

Dwyran Flood Relief Scheme: Ground Investigation Works, Anglesey

Archaeological Watching Brief/
Briff Gwyllo Archeolegol



Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

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Briff Gwyllo Archeolegol/ Archaeological Watching Brief

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Delwedd clawr blaen / Front Cover image: Post-excavation section view of TP08 from the north
(archive reference: G2706_020).

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CRYNODEB ANNHECHNEGOL

Comisiynwyd Ymddiriedolaeth Archaeolegol Gwynedd gan Binnies ar ran Cyfoeth Naturiol Cymru i ymgymryd â briff gwylio archeolegol yn ystod gwaith ymchwilio tir geodechnegol ar gyfer Cynllun Rheoli Perygl Llifogydd arfaethedig ger Dwyran, Ynys Môn. Cafodd cyfanswm o 12 pwll prawf eu cloddio i lawr i graig/graeon mewn ardaloedd wedi'u targedu ar hyd Afon Rhyd y Valley ac yr Afon Braint.

Ac eithrio pwll Treialu 1 a 2, a oedd wedi'i leoli o fewn ystâd dai ac a oedd yn cynrychioli tir wedi'i wneud, roedd y pyllau prawf a oedd yn weddill yn cynnwys cyfres o orwelion naturiol amrywiol, a oedd yn cyd-fynd â phrosesau rhewlifol a naturiol. Ni nodwyd unrhyw archaeoleg o fewn cyfyngiadau'r pyllau prawf.

NON-TECHNICAL SUMMARY

Gwynedd Archaeological Trust was commissioned by Binnies on behalf of Natural Resources Wales to undertake an archaeological watching brief during geotechnical ground investigation works for a proposed Flood Risk Management Scheme near Dwyran, Ynys Môn. A total of 12 trial pits was excavated down to bedrock/gravels in targeted areas along Afon Rhyd y Valley and the Afon Braint.

With the exception of Trial pit 1 and 2, which was positioned within a housing estate and represented made ground, the remaining trial pits contained a series of varying natural horizons, which correlated with glacial and natural processes. No archaeology was identified within the confines of the trial pits.

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Plate 9: Post-excavation view of TP06 down to natural horizon; View from: E; Scale: 1x1m (archive reference: G2706_014).

Plate 10: Post-excavation section view of TP06 from the north; Scale: 1x1m (archive reference: G2706_015).

Plate 11: Post-excavation view of TP07 down to natural clay horizon; View from: S; Scale: 1x1m
(archive reference: G2706_012).

Plate 12: Post-excavation section view of TP07 from the east; Scale: 1x1m
(archive reference: G2706_013).

Plate 13: Post-excavation view of TP08 down to sandy natural horizon; View from: E; Scale:
1x1m (archive reference: G2706_019).

Plate 14: Post-excavation section view of TP08 from the north; Scale: 1x1m
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Plate 16: Post-excavation section view of TP09 from the south; Scale: 1x1m
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Plate 17: Post-excavation view of TP10 down to natural horizon; View from: SE; Scale: 1x1m
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Plate 18: Post-excavation section view of TP10 from the southwest; Scale: 1x1m
(archive reference: G2706_023).

Plate 19: Post-excavation view of TP12 down to natural horizon; View from: NW; Scale: 1x1m
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Plate 20: Post-excavation section view of TP12 from the northeast; Scale: 1x1m
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Plate 21: Post-excavation view of TP13 down to natural clay horizon; View from: N; Scale: 1x1m
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Plate 22: Post-excavation section view of TP13 from the west; Scale: 1x1m (archive reference: G2706_033).

Plate 23: Post-excavation view of TP14 down to natural clay horizon; View from: N; Scale: 1x1m (archive reference: G2706_028).

Plate 24: Post-excavation section view of TP14 from the west; Scale: 1x1m (archive reference: G2706_029).

1 INTRODUCTION

Gwynedd Archaeological Trust was commissioned by Binnies on behalf of Natural Resources Wales to undertake an archaeological watching brief during geotechnical ground investigation works for a proposed Flood Risk Management Scheme near Dwyran, Ynys Môn (NGR SH44366558; post code LL61 6YY; cf. [Figure 01](#)). The scheme was located to the immediate south, east and west of the village of Dwyran, with five main work areas:

1. New flood wall or embankment at Ger-y-Felin;
2. New outfalls downstream of Pont Cadach;
3. New flood wall or embankment at Tyn y Parc;
4. Modify or replace tidal outfall on Afon Rhyd y Valley along with possible improvement works to the existing flood embankment to provide an access route to the tidal outfall; and
5. Potential Natural Flood Management measures on Afon Rhyd y Valley upstream of Dwyran.

The scheme may also include the installation of Property Level Protection (PLP) at a small number of residential properties that are presently affected by Afon Rhyd y Valley.

The geotechnical ground investigation works included trial pits and boreholes that was located across the main work areas, as indicated in [Figures 02](#) and [03](#). The ground investigation works were undertaken from June 2022, with a duration of four days for the trial pits.

The archaeological watching brief was completed in accordance with the following guidance:

- Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs) Version 1.1 (The Welsh Archaeological Trusts, 2018);
- Guidelines for digital archives (Royal Commission on Ancient and Historic Monuments of Wales, 2015);
- Management of Archaeological Projects (English Heritage, 1991);
- Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England, 2015).
- Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2020); and

- Standard and guidance for the creation, Compilation, Transfer and Deposition of Archaeological Archives (Chartered Institute for Archaeologists, 2020).

Gwynedd Archaeological Trust is certified to ISO 9001:2015 and ISO 14001:2015 (Cert. No.74180/B/0001/UK/En) and is a Registered Organisation with the Chartered Institute for Archaeologists.

1.1 Aims and Objectives

The key aims and objectives of the watching brief were to:

- identify and record any archaeological activity identified during the watching brief. There is known prehistoric, Roman, medieval and post-medieval activity within the area and the objective was to establish the date and nature of any archaeological remains identified and assess their implications for understanding local historical development, in conjunction with the known archaeological record.
- if no archaeological activity is identified, establish why this was the case; and
- if applicable, to place the results in context (if applicable), reference shall be made to *A Research Framework for the Archaeology of Wales Version 3, Final Refresh Document (March 2017)*.

1.2 Acknowledgements

GAT would like to thank the following for their contribution and support:

- *GAT Project team:* John Roberts, Stuart Reilly and Carolina Ferreira
- *Plant Machinery:* CMP
- *Client:* Binnies
- *Gwynedd Archaeological Planning Services:* Jenny Emmett and Tom Fildes

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

GAT has previously completed an archaeological assessment of the proposed Flood Risk Management Scheme (GAT Report 1620).

The assessment was undertaken during January and February 2022 and included desk-based research and a walkover survey. The research concluded that the proposed scheme was located within a predominantly rural and agrarian landscape, with varied archaeology present including prehistoric, Roman period, medieval and post-medieval activity. The key areas within the scheme zone were the Roman activity at Tre Anna Farm (GAT Report 1620 Features 14, 15 and 18; cf. [Figure 04](#)) that included evidence for settlement and artefacts, and the medieval activity near Ger-y-Felin comprising a former corn mill (GAT Report 1620 Feature 23; cf. [Figure 04](#)). GAT completed a geophysical survey at Tre Anna Farm in 2013 and several anomalies were detected that could be linked to the former settlement, including a circular feature and possible buildings. Topographical changes also suggested platforms that may be the last visible vestiges of paddocks and enclosures.

A walkover survey was completed as part of the assessment and inspected the scheme route along Afon Rhyd y Valley, the geophysical survey area targeted in 2013, the former location of the corn mill near Ger-y-Felin, as well as Tyn y Parc and Pont Cadach. The Afon Rhyd y Valley was found to include modern waterway and drainage controls, whilst at the geophysical survey area, no additional archaeological activity was identified. At the corn mill location, no further archaeological evidence was identified, whilst the local area was characterised by modernised dwellings and developments – as was Tyn y Parc; Pont Cadach was a modern, late 20th century road bridge (GAT Report 1620 Feature 32; cf. [Figure 04](#)). Collectively, the results demonstrated that there was potential for further archaeological activity, particularly in the areas Tre Anna Farm and Maen Hir at the eastern end of the scheme (Afon Rhyd y Valley work extents), as well as the site of the former corn mill at the western end (Ger-y-Felin work extents).

Based on these results, it was recommended that an archaeological evaluation was required in the Tre Anna Farm and Maen Hir area and that an archaeologist should be present during any ground investigation works, particularly within the location of Melin Wen (GAT Report 1620 Feature 23).

3 METHODOLOGY

3.1 Introduction

The trial pits programme aimed to identify and characterise archaeological features to assess their implications for understanding the area in conjunction with the known archaeological record. The watching brief was undertaken between 20th and 23rd June, 2022.

A total of twelve trial pits were excavated with the details of the individual trial pits shown below:

Trial pit no.	Centred (E/N)	Rationale	Figure no.
TP01	244404/ 365578	Ground investigation (GI) works	02
TP02	244348/ 365589	Ground investigation (GI) works	02
TP03	244707/ 364871	Ground investigation (GI) works	02
TP04	244302/ 365566	Ground investigation (GI) works	02
TP05	N/A	Cancelled	N/A
TP06	244366/ 365351	Ground investigation (GI) works	02
TP07	244432/ 365285	Ground investigation (GI) works	02
TP08	244453/ 365133	Ground investigation (GI) works	02
TP09	244487/ 365300	Ground investigation (GI) works	02
TP10	244503/ 365082	Ground investigation (GI) works	02
TP11	N/A	Cancelled	N/A

Trial pit no.	Centred (E/N)	Rationale	Figure no.
TP12	245876/ 366326	Ground investigation (GI) works	03
TP13	246366/ 366497	Ground investigation (GI) works	03
TP14	246570/ 366613	Ground investigation (GI) works	03

All trial pits were located and demarcated in advance by the contractor Binnies with a Leica GPS unit. All trial pits were opened and closed by a JCB 3CX wheeled mechanical excavator under constant archaeological supervision. The trial pits were carefully de-turfed by the mechanical excavator fitted with a toothless bucket; the turf was stored close to the trench and re-laid following the backfilling process. The topsoil and subsoil (where present) were excavated by machine with a toothless bucket in thin spits until either the natural substrate was reached, or archaeological features or deposits were encountered. All fieldwork was completed in accordance with industry standards and the GAT Fieldwork Manual.

- A record was made on GAT pro-formas of the topsoil and subsoil depths, as well as the composition of the glacial horizons (cf. [Appendix III](#))
- Photographic images were taken using a digital SLR camera set to maximum resolution in RAW format; the photographic record was digitised in *Microsoft Excel* as part of the fieldwork archive and dissemination process. A copy of the photographic metadata can be found in [Appendix II](#). Photographic images will be archived in TIFF format using Adobe Photoshop; the archive numbering system runs from **G2706_001 to G2706_039**. A photographic ID board was used during the watching brief to record site code, image orientation and any relevant trench and context numbers.
- The location of the trial pits was recorded using a Leica GPS unit

3.2 Data Management Plan

The physical archive has been stored in a designated project folder and the location confirmed in the Trust project database; the digital dataset has been stored on a dedicated Trust server, with the location confirmed in the Trust project database via a specific hyperlink. External datasets for the HER and RCAHMW are as defined in the dissemination strategy below. De-selected digital data will be confirmed in an updated Selection Strategy document appended to the final report.

On final approval, the following dissemination and archiving of the report and digital dataset will apply:

- A digital report has been provided to the client and GAPS;
- A digital report (PDF format) has been provided to the regional Historic Environment Record along with a digital dataset comprising an Event PRN summary (Microsoft Excel). The report and dataset were submitted in accordance with the required standards set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (Version 1.1); and
- A digital report and digital archive dataset was provided to Royal Commission on Ancient and Historic Monuments, Wales in accordance with the *RCAHMW Guidelines for Digital Archives Version 1*. The dataset includes:
 - Photographic metadata (Microsoft Access);
 - Photographic archive (TIFF format);
 - Project Information form (Excel);
 - File Information form (Excel) – Microsoft Word report text final;
 - File Information form (Excel) – Photographic metadata (general);
 - File Information form (Excel) – Adobe PDF report final; and
 - File Information form (Excel) - Photographic metadata (detail).

3.3 Selection Strategy

As defined in *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives* (Chartered Institute for Archaeologists, 2020) section 3.3.1, a project specific selection strategy and data management plan should be prepared. In support of this, the Chartered Institute for Archaeologist (CIfA), have stated that it is “widely accepted that not all the records and materials collected or created during the course of an Archaeological Project require preservation in perpetuity. These records and materials constitute the Working Project Archive which will be subject to Selection, in order to establish what will be retained for long-term curation”. The aim of selection is to ensure that all the elements retained from the Working Project Archive for inclusion in the Archaeological Archive are appropriate to establish the significance of the project and support “future research, outreach, engagement, display and learning activities”. Selection should be “focused on selecting what is to be retained to support these future needs, rather than deciding what can be dispersed” and can be qualified by a selection strategy, which details the project-specific selection process, agreed by all parties (including GAPS, client and/or landowner), which will be applied to a Working Project Archive prior to its transfer into curatorial care as the Archaeological Archive. The selection strategy can be viewed in [Appendix IV](#).

The selection strategy has taken into account:

- The aims and objectives of the project.
- The brief and/or Written Scheme of Investigation (WSI).
- The Collecting Institution’s collection policy and/or deposition guidelines.
- Local and regional research frameworks.
- Relevant thematic or period specific research frameworks.
- The project’s Data Management Plan (DMP).
- Internal recording and reporting policies.
- Material-specific guidance documents.

