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*Engineering Archaeological Services Ltd.*



**Trewen, Botwnnog, Archaeological  
Watching Brief**

**I.P. Brooks**

***EAS Client report 2023/10***

# **Trewen, Botwnnog, Archaeological Watching Brief**

**Survey Commissioned  
by  
Rhydian Owen.**

**Fieldwork  
by  
I.P. Brooks  
Engineering Archaeological Services Ltd.**

**Trewen, Botwnnog, Archaeological  
Watching Brief**

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***EAS Client report 2023/10***

**registered in England**

**No 2869678**

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## ***Introduction***

**NGR:** Centred on SH 26403 30458

**Status:**

***Within Historic Landscape Characterisation Area:*** Llŷn - Area 9 Rhoshirwaun and Bryncroes

**Location and Topography:** (Figures 1 and 2)

A new slurry lagoon has been constructed on land to the south west of the farm complex of Trewen, Botwnnog, Gwynedd (Planning Reference C23/0351/32/LL). The development area is within a pasture field immediately south west of a building range within the farm complex. The field is relatively flat, particularly within the area of the slurry lagoon. An area of approximately 24.5 x 30.0 m in size was stripped, which is larger than the final size of the lagoon. This area covered the gateway to the north of the building range and the full width of the building. Prior to the topsoiling a water trough had been moved from the middle of the gable end of the building. The development area is at 14.25 m OD

## **Background**

A limited desktop study was undertaken consisting of consulting the easily available records of the Historic Environment Record held by the Gwynedd Archaeological Trust (GAT Reference GATHER1933), the National Monuments Record held by the Royal Commission on the Ancient and Historical Monuments of Wales, The Welsh Tithe Maps website (<https://places.library.wales/browse/53.228/-3.414/14?page=1&alt=>) and the historic Ordnance Survey mapping on the National Library of Scotland website (<http://maps.nls.uk/os/25inch-england-and-wales/index.html>).

The earliest available map is the Tithe Map of the parish of Llandegwning, Caernarvonshire drawn in 1843 (Figure 3.1). The accompanying apportionment shown at that time the farm was owned by John Watkins and tenanted to John Griffiths. The development is within Plot 37 which is called Cae Cefn yr Ardd on the apportionment and is described as arable. The apportionment also gives some details of the farm buildings at the time as Plot 16 is described as containing “Trewan Home Court and Garden Road + Yard, Watering Place + Stable, Barn, Cowhouses + Rickyard”. The farm buildings, at the time, form an “L” shaped range at an unusual angle across the plot, possibly hinting at a re-organisation of the field layout around the farm at some point. Also of interest is Plot 19 which is called “Cae’r Efall” or Smithy Field which is suggestive of metal working in the area. At the time of the Tithe apportionment this field was also being used as an arable field.

The historic Ordnance Survey mapping (Figures 3.2 – 6) shows the development of the farmstead between 1888 (Figure 3.3) and 1963 (Figure 6) and the layout before the farm reorganisation which lead to the current arrangement.

The map published in 1888 shows a layout similar to that shown on the Tithe Map, but with a second “L” shaped range to the SE (Fig 3.2). There is also another range between the main farm complex and the house, this building survives to the present day. The farm is also called “Tre-waun” at this point. By the map published in 1900 (Figure 4.1), the smaller “L” shaped

range has lost one of its ranges and the farm name is now “Trewaun”. Unsurprisingly there is little change shown on the map published in 1901.

There appears to have been major development of the farm between 1901 and 1920. The main “L” shaped range has been developed in a “C” shape with a broad building added to the northern side, also a short range has been (re)added to the minor building on the southern boundary of the farm complex (Figure 5.1). Little changes by the map published in 1953 (Figure 5.2) except for an enclosure or pen in the SW corner of the plot. This pattern continues until, at least, 1963 (Figure 6.1). It is only on the map published in 1963 that the current farm name is recorded.

A search of the regional Historic Environment Record for known archaeological feature or structures within 500 m of the development area was carried out (GAT Gather1933). This reveals only five entries, none of which are directly related to the development. Three of the entries relate to water management with a sluice recorded from the Second Edition of the Ordnance Survey mapping at SH 26300 30487 (PRN 34277), an aqueduct to the west of Ty’n-Ilan at SH 26334 29993 (PRN 34278) and a mid-nineteenth century bridge over the Afon Sôch at SH 26524 30603 to the north east of Trewen (PRN 63301). This bridge is a listed structure (19334) listed at Grade II (<https://cadwpublic-api.azurewebsites.net/reports/listedbuilding/FullReport?lang=&id=19334>). Also listed is the church of St Gwninin at SH 26620 30050 (PRN 6968, Listed Building reference 4257) (<https://cadwpublic-api.azurewebsites.net/reports/listedbuilding/FullReport?lang=&id=4257>). Although the present church was built in 1840 it is thought to have been built on the site of a building which was mentioned in the 1254 Norwich taxation.

