New Ysgol Bro Aberffraw Primary School, Newborough, Anglesey

Archaeological Mitigation: Field Boundary Basic Record



New Ysgol Bro Aberffraw Primary School, Newborough, Anglesey

Archaeological Mitigation: Field Boundary Basic Record

Project No. G2467

Report No. 1367

Prepared for: Cyngor SIr Ynys Mon

February 2017

Written by: John Roberts

Illustration by: Neil McGuiness/John Roberts

Cover Photo: General view from southwest across Field 1 (G2467_255)

Cyhoeddwyd gan Ymddiriedolaeth Achaeolegol Gwynedd Ymddiriedolaeth Archaeolegol Gwynedd Craig Beuno, Ffordd y Garth, Bangor, Gwynedd, LL57 2RT

Published by Gwynedd Archaeological Trust Gwynedd Archaeological Trust Craig Beuno, Garth Road, Bangor, Gwynedd, LL57 2RT

CONTENTS

1 non-techncial summary	3
2 INTRODUCTION	
3 Archaeological and historical background	
3.1 Desk-Based Assessment & Geophysical Survey	6
3.2 Archaeological Evaluation (trial trenching)	
3.3 Watching Brief of Ground Investigation Works	7
4 METHODOLOGY	8
4.1 Photographic Record & Written Descriptive Record	8
5 results	9
5.1 Boundary 1	9
5.2 Boundary 2	10
6 conclusion	11
7 SOURCES CONSULTED	12
Appendix I	14
Reproduction of Gwynedd Archaeological Trust project design for	
archaeological mitigation (basic record), February 2017	
Appendix il	
Gwynedd Archaeological Trust Photographic Record Metadata	15

Figures

Figure 01: Site Location

Figure 02: Client sketch plan designating targeted hedgerows

Figure 03: First Edition 25 inch Anglesey Ordnance Survey Map of 1889, sheet XXII.10

Figure 04: Second Edition 25 inch Anglesey Ordnance Survey Map of 1901, sheet XXII.10

Figure 05: Third Edition 25 inch Anglesey Ordnance Survey Map of 1926, sheet XXII.10

Figure 06: Location of Photographic Archive. Based on Ordnance Survey 1:10000 County Series (Sheet SH46NW). Scale: 1:1000@A4. Crown Copyright. All Rights Reserved. License number AL100020895.

Plates

Plate 01: Boundary 1 west facing side: first 20m length detailing drystone wall section, hidden by hedgerow; scale: 2x1m (archive image: G2467_214)

Plate 02: Boundary 1 west facing side: second 20m length detailing drystone wall section, hidden by

hedgerow; scale: 2x1m (archive image: G2467_215)

Plate 03: Boundary 1 west facing side: third 20m length detailing drystone wall section, hidden by hedgerow; scale: 2x1m (archive image: G2467_216)

Plate 04: Boundary 1 west facing side: fourth 20m length detailing drystone wall section, gateway and start of clawdd section; scale: 2x1m (archive image: G2467_217)

Plate 05: Boundary 1 west facing side: fifth 20m length detailing denuded clawdd section; scale: 2x1m (archive image: G2467_218)

Plate 06: Boundary 1 west facing side: sixth 20m length detailing clawdd section; scale: 2x1m (archive image: G2467_219)

Plate 07: Boundary 1 west facing side: seventh 20m length detailing clawdd section; scale: 2x1m (archive image: G2467_220)

Plate 08: Boundary 1 west facing side: final 20m length detailing clawdd section, where it connects with another boundary; scale: 2x1m (archive image: G2467_221)

Plate 09: Boundary 1 view from west of gateway through boundary; scale: 3x1m (archive image: G2467_222)

Plate 10: Boundary 1 view from north detailing stone gatepost on southern side of gateway; scale: 3x1m (archive image: G2467_223)

Plate 11: Boundary 1 view from south of stone-built gatepost; scale: 1m (archive image: G2467_224)

Plate 12: Boundary 1 oblique view from north at northern end of boundary detailing clawdd construction; scale: 1m (archive image: G2467_237)

- Plate 13: Boundary 1 view from west of breach in clawdd towards northern end of boundary; scale: 2x1m (archive image: G2467_236)
- Plate 14: Boundary 1 oblique view from south of breach in clawdd towards northern end of boundary; on this section, the stone facing is only present on the western side; scale: 2x1m (archive image: G2467_235)
- Plate 15: Boundary 1 oblique view from southeast along eastern side of boundary; scale: 1m (archive image: G2467_233)
- Plate 16: Boundary 1 view west of clawdd construction detailing stone; scale: 2x1m (archive image: G2467_232)
- Plate 17: Boundary 1 view from north of breach in clawdd and denuded clawdd bank; scale: 1m (archive image: G2473_239)
- Plate 18: Boundary 1 oblique view from the south of eastern side of boundary (archive image: G2473_244)
- Plate 19: Boundary 2: first 20m length with view from north of boundary detailing gate and stone wall construction; scale: 2x1m (archive image: G2467_246)
- Plate 20: Boundary 2: second 20m length with view from north of boundary detailing transition from stone wall to earth bank; scalew: 2x1m (archive image: G2467_247)
- Plate 21: Boundary 2: third 20m length with view from north detailing earth bank section; scale: 2x1m (archive image: G2467_249)
- Plate 22: fourth 20m length with view from north of boundary detailing earth bank section and intersection with Boundary 1; scale: 2x1m (archive image: G2467_250)
- Plate 23: Boundary 2 side on view from west of gate detailing construction; scale: 1m (archive image: G2467_254)
- Plate 24: Boundary 2 view from south of transition from stone wall to earth bank; scale: 1m (archive image: G2467_256)

