Results of Archaeological Works -

Archaeological Evaluation (Evaluation Trenching) at

Land off Ffordd Glanffynnon, Llanrug, Gwynedd

NGR SH 53649 63021 (Central Point)

Project Number CR249B-2025

CR ARCHAEOLOGY

Compiled by C. Rees and M. Jones

On Behalf of Adra (Tai) Cyfyngedig

Summary

CR Archaeology were instructed by Adra (Tai) Cyfyngedig to conduct further archaeological works at the proposed site of a new residential development. The site is located on land adjacent to Ffordd Glanffynnon, Llanrug. The work undertaken was the excavation of four evaluation trenches targeting geophysical anomalies identified during the previous phase of works. Three of the four trenches yielded negative results, with the geophysical anomalies determined to be of natural or Post Medieval origin.

The fourth trench yielded a positive result, uncovering a burnt mound with an associated trough and possible pits. Two radiocarbon dates were obtained on short life charcoal samples from the mound which yielded dates of 1490 – 1420 cal BC and 980 – 590 cal BC. These dates indicate the mound was in use, if sporadically, for a considerable period spanning the Later Bronze Age.

Site works were carried out in January 2025.

Crynodeb

Cyfarwyddwyd CR Archaeology gan Adra (Tai) Cyfyngedig i gynnal gwaith archaeolegol pellach ar safle arfaethedig datblygiad preswyl newydd. Mae'r safle wedi'i leoli ar dir ger Ffordd Glanffynnon, Llanrug. Y gwaith a wnaed oedd cloddio pedair ffos werthuso yn targedu anomaleddau geoffisegol a nodwyd yn ystod cam blaenorol y gwaith. Rhoddodd tri o'r pedwar ffos ganlyniadau negyddol, gyda'r anomaleddau geoffisegol yn cael eu pennu i fod o darddiad naturiol neu Ôl-Ganoloesol.

Rhoddodd y bedwaredd ffos ganlyniad cadarnhaol, gan ddatgelu twmpath llosg gyda chafn cysylltiedig a phyllau posibl. Cafwyd dau ddyddiad radiocarbon ar samplau siarcol oes fer o'r twmpath a gynhyrchodd ddyddiadau o 1490 – 1420 cal CC a 980 – 590 cal CC. Mae'r dyddiadau hyn yn dangos bod y twmpath yn cael ei ddefnyddio, os yn ysbeidiol, am gyfnod sylweddol yn rhychwantu Diwedd yr Oes Efydd.

Cynhaliwyd gwaith ar y safle ym mis Ionawr 2025.

Results of Archaeological Works - Archaeological Evaluation (Evaluation Trenching) at Land off Ffordd Glanffynnon, Llanrug, Gwynedd

Planning Application Number:	Pre-Application (Reference 2023.128_02)
National Grid Reference:	SH 53649 63021 (Central Point)
Client:	Adra (Tai) Cyfyngedig
Report Author:	Catherine Rees and Matthew Jones
Report Number:	CR249B-2025
Date:	15/08/2025

Contents

1.0 Introduction

CR Archaeology were instructed by Adra (Tai) Cyfyngedig to conduct a programme of archaeological works at the at the proposed site of a new residential development (Appendix A).

The village of Llanrug is a settlement associated with the slate industry and is described as a "*nineteenth century village superimposed on an earlier, possibly eighteenth century, pattern of enclosure on the river meadows by the Afon Rhyddallt*" (Gwynedd HER PRN 15846).

This document has been prepared to supply the client and statutory bodies including the Local Planning Authority Archaeologist with information as to the archaeological potential, impact and constraints on the aforementioned scheme. It outlines the results of the second phase of works following the completion of a Desk Based Assessment, Walkover Survey and Geophysical Survey (Phase 1 - document CR249-2024). The Desk Based Assessment showed that whilst there is relatively little archaeological activity recorded in the vicinity of the site, the rural location and previously undeveloped nature of the site would make it a potential location for stray finds or isolated features/feature groups of prehistoric, early medieval or medieval date.

Gradiometer survey identified a limited number of magnetic anomalies, largely ferromagnetic responses thought to be from modern disturbance. Four evaluation trenches were excavated targeting the anomalies identified through the geophysical survey. The features identified through geophysical survey were found to be of natural or Post Medieval origin in three of the trenches.

In the fourth trench a large anomaly appearing to be rectilinear in plan and measuring approximately 16.5m x 14.5m was postulated to be a burnt mound – a hypothesis supported by the proximity of the anomaly to a stream. On excavation this was found to be the case and a large burnt mound with an associated trough and possible pits was uncovered. Two radiocarbon dates were obtained on short life charcoal samples from the mound which yielded dates of 1490 – 1420 cal BC and 980 – 590 cal BC. These dates indicate the mound was in use, if sporadically, for a considerable period spanning the Later Bronze Age.

2.0 Project Aims & Objectives

The aim of this programme of works was to undertake Archaeological Evaluation Trenching at the proposed development site. Four evaluation trenches targeted anomalies identified through geophysical survey.

It aimed to examine the potential archaeological resource surviving at the site and to provide information which will be utilised to determine an appropriate methodology for any further archaeological mitigation which may be required at the site.

The programme of archaeological works also aimed to assess the survival, character and date of any archaeological remains uncovered and to excavate, record and analyse all archaeological remains uncovered within the trenches.

This project aimed to fulfil the criteria for undertaking an Archaeological Field Evaluation as specified in the CIfA Standard and Guidance documents (2023 updates - https://www.archaeologists.net /codes/cifa).

It is intended that this document be utilised to inform further archaeological planning decisions and conditions at the site.

The objectives of this programme of works were:

- To make full and effective use of the resulting information to establish the archaeological significance of the site

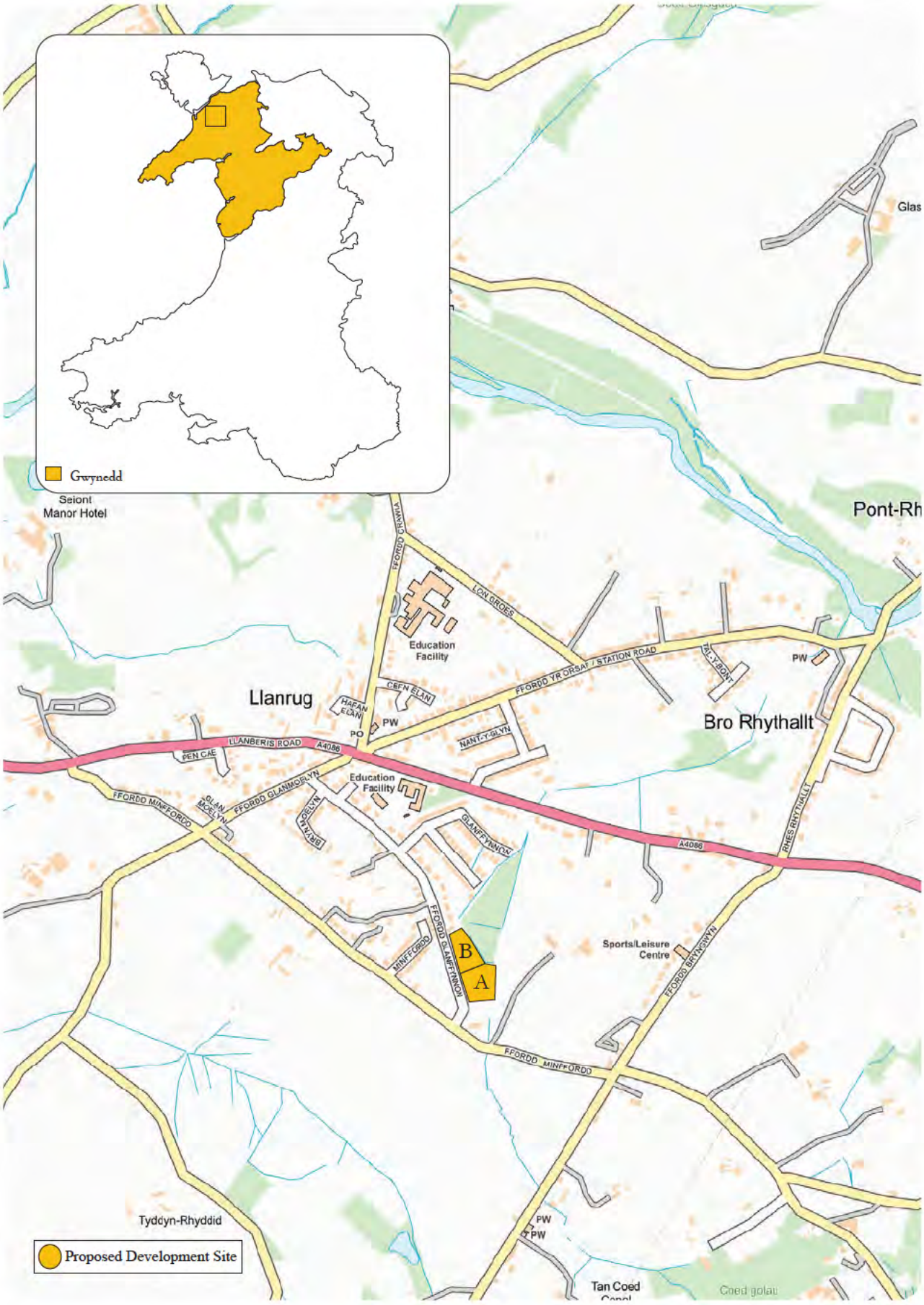


Figure 1. Site Location Map
(Source: OS Open Data Mapping Contains Ordnance Survey data © Crown copyright and database right 2018)

- To assess the presence, survival, character and date of any archaeological remains
- To excavate/record any archaeological remains uncovered.
- To help inform future decision making, design solutions, further evaluation & mitigation strategies.

3.0 Scheme of Works – Methodology

The work undertaken at the site was an Archaeological Evaluation (Evaluation Trenches) and the following section details the methodology employed in the research, site work, post excavation and archiving associated with the project.

3.1 Desk Based Research

A complete and coherent history of the site was compiled during the previous phase of works. This was utilised in the interpretation of the results of the trenching works. Additional research was undertaken to compliment the interpretation of the burnt mound.

The works were carried out accordance with the CIfA Standards and Guidance for historic environment desk-based assessment (CIfA Revised 2009 & 2014, 2020 update).

3.2 Methodology for Archaeological Evaluation Trenching

Four evaluation trenches measuring 1.8m x 30m were excavated within the proposed development site using a mechanical excavator fitted with a toothless bucket. The trenches were targeted on features identified during the geophysical survey. The trench array is shown in figure 2.

All machine excavation was supervised by an archaeologist from CR Archaeology. The trenches were excavated until an archaeological horizon, or the bedrock/natural was reached.