A programme of aerial photographs by the Royal Commission on the Ancient and Historic Monuments of Wales, in 2018, as part of the Cherish Project covered the area around Trewen and recorded a series of cropmarks (PRN 77183, NPRN 423854) which are thought to be archaeological in origins (Plates 2 – 4, Figure 7). The cropmarks suggest the presence of a possible plough-levelled round barrow approx. 25m diameter in the corner of a field approximately 160 m west of the slurry lagoon and possibly associated wider spreading cropmarks of linear ditches in fields to the west and south of Trewen.

### **Aims of the Fieldwork**

To record any archaeological features disturbed by the ground works associated with the construction of the slurry lagoon.

### **SUMMARY**

*The archaeological watching brief on the new slurry lagoon at Trewen, Botwnnog, Gwynedd took place on 25/09/2023. No archaeological features or significant deposits were recorded. The work was commission by Rhydian Owen.*

*Cynhaliwyd y briff gwylio archeolegol ar y morlyn slyri newydd yn Nhrewen, Botwnnog, Gwynedd ar 25/09/2023. Ni chofnodwyd unrhyw nodweddion archeolegol na dyddodion arwyddocaol. Comisiynwyd y gwaith gan Rhydian Owen.*

## ***Methodology***

An area of approximately 24.5 x 30.0 m was stripped by a mechanical excavator using a smooth faced ditching bucket (Plates 5 and 6). The topsoil varied between 400 mm to 600 mm in depth, with the topsoil tending to be thicker towards the south west. This stripping was monitored by the author.

## ***Watching Brief***

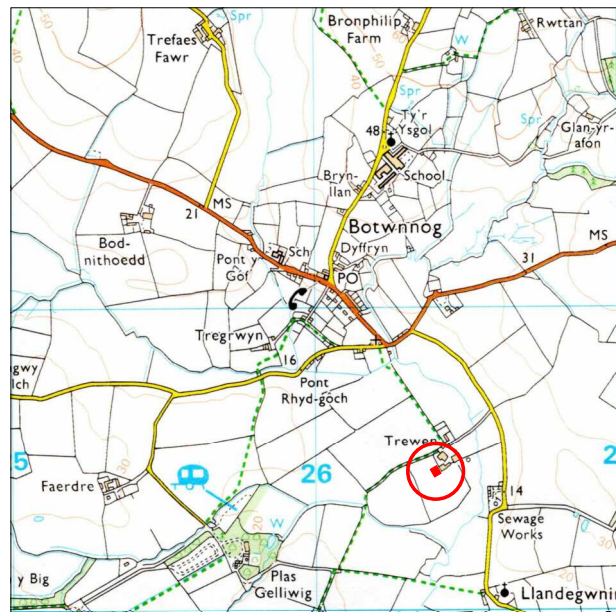
No features or archaeologically significant deposits were recorded. There were, however, two areas of modern disturbance noted. An area of approximately 5 x 5 m around the gate into the field had a lens of gravel within the topsoil which had hardened up access. A similar lens of gravel was also noted where a water trough had been placed in the centre of the gable of the farm buildings.

## ***Conclusions***

No features or deposits of archaeological significance were recorded during the ground works associated with the construction of the slurry lagoon at Trewen, Botwnnog, Gwynedd.