Plate 25: Boundary 2 view from south of earth bank; scale: 1m (archive image: G2467_258)

Plate 26: Boundary 2 oblique view from east of earth bank on south side of boundary; scale: 1m (archive image: G2467_261)

1 NON-TECHNCIAL SUMMARY

Gwynedd Archaeological Trust was commissioned by Cyngor Sir Ynys Môn to undertake a non-intrusive basic photographic and written record of two field boundaries at Newborough, Ynys Môn. The boundaries separated two fields that were set aside for pasture. The two boundaries represented different construction styles and phases of use, with one boundary (Boundary 1) constructed from drystone wall and clawdd and the second boundary (Boundary 2) constructed from an earth bank and a stone built wall. Boundary 1 included evidence of phasing associated with different construction styles and form, but was also in a dilapidated state and no longer functioned as a physical barrier, with a redundant gateway and several breaches caused by root action and livestock. Historic mapping suggested the different construction styles for the clawdd resulted from field systems and partitioning no longer present. Boundary 2 comprised two main construction styles: an earthen bank and a stone wall; the latter was constructed as part of local road improvements, replacing part of the earlier boundary represented by the bank.

It is recommended that additional basic recording is completed for both boundaries during any breaching or removal that may be proposed as this would provide further opportunities to record any phasing and construction, including the profiles of the banks. It would be particularly useful to record the bank section of Boundary 2, as this is so heavily obscured by vegetation; attendance during removal of vegetation would allow opportunity to complete a record of the boundary.

2 INTRODUCTION

Gwynedd Archaeological Trust (GAT) has been commissioned by *Cyngor Sir Ynys Môn* to undertake archaeological mitigation in advance of groundworks associated with the New Ysgol Bro Aberffraw, Newborough, Ynys Môn (NGR SH42476601). The site is currently a greenfield site, consisting of two fields (designated by GAT as Field 1 and Field 2) set aside for pasture and covering an area of approximately 28,571 m² (Figure 01).

The archaeological mitigation comprised a non-intrusive basic photographic and written record of two existing field boundaries, which are proposed for removal as part of the groundworks (Figure 02). The specified field boundaries were:

- Boundary 1: a northwest to southeast orientated field boundary centred on NGR SH42466600 and separating the two fields that comprise the site. The field boundary is a *clawdd*, built from earthen banks with stone facings and separated the two fields encompassed by the development site. Total length recorded was 155m; and
- Boundary 2: an east to west orientated field boundary centred on NGR SH42506591 and running alongside a lay-by attached to the B4421 road (north side). The field boundary formed the southern end of Field 1 and incorporated an earth bank and stone wall. Total length recorded was 77m, with 45m comprising the earth bank and the remaining length a stone wall.

The mitigation was completed w/c 20/02/17. Prior to completion, GAT prepared a project design defining the scope of works that was reviewed and approved by Gwynedd Archaeological Planning Services (GAPS) in advance of completion (q.v. Appendix I).

The field boundaries are classed as historically important field boundaries under Schedule I Part II 5(a) of the Hedgerow Regulations 1997: "5. The field boundary— (a)is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Inclosure Acts". As a result, the field boundaries may be legally protected under this act. *The completion of this basic record does not indicate approval for the removal of the field boundaries*.

The current report is for the non-intrusive basic record of the existing field boundaries and does not cover archaeological mitigation during the removal of the field boundaries or any

other archaeological mitigation during groundworks. Such mitigation would be covered in additional project design(s) and reports.

The basic record was completed in accordance with the following guidance:

- Management of Archaeological Projects (English Heritage, 1991);
- Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England, 2015); and
- Guidelines for digital archives Royal Commission on Ancient and Historic Monuments of Wales 2015.

Gwynedd Archaeological Trust is certified to ISO 9001:2008 and ISO 14001:2004 (Cert. No. 74180/A/0001/UK/En) and is a Registered Organisation with the Chartered Institute for Archaeologists and a member of the Federation of Archaeological Managers and Employers (FAME).

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

A desk-based assessment, walkover survey, and geophysical survey of the development area has been completed by GAT (GAT Report 1318), followed by an archaeological evaluation (GAT Report 1329) and a watching brief of ground investigation works (GAT Report 1330).

3.1 Desk-Based Assessment & Geophysical Survey

The desk-based assessment was completed by GAT in May 2016 and concluded that the site lay to the north of the historic core of the medieval town of Newborough, but within an area that was likely to have formed part of the town fields, with evidence of medieval strip fields having been identified in close proximity to the site. The site was the property of Lord Boston's Lligwy estate from at least the latter part of the 18th century and a Lligwy estate map of 1782 shows a house and associated paddock in the south west corner of the assessment area that is not shown on any later mapping. The Ordnance Survey maps of the later 19th and early 20th centuries shows the current area boundary, along with additional field boundarys that have been grubbed out in recent times. The magnetometer geophysical survey noted interference in two parts from strongly magnetic bedrock, indicating significant interference from the sub-surface geology, which was not visible on the surface. Linear anomalies were also identified, some of which probably represent field boundarys shown on the historic mapping and aerial photographs. Further linear anomalies probably represent field drains, and a former trackway was identified. A probable former small quarry was noted in the northwest corner of the site.

