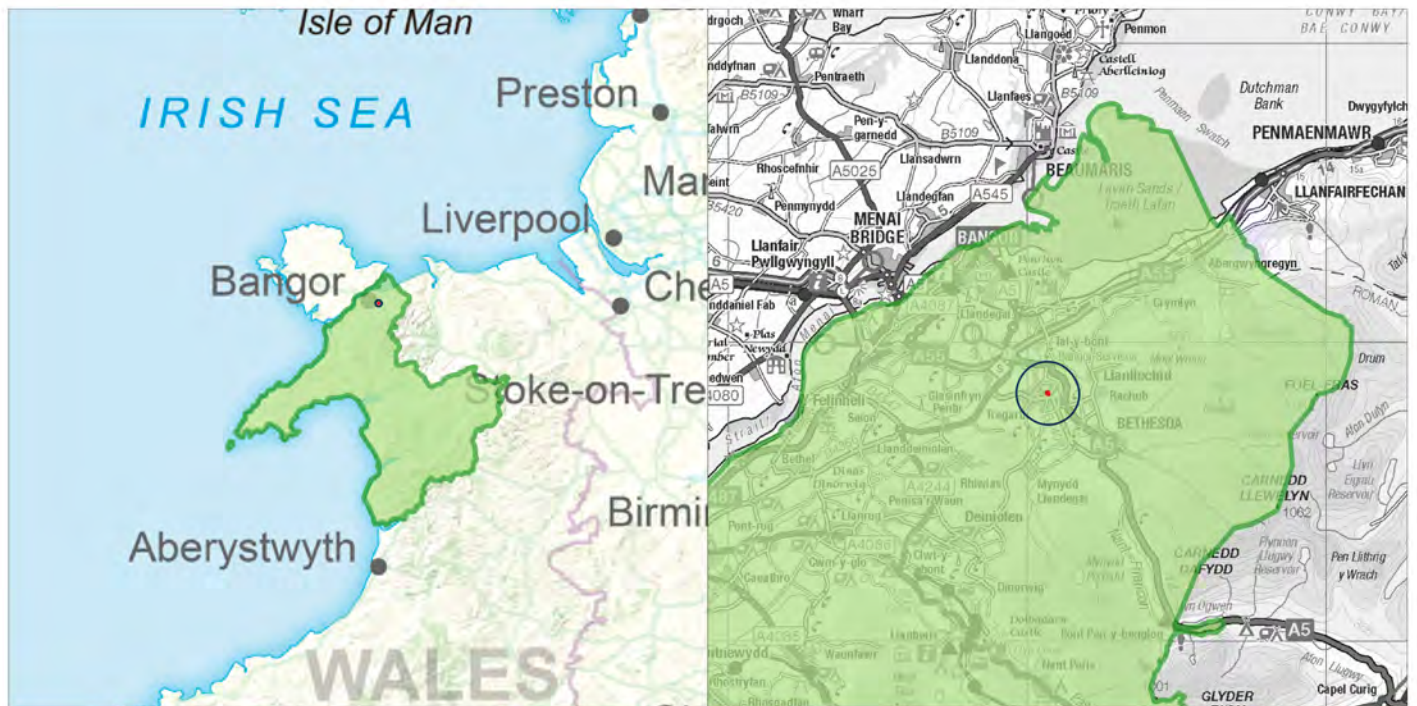
1.4 Archaeological and Historical Background

1.4.1. The archaeological and historical background for the site is set out in the Desk Based Assessment (Brown 2021) and is summarised in section 1.4 of the WSI (Appendix III). To very briefly summarise: The earliest known archaeological evidence from the area are a series of both enclosed and unenclosed settlement sites of presumed Iron Age or Romano-British date. These include the *Pendinas hillfort*, c.300m to the south of the PDA (GAT HER PRN 223). Metal detectorists have recovered a Roman brooch and coin c.700m to the south-east of the PDA (GAT

HER PRN 92277), and Roman plate, coin and spindle whorl have also been found c.700m to the west, evidencing activity nearby in the Roman period (GAT HER PRN 32867).

1.4.3. As with much of Wales little is known of the early medieval period in this area, although the later medieval township of Cororion, located 1km west, survives today in the form of a farmstead (GAT HER PRN 6812). Also, a Deserted Rural Settlement at Moel y Ci, comprising a platform house with hut groups and a field system, lies just beyond the edge of the study area, c.1.05km to the south-west (GAT HER PRNs 3680 7518).

1.4.4. Map evidence indicates that the PDA was rough pasture and Furze throughout the Post-Medieval period. Given its lack of agricultural utility it is possible that the area was used for dumping spoil associated with the construction of the Penrhyn Slate Quarry railway and/or the later L&NWR Bangor and Bethesda branch line, also running just south of the site, which was constructed in the early 1880s (GAT HER PRN 65561).



Site name: Land adjacent to Caes Gors,
Tregarth
Date: August 2021
Drawn by: AB
Scale: Varies

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Gwynedd

1km study area

Application site boundary



**Figure 1:
Site location**

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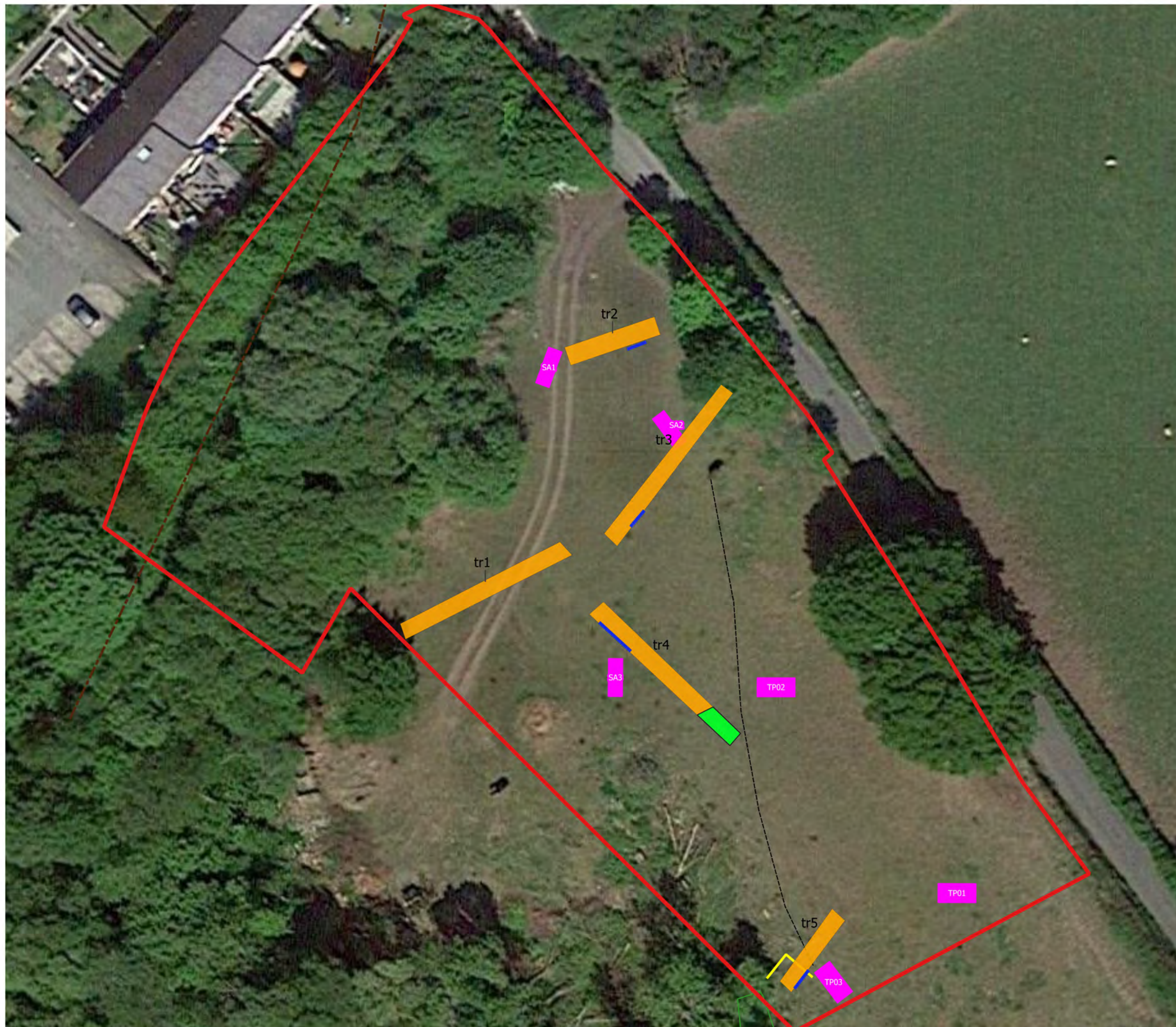


Figure 2: Trench and Geological Test Pit locations

- site_boundary
- Trenches
- dwg
- test_pits
- rectilinear_feature
- split between deposits
- base_of_slope
- extant_sewer
- boulder_strewn

Basemap: Google Satellite



Site name: Land adjacent to Caes Gors,
Tregarth
Date: September 2021
Drawn by: DU
Scale: 1:400 @ A3

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2 AIMS AND OBJECTIVES

2.1 Research Aims and Objectives

2.1.1 The aims and objectives of the archaeological evaluation are outlined in detail in the WSI (Appendix III) prepared by ARS Ltd. in consultation with the Development Control Archaeologist for Gwynedd Archaeological Planning Service, Tom Fildes, prior to the commencement of the works. They are summarised as:

- ◆ Identify the Presence/absence of archaeological features and deposits
- ◆ Record all archaeological features and deposits encountered
- ◆ Sample sufficient of any encountered features and deposits to establish relative sequence, dating, and state of preservation
- ◆ Gather information to establish the character, extent, form, function and status of any surviving archaeological or palaeoenvironmental deposits to inform the wider aims outlined below.