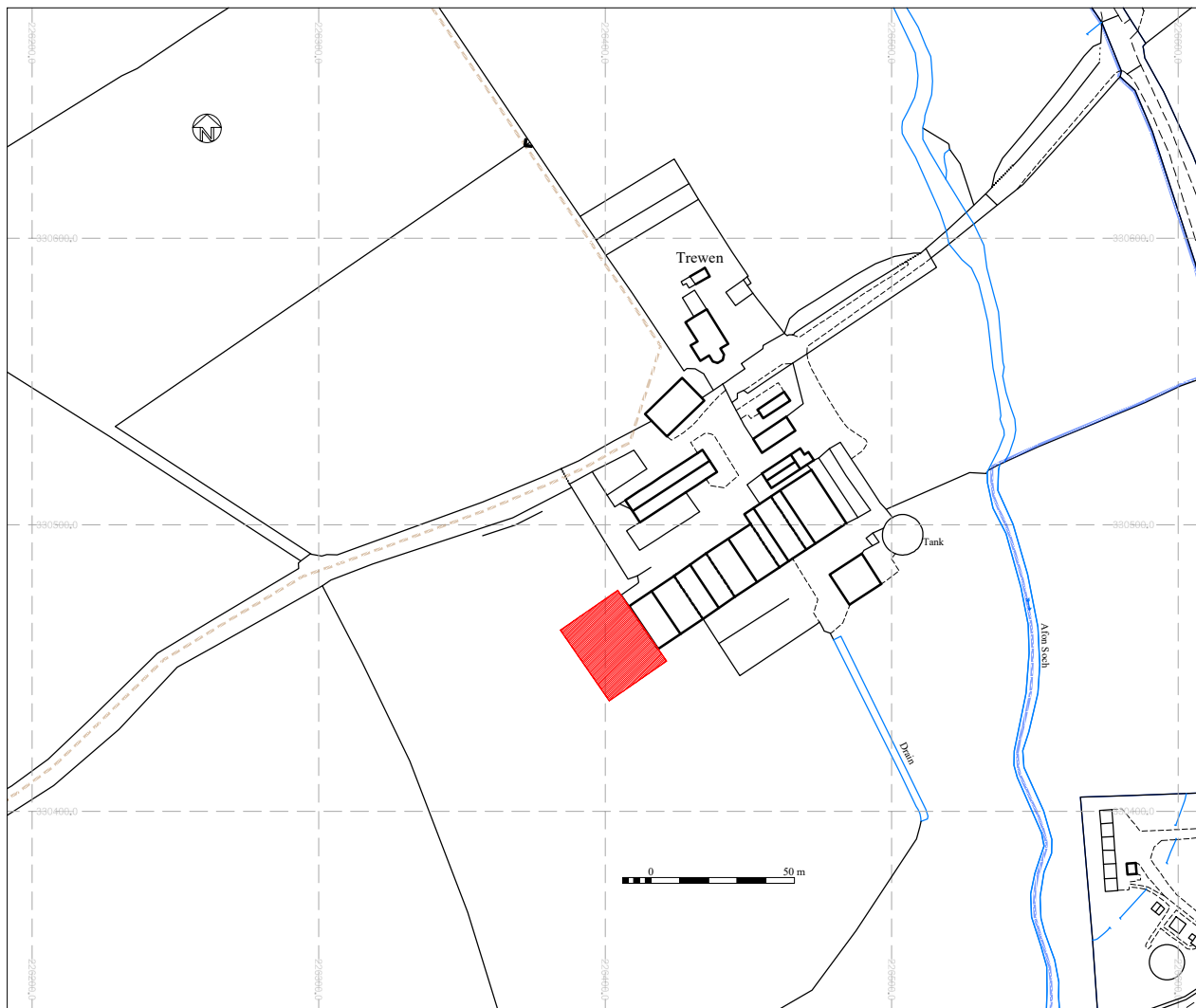
## ***Acknowledgements***

The watching brief was commissioned by Rhydian Owen, he also organised the mechanical excavator with its driver. The work was monitored by T. Fildes for the Gwynedd Archaeological Planning Service.



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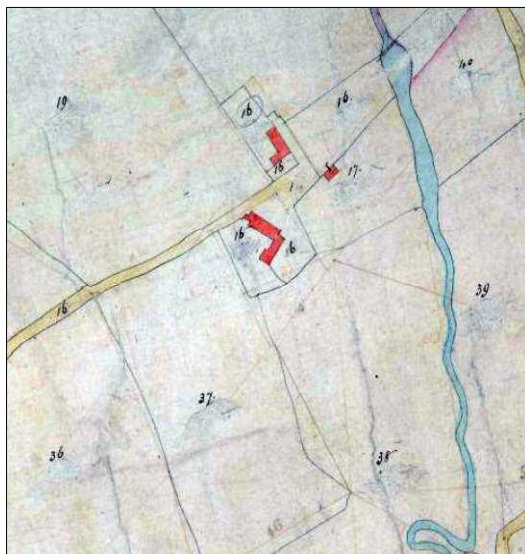
Figure 1: Location  
Scale 1:25,000