Archaeological features, structures or remains identified in the course of the evaluation were trowel cleaned by hand. Investigation of such features, structures or deposits will be sufficient to determine their character, date, significance and quality.

The burnt mound feature yielded suitable material for dating/environmental processing, and samples were taken for processing off site.

The works will be carried out in accordance with the CIfA Standard and Guidance documents for Archaeological Field Evaluation (2023 revision).

A basic photographic record of the site was made prior to the commencement of works.

Heneb (Gwynedd) Archaeological Planning Services were informed of the discovery of the burnt mound feature and an appropriate mitigation strategy agreed. Fieldwork was to be conducted and managed by Catherine Rees (MCIfA) & Matthew Jones (MA) of CR Archaeology. Fieldwork was conducted by Matthew Jones and Dr Ian Brooks.

The excavation works were carried out in accordance with the CIfA Standard and Guidance documents (2014 and will include 2023 updates).

3.2.1 Recording

The record forms at CR Archaeology are based on the Historic England system and full written, graphic and photographic records were made in accordance with the Historic England *Field Recording Manual*. The written record comprises completed *pro-forma* record sheets.

Plans, sections and elevations were produced on archive standard stable polyester film at scales of 1:10, 1:20 or 1:50, as appropriate. Representative measured sections were produced as appropriate showing the

sequence and depths of deposits. All drawings were numbered and listed in a drawing register, these drawing numbers being cross-referenced to written site records. A 'Harris matrix' diagram will be constructed for the excavated area.

A high-resolution 20 mega-pixel Sony Alpha digital camera was used to create a photographic record of the site. This is comprised of photographs of archaeological features and appropriate groups of features and structures. Included in each photograph is an appropriate scale, north arrow and a record board detailing the site name, number and context number. General photographs were also be taken in the event of a negative result.

All photographic records will be indexed and cross-referenced to written site records. Details concerning subject and direction of view will be maintained in a photographic register, indexed by frame number. Images from photography will be stored in a loss-less digital format in this case '*.TIF'.

3.2.2 Additional Mitigation/Contingency Measures

No additional mitigation/contingency measures were required.

3.2.3 Recovery, Processing and Curation of Artefactual Material

No artefactual material was recovered during the works.

3.2.3.1 Material Selection Strategy

No artefactual material was recovered during the works.

3.2.3.2 Archive Compilation

All records created during the fieldwork were checked for consistency and accuracy and will form part of the *Primary Site Archive (P1)* (EH 2006). The archive will contain all data collected, including records and other specialist materials. It will be ordered, indexed, adequately documented, internally consistent, secure, quantified, conforming to standards required by the archive repository and signposted appropriately to ensure future use in research, as detailed in the English Heritage *Management of Research Projects in the Historic Environment* (MoRPHE) methodology.

The archive will be assembled in accordance with the guidelines published in, *Standards in the museum care of archaeological collections* (Museums & Galleries Commission 1994), *Guidelines for the preparation of excavation archives for long-term storage* (United Kingdom Institute for Conservation, 1990) and *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* (AAF 2007).

All materials contained within the *Primary Site Archive (P1)* that are subsequently identified by the *Assessment Report* (*P2)* as appropriate for analysis will be processed by suitable specialists and the resultant *Research Archive* (*P3)* will be checked and ordered according to *MoRPHE* criteria. It is hoped that any archive/artefactual material created/discovered during this archaeological project will be deposited at the county museum. Archive material will be deposited in accordance with the museum's terms and conditions for archive deposition. In the event that no artefactual material is recovered or that the material is retained by the landowner the paper/digital archive will be deposited at the RCAHMW.

A copy of the digital archive will be deposited with the GAT HER and with the RCAHMW. RCAHMW will be notified in advance of the deposition of any archive created by this archaeological project and archive material will be deposited in accordance with the organisation's terms and conditions for archive deposition.

3.2.3.3 Data Management Policy

A site-specific Data Management Plan has been created based upon the Historic England Archaeological Digital Archiving Protocol (ADAPt) Digital Preservation Policy (www.historicengland.org.uk/content/docs/research/adapt-digital-preservation-policy/). The format is based upon the Historic England pro forma document (www.historicengland.org.uk/research/methods/archaeology/archaeological-archives/

adapt -toolkit/). The document is included as Appendix B.

3.3 Timetable for Proposed Works
Site works commenced on January 20th, 2025, and took one week to complete. Further time was allotted for research, report compilation and site archiving.

3.4 Staffing
The project was managed by Catherine Rees (MCIfA, BA (Archaeology), MA (Archaeology) Postgraduate Diploma (Historic Environment Conservation) & Matthew Jones (BA (Archaeology), MA (Archaeology). The fieldwork was conducted by Matthew Jones and Dr Ian Brooks.

All projects are carried out in accordance with CIfA *Standard and Guidance* documents.

3.5 Monitoring
The project was subject to monitoring Heneb (Gwynedd) Archaeological Planning Services who will be kept informed of site progress and the results of the works.

3.6 Health and Safety
A risk assessment was conducted prior to the commencement of works and site staff were familiarised with its contents. A first aid kit was located in the site vehicle.

All staff will be issued with appropriate Personal Protective Equipment (PPE) for the site work.

- Hi-visibility vests (EN471)
- Mobile Telephone
- Steel toe capped boots
- Hard Hat

3.7 The Report
The reports clearly and accurately incorporates information gained from the programme of archaeological works. It presents the documentary evidence gathered in such a way as to create a clear and coherent record. The report contains a site plan showing the locations of photographs taken.

The final report includes:

- A bilingual summary
- A copy of the agreed Written Scheme of Investigation
- A location plan
- A plan showing the locations of the evaluation trenches
- All identified features and significant finds plotted on an appropriately scaled plan
- Full dimensional and descriptive detail of all identified finds and features
- A full bibliography of sources consulted.

A copy of the reports in Adobe PDF format will be sent to the appropriate monitoring archaeologist for approval before formal submission. A PDF digital copy of the reports will be submitted to Heneb as part of the formal submission. A digital Adobe PDF version of the final report and will be lodged with the Historic Environment Record within six months of completion of post excavation works. The 2018 Guidance for the Submission of the Data to the Welsh Historic Environment Records document will be followed.

A short article will be submitted to the Archaeology in Wales Journal.

3.7.1 Copyright
CR Archaeology and sub-contractors shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it hereby provides a licence to the client and the local authority for the use of the report by the client and the local authority in all matters directly relating to the project as described in the Project.

4.0 Geological Context
4.1 Topography
The site is located on Ffordd Glanffynnon, Llanrug on the southern outskirts of the village. The proposed development area is currently in agricultural use.

4.2 Geology
The bedrock geology at the site is recorded as "*Fachwen Formation - Siltstone and limestone, interbedded. Sedimentary bedrock formed between 635 and 508 million years ago during the Ediacaran and Cambrian periods*" (https://geologyviewer.bgs.ac.uk/).

The site superficial geology is recorded as "*Glaciofluvial Deposits, Devensian - Sand and gravel. Sedimentary superficial deposit formed between 116 and 11.8 thousand years ago during the Quaternary period.*" (https://geologyviewer.bgs.ac.uk/).

5.0 Historical Background
The following section is brief and is intended to merely place the site in context. A more detailed history of the site is included in full in report CR249-2024.

In order to identify the character of archaeological remains in the vicinity of the site a search of the Gwynedd HER was conducted examining an area within a 500m radius of the proposed works (the grid reference for the search is taken as the centre point of the development area). This was expanded to 1000m to examine general trends.

There were 7 HER entries for sites within a 500m search radius of the centre of the proposed development area - 0 entries of Prehistoric date, 1 entry of Roman date, 1 entry of Medieval date, 4 entries of Post Medieval date, and 1 entry of Multiperiod date.

When the search area was extended to a 1000m radius the HER returned 39 entries – 1 entry of Prehistoric date, 4 entries of Roman date, 2 entries of Medieval date (one of Medieval & Post Medieval date), 25 entries of Post Medieval date (one of Medieval & Post Medieval date), 3 entries of Modern date, 1 entry of Multiperiod date and 4 entries of Unknown date.

Due to the prehistoric date of the feature the relevant section from report CR249-2024 has been included:

"**5.1 Prehistoric**
There were no records of prehistoric date was recorded within the 500m search radius.

When the search area was expanded to 1000m a single record was returned. PRN 81553 records the findspot of a flat axe. The period attribution is Bronze Age although the artefact summary records the find to have been "*a Roman flat Axehead*".

6.0 Results of Evaluation Trenching

6.1 Evaluation Trench Excavation

Four evaluation trenches, each measuring 1.8m x 30m were excavated during this phase of works (figure 2). Each trench is described individually below. Area numbers were assigned in the previous phase of works and have been retained for ease of discussion. Trench 1 was located in Area 1, Trenches 2 and 3 were located in Area 3, and Trench 4 in Area 2.

6.1.1 Trench 1 (Plates 1 - 3)

Trench 1 was orientated on an approximately NW– SE axis and was located to examine an area of ferromagnetic responses identified during through geophysical survey. Three contexts were identified in the trench:

- Context (101) was the topsoil. The deposit was a mid-brown silty clay with frequent rounded and angular small-medium stone inclusions. The deposit had an average depth of 0.36m.
- Context (102) was a natural outcrop of loose stone, including large boulders and protruding bedrock.
- Context (103) was the underlying natural. It was an orange-brown silty clay with frequent stones.

The large bedrock outcrop corresponds with the geophysical anomaly, and no archaeological finds or features were uncovered in this trench.

6.1.2 Trench 2 (Plates 4 - 5)

Trench 2 was orientated on an approximately W– E axis. Two contexts were identified in the trench:

- Context (201) was the topsoil. The deposit was a mid-brown silty clay with frequent rounded and angular small-medium stone inclusions. The deposit varied in depth between 0.36 - 0.43m.
- Context (202) was the underlying natural. It was an orange-brown silty clay with frequent stones. The natural was banded and changed towards the eastern end of the trench. In this area the natural was notably stonier. This transition corresponds with the breakoff slope of a marshy area and may indicate an earlier stream/riverbed.

No archaeological finds or features were uncovered in this trench.

6.1.3 Trench 3 (Plates 6 - 16, Figures 3 & 4)

Trench 3 was orientated on an approximately NW– SE axis and was located to examine an area of ferromagnetic and magnetic responses identified during through geophysical survey. Nine contexts were recorded in the trench:

- Context (301) was the topsoil. The deposit was a mid-brown silty clay with frequent rounded and angular small-medium stone inclusions. The deposit varied in depth between 0.24m- 0.38m.
- Context (302) was the underlying natural. It was an orange-brown silty clay with frequent stones.