4 RESULTS

A total of 12 trial pits were machine excavated as part of the ground investigation (GI) works for the proposed Flood Risk Management Scheme near Dwyran, Ynys Mon between 20th and 23rd of June 2022 ([Figure 02](#); [Figure 03](#); for trial pit descriptions see [Appendix III](#)).

All trial pits were excavated with a toothless ditching bucket down to the natural horizon. Once confirmed no archaeology was present, a tooth bucket was then utilised to reach the required depth. The average trial pit measured 3.2-3.5 metres long x 0.7 metres wide, and between 2 to 3.4 metres deep into the natural horizon. Each soil type was kept separate for sampling purposes then reinstated to the same order. No archaeology was observed within the confines of the trial pits along the scheme.

Trial pit 01 and 02 had been positioned within Ger y Felin housing estate within grass verges of landscaped ground (Plates 1-3). The topsoil had an average depth of 0.3m with the natural horizon being reached at 0.6m. Building material which included red brick and rubble was evident within the topsoil/subsoil fill (Plate 4). No archaeology was present in either trial pit.

Trial pit 04 which was relocated further northeast and closer to Ger y Felin Estate in the adjacent field (SH 44302 65566). The topsoil had a depth of 0.3m with no underlying subsoil and lay directly on a natural sand horizon (Plate 7). This is likely wind-blown sand as it was almost similar to clean building sand. The sand capped a tough sandy clay natural horizon with no inclusions within (Plate 8).

Trial pit 03 and 10, also relocated from their original position lay fairly close to each other. Both trial pits contained no archaeology within, however, comprised of a complex stratigraphy of varying naturals which correlated with glacial and water movement. TP03 had a topsoil depth of 0.3m and capped a series of gravelly clay and river gravels and pebbles (Plate 5 and 6). While TP10 also had a topsoil depth of 0.3m and contained a series of grey gravels and sandy glacial till material (Plate 17 and 18).

Trial pit 06,07,08 and 09 were all positioned in fairly close vicinity. All trial pits had a very shallow topsoil depth of 0.2m and comprised of a mid-grey, brown sandy silt with rare to no stone inclusions. No subsoil was present, with the natural horizon being clearly identifiable just under the topsoil. All trial pits had a series of varying layers of natural, from marine sand to river gravels and sandy clays (Plates 9-16). Each layer caps the top of the bedrock.

Trial Pit 12, 13 and 14 were positioned along the Afon Rhyd y Valley to the northeast of Dwyran. The three trial pits had an average topsoil depth of 0.3m, mid-greyish brown in colour and had

10-30% small angular stone inclusions (2-10cm on average). No archaeological evidence was found within, with only a modern ceramic land drain observed in TP13 running NW-SE. All three trial pits had a similar make up underneath the topsoil. The naturals consisted of yellowish orange clayey sand and sandy clay with some grit inclusions (Plates 19-24). At the base of the trial pits and lay on top of bedrock was a fairly regular mixture of gravels, pebbles and wet mid grey clay.

5 CONCLUSION

Gwynedd Archaeological Trust was commissioned by Binnies on behalf of Natural Resources Wales to undertake an archaeological watching brief during geotechnical ground investigation works for a proposed Flood Risk Management Scheme near Dwyran, Ynys Môn. A total of 12 trial pits were excavated with 2 pits (TP05 and TP11) descoped.

Whilst the trial pits were located across an area of archaeological potential, no archaeological activity was found within their confines. TP1 and TP2 were located within a housing estate and contained made ground, whilst the remaining trial pits were characterized by varying depths of topsoil, riverine deposits and glacial horizons

Nevertheless, this does not discount the possibility of archaeology present within the area and it is recommended that further archaeological engagement is required during scheme development.

6 SOURCES CONSULTED

1. *A Research Framework for the Archaeology of Wales, Current Research Framework Documents 2017* (<https://archaeoleg.org.uk/documents2017.html>) (accessed 25/11/2021)
2. English Heritage, 1991, Management of Archaeological Projects
3. English Heritage, 2015, Management of Research Projects in the Historic Environment (MoRPHE).
4. *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs) Version 1.1* (The Welsh Archaeological Trusts, 2018);
5. Guidelines for digital archives (Royal Commission on Ancient and Historic Monuments of Wales, 2015);
6. Management of Archaeological Projects (English Heritage, 1991);
7. Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England, 2015)
8. Royal Commission on Ancient and Historic Monuments of Wales 2015 *Guidelines for digital archives*
9. Standard and Guidance for Archaeological Excavation (Chartered Institute for Archaeologists, 2020);
10. Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2020);
11. Standard and guidance for the collection, documentation, conservation and research of archaeological materials (Chartered Institute for Archaeologists, 2020); and
12. Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives (Chartered Institute for Archaeologists, 2020).
13. Reilly S, Roberts J and Evans R. 2020, Cynllun Rhyddhad Llifogydd Dwyrán, Ynys Môn /Dwyrán Flood Risk Management Scheme, Ynys Môn: Asesiad Archeolegol/Archaeological Assessment. Gwynedd Archaeological Trust Report 1620

FIGURE 01

Location Map detailing main flood protection areas (in blue). Scale: 1 to 15000@A4.

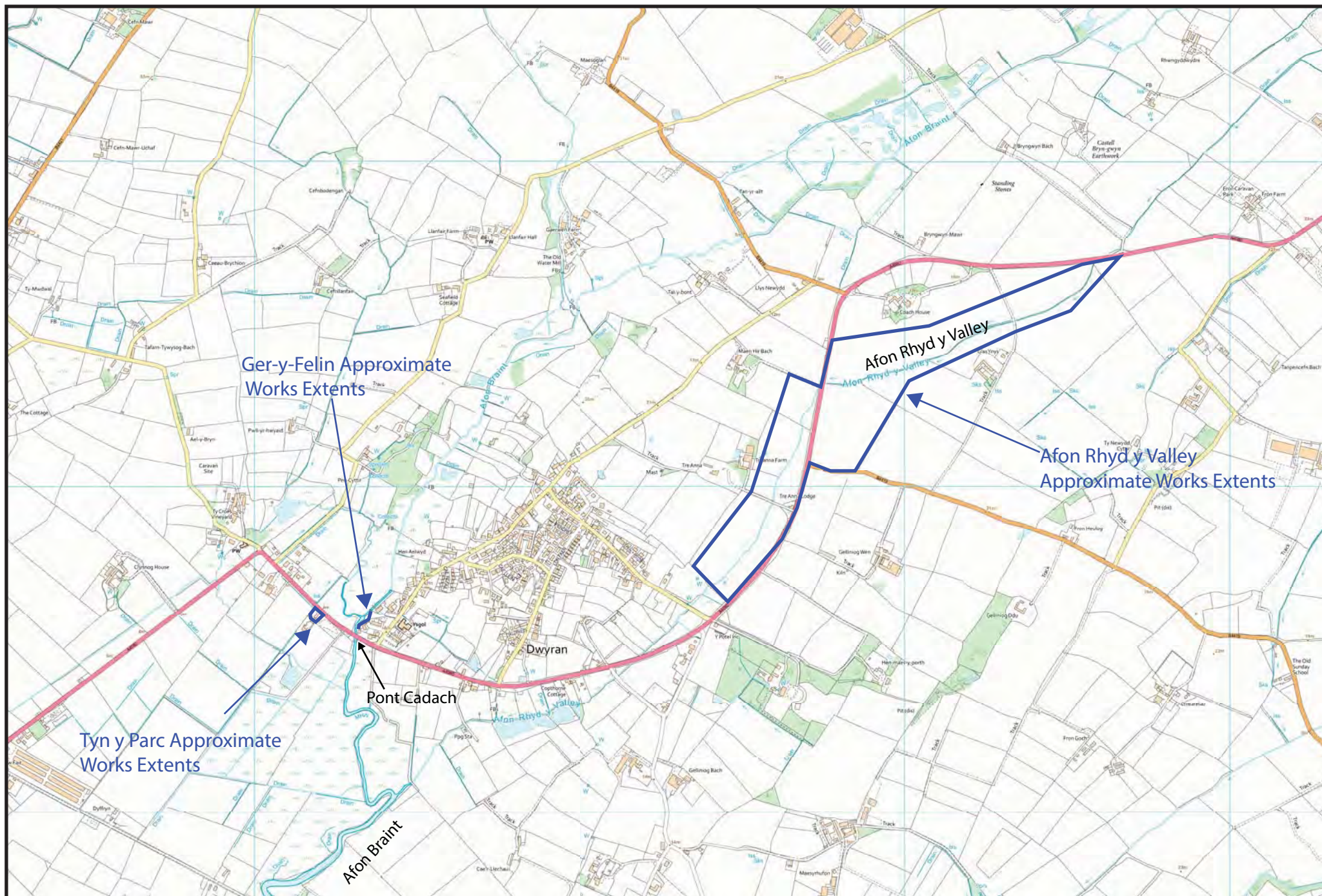


Figure 01: Location Map detailing main flood protection areas (in blue). Scale: 1 to 15000@A4.

FIGURE 02

Location map detailing Test Pits 01 to 04 and 06 to 10. Scale: 1:1500@A3.

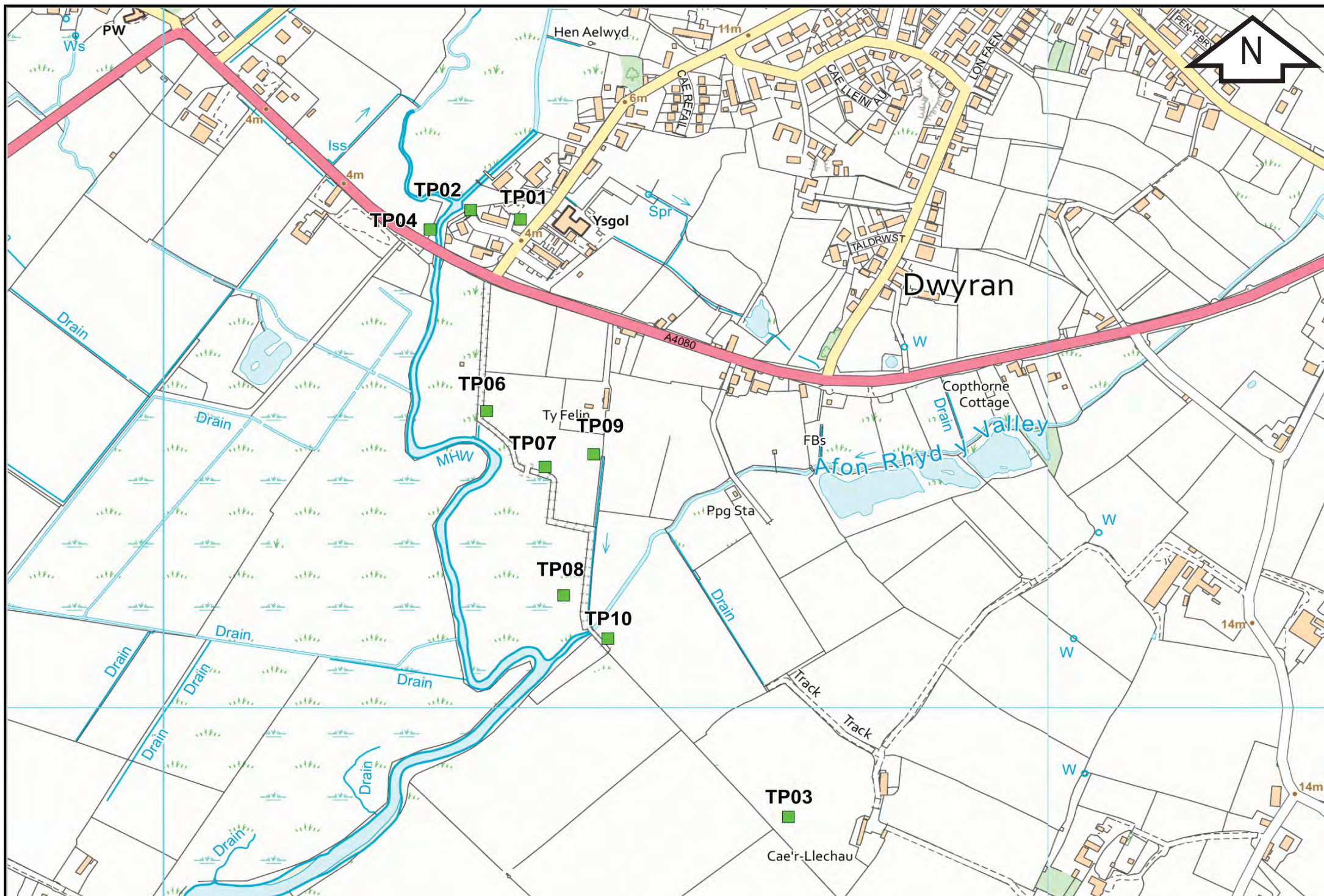


Figure 02: Location map detailing Trial Pits 01 to 04 and 06 to 10. Scale 1 to 1500@A3 © Crown Copyright Ordnance Survey AL100020895

FIGURE 03

Location map detailing Test Pits 12 to 14. Scale: 1:1500@A4.



Figure 03: Location map detailing Trial Pits 12 to 14. Scale 1 to 1500@A3 © Crown Copyright Ordnance Survey AL100020895

FIGURE 04

Location Map detailing main flood protection areas (in blue) and GAT Report 1620 Gazetteer Features 01 to 32. Scale: 1 to 15000@A4.