2.1.2 Wider regional research topics identified in the Research Framework for the Archaeology of Wales (available at: <https://www.archaeoleg.org.uk>) with relevance to the site include:

2.1.3 For the *Neolithic and Earlier Bronze Age* periods, the key research themes include:
Settlement

- ◆ *Human Remains*
- ◆ *Monuments*
- ◆ *Raw material extraction and use*
- ◆ *Material Culture*
- ◆ *Regionality and Connections;* and
- ◆ *The Coast.*

2.1.4 For all remaining periods settlement evidence and patterns is cited along with more period specific questions:

Later Prehistoric	Romano-British	Early Medieval
Building Chronologies	Interaction between occupiers and inhabitants	Context and characterisation of site assemblages
Palaeobotanical Evidence	The Campaigning years	Environmental evidence (specifically pollen sampling)
Social Change and Process	Funerary and Ritual	Demography, health and origins of population (including nutrition and pathogens)
Climate Change	Technology and Industry	Increased understanding of the overarching chronological framework
Resource utilisation		

3 METHOD STATEMENT

3.1 Introduction

3.1.1 The methodology for the evaluation is set out in detail in the WSI (Appendix III). The trenches were excavated as planned barring GPS accuracy issues, with the exception of trench 1, the north-western end of which extended into the treeline, necessitating its rotation to the south, pivoting around its south-western corner (Figure 3).

3.2 Coverage

3.2.1 The location of the evaluation trenches is depicted in Figures 2 and 3.

- ◆ Trench 1: Originally targeting the footprints of plots 4-6, the eventual trench targeted plot 6.
- ◆ Trench 2: Targeting the turning and parking area and to ascertain the depth, nature and stratigraphy of the 'made ground' at the northern entrance to the PDA
- ◆ Trench 3: Targeting the course of the proposed new access road.
- ◆ Trench 4: Targeting the footprints of plots 7-10
- ◆ Trench 5: targeting the footprint of plot 12 as well as the possible rectilinear setting of stones to ascertain whether it is of archaeological significance.

3.3 Professional Standards

3.3.1 The archaeological fieldwork was undertaken in accordance with the Chartered Institute for Archaeologists (CIfA) *Code of Conduct* (2019) and *Standard and Guidance for Archaeological Evaluations* (2020a).

3.4 Health and Safety

3.4.1 All works were undertaken in full compliance with the Health and Safety at Work Act 1974 and with the Management of Health and Safety Regulations 1992.

3.4.2 A risk assessment (RA No. 069/21/B) was produced before commencement of the work and was adhered to throughout the course of the fieldwork.

3.5 Fieldwork

3.5.1 The trenches were sited in accordance with the WSI (Appendix III) using survey grade Leica CS10 that gives a minimum tolerance of sub-metre accuracy, although this is more usually sub-centimetre accuracy, dependent upon satellite visibility. Trench 1 was forced to move due to the expanded tree line, relative to the satellite images available. The same equipment was used to record known points on drawn plans and sections, and to take spot heights within the trenches.

3.5.2 Overburden was removed in level spits down to the first archaeological horizon using an 8 tonne 360 excavator fitted with a 1.8m toothless ditching bucket, under continuous archaeological supervision.

3.5.3 Each trench was cleaned by hand to expose and define archaeological features. Pre-excavation photographs were taken of each trench and any exposed archaeology within them.

3.5.4 All features and trenches were tied into the Ordnance Survey Grid and all spot heights expressed in metres above Ordnance Datum (aOD).

3.5.5 All features were digitally photographed using a Nikon Coolpix W100 with a 13.2 megapixel sensor, and a full register of photographs was kept.

3.5.6 All written records were kept on ARS pro forma recording sheets.

4 RESULTS

4.1.1 An overall plan of trench locations is presented in Figure 2. Individual trench plans were deemed unnecessary given the lack of any archaeological features but photographs are included as subsequent figures.

4.1.2 The context records are summarised in Table 1 providing an overview of the presence/absence of, or potential for, archaeology associated with each evaluation trench. The table should be viewed in association with the figures, photographs and text for each trench. Further details are preserved within the site archive.

4.1.3 The overburden across the area subject to evaluation was machine excavated down to the start of any archaeological horizon or to a maximum depth of 1.20m, under continuous archaeological supervision. The depth of the excavations varied considerably, with trenches 2 and 3 both cut through made ground to a maximum depth of around 1.00m before natural deposits were reached. Trench 1 was cut to a maximum safe depth of 1.20m, this was through 'made ground' and a deposit of more modern waste material, with the natural geology still not visible in the base of the trench at this depth. Trenches 4 and 5 were both situated further up the southern slope, and as such both varied in depth. The south eastern and north eastern portions of these were respectively quite shallow while the opposite ends, at the base of the slope, showed the presence of made ground to a depth of 0.90m (trench 5) and 0.97m (trench 4).

4.2 Site Taphonomy and Condition of Preservation

4.2.1 The site is set in the Ice moulded foothills of Snowdonia, within a small valley of a tributary of the River Ogwen. The Afon Ogwen sits within the Nant Ffrancon 5km south, a distinctly U profiled valley indicating its origin under the Merioneth Ice Cap in the Last Glacial Maximum, further confirmed by the Till and Sheet Wash within this tributaries valley.

4.2.2 The most notable feature concerning the present topography of the PDA is the deposition of waste material as 'made ground' at the base of the slope in the western portion of the site. This likely served the dual purpose of levelling the field to a significant degree, making it more useful as a paddock, and helping to alleviate the worst of the flooding. Despite this the northernmost portion of the site, situated next to the stream, is still reported as regularly being underwater during the winter. This process of reclamation continued until very recently with modern plastic rubbish observed in both (1002) and (1004).

4.2.3 The soil is 'slightly acidic loamy soil' characterized by its low fertility (Cranfield University 2021) suggesting that pasture is, and has been the only suitable agricultural application.

4.2.4 Additionally, the site is strewn with boulders whose origin remains shrouded.

4.3 Results

4.3.1 All trenches were placed specifically to evaluate the potential impact of the footprint of the proposed development or to target anomalies identified on the site walkover survey (Brown 2021), with the trenches amounting to a combined area of 160m².

4.3.2 Of the five trenches excavated, only trench 5 contained possible archaeological remains, whilst trenches 1-4 only showed made ground.

4.3.3 The following section should be read in conjunction with the accompanying figures and captions and the Trench Summary Table (Table 1) and Context Summary Table (see Appendix I). These provide a synthesis of the presence/absence of archaeology or potential archaeology in each of the trenches, in addition to the depths of the topsoil/over burden and subsoil, below ground level (BGL).

4.4 Trench 1

4.4.1 Trench 1 (Figure 4) was cut through modern detrital material and made ground to a depth of 1.20m meaning the total depth of these deposits remains unknown. A cut [1003], containing dark, organic waste (1002) was visible in section c.4m from the north western end of the trench. This was itself cut through a modern deposit of waste material (1004) that, although similar in colour and composition to the earlier made ground deposit encountered elsewhere (for example: (3004), (2003), (4002) below), contained a good quantity of plastic rubbish, fencing wire, crisp packets etc. It is possible this represents reworking of the older made ground during the repeated disposal of waste material.



Figure 4: Trench 1 looking south east (1m Scales)

4.5 Trench 2

4.5.1

4.5.2 Trench 2 (Figure 5) contained no archaeological features below the two deposits of made ground. The first of these, lying directly under the thin turf was a deposit formed almost entirely of slate rubble (2002), possibly utilised to consolidate the new ground surface at the bottom of the paddock. Beneath this is a mid brownish-Orange sandy clay with moderate small stones (2003). A made ground deposit which likely originated from nearby construction, possibly one of the railways to the south, although on present evidence it is impossible to accurately date. Within this deposit (2003) some very large boulders were encountered, with some being too large for removal with the available machinery necessitating them being left *in-situ*. Below these made ground deposits was the dark peat (2004) layer, already identified by the exploratory holes dug by Caulmert (Pritchett 2021) (see Figure 2). This was the lowest deposit, sitting directly above the natural and it is probable that it represents the former turf/topsoil, and therefore the approximate position of the ground surface before the made ground was deposited. This fits with what was seen in the north eastern end of trench 5 (below) where the topsoil sat directly on the natural, with no discernible subsoil present.



Figure 5: Trench 2 looking west (1m scales)

4.6 Trench 3

4.6.1 Trench 3 (Figure 6) showed a very similar stratigraphy to Trench 2 and likewise presented no archaeological features. A sequence of slate rubble (3002), with a lens of silty sand to the south east (3003) overlying the earlier made ground deposit (3004) itself deposited on the peat (3005). Intense rooting in this deposit provides further evidence to suggest this deposit represents a former land surface (see Figure 7).



Figure 6: Trench 3 looking west (1m scales)



Figure 7: North east facing section in Trench 3 (See figure 10B) (1m scale)

4.7 Trench 4

4.7.1 Although no archaeological features were revealed in trench 4 (Figure 8), it was located on the slope of the hill and captured the extent of the made ground (4002). The deposit was seen to lens off to the southern end of the trench, revealing the interface between it and the land surface (4003) it was dumped upon (see Figure 2). This turf line, transforming to a peat in buried areas, remains the surface of the south eastern portion of the site.