The remaining contexts were associated with a burnt mound and underlying features. Context (303) was assigned to the mound material, which measured approximately 17m in length in the trench section. The feature extended beyond the trench limits to the east and west. Deposit (303) was up to 0.55m in depth, tailing off at the edges of the mound. As is characteristic of burnt mound deposits the material was black and composed of c.90% small angular fire cracked stone. It was within a clay silt soil matric stained black, with frequent charcoal flecks and fragments. It is likely that although appearing to be a homogenous deposit the material will have been mixed and redeposited numerous times over the lifespan of the burnt mound.

Figure 2. Trench Location Plan

Plate 1. Trench 1
(View from the Southeast)

Plate 2. Trench 1
(View from the Northwest)

Plate 3. Trench 1 - Boulders in Natural (View from the Northwest)

Plate 4. Trench 2
(View from the East)

Plate 5. Trench 2
(View from the West)

A section approximately 0.75m wide was cut through mound material (303). The sondage was hand excavated, and three features were identified which were cut into the underlying natural (302). Due to the similarity of the feature fills with the overlying mound material it is possible that they may have been cut from a higher level but we not visible until the contrast with the surrounding natural enabled identification. Due to the location of the features in relation to the trench section they were not fully exposed in plan and extended beyond the limits of the excavated area.

Feature [304] was a pit or the round terminal of linear feature. It was not fully exposed in plan due to its position in the trench and measured c. 0.85m in the section edge. It survived to a maximum depth of 0.15m. The feature had a uniform profile with gradual concave sides and a flat base. It contained a single fill (305) which was indistinguishable from mound material (303).

Feature [306] was a possible small pit or the round terminal of linear feature. It was not fully exposed in plan due to its position in the trench and had a maximum width of 0.45m. It survived to a depth of 0.10m. Due to the shallow depth of the feature it was less clear than [304] and [309], and although it appeared to have a uniform profile with gradual concave sides and a flat base, on further excavation this feature may prove to be an undulation in the natural or a stone hole. It contained a single fill (307) which was indistinguishable from mound material (303).

Feature [309] extended across the sondage through material (303). It was excavated to a maximum depth of 0.6m (from the trench base). At this depth the excavation was ceased due to the instability of the trench edges and rising ground water. The feature had a width of c. 1.40m - 1.50m in the area excavated. The southwestern break of slope was clear and sharp, but uneven due to the large quantity of stone in the underlying natural. The northwestern side of the feature appears to be slightly stepped, although this could be due to the cut following stones in the natural. It would seem likely given the location and excavated dimensions of the feature that it is trough for the burnt mound. It contained a single fill (308) which was indistinguishable from mound material (303).

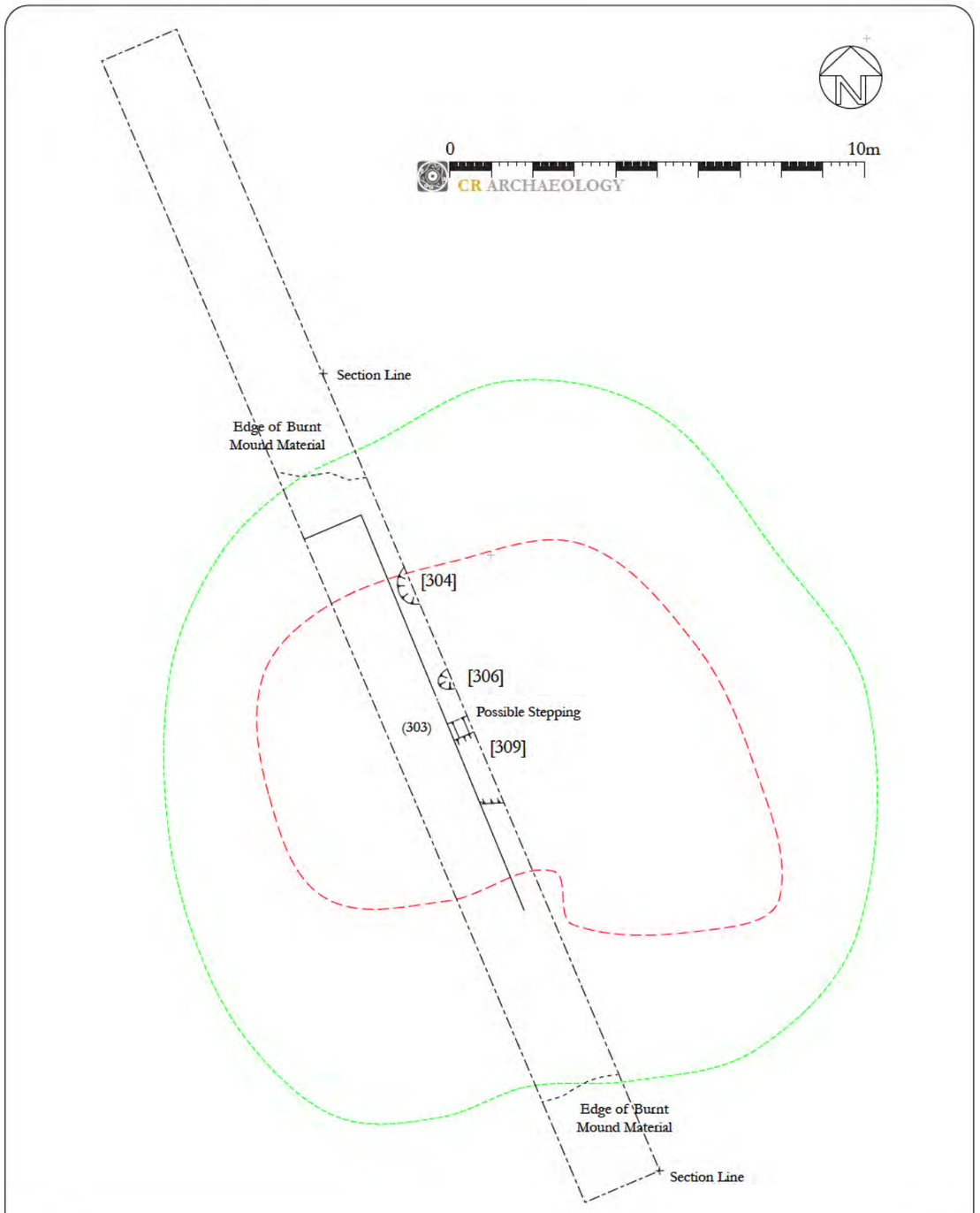
The burnt mound material was bulk sampled, and two radiocarbon dates were obtained on charcoal recovered through wet sieving. The results of these works is discussed below (Section 6.2).

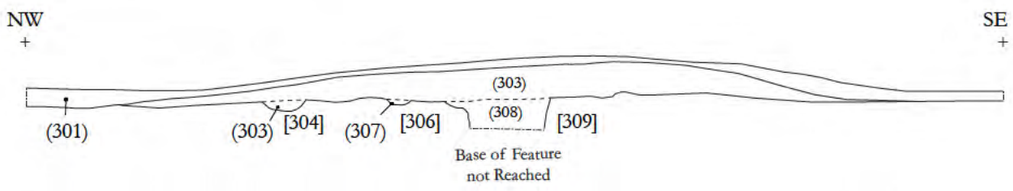
6.1.4 Trench 4 (Plates 17 - 20)
Trench 4 was orientated on an approximately NW– SE axis and was located to examine two possible linear anomalies identified through the geophysical survey. Five contexts were identified in the trench:

- Context (401) was the topsoil. The deposit was a mid-brown silty clay with frequent rounded and angular small-medium stone inclusions. The deposit had an average depth of 0.36m.
- Context (402) was the underlying natural. It was an orange-brown silty clay with frequent stones.
- Context (403) was an area where two natural boulders protruded from the clay and are believed to be the source of one of the linear anomalies.
- Context [404] the uneven shallow cut or indentation which measured approximately 2m by 2m in plan. It survived to a maximum depth of 0.08m. It contained a single fill – (405).
- Context (405) was the fill of feature [404]. It was a dark brown silty clay with occasional small, rounded stone inclusions. Two sherds of 19th century Buckley Ware (not retained) were recovered from the fill giving a secure post medieval date to the feature.

6.2 Burnt Mound Discussion

Two short life (twig) samples on unidentified wood from context (303) were submitted to SUERC Accelerator Mass Spectrometer Radiocarbon Laboratory for radiocarbon dating (table 1). Dates were calibrated using IntCal20 (Reimer et al 2020) and OxCal Version 4.4 (Bronk Ramsey 2009 and references therein). Dates are rounded out to the nearest 5 years. A full copy of the results is included as Appendix C.