The assessment report recommended that basic recording be completed of all field boundarys within the assessment area (designated as Feature 1) and that specific geophysical anomalies were targeted for archaeological evaluation via trial trenching.

3.2 Archaeological Evaluation (trial trenching)

Twenty 30x2m trial trenches were excavated by GAT in July 2016 for the evaluation stage, targeting 11 features identified during the desk-based assessment and geophysical survey, along with several additional trenches in areas where no potential archaeological features had previously been identified. The trial trenches identified a possible medieval house plot and associated small garden plot (Feature 2; Primary Reference Number (PRN) 61868) and a possible prehistoric circular feature and associated curvilinear ditch (Feature 19; PRN

61870). Recommendations were subsequently made for archaeological mitigation during construction groundworks.

3.3 Watching Brief of Ground Investigation Works

An archaeological watching brief was completed by GAT in August 2016 and monitored the geotechnical ground investigation works. No archaeological activity was identified within the confines of the monitored areas, which were characterised by shallow topsoil and a thick subsoil with the glacial horizon encountered at a minimum depth of 0.75m.

4 METHODOLOGY

4.1 Photographic Record & Written Descriptive Record

The basic record comprised a non-intrusive photographic and written descriptive record completed using GAT pro-formas. Photographic images were taken using a digital SLR (Nikon 3100) camera set to maximum resolution (4068 × 3072 12.9 effective megapixels) in RAW format. Images were converted to TIFF and JPEG format for archiving using Adobe Photoshop, with a total of 48 images taken (archive reference nos. G2467_214 to G2467_261; q.v. Appendix II & Figure 06). The written descriptive record included the dimension, form, fabric, orientation and condition of each field boundary. Archiving was completed in accordance with the Royal Commission on Ancient and Historic Monuments of Wales *Guidelines for Digital Archives* (2015).

5 RESULTS

5.1 Boundary 1

Boundary 1 comprised a northwest to southeast orientated field boundary centred on NGR SH42466600 and separating the two fields that comprise the site: Field 1 and Field 2 (Figure 01). The total length recorded was 155m. The boundary comprised both clawdd (earth and stone bank) and drystone wall and included a gateway between Fields 1 and 2 (Plates 01 to 08). The boundary no longer served as a barrier between the two fields, with livestock roaming freely between both fields, through the open gateway and across the dilapidated clawdd.

The main drystone wall section measured 69m in length and was screened by a hedgerow for the majority of its length (Plates 01 to 04). The wall was built from irregular sized subrectangular and measured an average 0.4m in height and 0.5m in width, with upright stone capping. There was evidence of disrepair. This section was separated from the rest of the boundary by a 3.0m wide gateway (Plate 04 and Plate 09). The gateway comprised a 1.5m high and 0.5m wide stone carved gatepost on the southern side (Plate 10) and a drystone built, conical shaped gatepost on the northern side, 1.3m high and 1.4m wide (Plate 11). The drystone built gatepost included evidence of cement patch repair. The gate had been removed, with metal hinge supports still visible in the stone carved gatepost and a small hole visible in the cement render on the opposite gatepost, for receiving a sprung gate bolt. An additional 4m length of drystone wall continued north from the gateway, built in a similar style to the rest of the drystone wall, but in a more dilapidated state; the remainder of the boundary comprised a clawdd.

The clawdd comprised three sections of varied construction and condition: a 36m long, 2.5m wide and 0.35m high denuded earth bank limited stonework (Plates 12 to 14); a 23m long, 2m wide and 0.7m high earth and stone bank, with the stone covering both sides and the top of the bank (Plates 15 to 16), and a final length of 22m long, 2m wide and 0.6m high earth bank (Plates 17 and 18). All three sections were surmounted by unpruned hawthorn and trees. Both sections incorporating the earth and stone bank used closely packed sub-rectangular and sub-angular stones of varying size, with the 23m long section more dilapidated, in part from root action.

5.2 Boundary 2

Boundary 2 comprised an east to west orientated field boundary centred on NGR SH42506591 and running alongside a lay-by attached to the B4421 road (north side). The field boundary formed the southern end of Field 1 and incorporated an earth bank and stone wall. Total length recorded was 77m, with 45m comprising the earth bank and the remaining length a stone wall (Plates 19 to 22). The earth bank was heavily obscured on both sides by vegetation overgrowth and could not be accessed to measure the height or width of construction. No stone work was visible. The stone wall measured 1.4m in height and 0.5m in width and was built from mortar bonded irregular sized sub-angular and sub-rectangular stone, with crenelated capping of roughly square shaped stone. The stones used appeared similar to those used for the drystone wall and clawdd sections of Boundary 1. The field entrance was incorporated into the boundary and included a precast concrete pillar supporting the gate hinges (Plate 23). The roadside portion of the stone wall was partly obscured by a grassed embank and vegetation overgrowth (Plates 26 and 26).