Figure 8: Trench 4 looking A:north west, B: south east (1m scales)

4.8 Trench 5

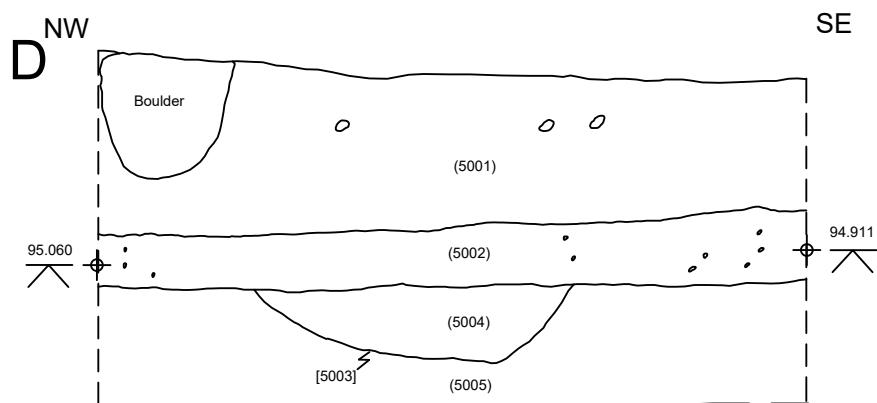
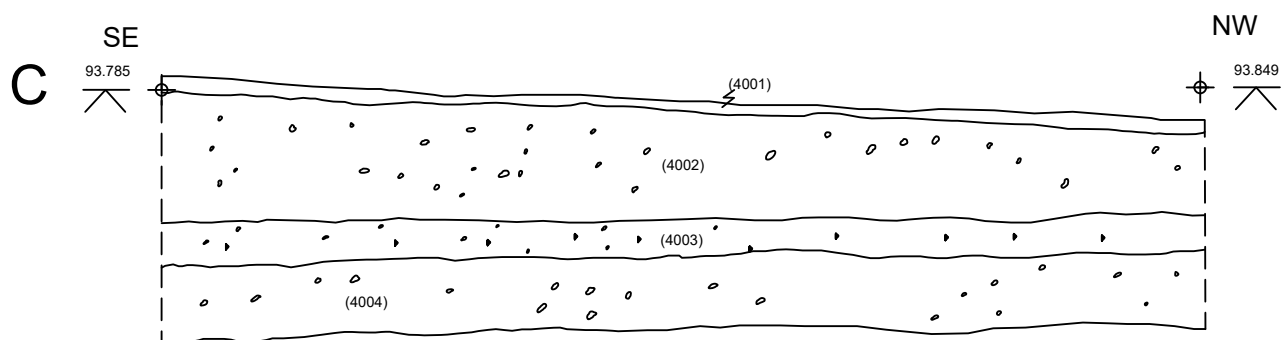
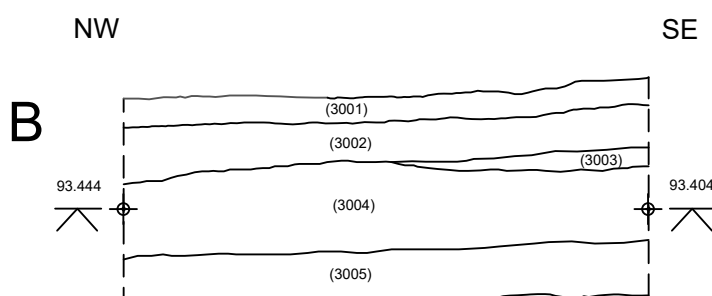
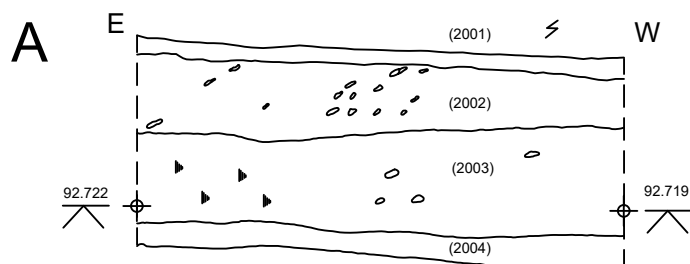
4.3.8 Trench 5 (Figure 9) tells a similar story to trench 4. It clearly shows made ground in the south east towards the bottom of the slope and topsoil atop natural at the north western end. The large boulders in this area can be seen to sit within the made ground (5001). Although they form a fortuitous shape labelled as a rectilinear feature (See Figure 2), they do not appear to form any sort of structure nor do they appear to have been deliberately placed where they stand. It seems most likely that these boulders are the result of the construction of the railways, with similar boulders observed in the wall besides the railway bridge which passes over the road running along the north east of the site (Figure 11). Below this made ground was the darker deposit (5002) akin to the buried topsoil seen in trenches 2, 3 and 4. At the base of the sequence an ephemeral 'cut' [5003] was observed into the natural (5005). This was an irregular shape with poorly defined edges filled with a brownish grey sandy silt derived from the buried topsoil. This is interpreted as a natural feature, possibly a tree bowl or stone setting.



Figure 9: Trench 5 looking north east (1m scales)

4.9 Summary

4.9.1 The evaluation trenches identified no archaeological features. It is likely that the bottom of the slope has long been unsuitable for settlement and arable farming, and has instead been used sporadically as pasture. Two distinct episodes of deposition occurred in the post-medieval period likely in an effort to raise and level the lower portion of the site, making it a more useful paddock less prone to flooding in winter. It is likely that the later of these two deposits is waste material provided by the Penryhn slate quarry, whilst the earlier is possibly material removed during the construction of one of the two railways. The numerous boulders strewn about the base of the slope and situated within this made ground may have the same origin. Some of these can also be found within the wall to the side of the un-named lane running along the north eastern edge of the PDA, with a concentration occurring to the south east of the *Corrig-Llwydion Bridge* (Figure 11).



Site name: Cae Gors
Date: 22-27/09/21
Drawn by: WM, IV, JF & DU

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Figure 10: Representative Sections:

A: Trench 2
B: Trench 3
C: Trench 4
D: Trench 5

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Figure 11: South west facing section of wall at the edge of the site (1m scale)

Table 1. Trench information summarised by trench number.

Trench No	Trench Dimensions (m)	Top soil thickness (m)	Sub soil thickness (m) Optional	Archaeology? If no e.g. Modern field drain only.	Features (List each feature type on a separate line)	Context Number	Finds	Dating	Period
1	2mx20m	c.0.06m	n/a	Made ground and modern pit only.	Pit	[1003]	-	Modern material within (1002)	Modern
2	2mx10m	0.07m	n/a	Made ground & buried topsoil only.	-		-		Post-Med/Modern
3	2mx20m	0.11m	n/a	Made ground & buried topsoil only.	-		Pottery, Glass, CBM	Late 18 th -20 th century	Post-Med
4	2mx20m	0.06m	n/a	Made ground & buried topsoil only.	-		Black-glazed earthenware, brown-glazed earthenware	Late 18 th -20 th century	Post-Med
5	2mx10m	c0.06m	n/a	Made ground & buried topsoil only.	-		-	-	-

5 SPECIALIST ASSESSMENT AND ANALYSIS

5.1 The post-medieval pottery

Four fragments of pottery weighing 160.45g were recovered, dating from the 18th-early 20th centuries, as summarised in Table 1.

Table 2. Pottery.

Artefact Type	Date Range	Artefact Count by Context	
		Trench 4 Topsoil	(3005)
Black-glazed earthenware	Late 18 th -20 th centuries	1	1
Brown-glazed earthenware	Late 18 th -20 th centuries	1	-
White-glazed stoneware	Early 20 th century	-	1
Weight (g)		88.66	71.79
Total Count		2	2

They comprise rimsherds of brown and black-glazed earthenware dishes and a white glazed stoneware jar rimsherd. They represent utilitarian wares that were likely used for the storage of food.

5.2 Ceramic Building Material

A single fragment of salt-glazed stoneware drainage pipe weighing 70.05g was recovered from context (3004), likely dating to the 19th-20th century.

5.3 Glass

A single light green bottle glass base, likely a drinks bottle, was recovered from context (3004), which dates to the late 19th-20th century.

6 DISCUSSION

6.1 Site Context

6.1.1 It has been repeatedly identified that the wider area was densely settled throughout prehistory and the Roman/early medieval transition, as such, the key research questions here related to these periods .

6.2 Summary

6.2.1 No archaeological features were present in any of the 5 trenches. This perhaps indicates that the land has been permanently used as pasture.

The only certain evidence of human impact on the land within the PDA is the deliberate raising and apparent levelling of the land adjacent to the stream in the post-medieval period.

6.3 Significance

6.3.1 In its consultation response, Gwynedd Archaeological Planning Service identified prehistory, the Roman period and the Roman/early medieval transition as the key research questions to be addressed by this evaluation. The only identifiable archaeological events recorded were deposits of made ground belonging to the post-medieval period, as such there is little of archaeological significance.

7 PUBLICITY, CONFIDENTIALITY AND COPYRIGHT

7.1.1 Any publicity will be handled by the client.

7.1.2 ARS Ltd will retain the copyright of all documentary, photographic and video material under the Copyright, Designs and Patent Act (1988).

8 STATEMENT OF INDEMNITY

8.1.1 All statements and opinions contained within this report arising from the works undertaken are offered in good faith and compiled according to professional standards. No responsibility can be accepted by the author/s of the report for any errors of fact or opinion resulting from data supplied by any third party, or for loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in any such report(s), howsoever such facts and opinions may have been derived.

9 ARCHIVE

9.1.1 As no archaeologically significant finds or features were recovered from the site, it is not necessary to deposit an archive with the museum. This is in line with CIfA's (2020) 'Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives', and the Society of Museum Archaeologists' (1993) 'Selection, Retention and Dispersal of Archaeological Collections. Guidelines for use in England, Wales and Northern Ireland'.

9.1.2 An OASIS online record <http://ads.ahds.ac.uk/project/oasis/> has been initiated and completed for this work and all parts of the OASIS online form completed for submission to the HER. This will include an uploaded pdf version of this report. The site has produced a paper and digital archive which will be deposited, along with this report, in digital form with Archaeological Data Service (ADS). In addition, a copy of this report will be deposited with Gwynedd Historic Environment Record (HER).