Southwest Facing Section Through Burnt Mound and Associated Features

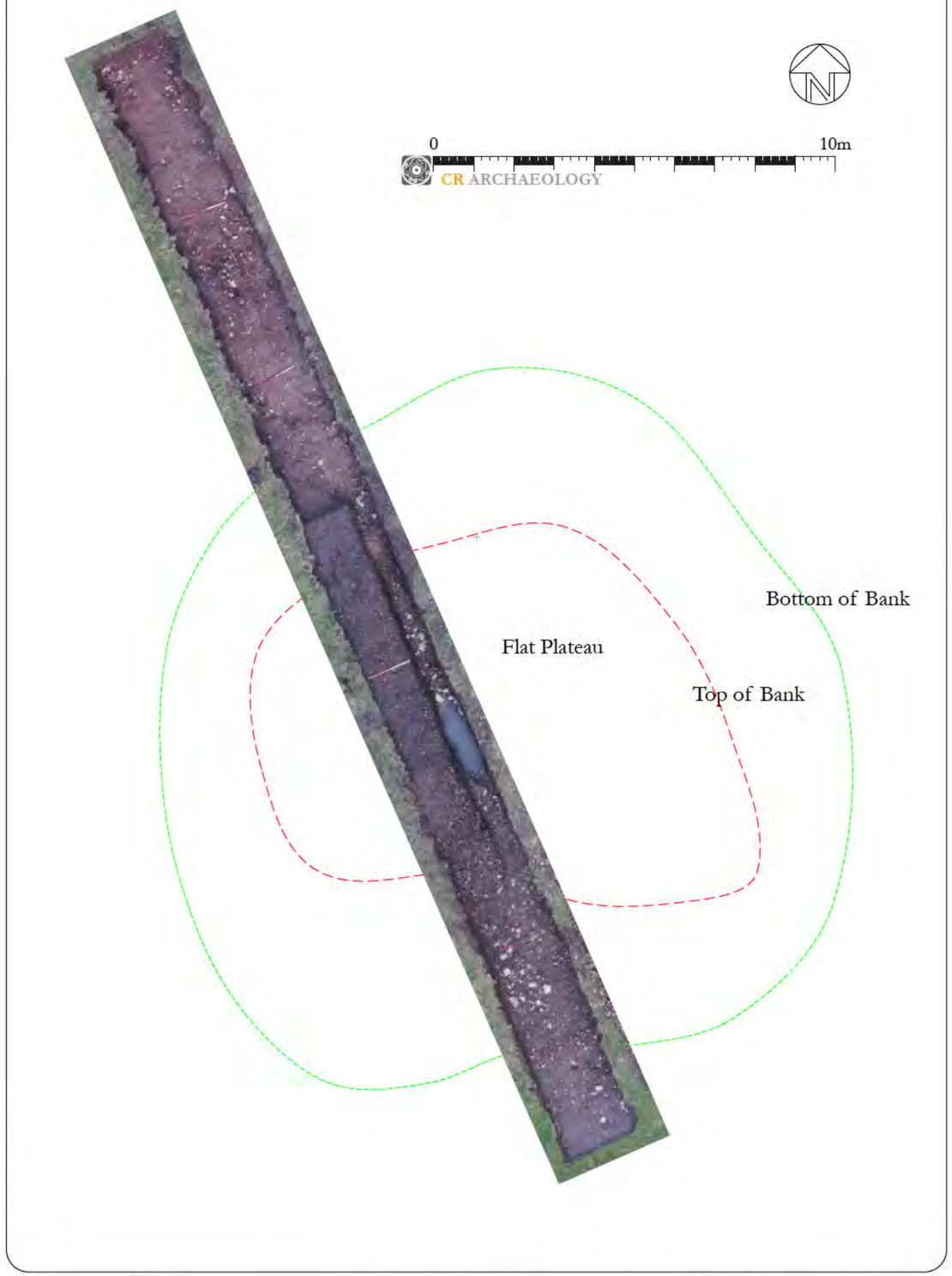


Figure 3. Plan and Section of Trench 3 Showing Burnt Mound and Related Features

Figure 4. Aerial Image of Trench 3 Showing Burnt Mound and Related Features. Note Water in Trough Feature

Plate 6. Trench 3 (View from the Northwest)

Plate 7. Trench 3 (View from the Northwest)

Plate 8. Trench 3 - Southwest Facing Sample Section

Plate 9 (Left). Trench 3 (View from the Southeast)

Plate 10 (Centre). Trench 3 (View from the Southeast)

Plate 11 (Right). Trench 3 - Southwest Facing Sample Section

Plate 12. Trench 3 - Southwest Facing Section Through Feature [304]

Plate 13. Trench 3 - Southwest Facing Section Through Feature [306]

Plate 14. Trench 3 - Northeast Facing Section Through Feature [309]

Plate 15. Trench 3 - Southwest Facing Section Through Feature [309]

Plate 16. Trench 3 Burnt Mound

Plate 17. Trench 4
(View from the Southeast)

Plate 18. Trench 4
Feature [404]
(View from the Southeast)

Plate 19. Trench 4
(View from the Northwest)

Plate 20. Trench 4
Section Through Feature [404]
(View from the Northwest)

Sample Description	Context	Sample ID	Date	Error	Calibrated Date (95.4%)	Carbon 13
Charcoal (Twig)	(303)	SUERC-134071	2779	24	980 – 860 cal BC	-25.4 ‰
Charcoal (Twig)	(303)	SUERC-134072	3162	24	1490 – 1415 cal BC	-26.0 ‰

Table 1. Radiocarbon Dates and Sample Details

The R_Combine function was applied to the two radiocarbon dates to determine whether it was statistically possible that both samples could have been the result of a single event – for example a single burning episode. There was poor agreement for this hypothesis, and it is therefore extremely unlikely that this was the case (see figure 11).

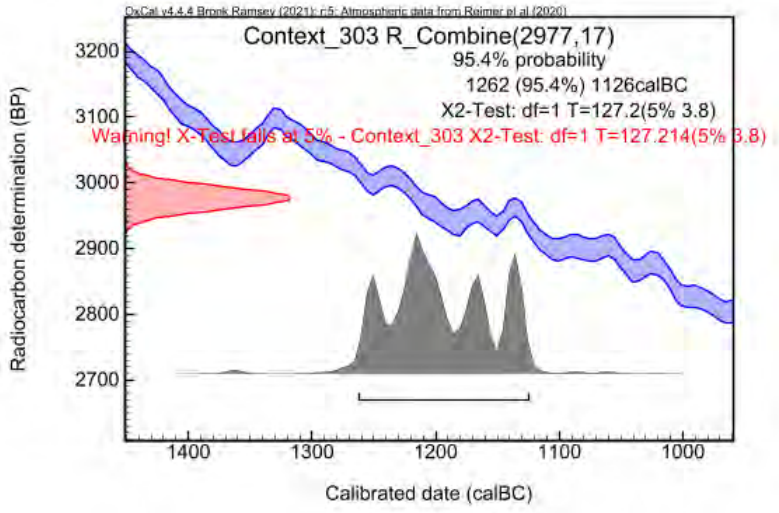


Figure 11. Poor Agreement following Application of R_Combine Function

The radiocarbon dates place the use of the burnt mound in the later Bronze Age (c.1600 – 700 BCE) (Forum on Information Standards in Heritage http://heritage-standards.org.uk/chronology/). Although there are currently insufficient dates to produce a model, the dates demonstrate that the site was potentially in use for hundreds of years – albeit on an intermittent basis.

Burnt mounds (*fulachta fiadh* in Ireland) as a monument class are defined as "*A mound of fire-cracked stones, normally accompanied by a trough or pit which may have been lined with wood, stone or clay. Assumed to be locations where heated stones were used to boil water primarily for cooking purposes*" (Forum on Information Standards in Heritage https://heritage-standards.org.uk/2021/02/Mon_alpha.pdf). Similarly the definition cited in Hodder and Barfield's seminal publication *Burnt Mounds and Hot Stone Technology* (1990: 1) reads "*A burnt mound is defined as an accumulation of fire-crazed stones, ash and charcoal, usually sited next to a river or lake, with hearths and/or some form of trough or basin capable of holding waterer within or adjacent to it*". The location of the burnt mound encountered in Trench 3 is consistent with this observation, with a stream running along the eastern field boundary (see figure 2). The course of the stream has been altered and straightened in line with a Post Medieval field boundary and is likely to have been closer to the burnt mound when the mound was in use.

Burnt mounds were created through the repeated heating of stones in a hearth and transferring the hot stones to a water filled trough or pit to heat the water. Fire cracked stones were discarded when the shattered fragments became too small to use, creating an often crescent shaped mound around the trough

(Kenney 2021: 76). Despite the wealth of sites, there is still much debate as to the uses of this hot water with interpretations ranging from cooking – particularly for feasting activity, brewing, bathing/saunas or industrial uses such as for dying or salt production (Barfield 1990, Kenney 2021: 77). Interpretation is hindered by the lack of artefactual material with a distinct absence of finds such animal bone, pottery, settlement debris from the vast majority of sites – including this one.

The advent of routine radiocarbon dating of burnt mounds has improved our understanding of their chronology. The findings of Brindley and Lanting cited by Buckley (1990: 5) based upon 36 samples from Ireland suggested that burnt mounds were in use from the Early Bronze Age through to the late Medieval period, with the majority of sites of Bronze Age date.

Kenney (2012) conducted an in depth study of burnt mounds in northwest Wales, identifying over 200 sites within the Historic Environment Record area maintained by Gwynedd Archaeological Trust. The number has increased since this date. Kenney collated the available radiocarbon dates determining that despite some outliers, the majority of burnt mound activity started shortly after 2500 cal BC and ended around 800 cal BC. The dates from the study site fall comfortably within the later part of this date range.

7.0 Conclusion

The evaluation trenching works undertaken at Land off Ffordd Glanffynnon, Llanrug, Gwynedd identified a Later Bronze Age burnt mound with associated pits and trough. This monument type is common throughout Wales and fits within the established pattern of being located near watercourses.

Should planning permission be granted for this site further investigation of this monument is recommended to define its limits and to identify any further associated features. Additional radiocarbon dates would be beneficial to allow for chronological modelling of the site to determine the start and duration of site use.

8.0 Bibliography

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https://heritage-standards.org.uk/2021/02/Mon_alpha.pdf

Appendix A.
Specifications for Archaeological Works

Written Scheme of Investigation -

Archaeological Evaluation (Evaluation Trenching) at

Land off Ffordd Glanffynnon, Llanrug, Gwynedd

NGR SH 53649 63021 (Central Point)

Project Number CR249-2024B

CR ARCHAEOLOGY
Compiled by C. Rees and M. Jones
On Behalf of Adra (Tai) Cyfyngedig

Written Scheme of Investigation Archaeological Evaluation (Evaluation Trenching) at Land off Ffordd Glanffynnon, Llanrug, Gwynedd

Planning Application Number:	Pre-Application (Reference 2023.128_02)
National Grid Reference:	SH 53649 63021 (Central Point)
Client:	Adra (Tai) Cyfyngedig
Report Author:	Catherine Rees and Matthew Jones
Report Number:	CR249-2024B
Date:	09/12/2024

Contents

1.0 Introduction

CR Archaeology have been instructed by Adra (Tai) Cyfyngedig to conduct a programme of archaeological works at the at the proposed site of a new residential development (Appendix A).

The village of Llanrug is a settlement associated with the slate industry and is described as a "*nineteenth century village superimposed on an earlier, possibly eighteenth century, pattern of enclosure on the river meadows by the Afon Rhyddallt*" (Gwynedd HER PRN 15846).

This document has been prepared to supply the client and statutory bodies including the Local Planning Authority Archaeologist with information as to the archaeological potential, impact and constraints on the aforementioned scheme. It outlines the methodology for the second phase of works following the completion of a Desk Based Assessment, Walkover Survey and Geophysical Survey (document CR249-2024). The Desk Based Assessment showed that whilst there is relatively little archaeological activity recorded in the vicinity of the site, the rural location and previously undeveloped nature of the site would make it a potential location for stray finds or isolated features/feature groups of prehistoric, early medieval or medieval date.

Gradiometer survey identified a limited number of magnetic anomalies, largely ferromagnetic responses thought to be from modern disturbance. One anomaly was distinctly rectilinear in plan and measured approximately 16.5m x 14.5m and is believed to be of possible archaeological origin. It was unclear as to the precise nature of this anomaly but it possible it represents the remains of a building – although there are none shown in this area on historic mapping and does not align with the field boundaries. An alternative possibility is that this may be a burnt mound – a hypothesis supported by the proximity of the anomaly to a stream.

This Written Scheme of Investigation details a programme for an Archaeological Evaluation (trenching) at the site. Four evaluation trenches will target the anomalies identified through geophysical survey.