Based on drawing 3202/21 by  
Richards Moorehead & Laing Ltd

Figure 2: Location of the Development  
Scale 1:2,500



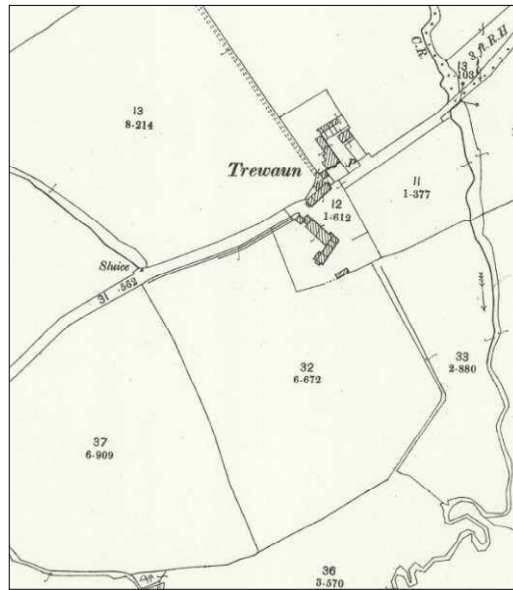


3.1: Tithe map of the parish of Llandegwning, Caernarvonshire 1843



3.2: Caernarvonshire XLVI NE published in 1888

Figure 3: Historic Mapping  
Re-scaled to 1:5,000



4.1: Caernarvonshire XLVI.8 published in 1900



4.2: Caernarvonshire XLVI NE published in 1901

Figure 4: Historic Mapping  
Re-scaled to 1:5,000



5.1: Caernarvonshire XLVI NE published in 1920



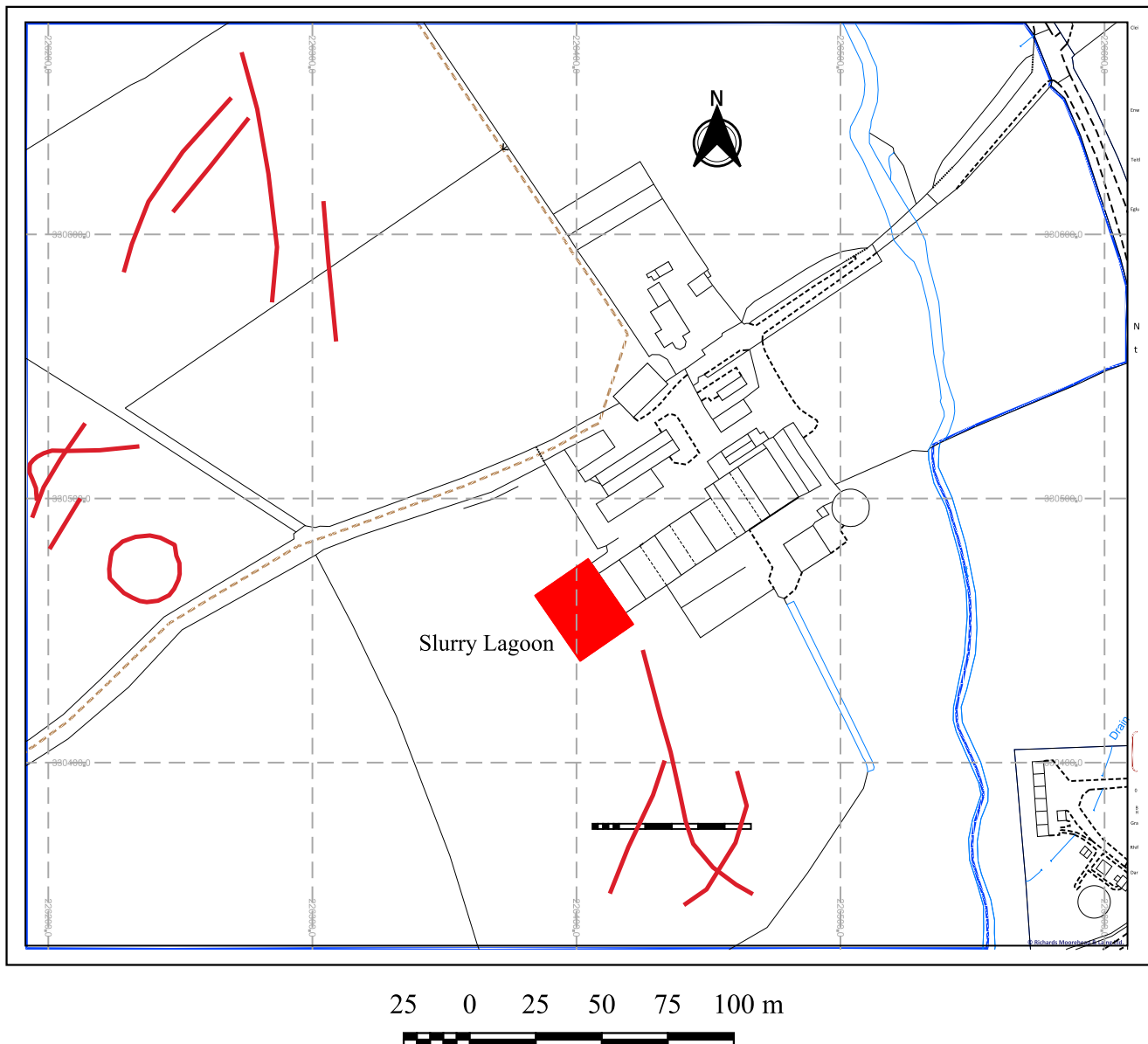
5.2: Caernarvonshire XLVI NE published in 1953