6 CONCLUSION

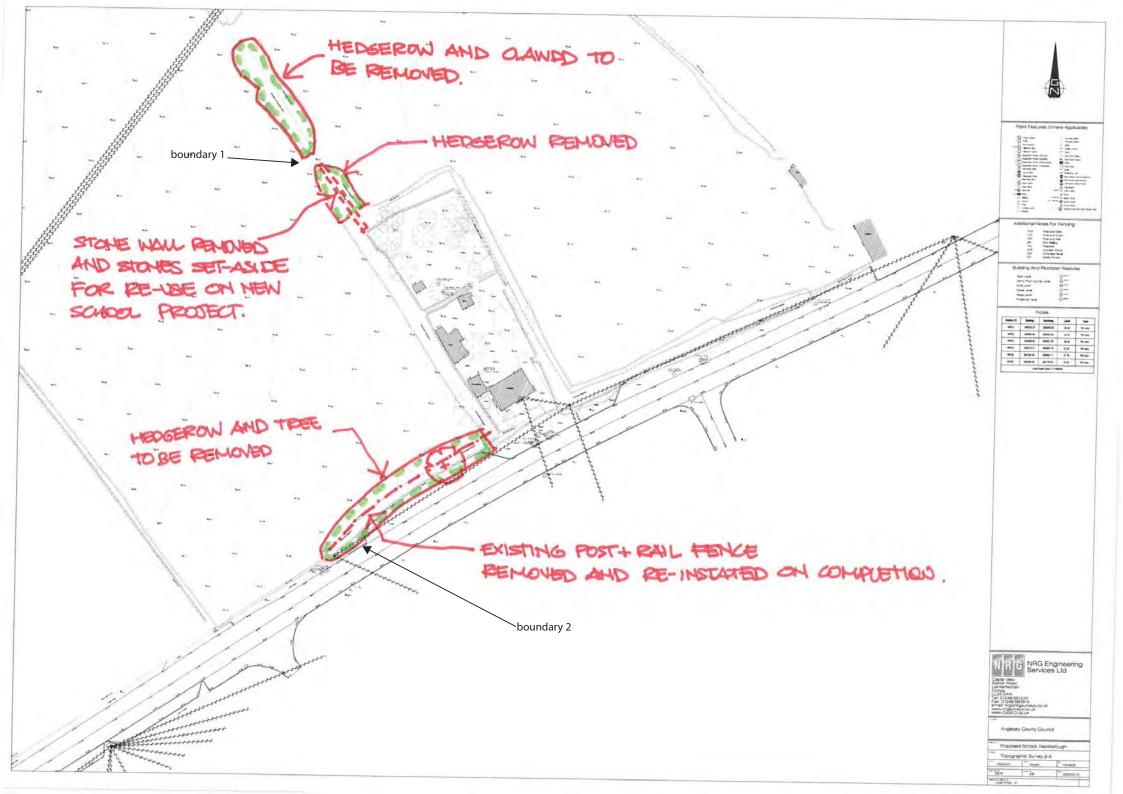
The two boundaries represented different construction styles and phases of use and construction. Boundary 1 represented an internal field boundary that no longer functioned as a physical barrier, with a redundant gateway and several breaches caused by root action and livestock. Boundary 1 comprised two main construction styles: a drystone wall and a clawdd. The drystone wall appeared to be of uniform style, although the majority was obscured by a dense hedgerow, whilst the clawdd included at least three building styles. The change in styles could suggest phases of construction or repair: the First to Third Edition 1-inch to 25 mile Ordnance Survey Maps (Sheet XXII.10; 1889, 1900 and 1926 respectively Figures 03 to 05) show that both fields were sub-divided into smaller plots: on the First to Third Editions, Field 1 is sub-divided into three plots, with a no longer visible boundary bifurcating the field, with Field 2 also divided into two plots. It is possible that the differing building styles along Boundary 1 may relate to this sub-division: the gateway appears to be where the former east-west boundary dividing Field 1 intersected with Boundary 1, suggesting the gateway provided access between the southern end of Field 1 and Field 2. The former boundary dividing Field 2 intersects with Boundary 1 around the point where this boundary transitioned from a stone and earth bank to a simpler bank. There are no additional former east-west boundaries on the historic mapping to suggest a reason for the change in clawdd style at the northern end of Boundary 1, where the clawdd changed from a bank with stone on the western side only to a bank with stone on both sides. The 1782 Lligwy estate map and the 1845 Tithe map do not include any additional information to support this.