2.0 Project Aims & Objectives

The aim of this programme of works is to undertake Archaeological Evaluation Trenching at the proposed development site. Four evaluation trenches will target the anomalies identified through geophysical survey.

It aims to examine the potential archaeological resource surviving at the site and to provide information which will be utilised to determine an appropriate methodology for any further archaeological mitigation which may be required at the site.

The programme of archaeological works also aims to assess the survival, character and date of any archaeological remains uncovered and to excavate, record and analyse all archaeological remains uncovered within the trenches.

This project aims to fulfil the criteria for undertaking an Archaeological Field Evaluation as specified in the CIfA Standard and Guidance documents (2023 updates - https://www.archaeologists.net /codes/cifa).

It is intended that this document be utilised to inform further archaeological planning decisions and conditions at the site.

The objectives of this programme of works are:

- To make full and effective use of the resulting information to establish the archaeological significance of the site
- To assess the presence, survival, character and date of any archaeological remains
- To excavate/record any archaeological remains uncovered.

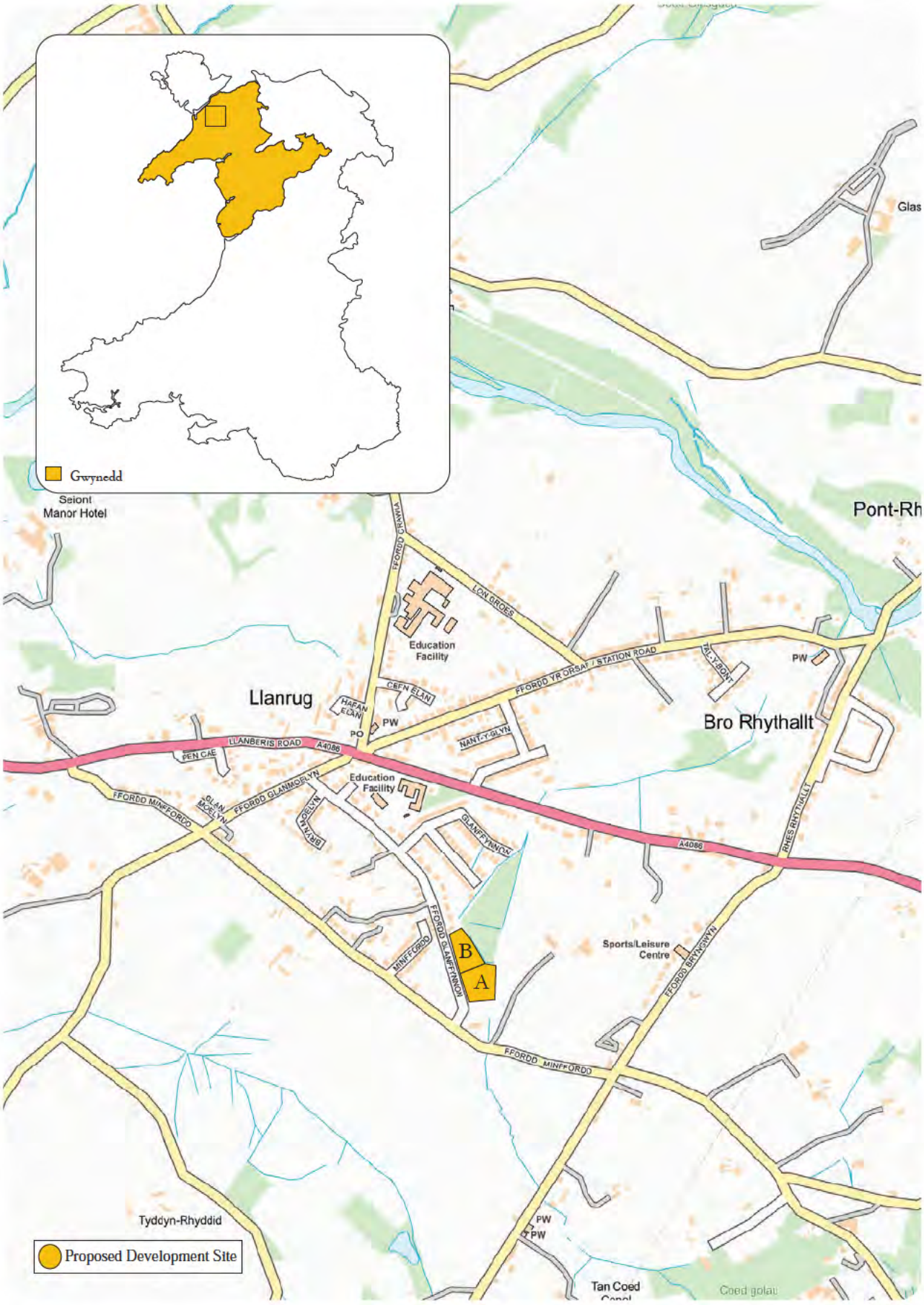

Figure 1. Site Location Map
(Source: OS Open Data Mapping Contains Ordnance Survey data © Crown copyright and database right 2018)

- To help inform future decision making, design solutions, further evaluation & mitigation strategies.

3.0 Brief Historical Background

The following section is brief and is intended to merely place the site in context. A more detailed history of the site is included in full in report CR249-2024.

In order to identify the character of archaeological remains in the vicinity of the site a search of the Gwynedd HER was conducted examining an area within a 500m radius of the proposed works (the grid reference for the search is taken as the centre point of the development area). This was expanded to 1000m to examine general trends.

There were 7 HER entries for sites within a 500m search radius of the centre of the proposed development area - 0 entries of Prehistoric date, 1 entry of Roman date, 1 entry of Medieval date, 4 entries of Post Medieval date, and 1 entry of Multiperiod date.

When the search area was extended to a 1000m radius the HER returned 39 entries – 1 entry of Prehistoric date, 4 entries of Roman date, 2 entries of Medieval date (one of Medieval & Post Medieval date), 25 entries of Post Medieval date (one of Medieval & Post Medieval date), 3 entries of Modern date, 1 entry of Multiperiod date and 4 entries of Unknown date.

4.0 Geological Context

4.1 Topography

The site is located on Ffordd Glanffynnon, Llanrug on the southern outskirts of the village. The proposed development area is currently in agricultural use.

4.2 Geology

The bedrock geology at the site is recorded as "*Fachwen Formation - Siltstone and limestone, interbedded. Sedimentary bedrock formed between 635 and 508 million years ago during the Ediacaran and Cambrian periods*" (https://geologyviewer.bgs.ac.uk/).

The site superficial geology is recorded as "*Glaciofluvial Deposits, Devensian - Sand and gravel. Sedimentary superficial deposit formed between 116 and 11.8 thousand years ago during the Quaternary period.*" (https://geologyviewer.bgs.ac.uk/).

5.0 Scheme of Works – Methodology

The work to be undertaken at the site is an Archaeological Evaluation (Evaluation Trenches) and the following section details the methodology for the research, site work, post excavation and archiving associated with the project.

5.1 Desk Based Research

A complete and coherent history of the site was compiled during the previous phase of works. This will be utilised in the interpretation of the results of the trenching works. Additional research will be undertaken as necessary following a positive trenching result.

The works were/will be carried out accordance with the CIfA Standards and Guidance for historic environment desk-based assessment (CIfA Revised 2009 & 2014, 2020 update).

This material will form the historical background for a full archaeological report and will be utilised to aid the interpretation of the results of the evaluation trenching.

5.2 Methodology for Archaeological Evaluation Trenching
Four evaluation trenches measuring 1.8m x 30m will be excavated within the proposed development site using a mechanical excavator fitted with a toothless bucket. The trenches are targeted on features identified during the geophysical survey. The proposed trench array is shown in figure 2.

All machine excavation will be supervised by an archaeologist from CR Archaeology. The trenches will be excavated until an archaeological horizon or the bedrock/natural is reached. When it is felt that the natural has been reached, if possible the machine will be used to excavate a sondage into the deposit to confirm that it has not been redeposited and that the material is the natural.

In the event of modern hard standing being uncovered, a sondage will be machine excavated to determine the depth of this deposit. If safe to do so the modern deposit will be removed to assess the survival of underlying deposits. If the deposit is of a considerable depth it will not be removed and the trench will be excavated to this level to attempt to determine the extent of the modern disturbance.

Any archaeological features, structures or remains identified in the course of the evaluation will be trowel cleaned by hand. Investigation of such features, structures or deposits will be sufficient to determine their character, date, significance and quality. Excavation will generally involve the removal of 50% of pits/posthole fills and 25% of the fills of ditches/large linear features.

If features yield suitable material for dating/environmental processing, then samples will be taken for processing off site. The size of these samples will depend on the size of the feature but for smaller features a sample of up to 95% will be taken. For larger features a sample of up to 40 litres will be taken. In the event of a significant discovery Heneb (Gwynedd) Archaeological Planning Services will be informed of the discovery and a mitigation strategy agreed before works will progress.

Should structural remains be uncovered during the works they will be fully exposed within the trenches and excavated to establish the presence/absence of intact floor levels. If floors are found the floors will be cleaned and recorded but not excavated further at this stage.

The works will be carried out in accordance with the CIfA Standard and Guidance documents for Archaeological Field Evaluation (2023 revision).

A basic photographic record of the site will be made prior to the commencement of works, which will be used for reference and to aid with the interpretation of the site.

In the event of a significant discovery Heneb (Gwynedd) Archaeological Planning Services will be informed of the discovery and an appropriate mitigation strategy agreed before works will progress. Fieldwork is to be conducted and managed by Catherine Rees (MCIfA) & Matthew Jones (MA) of CR Archaeology.

The excavation works will be carried out in accordance with the CIfA Standard and Guidance documents (2014 and will include 2023 updates).

5.2.1 Recording
The record forms at CR Archaeology are based on the Historic England system and full written, graphic and photographic records will be made in accordance with the Historic England *Field Recording Manual*. Sample forms can be provided on request. The written record shall comprise completed *pro-forma* record sheets.