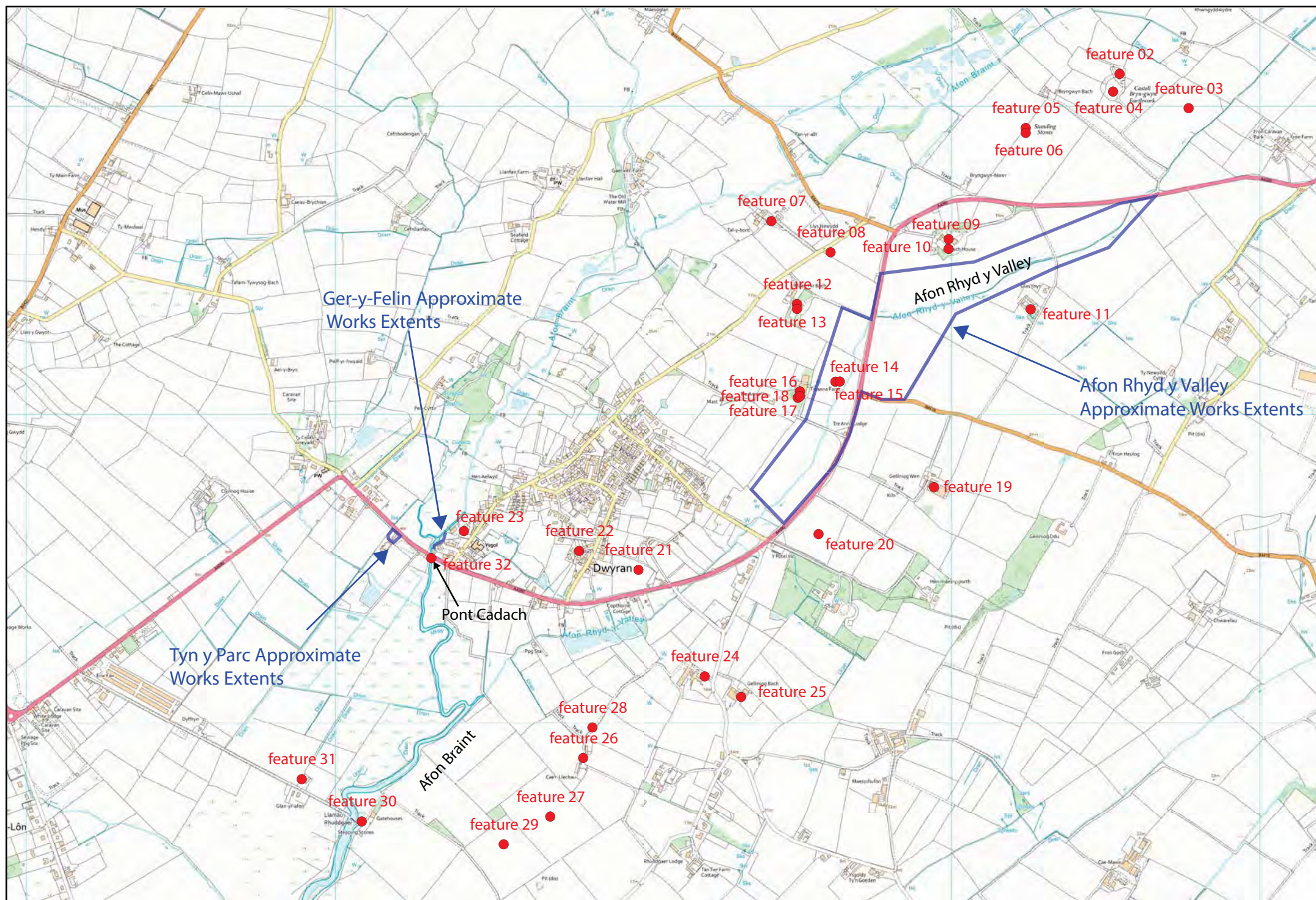


Figure 04: Location Map detailing main flood protection areas (in blue) and Gazetteer Features. Scale: 1 to 15000@A4. © Crown Copyright Ordnance Survey AL10002089



Plate 1: Post-excavation view of TP01 down to natural horizon; View from: SW; Scale: 1x1m (archive reference: G2706_002).



Plate 2: Post-excavation section view of TP01 from the northwest; Scale: 1x1m (archive reference: G2706_003).



Plate 3: Post-excavation view of TP02 down to natural horizon; View from: NNW; Scale: 1x1m (archive reference: G2706_006).



Plate 4: Post-excavation section view of TP02 from the east-northeast; Scale: 1x1m (archive reference: G2706_007).



Plate 5: Post-excavation view of TP03 down to natural clay horizon; View from: SE; Scale: 1x1m (archive reference: G2706_025).



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Plate 11: Post-excitation view of TP07 down to natural clay horizon; View from: S; Scale: 1x1m (archive reference: G2706_012).



Plate 12: Post-excitation section view of TP07 from the east; Scale: 1x1m (archive reference: G2706_013).



Plate 13: Post-excitation view of TP08 down to sandy natural horizon; View from: E; Scale: 1x1m (archive reference: G2706_019).



Plate 14: Post-excitation section view of TP08 from the north; Scale: 1x1m (archive reference: G2706_020).



Plate 15: Post-excitation view of TP09 down to natural horizon; View from: W; Scale: 1x1m (archive reference: G2706_016).



Plate 16: Post-excitation section view of TP09 from the south; Scale: 1x1m (archive reference: G2706_017).



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Plate 18: Post-excitation section view of TP10 from the southwest; Scale: 1x1m (archive reference: G2706_023).



Plate 19: Post-excitation view of TP12 down to natural horizon; View from: NW; Scale: 1x1m (archive reference: G2706_038).



Plate 20: Post-excitation section view of TP12 from the northeast; Scale: 1x1m (archive reference: G2706_039).



Plate 21: Post-excitation view of TP13 down to natural clay horizon; View from: N; Scale: 1x1m (archive reference: G2706_031).



Plate 22: Post-excitation section view of TP13 from the west; Scale: 1x1m (archive reference: G2706_033).



Plate 23: Post-excavation view of TP14 down to natural clay horizon; View from: N; Scale: 1x1m (archive reference: G2706_028).



Plate 24: Post-excavation section view of TP14 from the west; Scale: 1x1m (archive reference: G2706_029).

APPENDIX I

Gwynedd Archaeological Trust Written Scheme of Investigation

DWYRAN FLOOD RISK MANAGEMENT SCHEME (G2706)

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL WATCHING BRIEF

Prepared for

Binnies

May 2022



Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

Approvals Table				
	Role	Printed Name	Signature	Date
Originated by	Document Author			
Reviewed by	Document Reviewer			
Approved by	Principal Archaeologist			

Revision History			
Rev No.	Summary of Changes	Ref Section	Purpose of Issue

All GAT staff should sign their copy to confirm the project specification is read and understood and retain a copy of the specification for the duration of their involvement with the project. On completion, the specification should be retained with the project archive:

Name

Signature

Date

DWYRAN FLOOD RISK MANAGEMENT SCHEME (G2706)

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL WATCHING BRIEF

Prepared for *Binnies*, May 2022

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1 INTRODUCTION

Gwynedd Archaeological Trust has been commissioned by Binnies on behalf of Natural Resources Wales to undertake an archaeological watching brief during geotechnical ground investigation works a proposed Flood Risk Management Scheme near Dwyran, Ynys Môn (NGR SH44366558; post code LL61 6YY; cf. [Figure 01](#)). The scheme is located to the immediate south, east and west of the village of Dwyran, with five main work areas:

1. New flood wall or embankment at Ger-y-Felin;
2. New outfalls downstream of Pont Cadach;
3. New flood wall or embankment at Tyn y Parc;
4. Modify or replace tidal outfall on Afon Rhyd y Valley along with possible improvement works to the existing flood embankment to provide an access route to the tidal outfall; and
5. Potential Natural Flood Management measures on Afon Rhyd y Valley upstream of Dwyran.

The scheme may also include the installation of Property Level Protection (PLP) at a small number of residential properties that are presently affected by Afon Rhyd y Valley.

The geotechnical ground investigation works will include trial pits and boreholes that will be located across the main work areas, as indicated in [Figures 02](#) and [03](#). The ground investigation works are scheduled to be undertaken from May 2022, with an estimated duration of 11No days.

The archaeological watching brief will be completed in accordance with the following guidance:

- Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs) Version 1.1 (The Welsh Archaeological Trusts, 2018);
- Guidelines for digital archives (Royal Commission on Ancient and Historic Monuments of Wales, 2015);
- Management of Archaeological Projects (English Heritage, 1991);
- Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England, 2015);
- Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2020); and

- Standard and guidance for the creation, Compilation, Transfer and Deposition Of Archaeological Archives (Chartered Institute for Archaeologists, 2020).

Gwynedd Archaeological Trust is certified to ISO 9001:2015 and ISO 14001:2015 (Cert. No. 74180/B/0001/UK/En) and is a Registered Organisation with the Chartered Institute for Archaeologists.

1.1 Fieldwork Aims and Objectives

The key aims and objectives are to:

- identify and record any archaeological activity identified during the watching brief. There is known prehistoric, Roman, medieval and post-medieval activity within the area and the objective would be to establish the date and nature of any archaeological remains identified and assess their implications for understanding local historical development, in conjunction with the known archaeological record.
- to place the results in context (if applicable), with reference made to *A Research Framework for the Archaeology of Wales Version 03, Final Refresh Document* (March 2017);
- if no additional archaeological activity is identified, establish why this may be the case.

1.2 Monitoring Arrangements

The watching brief will be monitored by the Gwynedd archaeological Planning Service (GAPS); the content of this written scheme of investigation (WSI) and all subsequent reporting by GAT must be approved by GAPS prior to final issue.

The GAPS Archaeologist will need to be informed by GAT of the project timetable and of the subsequent progress and findings. This will allow the GAPS Archaeologist time to arrange monitoring visits and attend site meetings (if required) and enable discussion about the need or otherwise for further archaeological works (if required) as features of potential archaeological significance are encountered. GAPS' contact details are:

- Jenny Emmett | jenny.emmett@heneb.co.uk | 07824481052

1.3 Historic Environment Record

In line with the Gwynedd Historic Environment Record (HER) requirements, the HER will be contacted at the onset of the project to ensure that any data arising is formatted in a manner suitable for accession to the HER and follows the guidance set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (The Welsh Archaeological Trusts, 2018). The HER will be informed of the project start date, location including grid reference, estimated timescale for the work, and further relevant information associated with the project. HER Enquiry Number GATHER1639 and Event Primary Reference Number 46262 have been assigned.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

GAT has completed an archaeological assessment of the proposed Flood Risk Management Scheme (GAT Report 1620).

The assessment was undertaken during January and February 2022 and included desk-based research and a walkover survey. The research concluded that the proposed scheme was located within a predominantly rural and agrarian landscape, with varied archaeology present including prehistoric, Roman period, medieval and post-medieval activity. The key areas within the scheme zone were the Roman activity at Tre Anna Farm (GAT Report 1620 Features 14, 15 and 18; cf. [Figure 04](#)) that included evidence for settlement and artefacts, and the medieval activity near Ger-y-Felin comprising a former corn mill (GAT Report 1620 Feature 23; cf. [Figure 04](#)). GAT completed a geophysical survey at Tre Anna Farm in 2013 and several anomalies were detected that could be linked to the former settlement, including a circular feature and possible buildings. Topographical changes also suggested platforms that may be the last visible vestiges of paddocks and enclosures.

A walkover survey was completed as part of the assessment and inspected the scheme route along Afon Rhyd y Valley, the geophysical survey area targeted in 2013, the former location of the corn mill near Ger-y-Felin, as well as Tyn y Parc and Pont Cadach. The Afon Rhyd y Valley was found to include modern waterway and drainage controls, whilst at the geophysical survey area, no additional archaeological activity was identified. At the corn mill location, no further archaeological evidence was identified, whilst the local area was characterised by modernised dwellings and developments – as was Tyn y Parc; Pont Cadach was a modern, late 20th century road bridge (GAT Report 1620 Feature 32; cf. [Figure 04](#)).

Collectively, the results demonstrated that there was potential for further archaeological activity, particularly in the areas Tre Anna Farm and Maen Hir at the eastern end of the scheme (Afon Rhyd y Valley work extents), as well as the site of the former corn mill at the western end (Ger-y-Felin work extents).

Based on these results, it was recommended that an archaeological evaluation was required in the Tre Anna Farm and Maen Hir area and also that an archaeologist should be present during any ground investigation works, particularly within the location of Melin Wen (GAT Report 1620 Feature 23).

3 METHODOLOGY

3.1 Introduction

An archaeological watching brief is defined by the Chartered Institute for Archaeologists as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive (CIfA, 2020).

The watching brief will monitor the geotechnical ground investigation areas detailed on [Figures 02](#) and [03](#). The ground investigations will be undertaken in May 2022 and will include:

- Trial Pits TP01 to TP10 ([Figure 02](#)), located at the western end of the scheme and incorporating the Tyn y Parc, Ger-y-Felin and Pont Cadach work extents;
- Trial Pits TP12 to TP14 ([Figure 03](#)), located at the eastern end of the scheme and incorporating the Afon Rhyd y Valley work extents and specifically the locations of Dams 3 to 5; and
- Cable Percussive Boreholes BH01 to BH06 ([Figure 02](#)), located at the western end of the scheme and incorporating the Tyn y Parc, Ger-y-Felin and Pont Cadach work extents.

The trial pits will be excavated using a 13-tonne machine to a depth of 4m and the pits are expected to be 0.60m wide and up to three metres in length; the cable percussive boreholes will be dug using A-frames to a depth of 15m. The ground investigation works have an estimated duration of 11No days.