10 ACKNOWLEDGEMENTS

10.1.1 ARS Ltd would like to thank MacLennan Construction Ltd for this contract and their assistance in executing it.

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APPENDIX I CONTEXT DESCRIPTION TABLE

Trench No.	Context Number	Feature Number	Context Type	Length	Width	Depth	Findings	Context Description	Palaeoenvironmental Residues	Estimated Date
1	1001		Deposit	20m+	2m+	0.06m	-	Turf/topsoil	-	-
1	1002		Fill	-	-	-	-	Modern waste/backfill	-	-
1	1003		Cut	c.7m+	2m+	1.20m+	-	Modern waste pit	-	-
1	1004		Deposit	c.13m+	2m+	1.20m+	-	Disturbed made ground?	-	-
2	2001		Deposit	10m+	2m+	0.07m	-	Turf/topsoil	-	-
2	2002		Deposit	10m+	2m+	0.30m	-	Made Ground	-	Post Med
2	2003		Deposit	10m+	2m+	0.42m	-	Made Ground	-	Post Med
2	2004		Deposit	10m+	2m+	0.11m	-	Buried turf/topsoil	-	-
3	3001		Deposit	20m+	2m+	0.10m	-	Turf/topsoil	-	-
3	3002		Deposit	20m+	2m+	0.20m	-	Made Ground	-	Post Med
3	3003		Deposit	c.5m	2m+	0.08m	-	Lens, silt/sand, freq. gravel	-	Post Med
3	3004		Deposit	20m+	2m+	0.34m	Glass, CBM	Made Ground	-	Post Med
3	3005		Deposit	20m+	2m+	0.19m	Pot	Buried turf/topsoil	-	Post Med
4	4001		Deposit	20m+	2m+	0.06m	Pot	Turf/topsoil	-	-
4	4002		Deposit	c.15m+	2m+	0.50m	-	Made Ground	-	Post Med
4	4003		Deposit	c.15m+	2m+	0.16m	-	Buried Turf	-	-
4	4004		Deposit	c.15m+	2m+	0.28m	-	Buried Topsoil	-	-

5	5001		Deposit	6m+	2m+	0.61m	-	Made Ground	-	Post Med
5	5002		Deposit	4m+	2m+	0.20m	-	Buried Topsoil	-	-
5	5003		Cut	1.20m	2m+	0.28m		Cut of natural feature	-	-
5	5004		Fill	1.20m	2m+	0.28m		Fill of natural feature	-	-

Summary for archaeol5-502395

OASIS ID (UID)	archaeol5-502395
Project Name	Evaluation at Caes Gors, Tregarth, Llandygai, Gwynedd
Activity type	Evaluation
Project Identifier(s)	
Planning Id	
Reason For Investigation	Planning: Between application and determination
Organisation Responsible for work	Archaeological Research Services Ltd
Project Dates	
Location	Caes Gors, Tregarth, Llandygai, Gwynedd NGR : SH 60685 68297 LL : 53.1934557202298, - 4.0867659844421 12 Fig : 260685,368297
Administrative Areas	Country : Wales County : Gwynedd District : Gwynedd Parish : Llandygai
Project Methodology	
Project Results	
Keywords	
HER	Glamorgan-Gwent Archaeological Trust - unRev - STANDARD
HER Identifiers	
Archives	

Land adjacent to Caes Gors, Tregarth, Llandygai
Written Scheme of Investigation for Archaeological Works

August 2021



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Local Authority: Gwynedd Council

Site central NGR: SH 60685 68297

Written Scheme of Investigation for Archaeological Works at land adjacent to Caes Gors, Tregarth, Llandygai, Gwynedd

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1 INTRODUCTION

1.1 Project and Planning Background

1.1.1. Archaeological Research Services Ltd (ARS Ltd) has been commissioned by MacLennan Construction Ltd to produce a Written Scheme of Investigation (WSI) for archaeological evaluation trenching on land adjacent to Caes Gors, Tregarth, Llandygai, Gwynedd (Figure 1). This is following the submission of ‘*Full planning application for the erection of 12 no. affordable dwellings with associated access, parking and infrastructure on land adjacent to Cae Gors, Tregarth, Bangor*’ (Ref. C21/0617/16/LL). The evaluation has been requested by the Gwynedd Archaeological Planning Service (GAPS) as part of the consultation for the scheme.

1.1.2. An Historic Environment Desk-Based Assessment (DBA) has also been requested by GAPS in order to inform the interpretation of any archaeological remains that are identified during the course of the evaluation, and this is currently in preparation (Brown 2021).

1.1.3. This WSI has been prepared in consultation with Tom Fildes, Development Control Archaeologist for GAPS. It confirms the nature of the archaeological works required and describes the objectives and methods to be used by ARS Ltd when undertaking the archaeological works.

1.1.4. The archaeological works will be carried out in accordance with Planning Policy Wales, paragraph 6.1.26 (Welsh Government 2021, 130), which states:

‘Where archaeological remains are known to exist or there is a potential for them to survive, an application should be accompanied by sufficient information, through desk-based assessment and/or field evaluation, to allow a full understanding of the impact of the proposal on the significance of the remains. The needs of archaeology and development may be reconciled, and potential conflict very much reduced, through early discussion and assessment.’

1.2 Site Description and Location

1.2.1. The ‘red line boundary’ of the proposed development area (hereafter ‘PDA’) is depicted by a red polygon on Figure 1, and covers an area of c.0.51 ha, centred at NGR SH 60685 68297. It is bounded along its north-eastern edge by an un-named lane that runs from a junction with Tal Gae at the north-north-east before joining the B4409 at Tregarth, c.500m to the south-south-east. To the north-west the PDA abuts the curtilages of properties accessed off Bro Syr Ifor, and is unbounded to the south-west and south-east.

1.2.2. The topography of the PDA slopes down steeply from c.102m above ordnance datum (aOD) at its south-eastern corner before plateauing out towards the centre of the site and reaching a low point at c.92.5m aOD in the north-western part of the site where a small un-named watercourse flows across in a north-easterly direction. This watercourse continues to a confluence with the Afon Ogwen some

400m to the north-east. The topography rises up again gently to the north-west of the stream to c.94m aOD along the north-eastern edge of the PDA.

1.2.3. The PDA is largely under improved pasture, and there are also a number of scattered trees along the north-eastern boundary of the site and a denser band of broad-leaved woodland occupies the area of the PDA to the north-east of the stream. There is further broad-leaved woodland along the south-western edge of the PDA and this area is strewn with a number of large boulders which are visible through the undergrowth (depicted by green hatching on Figures 2 and 3). Whilst these might be the result of relatively recent clearance from the improved pasture, the possibility that they once formed part of a now tumbled wall cannot be discounted, although no field boundaries are recorded at this location on historic mapping. There are also numerous small areas of rock protruding through the grass across the PDA, but it is not clear as to whether these are areas of outcropping bedrock or partially buried boulders. Towards the south-western corner of the PDA a number of what do appear to be smaller buried boulders are visible, some of which appear to form an 'L' shaped feature (depicted in yellow on Figures 2 and 3). Whilst this may merely be a fortuitous placement, the possibility that these are the buried foundations of the corner of an enclosure or building cannot be discounted.

1.3 Geology and Soils

1.3.1. The BGS records that the underlying solid geology across the majority of the PDA comprises interbedded siltstone and limestone of the *Fachwen Formation*, which is described as follows: '*These sedimentary rocks are fluvial in origin. They are detrital, ranging from coarse- to fine-grained and form beds and lenses of deposits reflecting the channels, floodplains and levees of a river or estuary (if in a coastal setting)*' (BGS 2021). There is also a narrow band of mudstone and siltstone belonging to the Llanberis Slates Formation which occupies a narrow band along the north-eastern edge of the PDA. This formation is described thus: '*These sedimentary rocks are marine in origin. They are detrital and comprise coarse- to fine-grained slurries of debris from the continental shelf flowing into a deep-sea environment, forming distinctively graded beds.*' (BGS 2021).

1.3.2. A superficial deposit of *Devensian Till (Diamicton)* occupies much of the western half of the PDA, an unsorted sediment with gravel in a fine mud matrix laid down during glaciation. This deposit is also overlying earlier *Glaciofluvial Sheet Deposits* which also date to the Devensian period, and which comprise sand and gravel (BGS 2021).

1.3.3. The overlying soils of the PDA are classified by the *Soilscapes* interactive online viewer as belonging to the *Soilscapes 6* soils unit. These soils are described as '*freely draining slightly acid loamy soils*' which are characterized as having a low fertility (Cranfield University 2021).

1.3.4. Ground investigations (Caulmert Ltd 2021) in the lower area in the vicinity of the watercourse encountered a firm to stiff grey mottled orange slightly sandy very gravelly clay at 1.2m below ground level (BGL), which is likely to represent the *Devensian Till* which overlies the earlier sand and gravels. This was overlaid by a

c.0.25m thick layer of blackish brown peat of unknown date (at c.1m BGL), with a deposit of brown silty sandy gravel above. Above the gravel was a brown silty gravelly sand with frequent cobbles and occasional brick, which is evidently 'made ground' likely to have post-medieval and/or modern elements. Groundwater was encountered in the excavations at depths between 0.4m and 1.1m below ground level.

1.3.5. The trial pits in the more elevated areas of the site to the south-east (the pink polygons labelled as TP01-03 on Figures 2 and 3) encountered strong slightly weathered grey finely laminated mudstone bedrock at between 0.6m to 1.7m BGL. This was overlain by subsoil deposits recorded variously as greyish brown very sandy slightly silty gravel, and orange brown silty very gravelly sand, beneath a 0.2m thick topsoil comprising a brown sandy gravelly silt. The results from TP01-03 indicate that both the glaciofluvial sheet deposits and Llanberis Slates Formation appear to extend further to the south-east than mapped on the BGS 1:50k mapping.