Plans, sections and elevations will be produced on gridded, archive standard stable polyester film at scales of 1:10, 1:20 or 1:50, as appropriate. Representative measured sections will be prepared as appropriate showing the sequence and depths of deposits. All drawings will be numbered and listed in a drawing

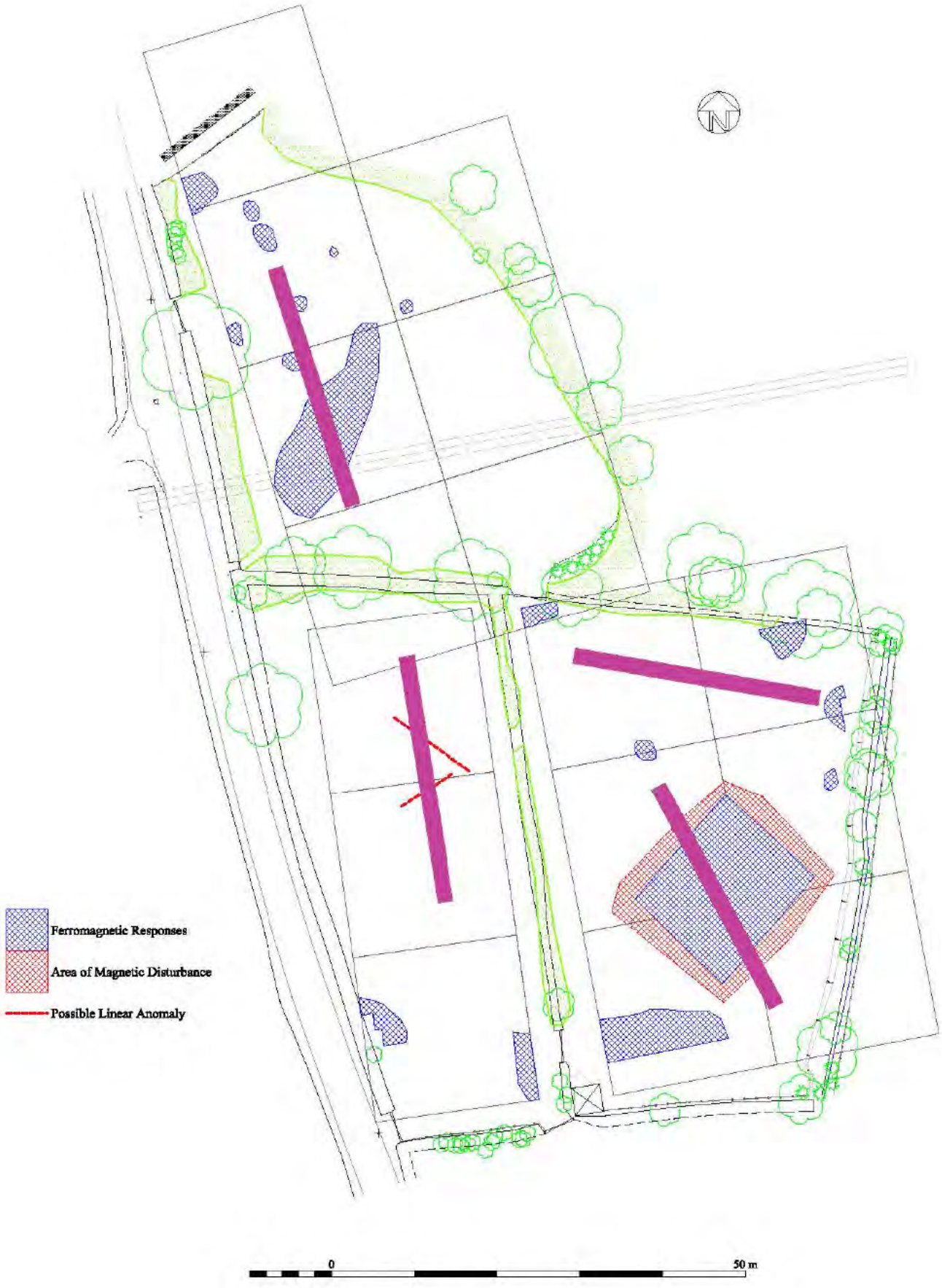

Figure 2. Proposed Trench Layout

register, these drawing numbers being cross-referenced to written site records. A 'Harris matrix' diagram will be constructed for the excavated area.

A high-resolution 20 mega-pixel Sony Alpha digital camera will be used to create a photographic record of the site. This will be comprised of photographs of archaeological features and appropriate groups of features and structures. Included in each photograph will be an appropriate scale, north arrow and a record board detailing the site name, number and context number. General photographs will also be taken in the event of a negative result.

All photographic records will be indexed and cross-referenced to written site records. Details concerning subject and direction of view will be maintained in a photographic register, indexed by frame number. Images from photography will be stored in a loss-less digital format in this case '*.TIF'.

5.2.2 Additional Mitigation/Contingency Measures

In the event of a significant archaeological discovery being made during the excavation, CR Archaeology will immediately inform both the client and the development control archaeologist. Consultation will take place between CR Archaeology, Heneb (Gwynedd) Archaeological Planning Services and the client with regards to the most suitable course of action.

In the event that human remains are encountered site work will cease with immediate effect. The coroner, client and monitoring body will be informed immediately. The company will abide by the requirements of Section 25 of the Burial Act 1857. Any arrangements regarding the discovery of human remains will be at the discretion of HM Coroner whose instruction/permission will be sought.

All human remains are to be preserved *in situ*, covered and protected. They will only be removed in exceptional circumstances and with the appropriate Ministry of Justice licence, environmental health regulations, Coroner's permission and, if appropriate, in compliance with the Disused Burial Grounds (Amendment) Act 1981 or other local Act, with adequate security provided in such cases. Should this be undertaken a separate specification for works will be prepared detailing the excavation and post-excavation strategies.

Any artefacts recovered that fall within the scope of the Treasure Act 1996 will be reported to the landowner, Heneb (Gwynedd) Archaeological Planning Services and to HM Coroner.

5.2.3 Recovery, Processing and Curation of Artefactual Material

All recovered artefactual material will be retained, cleaned, labelled and stored according to *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials (Updated 2020) and First Aid for Finds (Watkinson & Neal* 2001). The aim will be to create a stable, ordered, well-documented, accessible material archive forming a resource for current and future research (CIfA 2008, revised 2014, updated 2020).

All artefactual material will be bagged and labelled with the site code and context number prior to their removal from site. The archive reference number will be clearly marked on all finds. Each assemblage will be examined according to typological or chronological criteria and conservation needs identified. An assessment report of all post-medieval material will be produced by Matthew Jones, prehistoric pottery will be examined by Frances Lynch and lithics by Dr Ian Brooks. A list of further specialists will submitted if necessary and the relevant expertise will be sought. Any specialist conservation necessary will be undertaken by Cardiff Conservation Services, Cardiff University. This will be conducted in accordance with guidelines issued by the Institute for Conservation.

Following analysis, it is proposed that archaeological material recovered and the paper/digital archive will be deposited in the local museum. A copy of the digital archive will be deposited with the RCAHMW.

Processed assemblages will be boxed according to issued guidelines and a register of contents compiled prior to deposition. The works will be carried out in accordance with The Chartered Institute for Archaeologists: *Standard and Guidance for Archaeological Field Evaluation* (2023).

5.2.3.1 Material Selection Strategy
The material selected for retention will be determined in accordance with the National Panel for Archaeological Archives in Wales Archaeological Archives: Selection, Retention and Disposal Guidelines for Wales (http://www.welshmuseumsfederation.org/uploads/online%20resources/National%20Archaeology%20standards%20wales%202017/natstandardsfinal2019.pdf).

5.2.3.2 Archive Compilation
All records created during the fieldwork will be checked for consistency and accuracy and will form part of the *Primary Site Archive (P1)* (EH 2006). The archive will contain all data collected, including records and other specialist materials. It will be ordered, indexed, adequately documented, internally consistent, secure, quantified, conforming to standards required by the archive repository and signposted appropriately to ensure future use in research, as detailed in the English Heritage *Management of Research Projects in the Historic Environment* (MoRPHE) methodology.

The archive will be assembled in accordance with the guidelines published in, *Standards in the museum care of archaeological collections* (Museums & Galleries Commission 1994), *Guidelines for the preparation of excavation archives for long-term storage* (United Kingdom Institute for Conservation, 1990) and *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* (AAF 2007).

All materials contained within the *Primary Site Archive (P1)* that are subsequently identified by the *Assessment Report* (*P2)* as appropriate for analysis will be processed by suitable specialists and the resultant *Research Archive* (*P3)* will be checked and ordered according to *MoRPHE* criteria. It is hoped that any archive/artefactual material created/discovered during this archaeological project will be deposited at the county museum. Archive material will be deposited in accordance with the museum's terms and conditions for archive deposition. In the event that no artefactual material is recovered or that the material is retained by the landowner the paper/digital archive will be deposited at the RCAHMW.

A copy of the digital archive will be deposited with the GAT HER and with the RCAHMW. RCAHMW will be notified in advance of the deposition of any archive created by this archaeological project and archive material will be deposited in accordance with the organisation's terms and conditions for archive deposition.

5.2.3.3 Data Management Policy
A site-specific Data Management Plan has been created based upon the Historic England Archaeological Digital Archiving Protocol (ADAPt) Digital Preservation Policy (www.historicengland.org.uk/content/docs/research/adapt-digital-preservation-policy/). The format is based upon the Historic England pro forma document (www.historicengland.org.uk/research/methods/archaeology/archaeological-archives/adapt -toolkit/). The preliminary document is included as Appendix B.

5.3 Timetable for Proposed Works
It is envisaged that the works will commence in January 2025 and up to three weeks has been allotted for the works. Further time has been allotted for research, report compilation and site archiving.

5.4 Staffing
The project will be managed by Catherine Rees (MCIfA, BA (Archaeology), MA (Archaeology) Postgraduate Diploma (Historic Environment Conservation) & Matthew Jones (BA (Archaeology), MA (Archaeology). The fieldwork will be conducted by Matthew Jones and/or Catherine Rees.

All projects are carried out in accordance with CIfA *Standard and Guidance* documents.

5.5 Monitoring
The project will be subject to monitoring Heneb (Gwynedd) Archaeological Planning Services who will be kept informed of site progress and the results of the works. A site visit will be arranged as necessary.

5.6 Health and Safety
A risk assessment will be conducted prior to the commencement of works and site staff will be familiarised with its contents. A first aid kit will be located in the site vehicle.

All staff will be issued with appropriate Personal Protective Equipment (PPE) for the site work. Initially this is anticipated to consist of:

- Hi-visibility vests (EN471)
- Mobile Telephone
- Steel toe capped boots
- Hard Hat

Any further PPE required will be provided by CR Archaeology.

5.7 The Report
The reports will clearly, and accurately incorporate information gained from the programme of archaeological works. It will present the documentary evidence gathered in such a way as to create a clear and coherent record. The report will contain a site plan showing the locations of any photographs taken.

The final report will include:

- A bilingual summary
- A copy of the agreed Written Scheme of Investigation
- A location plan
- A plan showing the locations of the evaluation trenches
- All identified features and significant finds plotted on an appropriately scaled plan
- Full dimensional and descriptive detail of all identified finds and features
- A full bibliography of sources consulted

A copy of the reports in Adobe PDF format will be sent to the appropriate monitoring archaeologist for approval before formal submission. A PDF digital copy of the reports will be submitted to Heneb as part of the formal submission. A digital Adobe PDF version of the final report and will be lodged with the Historic Environment Record within six months of completion of post excavation works. The 2018 Guidance for the Submission of the Data to the Welsh Historic Environment Records document will be followed.