The watching brief is for the trial pits only, and the cable percussive boreholes will not be monitored. The locations for the trial pits in [Figure 02](#) and [Figure 03](#) are approximate and the precise locations and coordinates will be confirmed during the watching brief. Trial Pits TP01 and TP02 are within the general area of the former corn mill (GAT Report 1620 Feature 23; PRN 36138; NGR SH44426562) and may encounter the original watercourse and evidence of past land management.

The following watching brief methodology will be applied:

- All attendances and any identified features will be recorded using GAT watching brief pro-formas ([Appendix I](#));

- The ground investigation works will be monitored as far as the glacial horizon, any archaeological horizon or the limit of excavation, whichever is encountered first. The project archaeologist will be afforded sufficient time and opportunity to investigate any archaeological activity, or suspected archaeological activity, encountered.
- Photographic images will be taken using a digital SLR camera set to maximum resolution in RAW format; a photographic record will be maintained on site using GAT pro-formas ([Appendix II](#)) and digitised in *Microsoft Access* as part of the fieldwork archive and dissemination process. Photographic images will be archived in TIFF format using Adobe Photoshop; the archive numbering system will start from G2706_041. When practical, a photographic ID board will be used during the watching brief to record site code, image orientation and any relevant context numbers;
- Any subsurface features will be recorded photographically, with detailed notations and a measured survey (completed using a *Trimble* R8 GPS unit);
- Any archaeological features/deposits/structures encountered will be manually cleaned and examined to determine extent, function, date and relationship to adjacent activity. The following excavation strategy will generally apply: 50% sample of each sub-circular feature, 10% sample of each linear feature (terminal ends and intersection points with other features will be prioritised). However, if discrete features are identified these will be 100% excavated as will any exposed segments of linear features. *In the event of the identification of extensive/complex remains (for example burials, structures or preserved wooden or organic artefacts), additional time, resourcing and costs may be required for GAT to complete an appropriate programme of works.* Alternatively, if significant/complex archaeology is encountered, and/or if any archaeology cannot be safely accessed for investigation, the trial pit will be backfilled and relocated if necessary;
- Any required plans or sections to be drawn at a minimum 1:10 scale using GAT A4, A3 or A2 pro-forma permatrace;
- Should dateable artefacts, human remains and/or ecofacts be recovered, GAPS will be informed and agreement reached via correspondence for a suitable post-excavation strategy (in line with the MAP2 process), with results included in final reporting. *Additional time, resourcing and costs will be required to undertake any post-excavation programme of works.*
- The watching brief will be preceded by a toolbox talk from GAT to the GI contractor, defining the scope and procedures of the archaeological works.

3.2 Human Remains

Whilst it is not expected that human remains are to be encountered, if any human remains identified are to be excavated, and cannot be preserved in situ this will take place under appropriate regulations and with due regard for health and safety issues. In order to excavate human remains, a Ministry of Justice licence is required under Section 25 of the Burials Act 1857 for the removal of any body or remains of any body from any place of burial. In accordance with the Ministry of Justice licence, recovered remains will be reburied once the investigation and/or assessment/analysis are complete.

Non-fragmented skeletal remains will be excavated using wooden tools and collected and stored in polyethylene bags (with appropriate references for context, grave number, et al) and placed in a lidded cardboard archive box (note: separate boxes for each grave) and stored in a suitable manner within GAT premises. If significant quantities of human remains are encountered, a human osteologist should be contacted and appointed to advise the team during the fieldwork. The osteologist will be an external appointment: Dr. Genevieve Tellier | Tel: 01286 238827 | email: northwalesosteology@outlook.com who will assist in devising the excavation, recording and sampling strategy for features containing human remains. The osteologist should also help to ensure that adequate post-excavation processing of human remains is carried out so that the material is in a fit state for assessment during the post-excavation stage. For inhumations, this will involve washing, drying, marking and packing.

If human remains are recovered that are deemed suitable for further assessment/analysis, this will be completed in accordance with the osteologist's requirements and with *Human Bones from Archaeological Sites: Guidelines for Producing Assessment Documents And Analytical Reports* (Chartered Institute for Archaeologists, 2017).

3.3 Ecofacts

Due to the existing ground conditions and the depth of the proposed works it is unlikely that suitable deposits will be encountered. If they are however, bulk samples will be taken by the GAT archaeologist for further assessment and analysis. If any waterlogged/organic deposits are encountered, the GAT archaeologist will monitor and record the depth and context of the deposit or deposits but will not recover samples. Based on potential, e.g., an extensive depth of waterlogged deposits, recourse may be made to a specialist (via Lucy Whittingham | Project Manager (post-excavation) | AOC Archaeology | telephone: 0208 843 7380 | email: lucy.whittingham@aocarchaeology.com) for advice on a palaeoenvironmental assessment and analysis strategy.

For any ecofact samples taken from human burials, this will be completed in accordance with an appointed osteologist's guidance.

3.4 Artefacts

Diagnostic artefacts will be retained for further examination and identification. Pottery sherds of 19th and 20th century date will be examined on site and the context from which they were retrieved noted but the sherds will not be retained. Retained artefacts will be treated according to guidelines issued by the UK Institute of Conservation, in particular the advice provided within First Aid for Finds (Watkinson and Neal 2001).

Any waterlogged artefacts (e.g. wood or leather) that are to be recovered for post-excavation assessment and analysis will be processed in accordance with *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage, 2011) and specifically in accordance with Brunning and Watson (2010) for waterlogged wood and Historic England (2012) for waterlogged leather. In such cases an external specialist will be contacted to agree an appropriate sampling and recovery strategy via Jackeline Robertson (AOC Archaeology | telephone: 0208 843 7380).

All finds are the property of the landowner; however, it is Trust policy to recommend that all finds are donated to an appropriate museum (in this case Oriel Mon, Rhosmeirch, Llangefni, LL77 7TQ) where they can receive specialist treatment and study. Access to finds must be granted to the Trust for a reasonable period to allow for analysis and for study and publication as necessary. Trust staff will undertake initial identification, but any additional advice would be sought from a wide range of consultants used by the Trust, including National Museums and Galleries of Wales at Cardiff.

All finds of treasure must be reported to the coroner for the district within fourteen days of discovery or identification of the items. Items declared Treasure Trove become the property of the Crown, on whose behalf the Portable Antiquities Scheme acts as advisor on technical matters, and may be the recipient body for the objects.

The Treasure Valuation Committee, based at the British Museum, and informed by the Portable Antiquities Scheme, will decide whether they or any other museum may wish to acquire the object. If no museum wishes to acquire the object, then the Secretary of State will be able to disclaim it. When this happens, the coroner will notify the occupier and landowner that he intends to return the object to the finder after 28 days unless he receives no objection. If the coroner receives an objection, the find will be retained until the dispute has been settled. GAT will contact the landowner for agreement regarding the transfer of artefacts, initially to GAT and subsequently to the relevant museum (Oriel Mon). A GAT produced pro-forma will

be issued to the landowner where they are given the option to donate the finds or to record that they want them returning to them once analysis and assessment has been completed. Artefacts to be donated will then be transferred to Oriel Mon in accordance with their guidelines.

3.5 Data Management Plan

Archiving will be completed based on following task list;

- Pro-formas: all cross referenced and scanned for digital archiving;
- Photographic Metadata: cross-referenced with all pro-formas and completed in Microsoft Excel;
- Project register (Microsoft Excel format) *if applicable*: cross-referenced with all pro-formas and completed in Microsoft Excel; and
- Measured drawings (permatrace) *if applicable*: all cross referenced and scanned for digital archiving.

This data will then be used as the basis for the physical and digital dataset archives. Information from these will be used to compile the project report. The physical archive will be stored in a designated project folder and the location confirmed in the Trust project database; the digital dataset will be stored on a dedicated Trust server, with the location confirmed in the Trust project database via a specific hyperlink. External datasets for the HER and RCAHMW are as defined in the dissemination strategy below. De-selected digital data will be confirmed in an updated digital management plan appended to the final report.

A draft report will be submitted within one month of fieldwork completion and a final report will be submitted to the regional Historic Environment Record within six months of project completion. The report will include the following:

1. Non-technical summary (Welsh and English)
2. Introduction
3. Background
4. Methodology
5. Results
6. Conclusion
7. List of sources consulted.
8. Appendix I – approved GAT project specification
9. Appendix II – photographic metadata

On final approval, the following dissemination and archiving of the report and digital dataset will apply:

- A digital report(s) will be provided to the client and GAPS (draft report then final report);

- A digital report will be provided to the regional Historic Environment Record; this will be submitted within six months of project completion (final report only), along with a digital dataset comprising an Event PRN summary. The report and dataset will be submitted in accordance with the required standards set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (Version 1.1); and
- A digital report and digital archive dataset will be provided to Royal Commission on Ancient and Historic Monuments, Wales (final report only), in accordance with the *RCAHMW Guidelines for Digital Archives Version 1*. The dataset will be prepared in the format required by RCAHMW and will include:
 - Photographic metadata (Microsoft Access);
 - Photographic archive (TIFF format);
 - Project Information form (Excel);
 - File Information form (Excel) – Microsoft Word report text final;
 - File Information form (Excel) – Photographic metadata (general);
 - File Information form (Excel) – Adobe PDF report final; and
 - File Information form (Excel) - Photographic metadata (detail).

3.6 Selection Strategy

As defined in *Standard and Guidance For The Creation, Compilation, Transfer And Deposition of Archaeological Archives* (Chartered Institute for Archaeologists, 2020) section 3.3.1, a project specific selection strategy and data management plan should be prepared. In support of this, the Chartered Institute for Archaeologist (CIfA), have stated that it is “widely accepted that not all the records and materials collected or created during the course of an Archaeological Project require preservation in perpetuity. These records and materials constitute the Working Project Archive which will be subject to Selection, in order to establish what will be retained for long-term curation”. The aim of selection is to ensure that all the elements retained from the Working Project Archive for inclusion in the Archaeological Archive are appropriate to establish the significance of the project and support “future research, outreach, engagement, display and learning activities”. Selection should be “focused on selecting what is to be retained to support these future needs, rather than deciding what can be dispersed” and can be qualified by a selection strategy, which details the project-specific selection process, agreed by all parties (including GAPS, client and/or landowner), which will be applied to a Working Project Archive prior to its transfer into curatorial care as the Archaeological Archive. The selection strategy will be summarised in [Appendix III](#) and finalised for the final report; the strategy will take into account:

- The aims and objectives of the project.
- The brief and/or Written Scheme of Investigation (WSI)).
- The Collecting Institution’s collection policy and/or deposition guidelines.
- Local and regional research frameworks.
- Relevant thematic or period specific research frameworks.
- The project’s Data Management Plan (DMP).
- Internal recording and reporting policies.
- Material-specific guidance documents.

4 PERSONNEL

The project will be managed by John Roberts, Principal Archaeologist GAT Contracts Section with attendances on-site undertaken by a GAT Project Archaeologist. The Project Archaeologist will be responsible for the following:

- All archaeological watching brief duties on site;
- Client/contractor liaison;
- GAPS liaison, with regular updates;
- specialist liaison (if relevant);
- completing all on site pro-formas and the fieldwork archive;
- sourcing Primary Reference Numbers (PRN) from the GAT HER for any new features identified;
- completing an event summary and creating or updating PRN data, dependent on results; and
- for submitting a draft final report for project manager review and approval, to then be submitted as per the arrangements defined above.

5 HEALTH AND SAFETY

The GAT Project Archaeologist(s) will be CSCS certified. Copies of the site specific risk assessment will be supplied to the client and site contractor prior to the start of fieldwork. Any risks and hazards will be indicated prior to the start of work via a submitted risk assessment. All staff will be issued with required personal safety equipment, including high visibility jacket, steel toe-capped boots and hard hat. GAT staff will abide by Trust Covid-19 guidelines and site contractor guidelines.

6 SOCIAL MEDIA

One of the key aims in the GAT mission statement is to improve the understanding, conservation and promotion of the historic environment in our area and inform and educate the wider public. To help achieve this, GAT maintains an active social media presence and seeks all opportunities to promote our projects and results. With permission, GAT would like the opportunity to promote our work on this scheme through our social media platforms. This could include social media postings during our attendance on site as well as any postings to highlight results. In all instances, approval will be sought from client prior to any postings.

7 INSURANCE

7.1 Public/Products Liability

Limit of Indemnity- £5,000,000 any one event in respect of Public Liability

INSURER Aviva Insurance Limited

POLICY TYPE Public Liability

POLICY NUMBER 24765101CHC/UN/000375

EXPIRY DATE 21/06/2022

7.2 Employers Liability

Limit of Indemnity- £10,000,000 any one occurrence.

The cover has been issued on the insurers standard policy form and is subject to their usual terms and conditions. A copy of the policy wording is available on request.