Figure 5: Historic Mapping  
Re-scaled to 1:5,000



6.1: Ordnance Survey SH23SE published in 1963

Figure 6: Historic Mapping  
Re-scaled to 1:5,000



Based on drawing 3202/21 by  
Richards Moorehead & Laing Ltd

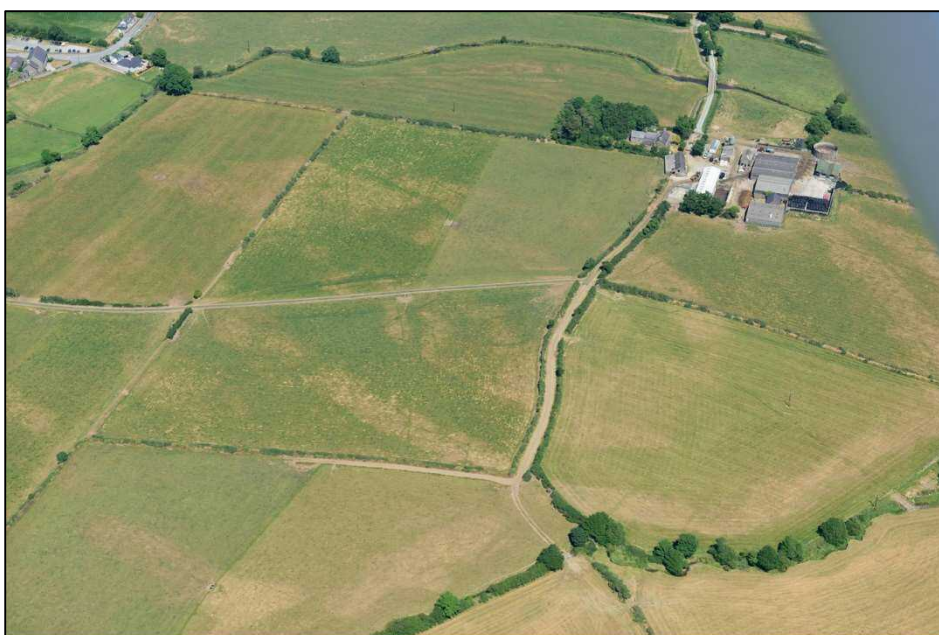
Figure 7: Plot of features on Aerial Photographs taken  
by the Royal Commission on the Ancient and  
Historical Monuments of Wales

Scale 1:2,500





Plate 1: Development area before topsoiling



AP\_2018\_2527.TIF

Plate 2: Aerial Photograph

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AP\_2018\_2528.TIF

Plate 3: Aerial Photograph

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AP\_2018\_2530.TIF

Plate 4: Aerial Photograph

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Plate 5: The development after topsoiling



Plate 6: The development after topsoiling



# **Appendix 1: Specification**

## **Specification for an Archaeological Watching Brief at Trewen, Botwnnog, Gwynedd. (Planning Reference C23/0351/32/LL)**

**Compiled by I.P. Brooks 06/09/23**

### **1. *Non-Technical Summary***

- 1.1. It is planned to construct a new slurry lagoon on land to the south west of the farm complex of Trewen, Botwnnog, Gwynedd (Planning Reference C23/0351/32/LL). Because of the archaeological sensitivity of the area the Gwynedd Archaeological Planning Service have recommended that an archaeological watching brief and limited desktop study be carried out and this requirement has been incorporated into the planning control for the development.