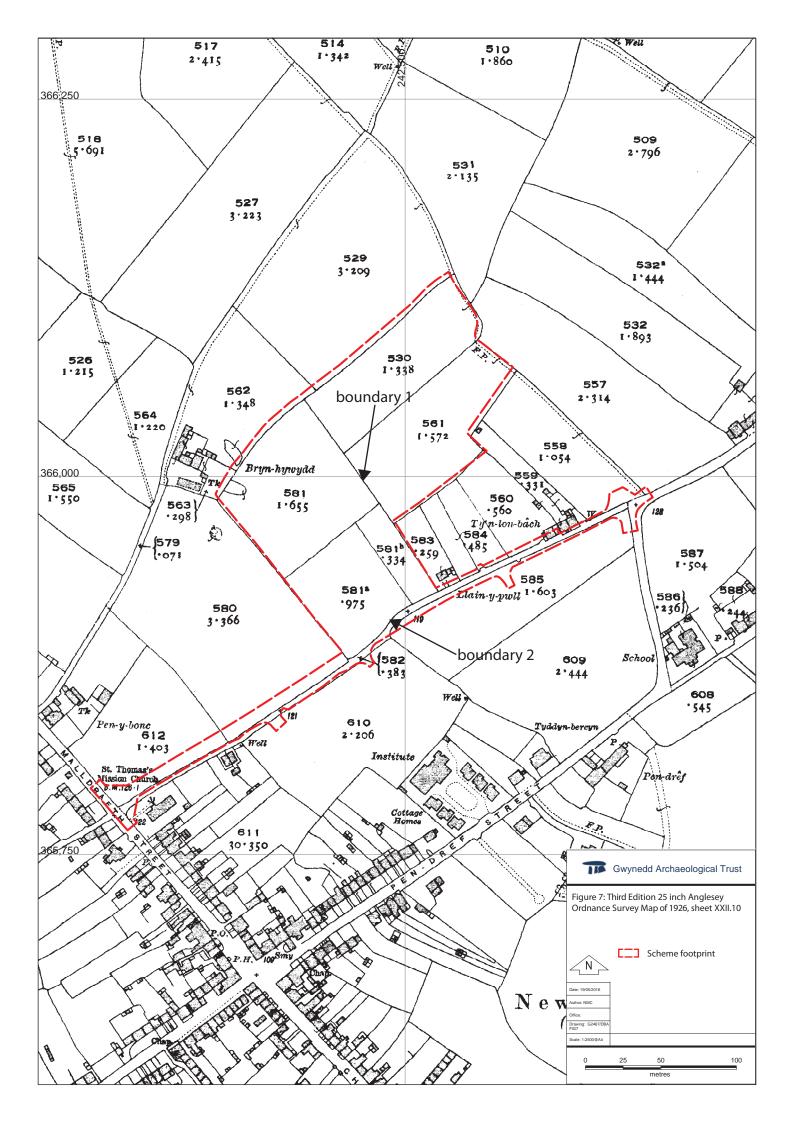
The change in the construction styles for Boundary 2 appear to reflect more modern changes, represented by local road improvements: the earth bank portion of the boundary reflects the more sinuous nature of the road line as visible on the historic mapping, whilst the stone wall reflects a straighter section of the road built during the twentieth century, with the stone wall built to accommodate this improvement and replacing an earlier section of wall.

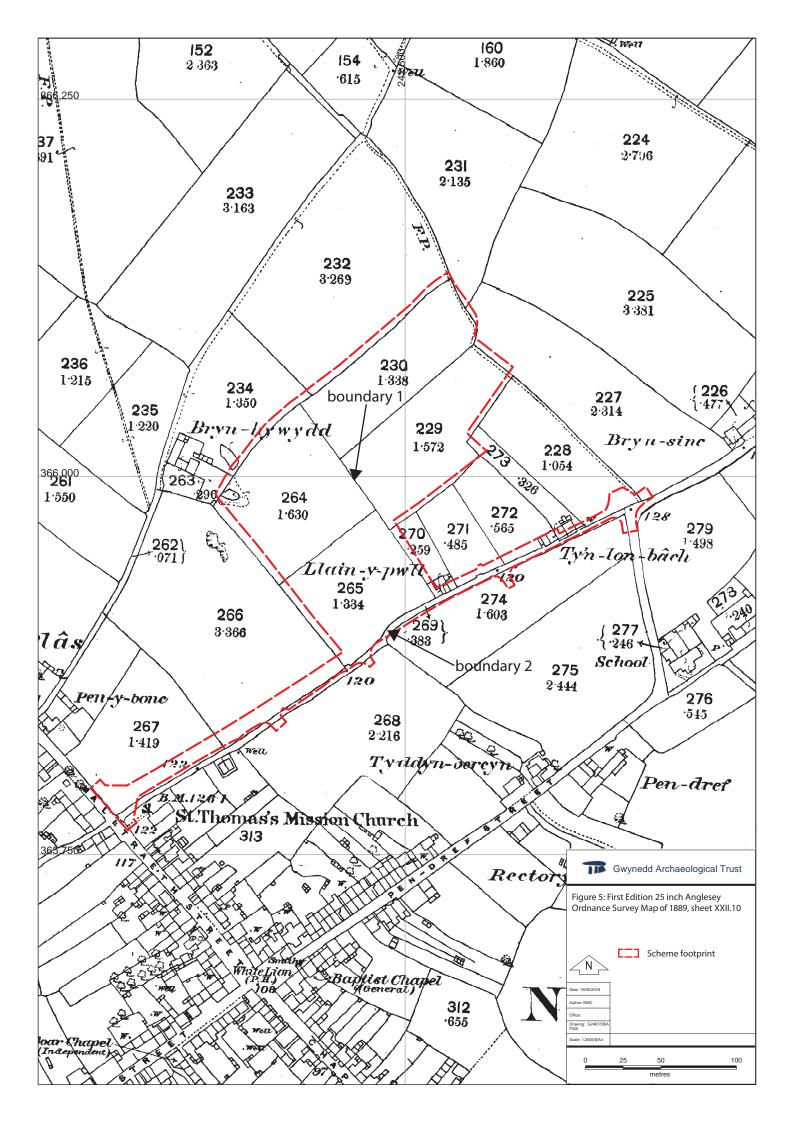
It is recommended that additional basic recording is completed for both boundaries during any breaching or removal as this would provide further opportunities to record any phasing and construction, including the profiles of the banks. It would be particularly useful to record the bank section of Boundary 2, as this is so heavily obscured by vegetation; attendance during removal of vegetation would allow opportunity to complete a record of the boundary.