INSURER Aviva Insurance Limited

POLICY TYPE Employers Liability

POLICY NUMBER 24765101 CHC / UN/000375

EXPIRY DATE 21/06/2022

7.3 Professional Indemnity

Limit of Indemnity- £5,000,000 in respect of each and every claim

INSURER Hiscox Insurance Company Limited

POLICY TYPE Professional Indemnity

POLICY NUMBER PL-PSC10002389775/00

EXPIRY DATE 22/07/2022

8 SOURCES CONSULTED

1. Brunning, R and Watson, J 2010, *Waterlogged Wood: Guidelines on the Recording*,
2. Chartered Institute for Archaeologists, 2017. *Human Bones from Archaeological Sites: Guidelines for Producing Assessment Documents and Analytical Reports*
3. Chartered Institute for Archaeologists, 2020, *Standard and Guidance for Archaeological Watching Brief*
4. Chartered Institute for Archaeologists, 2020, *Standard and Guidance for The Collection, Documentation, Conservation and Research of Archaeological Materials*
5. Chartered Institute for Archaeologists, 2020. *Standard and Guidance for Archaeological Watching Brief*;
6. Chartered Institute for Archaeologists, 2020, *Standard and Guidance for The Creation, Compilation, Transfer and Deposition of Archaeological Archives*
7. English Heritage, 1991, *Management of Archaeological Projects (MAP2)*
8. English Heritage, 2011, *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation*
9. Historic England, 2012, *Waterlogged Organic Artefacts Guidelines on their Recovery, Analysis and Conservation Sampling, Conservation and Curation of Waterlogged Wood* (3rd edition)
10. Historic England, 2015, *Management of Research Projects in the Historic Environment (MoRPHE)*
11. Royal Commission on Ancient and Historic Monuments of Wales, 2015, *Guidelines for digital archives*
12. The Welsh Archaeological Trusts, 2018, *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)*
13. Reilly S, Roberts J and Evans R. 2020, Cynllun Rhyddhad Llifogydd Dwyrân, Ynys Mon /Dwyrân Flood Risk Management Scheme, Ynys Mon: Asesiad Archeolegol/Archaeological Assessment. Gwynedd Archaeological Trust Report 1620
14. Watkinson, D and Neal, V, 2001, *First aid for finds* (3rd edition)

FIGURE 01:

Location Map detailing main flood protection areas (in blue). Scale: 1 to 15000@A4.

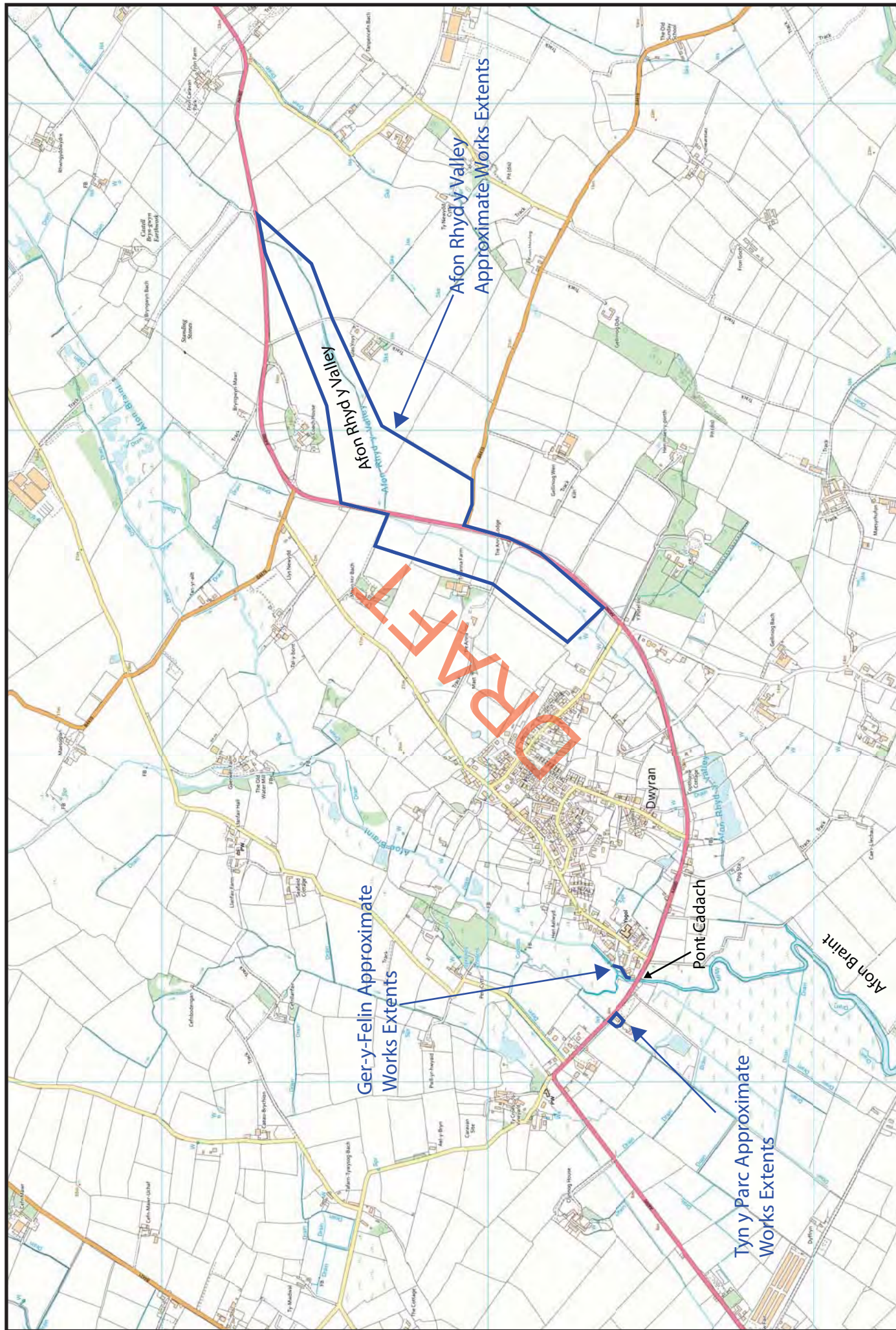


Figure 01: Location Map detailing main flood protection areas (in blue). Scale: 1 to 15000@A4.
© Crown Copyright Ordnance Survey Vectormap Local AL10002089

FIGURE 02:

Reproduction of Binnies Drawing No. 4020878-BUK-ZZ-00-SK-GE-00001

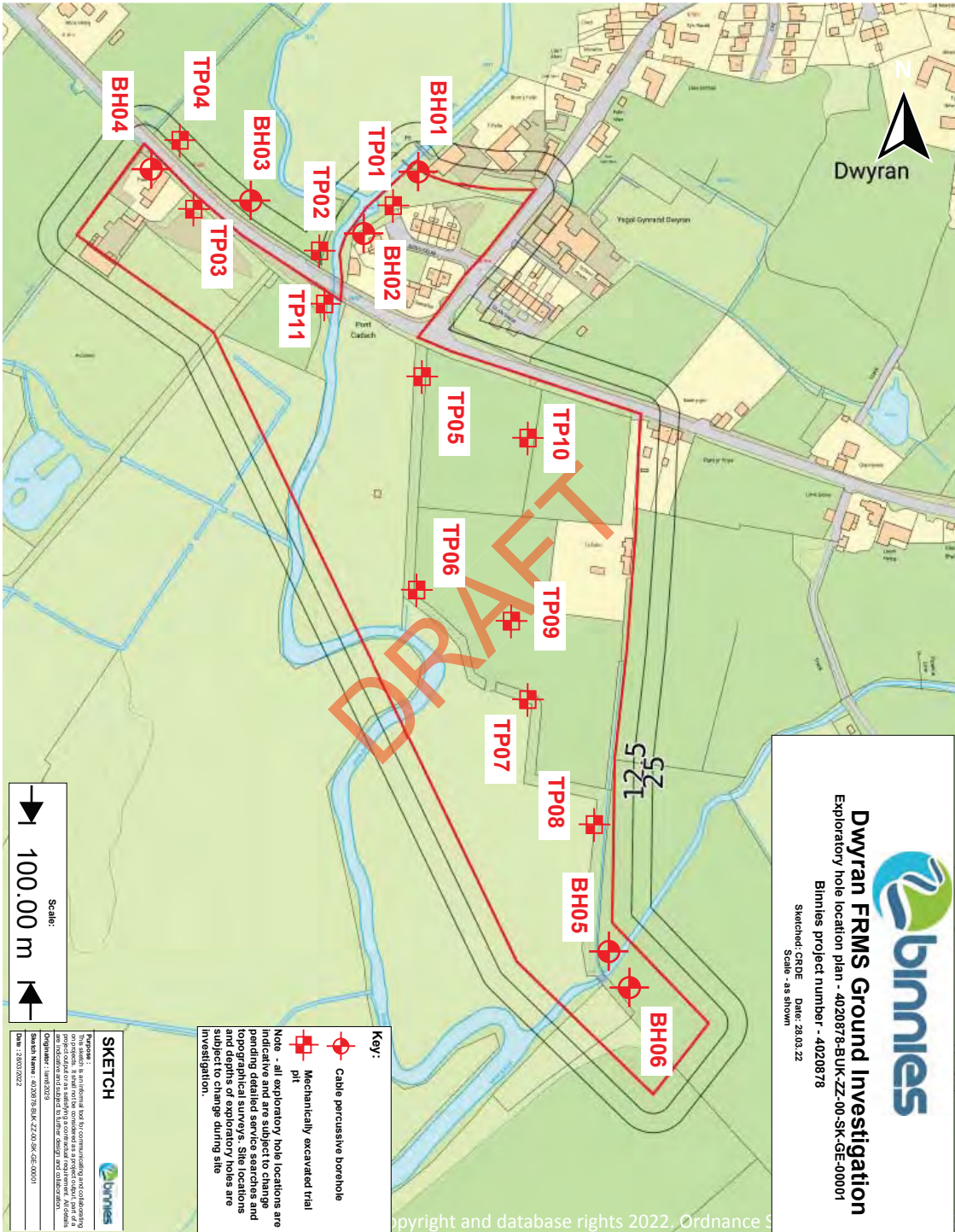


FIGURE 03:

**Reproduction of Binnies Drawing No. 4020878-BUK-ZZ-00-SK-GE-00002
rev 2**

Dam 4:

crest level: 11.0m AOD
outfall size: 300mm TBC
outfall invert level: 9.3m AOD

Dam 3:

crest level: 7.6m AOD (road level)
outfall size: 600mm dia.
outfall invert level: 6.1m AOD

Dam 5:

crest level: 11.7m AOD (road level)
outfall size: 450mm TBC
outfall invert level: 11.1m AOD

Dam 2:

crest level: 6.5m AOD
outfall size: 600mm x 600mm
outfall invert level: 4.2m AOD

Dam 1:

crest level: 5.0m AOD
outfall size: 600mm x 600mm
outfall invert level: 2.7m AOD

TP14

TP13

TP12

SKETCH

Purpose: This sketch is an advisory tool for cross-checking and corroborating the location of exploratory holes. It is not a final design and should not be used for construction or as a substitute for a detailed design. All details are subject to change during the design process.
Originator: binnies
Sketch Name: 4020878-BUK-ZZ-00-SK-GE-00002
Date: 28/03/2022

Key:



Cable percussive borehole



Mechanically excavated trial pit

Note - all exploratory hole locations are indicative and are subject to change during the design process. All details are subject to change during site investigation.



FIGURE 04:

Location Map detailing main flood protection areas (in blue) and GAT Report 1620 Gazetteer Features 01 to 32. Scale: 1 to 15000@A4.

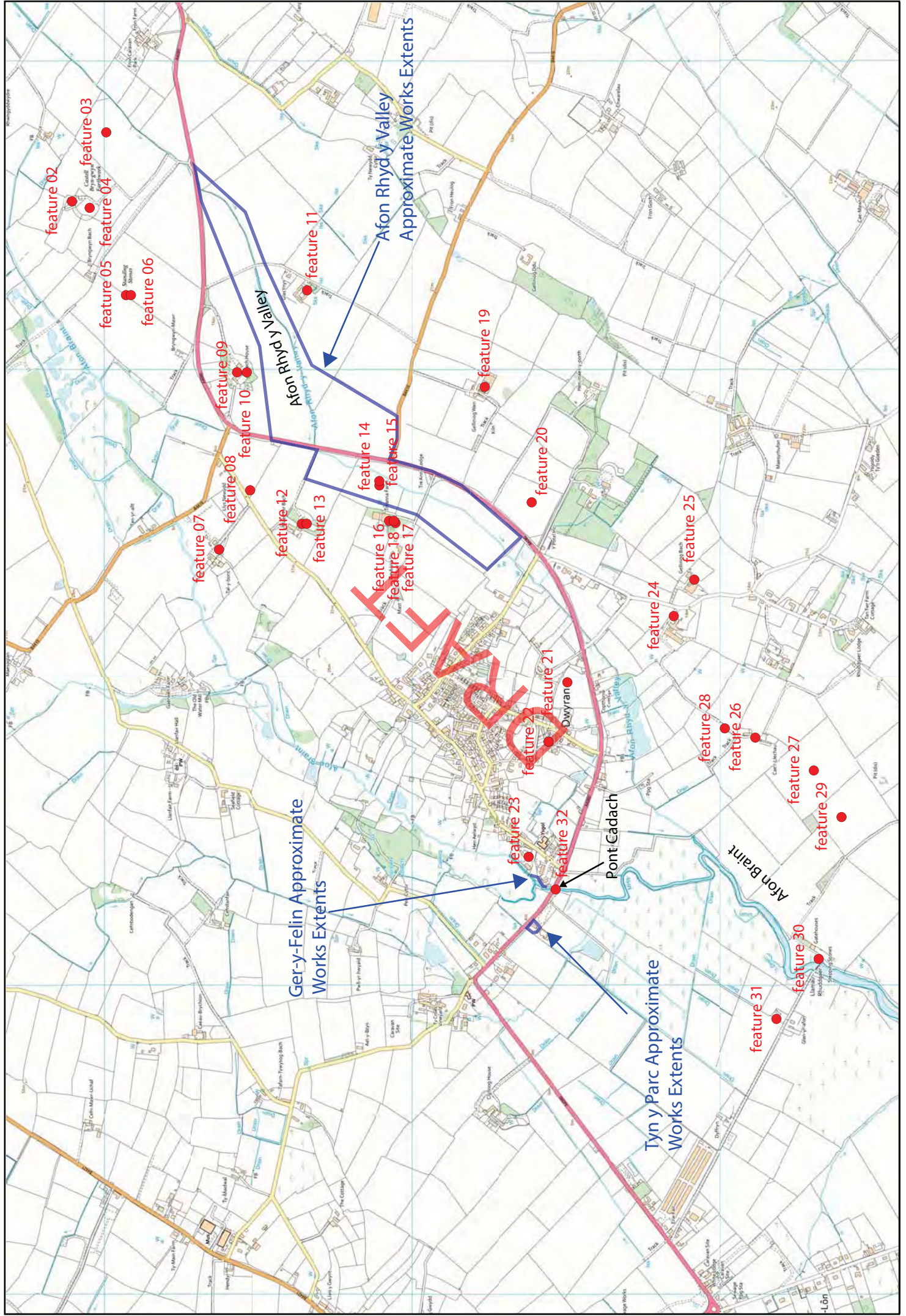


Figure 04: Location Map detailing main flood protection areas (in blue) and Gazetteer Features. Scale: 1 to 15000@A4. © Crown Copyright Ordnance Survey AL10002089