### **2. *Background***

- 2.1. It is planned to construct a new slurry lagoon on land at Trewen farm, Botwnnog, Gwynedd.
- 2.2. Although the proposed development is outside the current footprint of the farm complex it is within a field that is noted on the Tithe map as *Cae cefn yr ardd* which translates as the back garden field. The field immediately to the north of the development, however, is named as *Cae'r efail* (forge field) on the apportionment associated with the Tithe map.
- 2.3. Two archaeological sites are recorded on the regional Historic Environment Record within the immediate area of the development. PRN: 34277, a sluice labelled on the 2nd edition OS map and PRN: 77183 a series of cropmarks possibly marking the position of a barrow and multiple enclosures (Also known as NPRN: 423854).
- 2.4. The site falls within the Registered Historic Landscape of Llyn Ac Ynys Enlli (ref. HLW (Gw) 8)
- 2.5. The Gwynedd Archaeological Planning Service have advised that an archaeological watching brief and limited desktop study be carried out on the development (Fildes, letter dated 12<sup>th</sup> May 2023)

### **3. *Objectives***

- 3.1. The principal objective of the proposed watching brief are as follows:
  - 3.1.1. To record any archaeological features disturbed by the ground works associated with the construction of the slurry lagoon.

### **4. *Fieldwork Program***

- 4.1.1. Restricted Desktop study
- 4.1.2. Archaeological Watching Brief.
- 4.1.3. Analysis
- 4.1.4. Archive preparation
- 4.1.5. Report preparation

### **5. *Methodology***

- 5.1. Desktop study

5.1.1.The following records and cartographic materials will be consulted as part of the desktop study:

5.1.2.The Gwynedd Historic Environment Record

5.1.3.The National Monuments Record held by the Royal Commission on the Ancient and Historic Monuments of Wales.

5.1.4.Other records, both digital and published will be consulted as necessary

5.1.5.If the copyright holder agrees copies of any maps or images will be included within the report.

5.1.6.All sources will be fully listed and shall include accession numbers

## 5.2. Fieldwork

5.2.1.A suitably qualified archaeologist will be present to monitor any groundworks associated with the construction of the new slurry lagoon.

5.2.2.It will be encouraged that all topsoil and superficial deposits will be removed using a smooth faced bucket.

5.2.3.Selective hand cleaning will be undertaken to define any archaeological features recorded during topsoiling.

5.2.4.A minimum of 10% of each of the linear features and 50% of each discrete feature will be excavated.

5.2.4.1.All relationships between archaeological features will be investigated.

5.2.4.2.Specific features of significant archaeological importance (such as graves or features with significant deposits) will be fully excavated.

5.2.5.All features or archaeologically significant deposits revealed will be fully recorded including:

5.2.5.1.A written description of deposit: type, components etc.

5.2.5.2.Hand drawn plans and sections at suitable scales. Typically plans will be drawn at a scale of 1:20 or greater and sections at a scale of 1:10.

5.2.5.3.Photographs will be taken with Nikon D5300 Digital SLR Camera at a resolution of 24.2 MP

5.2.5.4.If appropriate photographs will be taken with a Panasonic Lumix DC-FT7 camera on an extendable pole. These photographs will be processed with Agisoft Metashape v. 1.6.3 to produce photogrammetric images of the trenches.

5.2.5.5.Plan drawings showing the extent and nature of any archaeological deposits or features encountered.

5.2.5.6.Section drawings of any features recorded to record vertical stratigraphy.

5.2.6.The photographs will include metric scales

5.2.7.All artefacts and ecofacts will be recorded by context.

5.2.8.Each deposit, feature or layer will be identified by a unique context number to which all other records will be related

5.2.9.Where possible, elevation drawings of feature half sections to record vertical stratigraphy.