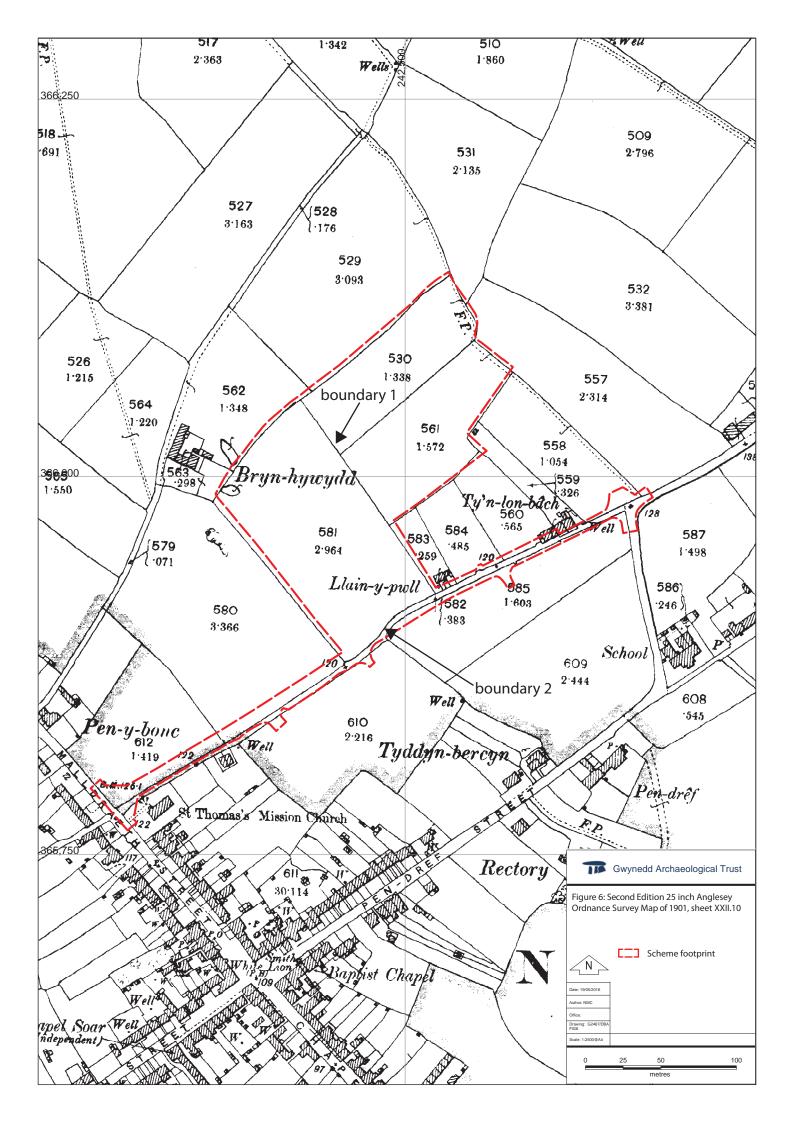
7 SOURCES CONSULTED

- 1. English Heritage, 1991, Management of Archaeological Projects
- Evans R., Hopewell D. and McGuiness, N. 2016 New Ysgol Bro Aberffraw Primary School, Newborough, Ynys Môn: Archaeological Assessment and Geophysical Survey: Phase 1 Field Evaluation. GAT report 1318.
- 3. Historic England, 2015, Management of Research Projects in the Historic Environment (MoRPHE).
- 4. Lligwy Additional MSS 1123 Plans
- McGuinness, N. 2016 Archaeological Trial Trenching at New Ysgol Bro Aberffraw Primary School, Newborough. GAT Report 1329
- 6. Oattes, A. M. 2016. New Ysgol Bro Aberffraw Primary School Newborough, Anglesey Archaeological Watching Brief. GAT Report 1330.
- 7. Tithe Map of the Parish of Newborough 1845
- 8. Ordnance Survey 1st edition 25 inch Anglesey County Series of 1889, Sheet XXII.10
- 9. Ordnance Survey 2nd edition 25 inch Anglesey County Series of 1900, Sheet XXII.10
- 10. Ordnance Survey 3rd edition 25 inch Anglesey County Series of 1926, Sheet XXII.10