1.4 Archaeological and Historical Background

1.4.1. The archaeological and historical background of the site and a 1km study area surrounding it is to be provided in more detail in ARS Ltd's *Land adjacent to Caes Gors, Tregarth, Llandygai, Gwynedd: Historic Environment Desk-Based Assessment* (Brown 2021). The following is a summary of the main findings of this report.

Later Prehistoric and Romano-British Periods

1.4.2. The earliest archaeological evidence known within the study area comprises a number of enclosed and unenclosed prehistoric settlement sites, the nearest being the *Pendinas Hillfort* which is located c.300m to the south-east of the PDA on a ridge overlooking the River Ogwen (GAT HER PRN 223). This defended site is thought to date broadly to the Iron Age period and is designated as a Scheduled Monument (Cadw CN120). The *Parc Gelli Hut Group* is located c.450m to the WNW of the PDA (GAT HER PRN 260), and comprises a large unenclosed settlement of circular huts of likely Iron Age and/or Romano-British date, which is also designated as a Scheduled Monument (Cadw CN202). Another possible hut circle (now destroyed) of Romano-British or earlier date has been recorded short distance further along the ridge at *Maes yr Hedydd*, c.325m to the north-west of the PDA (GAT HER PRN 313), and the top of a beehive quern of possible 2nd to 3rd century AD date has also been recovered in the same vicinity (GAT HER PRN 3662).

1.4.3. Further prehistoric settlement evidence has been identified to the east of the River Ogwen, including the *Coed Uchaf Enclosed Hut Group* (GAT HER PRN 294), c.800m to the east of the PDA, which is also a Scheduled Monument (Cadw CN176). Further possible prehistoric settlement sites have also been identified to the east of the River Ogwen at Llanllechid, c.840m to the north-east of the PDA (GAT HER PRN 92312), and at two further locations c.500m (GAT HER PRN 5744) and 600m (GAT HER PRN 5745) to the south-east of the PDA. There is a further Scheduled enclosed hut circle settlement immediately to the east of the study area, known as *Hut Circles West of Corbri* (Cadw CN287/NMR 275739).

1.4.4. Recent discoveries just beyond the study area at Rachub (c.1.25km to the east of the PDA) provide further evidence for prehistoric settlement, identified during archaeological works undertaken ahead of a proposed housing development. This evidence includes possible roundhouses and enclosure walls (GAT HER PRN 81383), field boundaries (GAT HER PRNs 81633 & 81666) and a pit group and a gully that provided radiocarbon dates ranging from the 1st century BC to the 3rd century AD (GAT HER PRN 81667).

1.4.5. The majority of these later prehistoric/Romano-British settlement remains in the vicinity of the River Ogwen are located in close proximity to small watercourses which are tributaries of the larger river, and it is evident that this was a preferred topographic location for settlement during this period, and it is noteworthy that the PDA occupies a similar topographic position.

1.4.6. The lane that abuts the north-eastern edge of the PDA has been suggested as the putative course of a Roman road from Caer Llugwy to a hypothetical camp at Penrhyn, but this remains unproven (GAT HER PRN 17819). Metal detectorists have recovered a Roman brooch and coin within the study area, c.700m to the south-east of the PDA (GAT HER PRN 92277), and Roman plate, coin and spindle whorl have also been recovered c.700m to the west of the PDA (GAT HER PRN 32867), which further attests to activity with the study area during the Romano-British period.

Medieval Period

1.4.7. There is little known evidence for post-Roman/early medieval activity within the study area, but a cross-incised stone in a roadside wall, at Craig-y-Pandy, c.830m to the south-west of the PDA is thought to be of early medieval date, and other cross marked stones of possible 7th century date have been recorded in the Tregarth area (GAT HER PRN 66).

1.4.8. The township of Cororion (GAT HER PRN 6812) is the only documented medieval township within the study area, and this survives today as a farmstead, c.1km to the west of the PDA. The fourth branch of the Mabinogi (the tale of Math son of Mathonwy) refers to this township as 'Creuwryon', and it is also recorded in the *Extent of North Wales* made for Edward III by John de Delves in 1352.

1.4.9. A Deserted Rural Settlement at Moel y Ci is located just beyond the edge of the study area, c.1.05km to the south-west of the PDA and this comprises a platform house with hut groups and a field system (GAT HER PRNs 3680 7518).

Post-Medieval Period

A Penrhyn Estate map dating to 1768 (Bangor University Archives and Special Collections PENRA/2215) confirms that the road which bounds the eastern edge of the PDA (known today as Tal Gae) was well established by this time, and it is likely that this was the main ancient routeway along the Ogwen valley, as it appears to predate the surrounding patchwork of small fields which but up against it. The majority of the PDA occupied part of a larger enclosed area extending to the west named simply as *Ffridd Isaf* ('lower mountain pasture') which indicates that this was a surviving part of the former common pasture sloping down to the watercourse from the south. The watercourse is not depicted on the map, but its location can be

identified as the boundary between the *Ffridd Isaf* and the fields to the north, which include a small, unnamed field and *Cae Coch Isaf*, both of which extend slightly into the north-eastern edge of the PDA. This latter field ('lower red field') may be so-named due to the presence of the underlying glaciofluvial sand and gravel, and could indicate that this field was cultivated. Most of the PDA to the north of the stream was depicted as occupied by an unnamed area adjacent to a distinctly wider part of the road, and opposite an elongated field named *Gweirglodd* ('meadow') which continues along the course of the stream. This may have been an area prone to flooding or an area where the road widened due to having to ford the stream at this point, and possibly an area used for stock management when moving flocks to and from the adjacent pasture, via the PDA.

The Llandegai tithe map of 1840 illustrates that the PDA was part of an area still described as *Ffridd* ('mountain pasture'), associated with a farmstead named *Pennygroes*, and the Ordnance Survey (OS) maps produced between 1889 to 1988 inclusive depict this area as unimproved pasture throughout this period. The 1995 OS map also indicates the presence of scattered boulders across the PDA. More recently, the pasture within the PDA has been improved, and grazed by horses, and large boulders identified during the walkover survey within the woodland immediately to the west of the PDA may have derived from this clearance, although an archaeological origin for these cannot be discounted.

2 AIMS AND OBJECTIVES

2.1 Regional Research Aims and Objectives

2.1.1. The proposed archaeological works have the potential to identify the presence of evidence pertinent to overarching research themes identified within period-specific papers of the *A Research Framework for the Archaeology of Wales* (<https://www.archaeoleg.org.uk/used.html>). In its consultation response, GAPS identified that the wider area was densely settled throughout prehistory and the Roman/early medieval transition, and as such, it is key research questions relating to these periods which are mostly likely to be addressed by the proposed fieldwork.

2.1.2. For the *Neolithic and Earlier Bronze Age* periods, the key research themes were most recently 'refreshed' in 2017 (Pannet 2017), and these include:

- ♦ *Settlement*
- ♦ *Human Remains*
- ♦ *Monuments*
- ♦ *Raw material extraction and use*
- ♦ *Material Culture*
- ♦ *Regionality and Connections; and*
- ♦ *The Coast.*

2.1.3. For the *Later Prehistoric* periods, key research agenda questions were most recently revisited in 2016: *'The previous iteration of the research agenda identified a number of key areas on which work should be focussed. Building Chronologies was key, settlement evidence, Palaeobotanical evidence, Social change and social processes, climate change and the impact on resource utilisation were identified as important ... Rather than amendments perhaps the questions should be refined and augmented'* (Anon, 2016, 2).

2.1.4. For the Roman period, five key research themes were identified during the first iteration of the *Research Agenda*, and when revisited in 2016 there was *'general agreement that the primacy of the five principal research themes was still valid'* (Davies 2017, 1). These research themes comprise:

- ♦ *Settlement Patterns;*
- ♦ *Interaction between Roman occupiers and the indigenes;*
- ♦ *the Archaeology of the Campaigning years;*
- ♦ *Funerary and Ritual, and*
- ♦ *Technology and Industry.*

2.1.5. For the early medieval period, eight key research priorities were identified as part of the original *Research Agenda* in 2005, and these were also reiterated when revisited in 2016:

- ♦ *Identification of potential early medieval sites, particularly secular settlements, through collation and assessment of new and existing information sources.*
- ♦ *Confirmation of potential early medieval sites through fieldwork, trial excavation and the application of dating techniques.*
- ♦ *Full archaeological investigation and characterisation of a sample of identifiable early medieval sites, both secular and ecclesiastical, in different regions, through fieldwork and excavation, and an understanding of their location in the wider landscape, both physical and temporal.*
- ♦ *Detailed analysis of early medieval artefacts and their contexts and characterisation of site assemblages. 5. Identification and analysis of environmental evidence from excavated samples and increased pollen sampling.*
- ♦ *Analysis of human remains for information on origins, demography, health, nutrition and transfer of pathogens.*
- ♦ *Improving understanding of the chronological framework for the period through the application of all available methods and increased use of radiocarbon dating, especially on multi-period sites.*
- ♦ *Engaging with relevant research on early medieval material culture elsewhere in Britain and Ireland thereby setting the evidence from Wales within a broader context.*

2.1.6. During the course of the archaeological works other regional research aims and objectives may come to the fore. These aims and objectives will be revisited both during and after fieldwork in order that they may be updated as necessary.

2.2 Fieldwork Aims and Objectives

2.2.1. The aim of the archaeological evaluation trenching is to assess the survival of any below ground archaeological remains that may be present and to evaluate the impact of the planned development on archaeological remains, and to recover information that could help to contribute to the overarching research themes and sub-themes identified in Section 3.1 above. The objectives of the archaeological fieldwork is as follows.