- 5.2.10. Where appropriate, deposits will be sampled for environmental, dating or technological evidence. Samples will be fully recorded and packed appropriately for future analysis.
  - 5.2.10.1. Sampling will be carried out in accordance with the procedures outlined in English Heritage. 2011. Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post-excavation.
  - 5.2.10.2. Bulk samples are likely to be in the range of 10 – 40l depending on the reason for the sample and the availability of suitable material.
- 5.2.11. If human remains are encountered all works will stop until the appropriate permissions have been obtained. A further specification will be submitted to detail the excavation of any human remains and the subsequent specialist reports.
- 5.3. The Gwynedd Archaeological Planning service will be notified immediately if significant archaeological deposits, features or artefacts are located.
- 5.4. Post Excavation Analysis
  - 5.4.1. If there is little, or no, archaeological deposits/features or remains recorded during the evaluation will progress immediately on to the archive report.
  - 5.4.2. If significant archaeological remains/features/deposits are encountered. On completion of the fieldwork an assessment of the archaeological record from the site, will be made and the project design updated. Including an estimate on the cost of the post-excavation process.
  - 5.4.3. On approval of the updated project design the full archaeological report will be undertaken to including the commissioning of all specialist reports recommended by the revised project design.
- 5.5. Finds
  - 5.5.1. The intention is to archive any suitable finds with STORIEL in Bangor.
  - 5.5.2. Any flint artefacts will be studied by I.P. Brooks for Engineering Archaeological Services Ltd.
  - 5.5.3. Any pottery will be studied by an appropriate specialist to be agreed in consultation with the Curatorial Archaeologist.
    - 5.5.3.1. It is intended that M. Jones (CR Archaeology) will report on the post-medieval finds including any pottery collected
  - 5.5.4. Any metal or other special finds will be studied by an appropriate specialist to be agreed in consultation with the Curatorial Archaeologist
  - 5.5.5. All ceramic, bone and stone artefacts will be cleaned and processed immediately following the watching brief.
  - 5.5.6. Metal artefacts will be stored and managed on site according to the UK Institute of Conservation Guidelines.
  - 5.5.7. Any samples taken for environmental analysis will be assessed and studied by an appropriate specialist to be agreed in consultation with the Curatorial Archaeologist
  - 5.5.8. All finds will be bagged by context with the exception of closely datable or “special” finds which will be recorded with a 3 D position and will be bagged separately

5.5.9. The requirement for specialist archaeological reports will be discussed with the Curatorial Archaeologist. The extent and cost of any such report will be discussed with the client and a suitable level of response formulated in discussion between the Archaeologist and the Curatorial Archaeologist.

5.5.10. The initial report will include an assessment of the finds from the work and a recommendation for further study if require.

## 5.6. Archive Preparation and Report Preparation

5.6.1. On completion of fieldwork an archive of the results will be prepared.

5.6.2. The digital records will be archived with the Royal Commission on Ancient and Historic Monuments of Wales

5.6.3. The digital archive will be prepared in line with Royal Commission on Ancient and Historic Monuments of Wales. 2015. Guidelines for digital archives

5.6.4. The deposition of any find with a local museum will be discussed with the owner and the development control archaeologist with a strong recommendation that any finds are deposited in a suitable local museum. This is likely to be STORIEL in Bangor.

5.6.5. A summary report on the findings of the investigations will be prepared and completed within four weeks from completion of the project. This will summarise the results of the project including;

5.6.5.1. A site location plan

5.6.5.2. A plan of the site locating any features or archaeological deposits located.

5.6.5.3. An outline methodology

5.6.5.4. The results of the Watching Brief.

5.6.5.5. A full bibliography

5.6.5.6. A copy the agreed specification

5.6.5.7. An assessment of the potential for further archaeological investigation

5.6.5.8. Up to five copies of the report will be provided.

5.6.5.9. A digital copy of the report will also be provided.

5.6.5.10. A digital copy of the report will be supplied to the Gwynedd Historic Environment Record

5.6.5.11. A digital copy of the report will be supplied to Gwynedd Archaeological Planning Service

5.6.5.12. The preparation of the report will conform to the Welsh Archaeological Trusts 2018 "Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)"

## 6. *Staff*

6.1. The project will be carried out by Ian Brooks, PhD, BA, MCIfA, FSA

## 7. **Timetable**

7.1. The timetable will be defined by the construction programme and is therefore beyond the control of the archaeologist.

## 8. **General**

8.1. CIfA Code of Conduct

8.1.1.All staff will abide by, and all procedures be carried out in accordance with the Chartered Institute for Archaeologists' Code of Conduct

## 8.2. Health and Safety

8.2.1.EAS Ltd adopt and adhere to safe working practices at all times.

8.2.2.A copy of the company's general statement of policy is available on request.

## 8.3. Staff

8.3.1.The project will be directed by Dr I.P. Brooks MCIfA FSA

## 8.4. Curatorial Monitoring

8.4.1.The Gwynedd Archaeological Planning Service will be informed as to the start date and progress of the fieldwork.

## 8.5. Insurance

8.5.1.EAS Ltd carries all necessary Public and Employee Liability Insurances.

8.5.2.EAS Ltd carries Professional Indemnity Insurance

# 9. Data Management

## 9.1. Photographs will be taken in Nikon NEF (Raw) format

9.1.1.These will be converted to TIFF for archiving and JPEG for illustrations and general use.

9.1.2.Photographs for photogrammetry will be taken in JPEG format and processed using Agisoft Metascape v. 1.6.3. Orthographically corrected elevations photos will be produced in JPEG format and converted to TIFF for archiving.

## 9.2. Any topographic survey will be carried out using a Leica TS06 total station with the data processed using NRG Engineering Surveying System V2016.00.