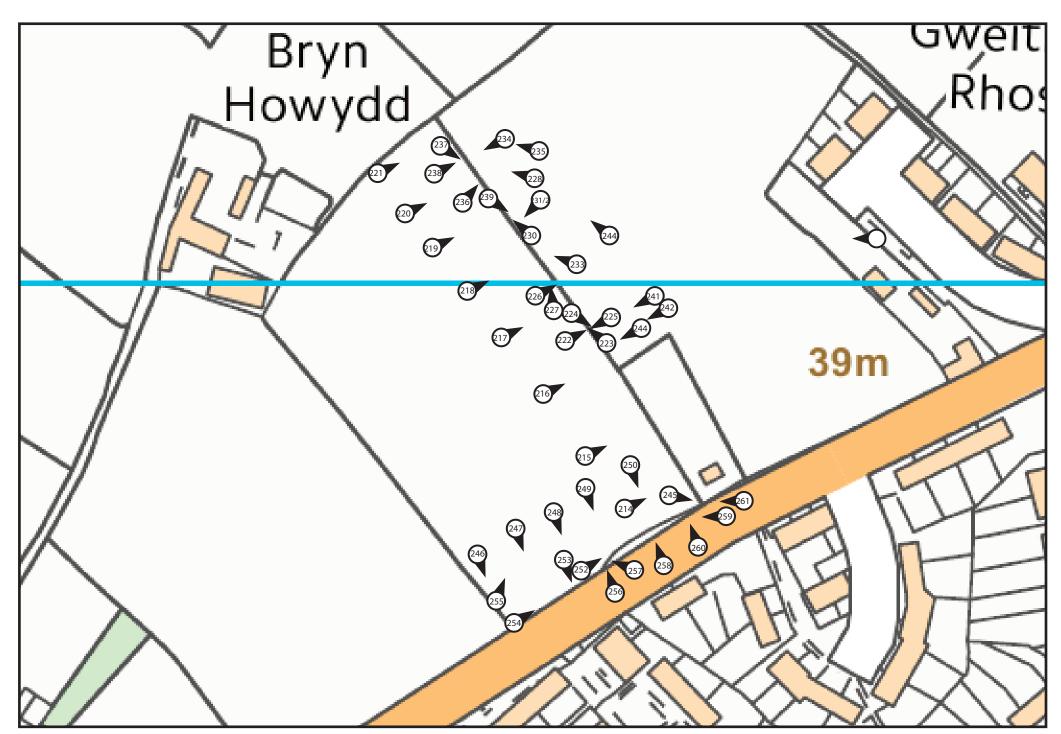


Figure 06: Location of Photographic Archive. Based on Ordnance Survey 1:10000 County Series (Sheet SH46NW). Scale: 1:1000@A4. Crown Copyright. All Rights Reserved. License number AL100020895.



Plate 01: Boundary 1 west facing side: first 20m length detailing drystone wall section, hidden by hedgerow; scale: 2x1m (archive image: G2467_214)



Plate 02: Boundary 1 west facing side: second 20m length detailing drystone wall section, hidden by hedgerow; scale: 2x1m (archive image: G2467_215)



Plate 03: Boundary 1 west facing side: third 20m length detailing drystone wall section, hidden by hedgerow; scale: 2x1m (archive image: G2467_216)



Plate 04: Boundary 1 west facing side: fourth 20m length detailing drystone wall section, gateway and start of clawdd section; scale: 2x1m (archive image: G2467_217)



Plate 05: Boundary 1 west facing side: fifth 20m length detailing denuded clawdd section; scale: 2x1m (archive image: G2467_218)



Plate 06: Boundary 1 west facing side: sixth 20m length detailing clawdd section; scale: 2x1m (archive image: G2467_219)



Plate 07: Boundary 1 west facing side: seventh 20m length detailing clawdd scetion; scale: 2x1m (archive image: G2467_220)



Plate 08: Boundary 1 west facing side: final 20m length detailing clawdd section, where it connects with another boundary; scale: 2x1m (archive image: G2467_221)



Plate 09: Boundary 1 view from west of gateway through boundary; scale: 3x1m (archive image: G2467_222)



Plate 10: Boundary 1 view from north detailing stone gatepost on southern side of gateway; scale: 3x1m (archive image: G2467_223)



Plate 11: Boundary 1 view from south of stone-built gatepost; scale: 1m (archive image: G2467_224)



Plate 12: Boundary 1 oblique view from north at northern end of boundary detailing clawdd construction; scale: 1m (archive image: G2467_237)



Plate 13: Boundary 1 view from west of breach in clawdd towards northern end of boundary; scale: 2x1m (archive image: G2467_236)



Plate 14: Boundary 1 oblique view from south of breach in clawdd towards northern end of boundary; on this section, the stone facing is only present on the western side; scale: 2x1m (archive image: G2467_235)



Plate 15: Boundary 1 oblique view from southeast along eastern side of boundary; scale: 1m (archive image: G2467_233)



Plate 16: Boundary 1 view west of clawdd construction detailing stone; scale: 2x1m (archive image: G2467_232)



Plate 17: Boundary 1 view from north of breach in clawdd and denuded clawdd bank; scale: 1m (archive image: G2473_239)



Plate 18: Boundary 1 oblique view from the south of eastern side of boundary (archive image: G2473_244)



Plate 19: Boundary 2: first 20m length with view from north of boundary detailing gate and stone wall construction; scale: 2x1m (archive image: G2467_246)



Plate 20: Boundary 2: second 20m length with view from north of boundary detailing transition from stone wall to earth bank; scalew: 2x1m (archive image: G2467_247)



Plate 21: Boundary 2: third 20m length with view from north detailing earth bank section; scale: 2x1m (archive image: G2467_249)



Plate 22: fourth 20m length with view from north of boundary detailing earth bank section and intersection with Boundary 1; scale: 2x1m (archive image: G2467_250)



Plate 23: Boundary 2 side on view from west of gate detailing construction; scale: 1m (archive image: G2467_254)



Plate 24: Boundary 2 view from south of transition from stone wall to earth bank; scale: 1m (archive image: G2467_256)



Plate 25: Boundary 2 view from south of earth bank; scale: 1m (archive image: G2467_258)



Plate 26: Boundary 2 oblique view from east of earth bank on south side of boundary; scale: 1m (archive image: G2467_261)

APPENDIX I

Reproduction of Gwynedd Archaeological Trust project design for archaeological mitigation (basic record), February 2017

NEW YSGOL BRO, NEWBOROUGH (G2467)

PROJECT DESIGN FOR ARCHAEOLOGICAL MITIGATION: BASIC RECORDING (HEDGEROWS)

Prepared for

Cyngor Sir Ynys Môn

February 2017

Ymddiriedolaeth Archaeolegol Gwynedd Gwynedd Archaeological Trust 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

NEW YSGOL BRO, NEWBOROUGH

PROJECT DESIGN FOR ARCHAEOLOGICAL MITIGATION: BASIC RECORDING (HEDGEROWS)