- ◆ Identify the presence/absence of archaeological features and deposits within the site.
- ◆ Record all archaeological features and deposits encountered.
- ◆ Sample sufficient of the archaeological features and deposits to establish relative sequence, likely dating and quality of preservation.
- ◆ Gather sufficient information to establish the character, extent, form, function and likely status of any surviving archaeological or palaeo-environmental deposits with a view to evaluating their significance and potential to inform the aims outlined in Sections 2.1 and 2.2.1 above.

3 ARCHAEOLOGICAL DESK BASED ASSESSMENT

3.1. The archaeological DBA that is being produced to inform the evaluation trenching will be produced in consultation with the following sources:

- ◆ Gwynedd Archaeological Trust's Historic Environment Record (GAT HER), for information regarding heritage assets, details of previous fieldwork, and Historic Landscape Characterisation (HLC) mapping.
- ◆ The National Monuments Record for Wales (NMRW) maintained by the Royal Commission on the Ancient Historical Monuments of Wales (RCAHMW).
- ◆ Cadw's downloadable GIS datasets for designated heritage assets available from 'Lle', the Welsh Government's GeoPortal for Wales.
- ◆ The online catalogue of the Gwynedd Archives held at Caernarvon Record Office for historic maps, plans and other documents relevant to the study area (nothing of relevance identified).
- ◆ The Bangor University Archives and Special Collections for historic maps and plans identified via its online catalogue.
- ◆ The *Archwilio* website for the Welsh Historic Environment Records Online for details of archaeological remains outside of the study area.

- ♦ The *Coflein* online catalogue of archaeology, buildings, industrial and maritime heritage in Wales for details of record held by the RCAHMW outside of the study area.
- ♦ Groundsure Historic Mapping Report for historic Ordnance Survey maps
- ♦ Natural Resources Wales LiDAR data made available via the *Lle* website under the Open Government Licence.
- ♦ The British Geological Survey onshore digital maps at 1:50 000 scale (DiGMapGB-50 – WMS).
- ♦ Cranfield University's *Soilscapes* interactive online viewer for a simplified version of the 1:250,000 scale Digital National Soil Map for England and Wales.
- ♦ Google Earth and Bing online historical satellite imagery.
- ♦ Caulmert Ltd's Geotechnical Investigation Report for the PDA.
- ♦ Any other relevant books, journals and publications identified during the course of the assessment.
- ♦ A site walkover.

4 ARCHAEOLOGICAL EVALUATION TRENCHING

4.1 Professional Standards

4.1.1. ARS Ltd is a Registered Organisation with the Chartered Institute for Archaeologists (CIfA). Registered Organisations are continuously assessed to ensure that the highest standards of work are carried out, in line with the *Code of Conduct* of the CIfA (2019a). In addition to our key management staff, who have achieved the highest grade of corporate CIfA membership, many of our field staff also hold corporate grade membership.

4.1.2. All elements of the archaeological evaluation will be carried out in accordance with Chartered Institute for Archaeologists (CIfA) *Code of Conduct* (2019a) and *Standards and Guidance for Field Evaluation* (2020a).

4.1.3. All staff employed on the project will be suitably qualified and experienced for their respective project roles and have practical experience of archaeological excavation and recording. All staff will be made aware of the archaeological importance of the area surrounding the site and will be fully briefed on the work required by this specification. Each member of staff will be fully conversant with the aims and methodologies of the evaluation and will be given a copy of this WSI to read.

4.1.4. All site operations will be carried out in a safe manner in accordance with ARS Ltd's health and safety policy. Deep sections, such as those across ditches or pits, will be shored or benched as necessary. A risk assessment will be prepared before commencement of works on site.

4.2 Coverage

4.2.1. It is proposed to excavate 5 trenches across the PDA, two measuring 2m by 10m and three measuring 2m by 20m (see Figures 2 and 3). This equates to approximately 4% of the total area of the PDA. These trenches have been positioned to target the relatively level ground that covers most of the central part of the site, whilst avoiding the currently densely vegetated area to the north-east of the stream and the relatively steeply sloping area which occupies the eastern part of the PDA, which it is considered would have less archaeological potential.

4.2.2. The rationale behind the location of each of the trenches is set out in Table 1 below:

Table 1: Trench location rationale

Trench no.	Size	Rationale
1	20m x 2m	To target the footprint of Plots 4-6.
2	10m by 2m	To target turning and parking area and to ascertain the depth, nature and, if possible, the stratigraphy of the 'made ground' close to the northern entrance to the PDA, and potentially to obtain samples of the buried peat deposit identified nearby in SA01 at c.1m BGL.
3	20m by 2m	To target the course of the proposed new access road into the PDA.
4	20m by 2m	To target the footprints of Plots 7-10.
5	10m by 2m	To target part of the footprint of Plot 12 as well as a possible rectilinear setting of stones to ascertain whether it is of archaeological significance.

4.3 Methodology

4.3.1. Excavation will be undertaken by a mechanical excavator using a toothless ditching bucket or by hand. All machining will be undertaken under the direct supervision of an archaeologist in successive level spits, and will proceed to the upper interface of the archaeological deposits or the geological natural, whichever is encountered first. If archaeological or natural deposits are not encountered, trenches should not exceed a maximum depth of 1.2m. No machinery will track over areas that have previously been stripped until the area has been signed off by ARS Ltd.

4.3.2. The excavation area will be appropriately cleaned using hand tools in order to expose the full nature and extent of archaeological features and deposits.

4.3.3. All spoil removed during ground works will be scanned visually to recover small finds. Finds so recovered will be recorded with their location of origin ascribed. Finds will be retained and recorded.

4.3.4. All archaeological features will be planned and sectioned as a minimum objective.

4.3.5. Isolated, discrete features such as pits and postholes not belonging to structure or industrial activities will be 50% sampled, although if they produce artefacts then provision is made for full excavation.

4.3.6. Discovery of any human remains will be reported to the coroner and excavated following receipt of the appropriate Ministry of Justice Guidelines.

4.3.7. Any deposits relating to funerary/ritual activities, such as burials and cremation deposits, will be 100% excavated. Domestic/industrial activity (such as walls, postholes, floors, hearths) will be sufficiently excavated to understand their form and function and to recover potential dating evidence and artefact and ecofact assemblages.

4.3.8. Area deposits such as buried soils or middens, will be hand excavated at a minimum 10%. Subsequent excavation by machine will be considered. Large intrusions, such as reservoirs, will be sufficiently excavated by machine, within safe limits, to provide information on their character.

4.3.9. Limited representative samples of bricks from brick-built structures will be retained for specialist analysis where appropriate.

4.3.10. For deposits that have potential for providing environmental or dating evidence, a minimum of 10 litres of sample will be taken, or 100% of the sample if smaller. This material will be floated and passed through graduated sieves, the smallest being a 500 μ mesh. Should other types of environmental deposits be encountered appropriate specialist advice will be sought and an appropriate sampling strategy devised. Samples will be assessed by a suitable specialist with provision for further analysis as required. Advice from specialist advisors will be taken as appropriate.

4.3.11. All site operations will be carried out in a safe manner in accordance with ARS Ltd's health and safety policy. Deep sections such as those across ditches or pits will be shored as necessary. A risk assessment will be prepared before commencement on site.

4.4 Recording

4.4.1. The site will be accurately tied into the National Grid and located on a 1:2500 or 1:1250 OS base map of the area. The site will be recorded using a single context planning system in accordance with the ARS Ltd field recording manual.

4.4.2. A full and proper record (written, graphic and photographic as appropriate) will be made for all work, using pro-forma record sheets and text descriptions appropriate to the work. Accurate scale plans and section drawings will be drawn where required at 1:50, 1:20 and 1:10 scales, as appropriate.

4.4.3. The stratigraphy of the site will be recorded even where no archaeological deposits have been identified.

4.4.4. All archaeological deposits and features will be recorded with above ordnance datum (AOD) levels.

4.4.5. A photographic record will be produced. All images will be taken in black and white print and digital format and will contain a graduated photographic scale. The main photographic archive will comprise 35mm b/w SLR print film, supplemented by digital SLR images taken as RAW data files. A register of all photographs will be kept. A selection of working shots will be taken to demonstrate how the site was investigated and what the prevailing conditions were like during excavation. Where potential archaeological features are already visible (for example the possible rectilinear stone setting in Trench 5), pre-excavation shots will also be taken. Record photographs will be printed at a minimum of 5" x 4". Photographic prints will be mounted in appropriate archival stable sleeves.

4.4.6. Where stratified deposits are encountered, a 'Harris' matrix will be compiled.

4.5 Finds Processing and Storage

4.5.1. All finds processing, conservation work and storage of finds will be carried out in compliance with the Chartered Institute for Archaeologists' *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (2020b) and those set out by UKIC (1990).

4.5.2. Artefact collection and discard policies will be appropriate for the defined purpose.

4.5.3. Bulk finds which are not discarded will be washed and, with the exception of animal bone, marked. Marking and labelling will be indelible and irremovable by abrasion. Bulk finds will be appropriately bagged, boxed and recorded. This process will be carried out no later than two months after the end of the excavation.

4.5.4. All small finds will be recorded as individual items and appropriately packaged (e.g. lithics in self-sealing plastic bags and ceramic in acid-free tissue paper). Vulnerable objects will be specially packaged and textile, painted glass and coins stored in appropriate specialist systems. This process will be carried out within two days of the small find being excavated.

4.5.5. During and after the excavation all objects will be stored in appropriate materials and storage conditions to ensure minimal deterioration and loss of information (including controlled storage, correct packaging, and regular monitoring, immediate selection for conservation of vulnerable material). All storage will have appropriate security provision.