APPENDIX I

Gwynedd Archaeological Trust Watching Brief pro-forma

YMDDIRIEDOLAETH ARCHAEOLEGOL GWYNEDD ARCHAEOLOGICAL TRUST		
WATCHING BRIEF DAY RECORD		Date
Project name	Project number	Compiler
Location		
Description		
Times of travelling and on-site		
Drawn record details		
Photographic record details		

APPENDIX II

Gwynedd Archaeological Trust Photographic Metadata pro-forma

Project Number:

[illegible]

APPENDIX III

Gwynedd Archaeological Trust Selection Strategy

G2706_Dwyran_Flood_Relief_Scheme

06/05/2022 v1.0

Selection Strategy

Project Information

Project Management

Project Manager	John Roberts john.roberts@heneb.co.uk
Archaeological Archive Manager	John Roberts john.roberts@heneb.co.uk
Organisation	Gwynedd Archaeological Trust

Stakeholders		Date Contacted
Collecting Institution(s)	GAT Historic Environment Record	05/05/2022
	RCAHMW	On completion of Project Archive
	Oriel Mon, Rhosmeirch, Llangefni, LL77 7TQ	If applicable, post-fieldwork based on artefact recovery
Project Lead / Project Assurance	Gwynedd Archaeological Planning Services	tbc
Developer	<i>Binnies</i>	n/a

Resources

Resources required Describe the resources required to implement this Selection Strategy, particularly if unusual resources are required.	No unusual resources required outside of GAT normal operating equipment and personnel.
--	--

Context

Describe below the context of this Selection Strategy. You should refer to:

- The aims and objectives of the project;
- Local Authority guidance (including the brief);
- Research Frameworks;
- The repository collection development policy and/or deposition policy;
- Material-specific guidance documents.

Note: This section may be copied from your Project Design/WSI to ensure all Stakeholders receive this context information.

The full aims and objectives of this project are detailed in the project specific written scheme of investigation (WSI).

Gwynedd Archaeological Trust has been commissioned by Binnies on behalf of Natural Resources Wales to undertake an archaeological watching brief during geotechnical ground investigation works a proposed flood relief scheme near Dwyran, Ynys Môn (NGR SH44366558; post code LL61 6YY; GAT Report 1620 Figure 01). The scheme is located to the immediate south, east and west of the village of Dwyran, with five main work areas:

- New flood wall or embankment at Ger-y-Felin;
- New outfalls downstream of Pont Cadach;
- New flood wall or embankment at Tyn y Parc;
- Modify or replace tidal outfall on Afon Rhyd y Valley along with possible improvement works to the existing flood embankment to provide an access route to the tidal outfall; and
- Potential Natural Flood Management measures on Afon Rhyd y Valley upstream of Dwyran.
- The scheme may also include the installation of Property Level Protection (PLP) at a small number of residential properties that are presently affected by Afon Rhyd y Valley.

The geotechnical ground investigation works will include trial pits and boreholes that will be located across the main work areas, as indicated in GAT Report 1620 Figures 02 and 03. The ground investigation works are scheduled to be undertaken from May 2022, with an estimated duration of 11No days.

Gwynedd Archaeological Trust. 2022. Dwyran Flood Relief Scheme. Written Scheme of Investigation for Archaeological Watching Brief. Project (G2706).

1 – Digital Data

Stakeholders

Name the individual(s) responsible for the Digital Data Selection decisions (i.e. Archaeological Archive Manager, Project Manager, Collections Curator).

John Roberts (GAT Principal Archaeologist)

Selection

Location of Data Management Plan (DMP)

Selection of digital data elements should be considered in your project's DMP. For the purpose of the Selection Strategy, you can either copy the selection section of your DMP below, or attach it as an appendix to this document. Please indicate here if the DMP is attached.

All digital data will be collected, stored and selected in lines with the Gwynedd Archaeological Trust (GAT) Data Management Plan located on GAT's servers (available on request).

The selection strategy in your DMP should:

- 1.1 Define what digital data will be selected for inclusion in the archaeological archive, how this will be done, and why. Do not forget to consider that specialists may have digital data that should be included in the archaeological archive.
- 1.2 Identify the selection review points during the project (i.e. project planning, data gathering, analysis and reporting and archive compilation).
- 1.3 Reference all relevant standards, policies or guidelines (e.g. digital repository deposition requirements) and specialist advice sought.
- 1.4 Identify any selection decisions that differ from standard guidelines and explain why.

Following the completion of the fieldwork, a working project archive will be created based on following task list;

1. Pro-formas: all cross referenced and complete;
2. Photographic Metadata: completed in *Microsoft Access* and cross-referenced with all pro-formas;
3. Survey data: downloaded using a Computer Aided Design package;
4. Sections (if relevant): all cross referenced and complete;
5. Plans (if relevant): all cross referenced and complete;
6. Artefacts (if relevant): quantified and identified; register completed;
7. Ecofacts (if relevant): quantified and register completed;
8. Context register (if relevant): quantified and register completed.

All relevant site archive data will be added to a digital project register specific to this project, which will be prepared in *Microsoft Excel*.

This data will then be used as the basis for the physical and digital dataset archives. Information from these will be used to compile the project report. The physical archive will be stored in a designated project folder and the location confirmed in the Trust project database; the digital dataset will be stored on a dedicated Trust server, with the location confirmed in the Trust project database via a specific hyperlink. External datasets for the HER and RCAHMW are as defined in the dissemination strategy below. De-selected digital data will be confirmed in an updated digital management plan appended to the final report

De-Selected Digital Data

The procedure for dealing with De-selected digital data and what specialist advice informed this process should be recorded in your DMP. Please copy this information here or attach your DMP as an appendix to this document.

It is envisaged that the de-selected material will be retained on the GAT servers for 2 years following the completion of the project at which point they will be reviewed and deleted as necessary in line with the GAT DMP.

Amendments

Detail any amendments to the above selection strategy here.

Date	Amendment	Rationale	Stakeholders

2 – Documents

Stakeholders

Name the individual(s) responsible for the Documents Selection decisions (i.e. Archaeological Archive Manager, Project Manager, Repository Representative).

John Roberts – Principal Archaeologist, Gwynedd Archaeological Trust;
Sean Derby – Historic Environment Record, Gwynedd Archaeological Trust;
Gareth Edwards, *Head of Knowledge and Understanding, RCAHMW*

Selection

Describe your Selection Strategy for the Documents elements of the archaeological archive. To do this you must:

- 2.1 Define which documents will be selected for inclusion in the archaeological archive, how this will be done, and why. Do not forget to consider that specialists may have documents that should be included in the archaeological archive.
- 2.2 Identify the selection review points during the project (e.g. project planning, data gathering, analysis and reporting and archive compilation).
- 2.3 Reference all relevant standards, policies or guidelines (e.g. digital repository deposition requirements) and specialist advice sought.
- 2.4 Identify any selection decisions that differ from standard guidelines and explain why.

- A digital report will be provided to the regional Historic Environment Record; this will be submitted within six months of project completion (final report only), along with a digital dataset comprising an Event PRN summary. The report and dataset will be submitted in accordance with the required standards set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (Version 1.1); and
- A digital report and digital archive dataset will be provided to Royal Commission on Ancient and Historic Monuments, Wales (final report only), in accordance with the *RCAHMW Guidelines for Digital Archives Version 1*. The dataset will be prepared in the format required by RCAHMW and will include:
 - Photographic metadata (Microsoft Access);
 - Photographic archive (TIFF format);
 - Project Information form (Excel);
 - File Information form (Excel) – Microsoft Word report text final;
 - File Information form (Excel) – Photographic metadata (general);
 - File Information form (Excel) – Adobe PDF report final; and
 - File Information form (Excel) - Photographic metadata (detail).

De-Selected Documents

Describe the procedure for dealing with De-selected material and what specialist advice has informed this procedure.

It is envisaged that the material de-selected from inclusion in the preserved archive will be duplicates or re-productions created during the analysis phase of the project. De-selected material will therefore either be retained to supplement GAT's research files or recycled.

Amendments

Detail any amendments to the above selection strategy here.

Date	Amendment	Rationale	Stakeholders

3 – Materials

Note: This step should be completed for each material component of the archaeological archive. Copy this table for the various materials as required, providing the 'Material Type' and a section identifier (eg. '3.1') for each.

Material type	Bulk Finds	Section 3.	
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Stakeholders

Name the individual(s) responsible for the Materials Selection decisions (i.e. Archaeological Archive Manager, Project Manager, Repository Representative).

John Roberts – Principal Archaeologist, Gwynedd Archaeological Trust;
Tom Fildes – Planning Archaeologist, Gwynedd Archaeological Planning Service;
Oriol Mon, Rhosmeirch, Llangefni, LL77 7TQ

There are known findspots within the local area and any diagnostic artefacts recovered during the watching brief will be retained for further examination and identification. Pottery sherds of 19th and 20th century date will be examined on-site and the context from which they were retrieved noted but the sherds will not be retained. The artefacts will be treated according to guidelines issued by the UK Institute of Conservation, in particular the advice provided within *First Aid for Finds* (Watkinson and Neal 2001).

Any waterlogged artefacts (e.g. wood or leather) that are to be recovered for post-excavation assessment and analysis will be processed in accordance with *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage, 2011) and specifically in accordance with Brunning and Watson (2010) for waterlogged wood and Historic England (2012) for waterlogged leather. In such cases an external specialist will be contacted to agree an appropriate sampling and recovery strategy via Lucy Whittingham Project Manager (post-excavation), AOC Archaeology, telephone: 0208 843 7380. All finds are the property of the landowner; however, it is Trust policy to recommend that all finds are donated to an appropriate museum (in this case Oriol Mon, Rhosmeirch, Llangefni, LL77 7TQ), where they can receive specialist treatment and study. Access to finds must be granted to the Trust for a reasonable period to allow for analysis and for study and publication as necessary. Trust staff will undertake initial identification, but any additional advice would be sought from a wide range of consultants used by the Trust, including National Museums and Galleries of Wales at Cardiff. All finds of treasure must be reported to the coroner for the district within fourteen days of discovery or identification of the items. Items declared Treasure Trove become the property of the Crown, on whose behalf the Portable Antiquities Scheme acts as advisor on technical matters, and may be the recipient body for the objects.

The Treasure Valuation Committee, based at the British Museum, and informed by the Portable Antiquities Scheme, will decide whether they or any other museum may wish to acquire the object. If no museum wishes to acquire the object, then the Secretary of State will be able to disclaim it. When this happens, the coroner will notify the occupier and landowner that he intends to return the object to the finder after 28 days unless he receives no objection. If the coroner receives an objection, the find will be retained until the dispute has been settled. GAT will contact the landowner for agreement regarding the transfer of artefacts, initially to GAT and subsequently to the relevant museum (Oriol Mon, Rhosmeirch, Llangefni, LL77 7TQ). A GAT produced pro-forma will be issued to the landowner where they are given the option to donate the finds or to record that they want them returning to them once analysis and assessment has been completed. Artefacts to be donated will then be transferred to Oriol Mon.

Selection

Describe your Selection Strategy for each material type and or object type. To do this you must:

- 3.1 State the Selection Strategy you are applying to each category of material, how this will be done, and why.
- 3.2 Identify the selection review points during the project (e.g. project planning, data gathering, analysis and reporting and archive compilation).
- 3.3 Reference all relevant standards, policies or guidelines (e.g. thematic, period, and regional, Research Frameworks, repository deposition policies) and specialist advice sought.
- 3.4 Identify any selection decisions that differ from standard guidelines and explain why.

The [Materials Selection Template](#) may be useful in structuring this section.

The full material archive returned to the GAT offices will be reviewed following analysis: Stakeholders (see above) will make selection decisions based on specialists reports and selection recommendations and SDMS collecting policy. The selection will take place during archive completion.

Uncollected Material

If you are practising selection in the field, describe the process that will be applied. To do this you must:

- Detail how you will characterise, quantify and record all uncollected material on site.
- Explain how you will dispose of, or re-distribute, uncollected material.

Any uncollected material will be left on-site to be incorporated into backfill.

De-Selected Material

Describe what you will do with the de-selected material. All processed material should have been adequately recorded before de-selection.

All bulk finds will be assessed and recorded to appropriate standards. De-selected material will be returned to the landowner as agreed by the landowner and curatorial archaeologist.

Amendments

Detail any amendments to the above selection strategy here.