9.2.1.Survey files will be converted to DXF format.

## 9.3. Initial written notes will be made on an "i Pad" using the "Pages" app. These will be converted to WORD format (.docx) format on downloading

## 9.4. The text for the report will be produced in Word (.docx) format

## 9.5. Drawing will be made in TurboCad 2021 v. 28.0 and stored in .TCW format. These will be converted into .DXF or .DWG format for archiving.

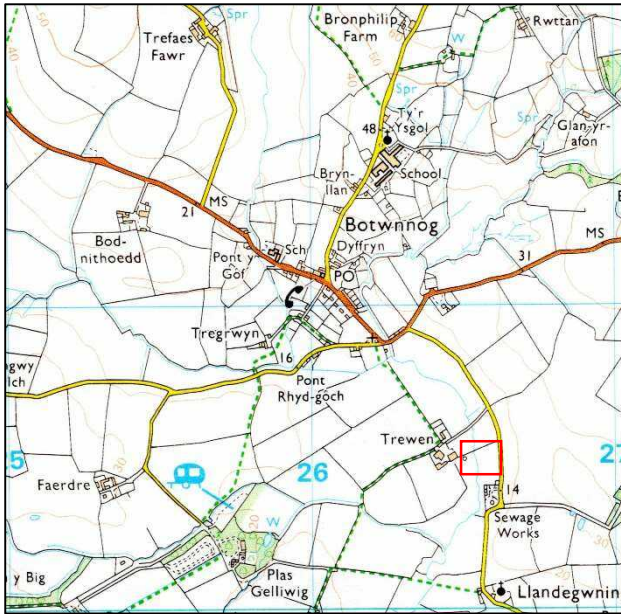
## 9.6. The report will converted to .PDF format using Expert PDF 15.

## 9.7. All files will be stored on the company laptop computer and backed up onto a suitable storage device.

# 10. Copyright

10.1. EAS Ltd shall retain full copyright of any commissioned reports, tender documents or other project documentation, under the Copyrights, Designs and Patents Act 1988 with all rights reserved: excepting that it hereby provides an exclusive licence to the client for the use of such documents by the client in all matters directly relating to the project as described in the Project Specification.

10.2. EAS Ltd is prepared to assign a licence to the client for the use of the report and any associated data.



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Figure 1: Location

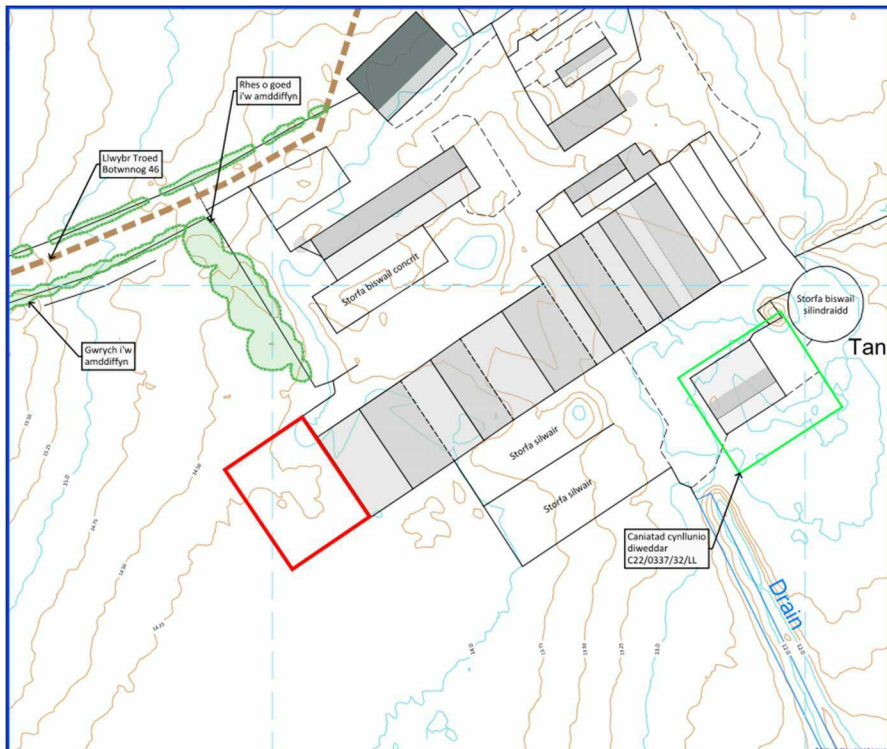


Figure 2: Location of the development