A short article will be submitted to the Archaeology in Wales Journal and other publications as appropriate.

5.7.1 Copyright
CR Archaeology and sub-contractors shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it hereby provides a licence to the client and the local authority for the use of the report by the client and the local authority in all matters directly relating to the project as described in the Project.

6.0 Bibliography

AAF. 2007. ***Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation***

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The Chartered Institute for Archaeologists. 2023. ***Universal Guidance for Archaeological Field Evaluation.***

Walker, K.1990. ***Guidelines for the preparation of excavation archives for long-term storage.*** United Kingdom Institute for Conservation (UKIC) Archaeology Section

Websites – all sites were visited 09/12/2024

https://geologyviewer.bgs.ac.uk/

Appendix A.
Proposed Development Plans

PRINTED:		15/03/2024 15:08:05		
REV:	DESCRIPTION:	DATE:	BY:	CHK:
P1	FIRST ISSUE	15/03/2024	ME	DP

OPTION 4

HOUSE TYPES

TYPE		AMOUNT
6P4B WCB	6P4B WC BUNGALOW	1
3P2B BUNG	3P2B BUNGALOW	4
4P2B	4P2B HOUSE	7
5P3B	5P3B HOUSE	7

TOTAL 19

POS PROVISION BASED ON PRE PLANNING APPLICATION COMMENTS (FIT BENCHMARK) : 24000m² PER 1000 POPULATION

24m² (AREA PP) x 81 (SITE POPULATION) = 1944m²

REQUIREMENT: 1944m²
POS ACHIEVED: 1316m²

N

0 5 10 15 20 25 m

1:500 @ A2

saer architects

www.saer.wales | 01492 472478 | studio@saer.wales

PROJECT:
FFORDD GLANFFYNNON, LLANRUG

CLIENT:
ATTICUS LAND AND DEVELOPMENT

DRAWING TITLE:
FEASIBILITY OPTION 4

DRAWING STATUS:	STATUS:
FOR COMMENTS	S3
DRAWING No:	PROJECT No:
FGL-SAL-A1-ZZ-DR-A-0SK04	P1212
SCALE:	REVISION:
1 : 500@A2	P1

Appendix B.
Data Management Plan

Data Management Plan

Project Outline

Project Manager	Catherine Rees
Project Number	CR249-2024
Project Name	Ffordd_Glanffynnon_Llanrug
Author(s)	C. Rees
Origination Date:	23-09-2024
Reviser(s)	
Date of last revision	15-08-2025
Project stages covered	Archaeological Evaluation – Trial Trenching
Version	1.0
Status	Complete
Summary of Changes	n/a
File Name/Location	H: CR Archaeology 2024-2025 Projects: CR249-2024_ Ffordd_Glanffynnon_Llanrug
Related Policies	CR249-2024_ Ffordd_Glanffynnon_Llanrug _Eval_Selection_Strategy

Data Collection/Creation

Data to be Collected/Created	The CR Archaeology standard pro forma recording system were used on site. Images will be created according to standards set out in ADAPt Guidance. All file formats created meet the standards set out in ADAPt. Drawings were created by hand on polyester drawing film, using 4H/6H Staedtler Mars Lumograph pencils and scanned in at standards set out in ADAPt. The documentary archive consists of: Text: Various Word Documents; including Project Design, Assessment Reports, Site Archive Completion Report. Databases: Excel database Images: Hard copy drawings, digital images, site photography (JPEG & TIFF), scanned drawings

How Data will be Collected/Created	The data was created according to the CR Archaeology Recording Manual, and ADAPt
Relations	Were data was derived in whole or in part from published or unpublished sources, whether printed or machine-readable, references have been made to the original material.

Documentation and Metadata

Metadata	Metadata will be created to the standard set out in ADAPt
Documentation	N/A

Ethical and Legal Compliance

Data Security Issues	There are no data security issues.
Intellectual Property Rights	The data and reports created by any external specialists will be CR Archaeology Copyright; this will be managed through their contracts.

Data Storage

Storage and Backup	Data will be stored on the CR Archaeology Network. During excavation was managed in line with Project Procedures for backing up data and transfer to network.
Access and Security	Data was made available to the project team through the CR Archaeology network. There are no security issues.

Selection and Preservation

Preservation Plan	The physical archive, the documentary archive and the digital archive will be deposited with the artefactual material at the local museum/archive. The documentary archive will contain any hard copy data reports the repository wish to receive. A copy of the digital archive will be sent to the RCAHMW. Copies of the project report and photographs will be deposited with the appropriate HER.

Data Sharing

Data Sharing Plan	The data generated from this project will be made publicly available through the digital repositories. Awareness of the work will be raised through publication, and documentation with the HER.
Data Sharing Restrictions	There are no restrictions on the use of this data after project completion.

Responsibilities and Resources

Responsibilities	The Project Manager and Archaeological Archives Curator are responsible for ensuring the data management plan is followed.
Resources	Resources required to deliver this plan are covered by standard CR Archaeology resources and the project design. The costs of deposition of the archive are covered by the client.

Appendix C.
Radiocarbon Dates

SUERC | RADIOCARBON LABORATORY

Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Prof. Darren F Mark Tel: +44 (0)1355 223332 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

13 August 2025

Laboratory Code	SUERC-134071 (GU71611)
Submitter	Catherine Rees CR Archaeology 62 Hendy Tal y Bont Conwy LL32 8JQ
Site Reference	CR249-2025 Llanrug Housing
Context Reference	303
Sample Reference	1
Material	Charcoal : Unidentified Wood
$\delta^{13}C$ relative to VPDB	-25.4 ‰
Radiocarbon Age BP	2779 ± 24

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

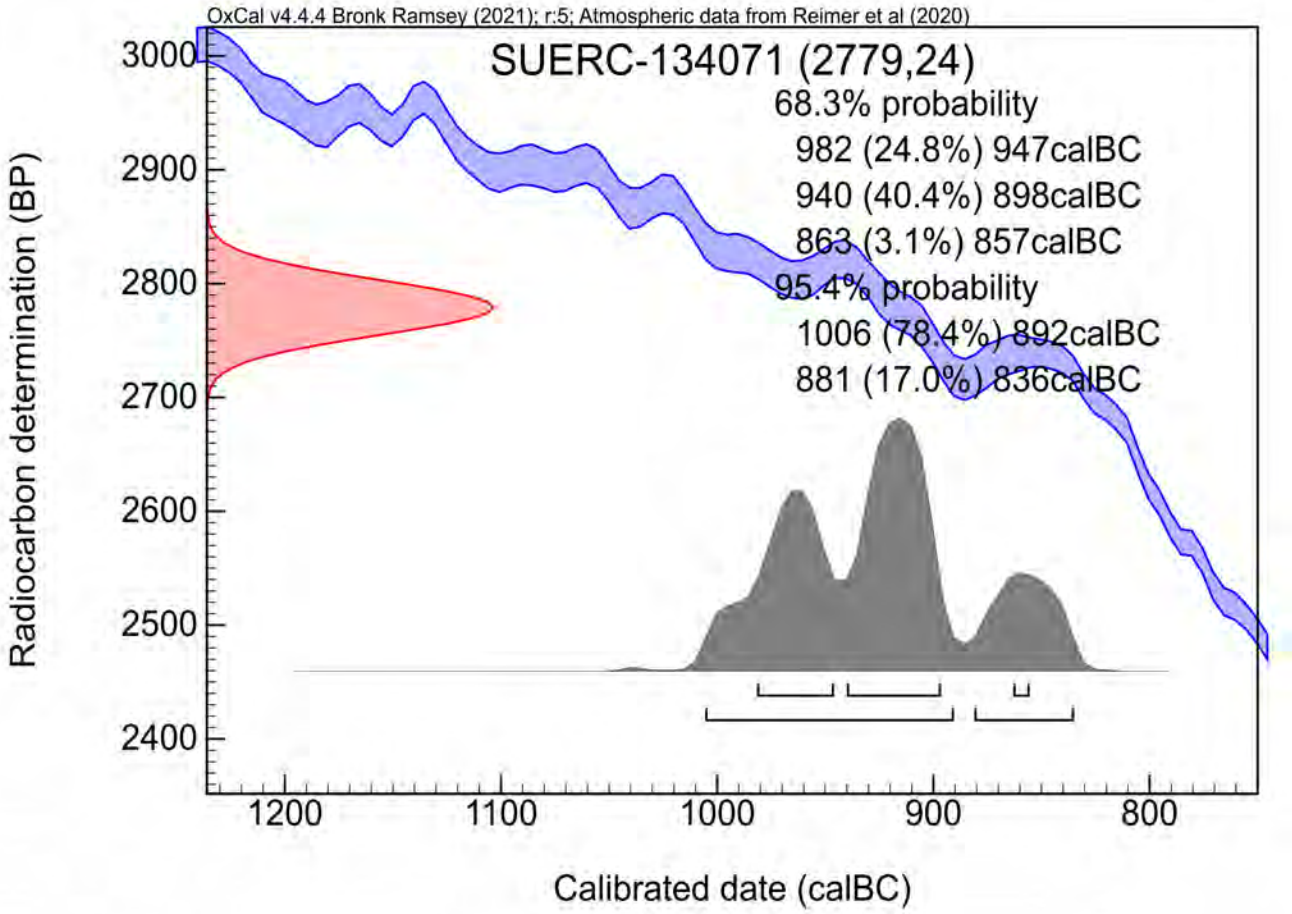
Samples with a SUERC coding are measured at the SUERC AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : E. Dunbar

Checked and signed off by : Helen Rose Knill



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal20 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*
† Reimer et al. (2020) *Radiocarbon 62(4) pp.725-57*

SUERC | RADIOCARBON LABORATORY

Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Prof. Darren F Mark Tel: +44 (0)1355 223332 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

13 August 2025

Laboratory Code	SUERC-134072 (GU71612)
Submitter	Catherine Rees CR Archaeology 62 Hendy Tal y Bont Conwy LL32 8JQ
Site Reference	CR249-2025 Llanrug Housing
Context Reference	303
Sample Reference	2
Material	Charcoal : Unidentified Wood
$\delta^{13}C$ relative to VPDB	-26.0 ‰
Radiocarbon Age BP	3162 ± 24