Date	Amendment	Rationale	Stakeholders

Materials Selection Template

This table may be inserted into Section 3 of the main [Selection Strategy Template](#) to help present differing selection strategies for different material types

Find Type	Selection Strategy	Stakeholders	Review Points
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APPENDIX II

Photographic Metadata

PHOTO RECORD NUMBER	PROJECT NAME	PROJECT PHASE	DESCRIPTION	VIEW FROM	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO	RECORD COMPILED BY	PLATES
G2706_001	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP01 from the southwest.	SW	Not used	Michael Sion Lynes	15/11/2021	Michael Sion Lynes	
G2706_002	Dwyran Flood Relief Scheme	GI Works	Post-excavation view of TP01 down to natural horizon from the southwest.	SW	1x1m	Michael Sion Lynes	15/11/2021	Michael Sion Lynes	1
G2706_003	Dwyran Flood Relief Scheme	GI Works	Post-excavation section view of TP01 from the northwest.	NW	1x1m	Michael Sion Lynes	15/11/2021	Michael Sion Lynes	2
G2706_004	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of extension to TP01 down to natural horizon (no scale).	SW	Not used	Michael Sion Lynes	15/11/2021	Michael Sion Lynes	
G2706_005	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP02 from the north-northwest.	NNW	1x1m	Michael Sion Lynes	15/11/2021	Michael Sion Lynes	
G2706_006	Dwyran Flood Relief Scheme	GI Works	Post-excavation view of TP02 down to natural horizon from the north-northwest.	NNW	1x1m	Michael Sion Lynes	15/11/2021	Michael Sion Lynes	3
G2706_007	Dwyran Flood Relief Scheme	GI Works	Post-excavation section view of TP02 from the east-northeast.	ENE	1x1m	Michael Sion Lynes	15/11/2021	Michael Sion Lynes	4
G2706_008	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP07 from the south.	S	1x1m	Michael Sion Lynes	15/11/2021	Michael Sion Lynes	
G2706_009	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP06 from the south.	W	1x1m	Michael Sion Lynes	15/11/2021	Michael Sion Lynes	

PHOTO RECORD NUMBER	PROJECT NAME	PROJECT PHASE	DESCRIPTION	VIEW FROM	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO	RECORD COMPILED BY	PLATES
G2706_010	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP09 from the south.	E	1x1m	Michael Sion Lynes	16/11/2021	Michael Sion Lynes	
G2706_011	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP05 from the east. ***CANCELLED***	E	1x1m	Michael Sion Lynes	16/11/2021	Michael Sion Lynes	
G2706_012	Dwyran Flood Relief Scheme	GI Works	Post-excavation view of TP07 down to natural horizon from the south.	S	1x1m	Michael Sion Lynes	16/11/2021	Michael Sion Lynes	11
G2706_013	Dwyran Flood Relief Scheme	GI Works	Post-excavation section view of TP07 from the east.	E	1x1m	Michael Sion Lynes	16/11/2021	Michael Sion Lynes	12
G2706_014	Dwyran Flood Relief Scheme	GI Works	Post-excavation view of TP06 down to natural horizon from the east.	E	1x1m	Michael Sion Lynes	16/11/2021	Michael Sion Lynes	9
G2706_015	Dwyran Flood Relief Scheme	GI Works	Post-excavation section view of TP06 from the north.	N	1x1m	Michael Sion Lynes	16/11/2021	Michael Sion Lynes	10
G2706_016	Dwyran Flood Relief Scheme	GI Works	Post-excavation view of TP09 down to natural horizon from the west.	W	1x1m	Michael Sion Lynes	16/11/2021	Michael Sion Lynes	15
G2706_017	Dwyran Flood Relief Scheme	GI Works	Post-excavation section view of TP09 from the south.	S	1x1m	Michael Sion Lynes	16/11/2021	Michael Sion Lynes	16
G2706_018	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP08 from the east.	E	1x1m	Michael Sion Lynes	16/11/2021	Michael Sion Lynes	

PHOTO RECORD NUMBER	PROJECT NAME	PROJECT PHASE	DESCRIPTION	VIEW FROM	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO	RECORD COMPILED BY	PLATES
G2706_019	Dwyran Flood Relief Scheme	GI Works	Post-excavation view of TP08 down to natural sandy horizon from the east.	E	1x1m	Michael Sion Lynes	16/11/2021	Michael Sion Lynes	13
G2706_020	Dwyran Flood Relief Scheme	GI Works	Post-excavation section view of TP08 from the north.	N	1x1m	Michael Sion Lynes	16/11/2021	Michael Sion Lynes	14
G2706_021	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP10 from the southeast.	SE	1x1m	Michael Sion Lynes	16/11/2021	Michael Sion Lynes	
G2706_022	Dwyran Flood Relief Scheme	GI Works	Post-excavation view of TP10 down to natural horizon from the southeast.	SE	1x1m	Michael Sion Lynes	17/11/2021	Michael Sion Lynes	17
G2706_023	Dwyran Flood Relief Scheme	GI Works	Post-excavation section view of TP10 from the southwest.	SW	1x1m	Michael Sion Lynes	17/11/2021	Michael Sion Lynes	18
G2706_024	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP03 from the southeast.	SE	1x1m	Michael Sion Lynes	17/11/2021	Michael Sion Lynes	
G2706_025	Dwyran Flood Relief Scheme	GI Works	Post-excavation view of TP03 down to natural clay horizon from the southeast.	SE	1x1m	Michael Sion Lynes	17/11/2021	Michael Sion Lynes	5
G2706_026	Dwyran Flood Relief Scheme	GI Works	Post-excavation section view of TP03 from the southwest.	SW	1x1m	Michael Sion Lynes	17/11/2021	Michael Sion Lynes	6
G2706_027	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP14 from the north.	N	1x1m	Michael Sion Lynes	17/11/2021	Michael Sion Lynes	

PHOTO RECORD NUMBER	PROJECT NAME	PROJECT PHASE	DESCRIPTION	VIEW FROM	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO	RECORD COMPILED BY	PLATES
G2706_028	Dwyran Flood Relief Scheme	GI Works	Post-excavation view of TP14 down to natural horizon from the north.	N	1x1m	Michael Sion Lynes	17/11/2021	Michael Sion Lynes	23
G2706_029	Dwyran Flood Relief Scheme	GI Works	Post-excavation section view of TP14 from the east.	E	1x1m	Michael Sion Lynes	17/11/2021	Michael Sion Lynes	24
G2706_030	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP13 from the south.	S	1x1m	Michael Sion Lynes	18/11/2021	Michael Sion Lynes	
G2706_031	Dwyran Flood Relief Scheme	GI Works	Post-excavation view of TP13 down to natural horizon from the north.	N	1x1m	Michael Sion Lynes	18/11/2021	Michael Sion Lynes	21
G2706_032	Dwyran Flood Relief Scheme	GI Works	View of ceramic land drain within TP13	N	1x1m	Michael Sion Lynes	18/11/2021	Michael Sion Lynes	
G2706_033	Dwyran Flood Relief Scheme	GI Works	Post-excavation section view of TP13 from the west.	W	1x1m	Michael Sion Lynes	18/11/2021	Michael Sion Lynes	22
G2706_034	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP04 from the southeast.	SE	1x1m	Michael Sion Lynes	18/11/2021	Michael Sion Lynes	
G2706_035	Dwyran Flood Relief Scheme	GI Works	Post-excavation view of TP04 down to natural horizon from the southeast.	SE	1x1m	Michael Sion Lynes	18/11/2021	Michael Sion Lynes	7
G2706_036	Dwyran Flood Relief Scheme	GI Works	Post-excavation section view of TP04 from the southwest.	SW	1x1m	Michael Sion Lynes	18/11/2021	Michael Sion Lynes	8

PHOTO RECORD NUMBER	PROJECT NAME	PROJECT PHASE	DESCRIPTION	VIEW FROM	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO	RECORD COMPILED BY	PLATES
G2706_037	Dwyran Flood Relief Scheme	GI Works	Pre-excavation view of TP12 from the northwest.	NW	1x1m	Michael Sion Lynes	18/11/2021	Michael Sion Lynes	
G2706_038	Dwyran Flood Relief Scheme	GI Works	Post-excavation view of TP12 down to natural horizon from the northwest.	NW	1x1m	Michael Sion Lynes	18/11/2021	Michael Sion Lynes	19
G2706_039	Dwyran Flood Relief Scheme	GI Works	Post-excavation section view of TP12 from the northeast.	NE	1x1m	Michael Sion Lynes	18/11/2021	Michael Sion Lynes	20

APPENDIX III

Trial Pit Description List

Trial Pit/Plot.	GI TP01	Maximum Depth (m)	3.8
Length and width (m)	5.5 x 0.7	Orientation	NE-SW
OSGB centre point	E 244404 N 365578	Photos	001-004

Type.	Depth (m)	Description
Topsoil	0-0.30	Greyish mid-brown sandy silt with some modern inclusions (milk bottle, aluminium can and plastic wrappers), rooting throughout. (Made ground)
Subsoil	0.3–0.6	Yellowish brown sandy silt with rare (10%) angular stone inclusions (4-15cm in size). One fragment of ceramic drainage pipe.
Natural	0.6>	Mixtures of yellows and mid grey sandy clay. 20-30% small to medium sized stone inclusions, angular in shape (6-30cm in size).

Trial Pit/Plot.	GI TP02	Maximum Depth (m)	3.2
Length and width (m)	3.7 x 0.7	Orientation	NNW-SSE
OSGB centre point	E 244348 N 365589	Photos	005-007

Type.	Depth (m)	Description
Topsoil	0-0.6	Greyish mid-brown sandy silt with building material inclusions within (red brick and mortar). (Made ground)
Natural	0.6>	Yellow sand overlaying mid grey sandy clay beneath. No stone inclusions

Trial Pit/Plot.	GI TP03	Maximum Depth (m)	3.0
Length and width (m)	3.5 x 0.7	Orientation	NW-SE
OSGB centre point	E 364871 N 244707	Photos	024-026

Type.	Depth (m)	Description
Topsoil	0-0.3	Greyish mid-orangey brown sandy silt with 20-25% angular and sub-angular stone inclusions (2-10cm in size), rooting throughout.
Natural	0.3-1.7	Mid-orangey brown, gravelly and gritty sandy clay (Glacial till).
Natural	1.7>	Sandy light grey gravel, Pebbles and sandy clay leached material sat on top of bedrock.

Trial Pit/Plot.	GI TP04	Maximum Depth (m)	3.2
Length and width (m)	3.7 x 0.7	Orientation	NW-SE
OSGB centre point	E 244302 N 365566	Photos	034-036

Type.	Depth (m)	Description
Topsoil	0-0.3	Greyish mid to dark brown sandy silt with very rare stone inclusions (angular 2-5cm in size), rooting throughout.
Natural	0.3-0.8	Clean sand: Yellow and orange in colour.
Natural	0.8>	Mid-grey sandy clay, fairly tough in compaction, no stones within.

Trial Pit/Plot.	GI TP06	Maximum Depth (m)	3.5
Length and width (m)	4.5 x 3	Orientation	E-W
OSGB centre point	E 244366 N 365351	Photos	009, 014-15

Type.	Depth (m)	Description
Topsoil	0-0.2	Greyish mid-brown sandy silt with rare angular stone inclusions <5% (2-4cm in size), rooting throughout.
Natural	0.2-0.8	Orangey mid-brown clayey sand with no stone inclusions.
Natural	0.8-1.8	Light grey sandy clay, no inclusions.
Natural	1.8>	River gravels (Grey, fine)

Trial Pit/Plot.	GI TP07	Maximum Depth (m)	3.2
Length and width (m)	4.2 x 0.7	Orientation	N-S
OSGB centre point	E 244432 N 365285	Photos	008, 012-13

Type.	Depth (m)	Description
Topsoil	0-0.2	Greyish mid-brown sandy silt with rooting throughout.
Natural	0.2-0.4	Greyish sandy clay with yellow sand with no stone inclusions.
Natural	0.4-0.5	Mid-grey gravely band within natural
Natural	0.5>	Greyish sandy clay with yellow sand with no stone inclusions.

Trial Pit/Plot.	GI TP08	Maximum Depth (m)	3.4
Length and width (m)	3.2 x 0.7	Orientation	W-E
OSGB centre point	E 365133 N 244453	Photos	018-020

Type.	Depth (m)	Description
Topsoil	0-0.15	Fairly dark to mid-brown sandy silt with rooting throughout. Very rare stone inclusions <5% small angular (2-4cm)
Natural	0.15-0.3	Pure yellow marine sand
Natural	0.3>	Light grey clayey sand (Marine sand)

Trial Pit/Plot.	GI TP09	Maximum Depth (m)	3.2
Length and width (m)	3.5 x 0.7	Orientation	E-W
OSGB centre point	E 365300 N 244487	Photos	010, 016-17

Type.	Depth (m)	Description
Topsoil	0-0.20	Greyish mid-brown sandy silt with rooting throughout. Rare angular stone inclusions 10-20% (6-10cm in size).
Natural	0.2-0.8	Orangey brown clayey sand, no stone inclusions.
Natural	0.8>	Mid grey, fine river gravel with some pebbles (4-8cm).

Trial Pit/Plot.	GI TP10	Maximum Depth (m)	3
Length and width (m)	3.6 x 0.7	Orientation	NW-SE
OSGB centre point	E 365082 N 244503	Photos	021-023

Type.	Depth (m)	Description
Topsoil	0-0.3	Greyish mid-brown sandy silt with rooting throughout. Rare small angular stone inclusions 20-30% (4-8cm in size).
Natural	0.3-1.2	Yellow and light grey sandy clay with some fractured pieces of fractured red sandstone and sub-rounded schist (8-15cm in size) inclusion.
Natural	1.2-1.3	Band of fine grey gravel
Natural	1.3>	Mid-grey sandy clay (glacial till)

Trial Pit/Plot.	GI TP12	Maximum Depth (m)	2
Length and width (m)	3.1 x 0.7	Orientation	NW-SE
OSGB centre point	E 366326 N 245876	Photos	037-039

Type.	Depth (m)	Description
Topsoil	0-0.3	Greyish mid-brown sandy silt with rooting throughout. Hardly no stone inclusions within.
Natural	0.3-0.7	Orange and orangey-brown clayey-sand with rare 10-20% small angular stone inclusions (2-6cm in size).
Natural	0.7>	Mid-dark grey sandy gritty clay, fairly firm (glacial till).