4.5.6. All retained artefacts and ecofacts will be cleaned and packaged in accordance with the requirements of the recipient museum.

5 MONITORING ARRANGEMENTS

5.1 Archaeological Research Services Ltd acknowledges that it is the responsibility of the Development Control Archaeologist for GAPS to monitor the archaeological works. Reasonable notice (no less than 5 working days) shall be provided before the commencement of works and to arrange monitoring visits.

Tom Fildes

Development Control Archaeologist

Gwynedd Archaeological Trust
Craig Beuno
Garth Road
Bangor
Gwynedd
LL57 2RT

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Mobile: 07920 264232

Email: tom.fildes@heneb.co.uk

5.2 ARS Ltd will liaise with the Development Control Archaeologist for GAPS at regular intervals throughout the course of the work.

5.3 The client will afford reasonable access to the Development Control Archaeologist for GAPS or their representative, for the purposes of monitoring the archaeological evaluation.

6 TIMETABLING, STAFFING AND RESOURCES

6.1 The project manager for the archaeological evaluation will be Dr David Underhill at ARS Ltd and the fieldwork project officer will be a suitably experienced archaeologist and member of ARS Ltd's archaeological staff at either Project Officer or Assistant Project Officer grade. Additional archaeological officers may be appointed by ARS Ltd where required.

6.2 The outline timetable for the works is as follows. This will be updated by email as the project progresses.

Table 2: Outline project timetable

Task	Proposed commencement date
1. Archaeological evaluation trenching and recording	8 th September 2021
2. Post-excavation analysis, including any specialist reporting required	To begin on completion of Task 2.
3. Excavation report preparation and completion	To run concurrently with Task 3.
4. Archive preparation and deposition	To be completed following Tasks 3-4.

6.3 Specialist analyses will be carried out by appropriately qualified specialists as detailed subject to availability.

- | | |
|---|---|
| ♦ Flint and prehistoric pottery: | Dr Robin Holgate MCIfA |
| ♦ Romano-British pottery: | Dr Phil Mills MCIfA |
| ♦ Samian Ware: | Dr Gwladys Monteil |
| ♦ Romano-British small finds: | Alex Croom |
| ♦ Medieval and post-medieval pottery: | Dr Chris Cumberpatch or
Dr Robin Holgate MCIfA |
| ♦ Medieval and post-medieval clay pipes, glass and metalwork: | Mike Wood MCIfA or
Dr Robin Holgate MCIfA |
| ♦ Plant macrofossils and charcoals: | Luke Parker |
| ♦ Human and animal bone: | Milena Grzybowska |
| ♦ Radiocarbon dating: | Prof Gordon Cook (SUERC) |
| ♦ Finds conservation: | Vicky Garlick (Durham University) |

7 POST-EXCAVATION ASSESSMENT AND REPORTING

7.1 The aims of the post-fieldwork phase of the project are to:

- ♦ Produce a concise post-excavation assessment strategy
- ♦ Prepare an orderly archive of the records of the fieldwork
- ♦ Clean, conserve and prepare artefacts/ecofacts for long-term museum storage
- ♦ Prepare specialist reports as appropriate
- ♦ Prepare a report describing the basic nature of the archaeological deposits discovered
- ♦ Outline further works/ mitigation which may be required as a condition of reserved matters permission.

7.2 The written report will include as a minimum the following:

- ♦ A non-technical summary.
- ♦ Introduction and objectives of the evaluation.
- ♦ Methodology of the evaluation.
- ♦ An objective summary statement of results.

- ♦ A phased stratigraphic discussion of the archaeological features.
- ♦ An interpretive discussion of the results, placing them in a local and regional framework and an assessment of the significance of any remains.
- ♦ Appropriate supporting illustrations, including a site plan, trench and section plans, feature sections and plans and a phased site plan as appropriate.
- ♦ A site location plan at 1:2500 or 1:10000 on an OS base map as appropriate and a phased interpretation of the site as appropriate.
- ♦ The results of an assessment of artefacts, ecofacts and industrial residues carried out by suitable specialists, who will be furnished with relevant contextual and stratigraphic information.
- ♦ If sufficiently significant remains are recovered then an analysis of the above based upon the specialist assessment recommendations.
- ♦ In the event that significant remains are encountered, then a timetable for wider dissemination will be included in the report.
- ♦ A detailed context index and supporting data in tabulated form or in appendices.
- ♦ An index to and the proposed location of the archive.
- ♦ The proposed date of deposition of the archive.
- ♦ References.
- ♦ Photographs of work in progress on the site.

7.3 Within the report:

- ♦ All plans will be clearly related to the national grid
- ♦ All levels will be quoted relative to ordnance datum.

7.4 An OASIS online record <http://ads.ahds.ac.uk/project/oasis/> will be undertaken for the project, after client confidentiality has been waived.

8 ARCHIVE DEPOSITION

8.1 Archive Selection Strategy

8.1.1. Selection of the working project archive will be guided by the aims and objectives of the project, as set out in this WSI (Section 3 above); and from *A Research Framework for the Archaeology of Wales*. Archive selection will also be guided by ClfA's (2019b) *Toolkit for Selecting Archaeological Archives*.

8.2 Documentary Archive

8.2.1. All original documentary material created and collected during the archaeological works will be selected for inclusion in the final archive. Any duplicates

(including photocopies) of original documents will not be included in the final archive.

8.2.2. The deselected documents will be recycled, subject to final checks by ARS Ltd's Post-Excavation and Archives Officer.

8.3 Digital Archive

8.3.1. All digital data created over the course of this project will be collected, stored, and selected for final deposition in line with the project's Data Management Plan. This is likely to see final online deposition with the Archaeology Data Service (ADS) based at York University. The key types of digital data produced will include the following:

Table 3: Key digital data types

Type	Data
Text	Digital copies of the Written Scheme of Investigation and final report
Images	Site photography, scans of site drawings, graphics for reports, digitised drawings
Finds Data	Finds reports and tables, conservation records, images

8.3.2. Only final copies of any digital data will be selected and deposited in the final project archive.

8.3.3. Digital data to be included in the final archive will be reviewed during the post-excavation and archiving phase of works.

8.3.4. The project manager and digital archive repository will be consulted on the fate of any deselected material. Deselected material is expected to include duplicates and any non-final versions of data. Digital photographs will be assessed during post-excavation works and selected in line with Historic England's *Digital Image Capture and File Storage* (2015c). The deselected material will be stored on the ARS Ltd server for a period before being reviewed and deleted.

8.4 Material Archive

8.4.1. The selection of material finds for final deposition in the archaeological archive will be decided in collaboration with the finds specialist during the post-excavation phase. This will be based on addressing the aims and objectives of the project set out in this WSI (Section 3 above) and in *A Research Framework for the Archaeology of Wales*.

8.4.2. No material will be discarded without processing and recording. Deselected material can be retained as part of a handling or teaching collection, returned to the landowner, or discarded as agreed by the landowner, specialists, collecting museum and planning archaeologist.

8.5 Archive Deposition

8.5.1. On completion of the fieldwork, a project archive will be prepared for deposition by ARS Ltd with a suitable repository museum. The archive will comprise the primary records and synthetic works arising from the project, including documents, plans, sections, photographs, and electronic data and an accompanying metadata statement. An archive will be prepared and deposited even if the archaeological works produce no archaeologically significant finds.

8.5.2. High resolution digital photographs would, in discussion with GAPS Development Control Archaeologist, be submitted to the Archaeological Data Service (ADS) digital archive repository with the associated photographic registers and metadata. The digital archive will be prepared in line with current best practice as outlined in *Archaeology Data Service/Digital Antiquity Guides to Good Practice* (ADS/Digital Antiquity 2011).

8.5.3. The archive will be deposited in line with *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* (Brown 2007), ClfA's (2020c) *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives*, and Society of Museum Archaeologists (1993) *Selection, Retention and Dispersal of Archaeological Collections. Guidelines for use in England, Wales and Northern Ireland*. The archive will be deposited within two months of the completion of the report.

8.5.4. The Development Control Archaeologist for GAPS will be notified at the earliest opportunity should the site produce archaeologically significant, unusual, or unexpected finds. The curator of the appropriate repository museum will also be notified.

8.5.5. The Development Control Archaeologist for GAPS will be notified in writing on completion of the fieldwork with project dates for the completion of the report and deposition of the archive. The date for deposition of the archive and its contents will be outlined in the report and the Development Control Archaeologist for GAPS and appropriate repository museum informed in writing on final deposition of the archive.

8.5.6. All retained artefacts and associated material will be cleaned, recorded, properly stored and deposited in the archive (see Section 4.5 above).

8.5.7. A full set of annotated, illustrative pictures of the site, excavation, features, layers and selected artefacts deposited with the archive as digital images on disc.

8.5.8. At the start of work (immediately before fieldwork commences) an OASIS online record <http://ads.ahds.ac.uk/project/oasis/> will be initiated and key fields completed on Details, Location and Creators forms. All parts of the OASIS online form will be completed for submission to the HER. This will include an uploaded PDF/A version of the entire report (a paper copy will also be included within the archive) and a selection of the digital image files.

9 GENERAL ITEMS

9.1 Health and Safety

9.1.1. All work will be carried out in accordance with The Health and Safety at Work Act 1974. Specific health and safety policies exist for all out workplaces and all staff employed will be made aware of the policy and any relevant issues. The particular risks involved with this project will be assessed, recorded and relevant mitigation measures put in place as part of a full risk assessment, which will be compiled in advance of fieldwork. ARS Ltd retains Citation as its expert health and safety consultants and the appointed Health and Safety Officer for the company is Mark Potter.

9.1.2. With regard to the current Covid-19 pandemic, it will be ensured that all works will be undertaken in line with current government guidelines / regulations / restrictions / working practices. Advice provided by ClfA will also be taken into account (ClfA 2020d).