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

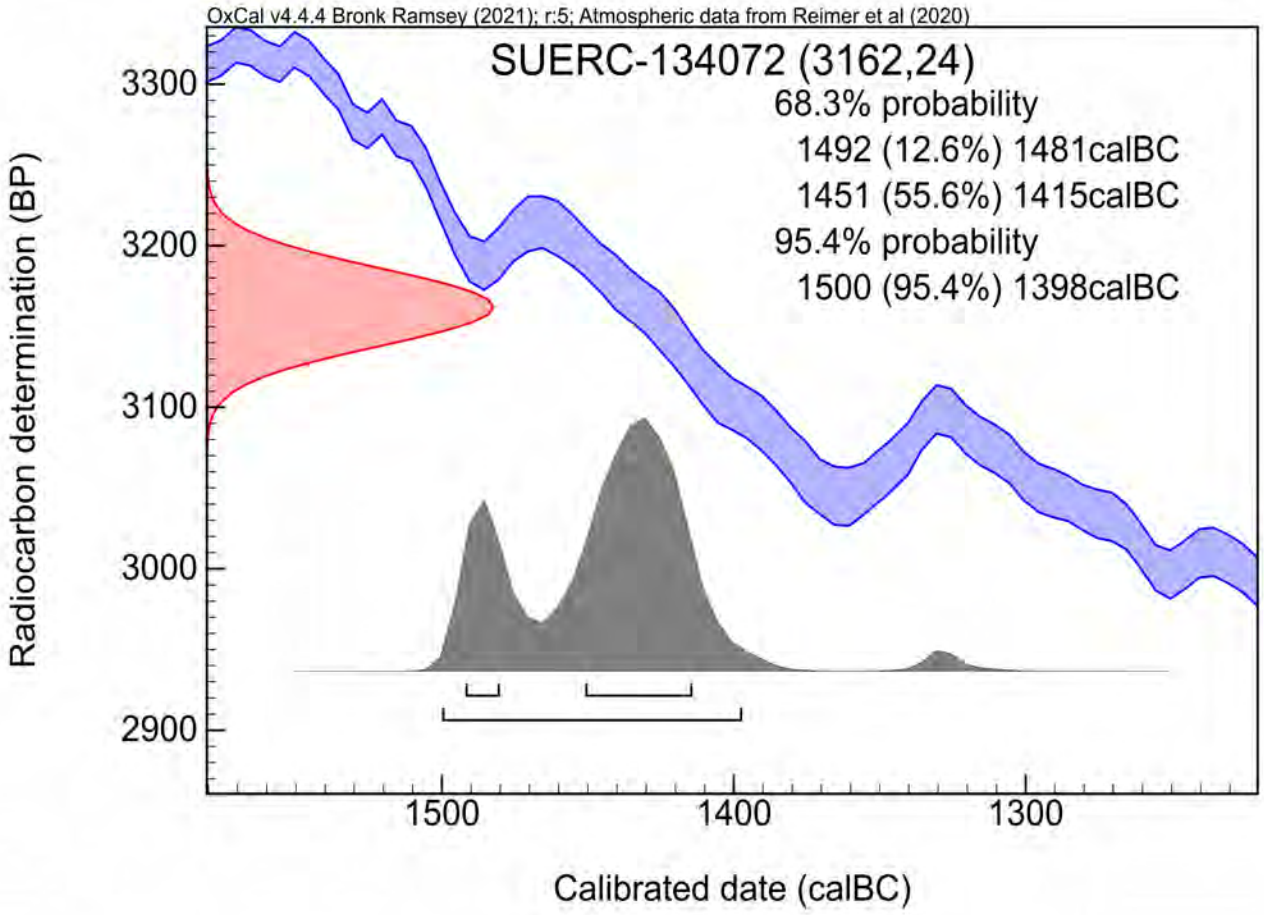
Samples with a SUERC coding are measured at the SUERC AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : E. Dunbar

Checked and signed off by : Helen Rose Knill



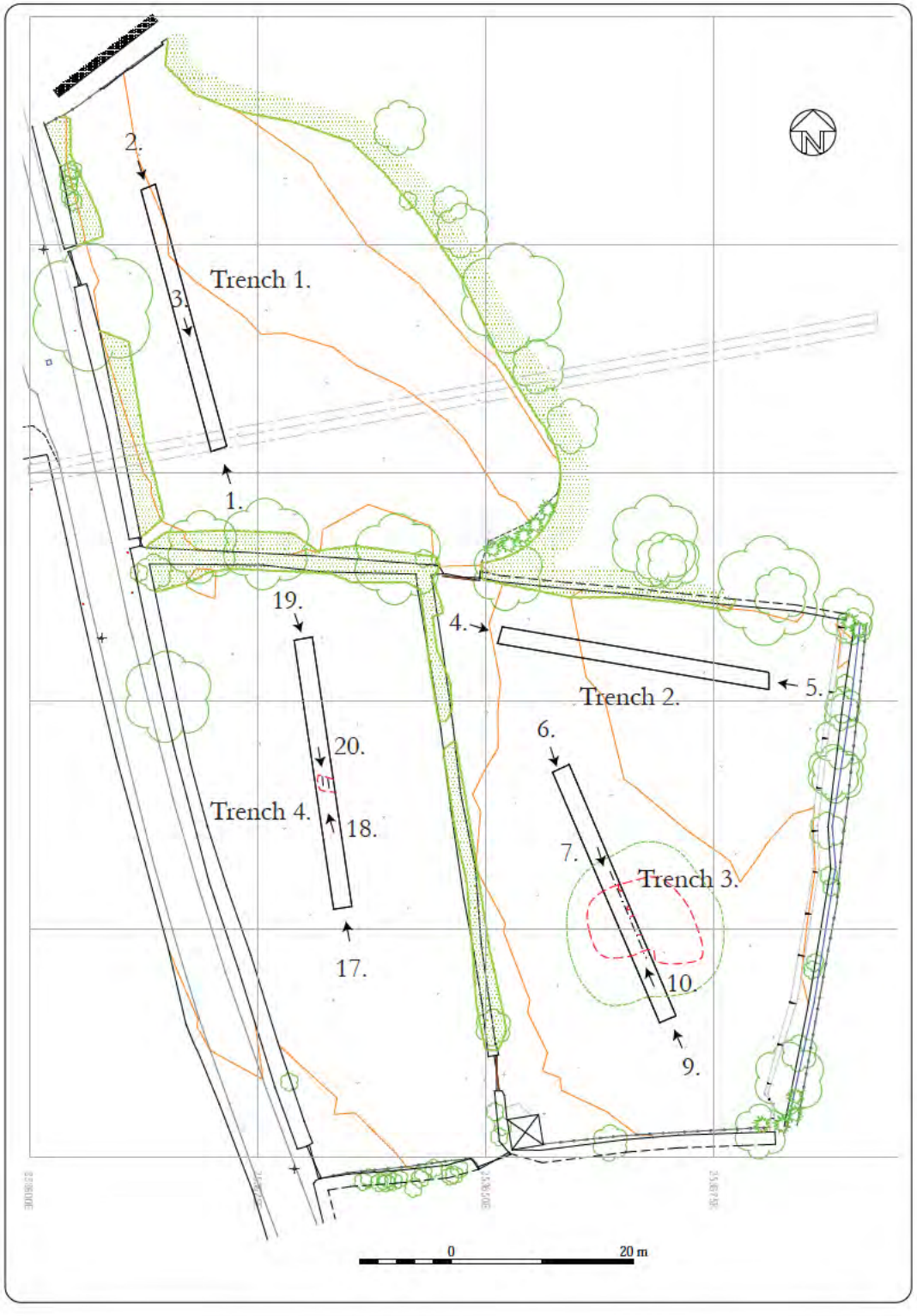
The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

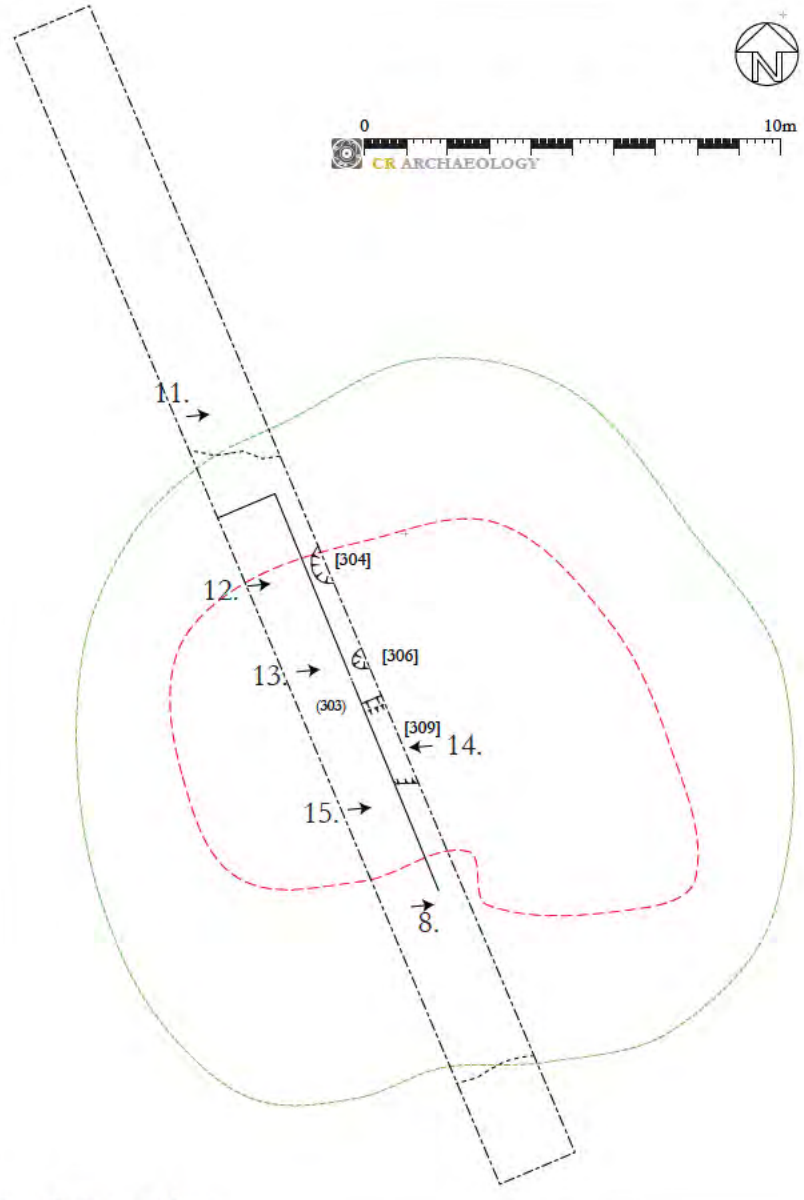
The above date ranges have been calibrated using the IntCal20 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*
† Reimer et al. (2020) *Radiocarbon 62(4) pp.725-57*

Appendix D.
Location and Direction of Photographic Plates





16. Trench from Above.

Appendix D. Location and Direction of Photographic Plates