Trial Pit/Plot.	GI TP13	Maximum Depth (m)	1.3
Length and width (m)	5 x 0.7	Orientation	N-S
OSGB centre point	E 366497 N 246366	Photos	030-033

Type.	Depth (m)	Description
Topsoil	0-0.2	Greyish mid-brown sandy silt with rooting throughout. Rare small angular stone inclusions 10-15% (4-8cm in size).
Natural	0.2-0.7	Yellowish-orange sandy clay with some grit inclusions (20-25%).
Natural	0.7>	Greyish-orange clay mixed with gravel (wet consistency)

Trial Pit/Plot.	GI TP14	Maximum Depth (m)	3
Length and width (m)	3.2 x 0.7	Orientation	N-S
OSGB centre point	E 366613 N 246570	Photos	027-029

Type.	Depth (m)	Description
Topsoil	0-0.3	Greyish mid-brown sandy silt with rooting throughout. Rare small to medium size angular stone inclusions 20-30% (2-10cm in size).
Natural	0.3-1.4	Yellow and orangey brown clayey sand, fairly compact.
Natural	1.4>	Mixture of mid to light grey clay with gravel and pebbles.

APPENDIX IV

Gwynedd Archaeological Trust Selection Strategy

G2706_Dwyran_Flood_Relief_Scheme

06/05/2022 v1.0

Selection Strategy

Project Information

Project Management

Project Manager	John Roberts john.roberts@heneb.co.uk
Archaeological Archive Manager	John Roberts john.roberts@heneb.co.uk
Organisation	Gwynedd Archaeological Trust

Stakeholders		Date Contacted
Collecting Institution(s)	GAT Historic Environment Record	05/05/2022
	RCAHMW	On completion of Project Archive
	Oriel Mon, Rhosmeirch, Llangefni, LL77 7TQ	If applicable, post-fieldwork based on artefact recovery
Project Lead / Project Assurance	Gwynedd Archaeological Planning Services	tbc
Developer	<i>Binnies</i>	n/a

Resources

Resources required Describe the resources required to implement this Selection Strategy, particularly if unusual resources are required.	No unusual resources required outside of GAT normal operating equipment and personnel.
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Context

Describe below the context of this Selection Strategy. You should refer to:

- The aims and objectives of the project;
- Local Authority guidance (including the brief);
- Research Frameworks;
- The repository collection development policy and/or deposition policy;
- Material-specific guidance documents.

Note: This section may be copied from your Project Design/WSI to ensure all Stakeholders receive this context information.

The full aims and objectives of this project are detailed in the project specific written scheme of investigation (WSI).

Gwynedd Archaeological Trust has been commissioned by Binnies on behalf of Natural Resources Wales to undertake an archaeological watching brief during geotechnical ground investigation works a proposed flood relief scheme near Dwyran, Ynys Môn (NGR SH44366558; post code LL61 6YY; GAT Report 1620 Figure 01). The scheme is located to the immediate south, east and west of the village of Dwyran, with five main work areas:

- New flood wall or embankment at Ger-y-Felin;
- New outfalls downstream of Pont Cadach;
- New flood wall or embankment at Tyn y Parc;
- Modify or replace tidal outfall on Afon Rhyd y Valley along with possible improvement works to the existing flood embankment to provide an access route to the tidal outfall; and
- Potential Natural Flood Management measures on Afon Rhyd y Valley upstream of Dwyran.
- The scheme may also include the installation of Property Level Protection (PLP) at a small number of residential properties that are presently affected by Afon Rhyd y Valley.

The geotechnical ground investigation works will include trial pits and boreholes that will be located across the main work areas, as indicated in GAT Report 1620 Figures 02 and 03. The ground investigation works are scheduled to be undertaken from May 2022, with an estimated duration of 11No days.

Gwynedd Archaeological Trust. 2022. Dwyran Flood Relief Scheme. Written Scheme of Investigation for Archaeological Watching Brief. Project (G2706).

1 – Digital Data

Stakeholders

Name the individual(s) responsible for the Digital Data Selection decisions (i.e. Archaeological Archive Manager, Project Manager, Collections Curator).

John Roberts (GAT Principal Archaeologist)

Selection

Location of Data Management Plan (DMP)

Selection of digital data elements should be considered in your project's DMP. For the purpose of the Selection Strategy, you can either copy the selection section of your DMP below, or attach it as an appendix to this document. Please indicate here if the DMP is attached.

All digital data will be collected, stored and selected in lines with the Gwynedd Archaeological Trust (GAT) Data Management Plan located on GAT's servers (available on request).

The selection strategy in your DMP should:

- 1.1 Define what digital data will be selected for inclusion in the archaeological archive, how this will be done, and why. Do not forget to consider that specialists may have digital data that should be included in the archaeological archive.
- 1.2 Identify the selection review points during the project (i.e. project planning, data gathering, analysis and reporting and archive compilation).
- 1.3 Reference all relevant standards, policies or guidelines (e.g. digital repository deposition requirements) and specialist advice sought.
- 1.4 Identify any selection decisions that differ from standard guidelines and explain why.

Following the completion of the fieldwork, a working project archive will be created based on following task list;

1. Pro-formas: all cross referenced and complete;
2. Photographic Metadata: completed in *Microsoft Access* and cross-referenced with all pro-formas;
3. Survey data: downloaded using a Computer Aided Design package;
4. Sections (if relevant): all cross referenced and complete;
5. Plans (if relevant): all cross referenced and complete;
6. Artefacts (if relevant): quantified and identified; register completed;
7. Ecofacts (if relevant): quantified and register completed;
8. Context register (if relevant): quantified and register completed.

All relevant site archive data will be added to a digital project register specific to this project, which will be prepared in *Microsoft Excel*.

This data will then be used as the basis for the physical and digital dataset archives. Information from these will be used to compile the project report. The physical archive will be stored in a designated project folder and the location confirmed in the Trust project database; the digital dataset will be stored on a dedicated Trust server, with the location confirmed in the Trust project database via a specific hyperlink. External datasets for the HER and RCAHMW are as defined in the dissemination strategy below. De-selected digital data will be confirmed in an updated digital management plan appended to the final report

De-Selected Digital Data

The procedure for dealing with De-selected digital data and what specialist advice informed this process should be recorded in your DMP. Please copy this information here or attach your DMP as an appendix to this document.

It is envisaged that the de-selected material will be retained on the GAT servers for 2 years following the completion of the project at which point they will be reviewed and deleted as necessary in line with the GAT DMP.

Amendments

Detail any amendments to the above selection strategy here.

Date	Amendment	Rationale	Stakeholders

2 – Documents

Stakeholders

Name the individual(s) responsible for the Documents Selection decisions (i.e. Archaeological Archive Manager, Project Manager, Repository Representative).

John Roberts – Principal Archaeologist, Gwynedd Archaeological Trust;
Sean Derby – Historic Environment Record, Gwynedd Archaeological Trust;
Gareth Edwards, *Head of Knowledge and Understanding, RCAHMW*

Selection

Describe your Selection Strategy for the Documents elements of the archaeological archive. To do this you must:

- 2.1 Define which documents will be selected for inclusion in the archaeological archive, how this will be done, and why. Do not forget to consider that specialists may have documents that should be included in the archaeological archive.
- 2.2 Identify the selection review points during the project (e.g. project planning, data gathering, analysis and reporting and archive compilation).
- 2.3 Reference all relevant standards, policies or guidelines (e.g. digital repository deposition requirements) and specialist advice sought.
- 2.4 Identify any selection decisions that differ from standard guidelines and explain why.

- A digital report will be provided to the regional Historic Environment Record; this will be submitted within six months of project completion (final report only), along with a digital dataset comprising an Event PRN summary. The report and dataset will be submitted in accordance with the required standards set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (Version 1.1); and
- A digital report and digital archive dataset will be provided to Royal Commission on Ancient and Historic Monuments, Wales (final report only), in accordance with the *RCAHMW Guidelines for Digital Archives Version 1*. The dataset will be prepared in the format required by RCAHMW and will include:
 - Photographic metadata (Microsoft Access);
 - Photographic archive (TIFF format);
 - Project Information form (Excel);
 - File Information form (Excel) – Microsoft Word report text final;
 - File Information form (Excel) – Photographic metadata (general);
 - File Information form (Excel) – Adobe PDF report final; and
 - File Information form (Excel) - Photographic metadata (detail).

De-Selected Documents

Describe the procedure for dealing with De-selected material and what specialist advice has informed this procedure.

It is envisaged that the material de-selected from inclusion in the preserved archive will be duplicates or re-productions created during the analysis phase of the project. De-selected material will therefore either be retained to supplement GAT's research files or recycled.

Amendments

Detail any amendments to the above selection strategy here.

Date	Amendment	Rationale	Stakeholders

3 – Materials

Note: This step should be completed for each material component of the archaeological archive. Copy this table for the various materials as required, providing the 'Material Type' and a section identifier (eg. '3.1') for each.

Material type		Section 3.	
Stakeholders			
Name the individual(s) responsible for the Materials Selection decisions (i.e. Archaeological Archive Manager, Project Manager, Repository Representative).			
John Roberts – Principal Archaeologist, Gwynedd Archaeological Trust; Tom Fildes – Planning Archaeologist, Gwynedd Archaeological Planning Service; Oriol Mon, Rhosmeirch, Llangefni, LL77 7TQ			
There are known findspots within the local area and any diagnostic artefacts recovered during the watching brief will be retained for further examination and identification. Pottery sherds of 19 th and 20 th century date will be examined on-site and the context from which they were retrieved noted but the sherds will not be retained. The artefacts will be treated according to guidelines issued by the UK Institute of Conservation, in particular the advice provided within <i>First Aid for Finds</i> (Watkinson and Neal 2001). Any waterlogged artefacts (e.g. wood or leather) that are to be recovered for post-excavation assessment and analysis will be processed in accordance with <i>Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation</i> (English Heritage, 2011) and specifically in accordance with Brunning and Watson (2010) for waterlogged wood and Historic England (2012) for waterlogged leather. In such cases an external specialist will be contacted to agree an appropriate sampling and recovery strategy via Lucy Whittingham Project Manager (post-excavation), AOC Archaeology, telephone: 0208 843 7380. All finds are the property of the landowner; however, it is Trust policy to recommend that all finds are donated to an appropriate museum (in this case Oriol Mon, Rhosmeirch, Llangefni, LL77 7TQ), where they can receive specialist treatment and study. Access to finds must be granted to the Trust for a reasonable period to allow for analysis and for study and publication as necessary. Trust staff will undertake initial identification, but any additional advice would be sought from a wide range of consultants used by the Trust, including National Museums and Galleries of Wales at Cardiff. All finds of treasure must be reported to the coroner for the district within fourteen days of discovery or identification of the items. Items declared Treasure Trove become the property of the Crown, on whose behalf the Portable Antiquities Scheme acts as advisor on technical matters, and may be the recipient body for the objects. The Treasure Valuation Committee, based at the British Museum, and informed by the Portable Antiquities Scheme, will decide whether they or any other museum may wish to acquire the object. If no museum wishes to acquire the object, then the Secretary of State will be able to disclaim it. When this happens, the coroner will notify the occupier and landowner that he intends to return the object to the finder after 28 days unless he receives no objection. If the coroner receives an objection, the find will be retained until the dispute has been settled. GAT will contact the landowner for agreement regarding the transfer of artefacts, initially to GAT and subsequently to the relevant museum (Oriol Mon, Rhosmeirch, Llangefni, LL77 7TQ). A GAT produced pro-forma will be issued to the landowner where they are given the option to donate the finds or to record that they want them returning to them once analysis and assessment has been completed. Artefacts to be donated will then be transferred to Oriol Mon.			

Selection

Describe your Selection Strategy for each material type and or object type. To do this you must:

- 3.1 State the Selection Strategy you are applying to each category of material, how this will be done, and why.
- 3.2 Identify the selection review points during the project (e.g. project planning, data gathering, analysis and reporting and archive compilation).
- 3.3 Reference all relevant standards, policies or guidelines (e.g. thematic, period, and regional, Research Frameworks, repository deposition policies) and specialist advice sought.
- 3.4 Identify any selection decisions that differ from standard guidelines and explain why.

The [Materials Selection Template](#) may be useful in structuring this section.

The full material archive returned to the GAT offices will be reviewed following analysis: Stakeholders (see above) will make selection decisions based on specialists reports and selection recommendations and SDMS collecting policy. The selection will take place during archive completion.

Uncollected Material

If you are practising selection in the field, describe the process that will be applied. To do this you must:

- Detail how you will characterise, quantify and record all uncollected material on site.
- Explain how you will dispose of, or re-distribute, uncollected material.

Any uncollected material will be left on-site to be incorporated into backfill.

De-Selected Material

Describe what you will do with the de-selected material. All processed material should have been adequately recorded before de-selection.

All bulk finds will be assessed and recorded to appropriate standards. De-selected material will be returned to the landowner as agreed by the landowner and curatorial archaeologist.

Amendments

Detail any amendments to the above selection strategy here.

Date	Amendment	Rationale	Stakeholders

Materials Selection Template

This table may be inserted into Section 3 of the main [Selection Strategy Template](#) to help present differing selection strategies for different material types

Find Type	Selection Strategy	Stakeholders	Review Points
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