9.2 Insurance Cover

9.2.1. ARS Ltd has full insurance cover for employee liability (£10 million) public liability (£10 million), professional indemnity (£10 million) and all-risks cover.

9.3 Community Engagement and Outreach

9.3.1. Any opportunities will be sought for engaging the local community in any archaeological findings, e.g. press release (at the client's discretion), dissemination of information via ARS Ltd's website and social media, a guided site tour and/or by presenting a paper and talking to local societies.

9.4 Changes to the Written Scheme of Investigation

9.4.1. Changes to the approved methodology or programme of works will only be made with prior written approval of the GAPS Development Control Archaeologist or their designated representative.

9.5 Publication

9.5.1. If significant archaeological remains are recorded, a summary of the project with, if appropriate, selected drawings, illustrations and photographs will be submitted within 2 years of the completion of the project in an appropriate archaeological journal.

9.5.2. In the event of significant remains being encountered and excavated but no further fieldwork takes place, there may be the need for a more formal publication than in the summary form. In this instance a suitable programme and timetable for publication and dissemination will be discussed and agreed upon by all stakeholders. This may include a note or short article in an appropriate archaeological journal.

9.6 Publicity and Copyright

9.6.1. Any publicity will be handled by the client. ARS Ltd will retain the copyright of all documentary and photographic material under the Copyright, Designs and Patent Act (1988).

10 REFERENCES

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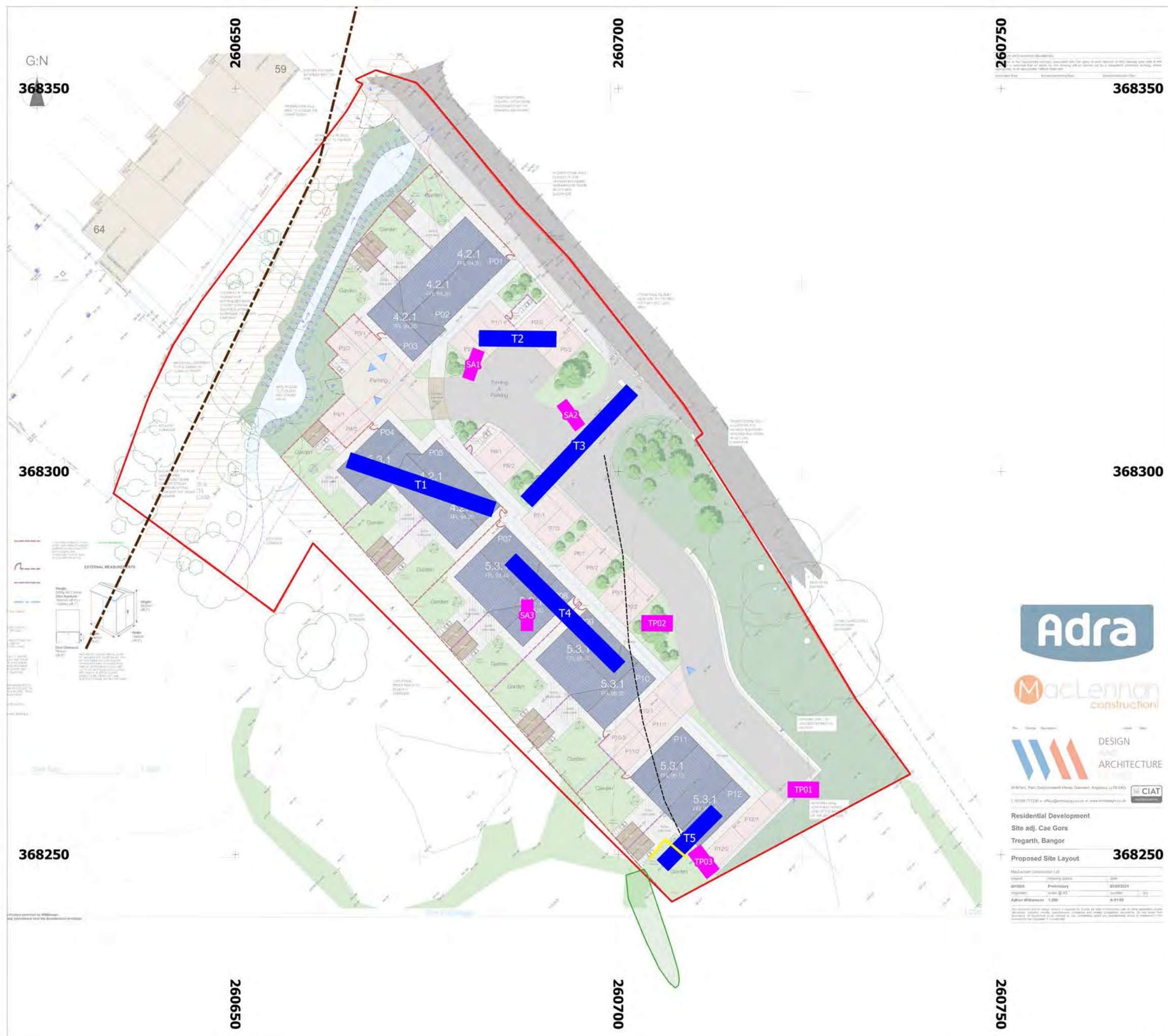
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APPENDIX 1: FIGURES



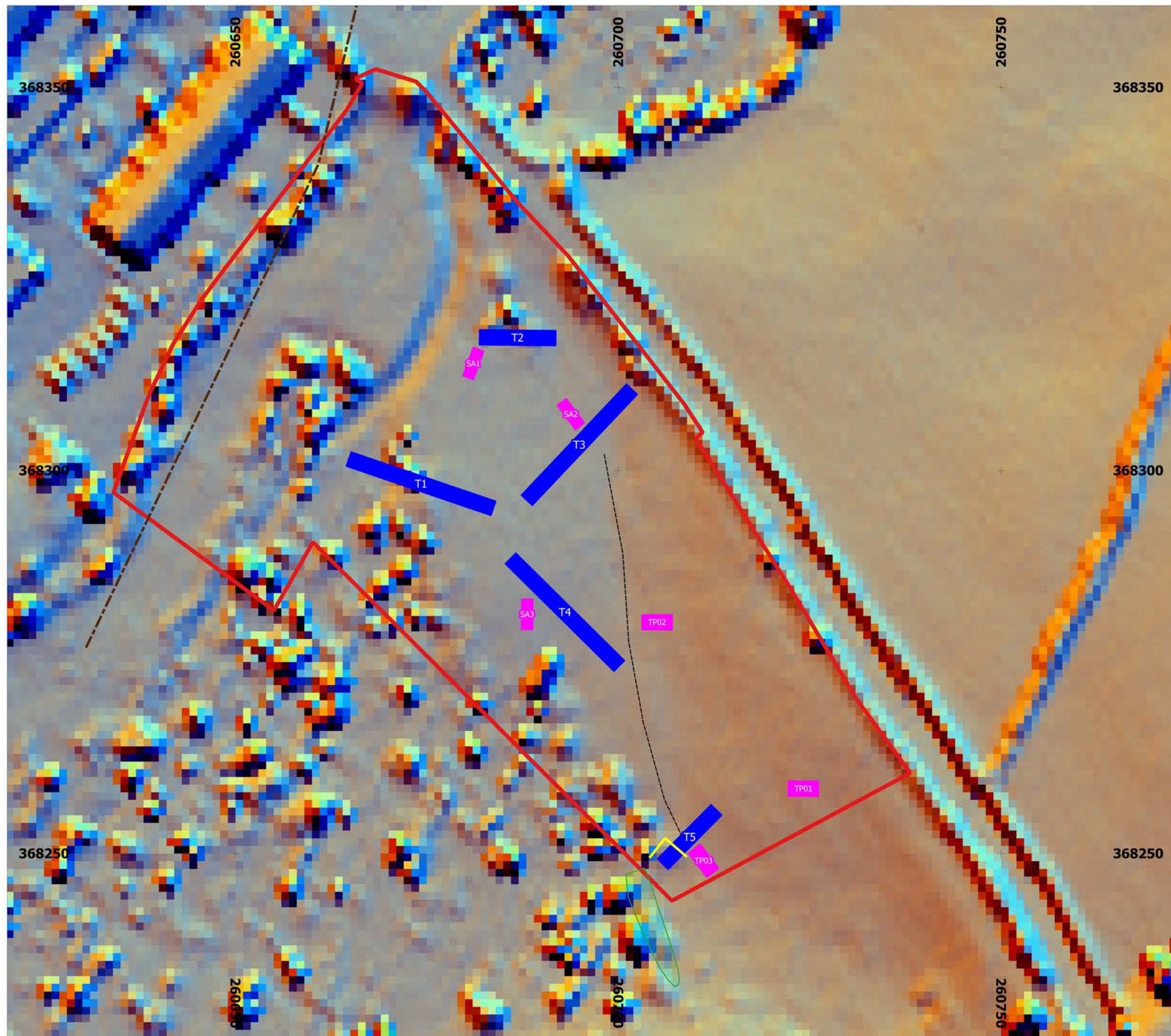


Figure 3: Trench location plan over LiDAR DSM @ 1m resolution

- ▭ Site boundary
- ▭ Test pit locations (previously excavated)
- ▭ Proposed trenches
- Possible rectilinear feature
- Extant line of sewer
- Base of slope
- ▭ Boulder strewn area immediately beyond site boundary

Contains Natural Resources Wales information © NRW and database right 2021.



Site name: Land adjacent to Caes Gors,
Tregarth
Date: August 2021
Drawn by: AB
Scale: 1:500 @ A3

This drawing: © ARS Ltd
Contains Ordnance Survey data.
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