Prepared for Cyngor Sir Ynys Môn, February 2017

CONTENTS

1 INTRODUCTION	5
2 Archaeological and historical background	7
2.1 Desk-Based Assessment & Geophysical Survey	
2.2 Archaeological Evaluation (trial trenching)	
2.3 Watching Brief of Ground Investigation Works	
3 METHODOLOGY	
3.1 Photographic Record & Written Descriptive Record	
3.2 Fieldwork Archiving	
4 PROCESSING DATA, ILLUSTRATION, REPORT AND ARCHIVING	
5 DISSEMINATION AND ARCHIVING	
5.1 Historic Environment Record	
6 PERSONNEL	14
7 HEALTH AND SAFETY	
8 INSURANCE	
9 SOURCES CONSULTED	
10 Figure 01	
10.1 Site Location	
11 Figure 02:	
11.1 Sites identified during desk based assessment and walk over survey	
12 Figure 03:	
12.1 Client sketch plan designating targeted hedgerows	
Appendix I	
Gwynedd Archaeological Trust photographic metadata pro-forma	21
Appendix il	
Gwynedd Archaeological Trust Basic Record pro-forma	

1 INTRODUCTION

Gwynedd Archaeological Trust (GAT) has been asked by *Cyngor Sir Ynys Môn* to prepare a project design for an archaeological mitigation in advance of groundworks associated with the New Ysgol Bro Aberffraw, Newborough, Ynys Môn (NGR SH42476601). The site is currently a greenfield site, consisting of two fields set aside for pasture and covering an area of approximately 28,571 m² (Figure 01).

The specified hedgerows comprise:

- A northeast to southwest orientated hedgerow centred on NGR SH42466600 and separating the two fields that comprise the site. The hedgerow is a *clawdd*, built from earthen banks with stone facings. Total length covered is 103m; and
- An east to west orientated hedgerow centred on NGR SH42506591 and running alongside a lay-by attached to the B4421 road (north side). The hedgerow includes remnants of *clawdd* with modern improvements. Total length covered is 45m.

The archaeological mitigation will comprise a basic photographic and written record of existing hedgerows, which are proposed for removal as part of the groundworks (Figure 02). The mitigation will be completed w/c 20/02/17 in advance of proposed groundworks that are scheduled from w/c 27/02/17 (Figure 03). Please note that the designated hedgerows are classed as historically important hedgerows under Schedule I Part II 5(a) of the Hedgerow Regulations 1997: "5. The hedgerow— (a)is recorded in a document held at the relevant date at a Record Office as an integral part of a field system pre-dating the Inclosure Acts". As a result, the hedgerows may be legally protected under this act. *The completion of this basic record does not indicate approval for the removal of the hedgerows*.

The current design is for the non-intrusive basic record of the existing hedgerows and does not cover archaeological mitigation during the removal of the hedgerows or any other archaeological mitigation during groundworks. Such mitigation would be covered in additional project design(s).

The basic record will be completed in accordance with the following guidance:

- Management of Archaeological Projects (English Heritage, 1991);
- Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England, 2015); and

 Guidelines for digital archives Royal Commission on Ancient and Historic Monuments of Wales 2015.

This mitigation phase will be monitored by the Gwynedd Archaeological Planning Services (GAPS); the content of this design and all subsequent reporting by GAT must be approved by GAPS prior to final issue.

Gwynedd Archaeological Trust is certified to ISO 9001:2008 and ISO 14001:2004 (Cert. No. 74180/A/0001/UK/En) and is a Registered Organisation with the Chartered Institute for Archaeologists and a member of the Federation of Archaeological Managers and Employers (FAME).

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

A desk-based assessment, walkover survey, and geophysical survey of the development area has been completed by GAT (GAT Report 1318), followed by an archaeological evaluation (GAT Report 1329) and a watching brief of ground investigation works (GAT Report 1330).

2.1 Desk-Based Assessment & Geophysical Survey

The desk-based assessment was completed by GAT in May 2016 and concluded that the site lay to the north of the historic core of the medieval town of Newborough, but within an area that was likely to have formed part of the town fields, with evidence of medieval strip fields having been identified in close proximity to the site. The site was the property of Lord Boston's Lligwy estate from at least the latter part of the 18th century and a Lligwy estate map of 1782 shows a house and associated paddock in the south west corner of the assessment area that is not shown on any later mapping. The Ordnance Survey maps of the later 19th and early 20th centuries shows the current area boundary, along with additional hedgerows that have been grubbed out in recent times. The magnetometer geophysical survey noted interference in two parts from strongly magnetic bedrock, indicating significant interference from the sub-surface geology, which was not visible on the surface. Linear anomalies were also identified, some of which probably represent field boundaries shown on the historic mapping and aerial photographs. Further linear anomalies probably represent field drains, and a former trackway was identified. A probable former small quarry was noted in the northwest corner of the site.

The assessment report recommended that basic recording be completed of all field boundaries within the assessment area (designated as Feature 1) and that specific geophysical anomalies were targeted for archaeological evaluation via trial trenching.

2.2 Archaeological Evaluation (trial trenching)

Twenty 30x2m trial trenches were excavated by GAT in July 2016 for the evaluation stage, targeting 11 features identified during the desk-based assessment and geophysical survey along with several additional trenches in areas where no potential archaeological features had previously been identified. The trial trenches identified in the Phase 1 assessment targeted for trenching. Two of these features, , a possibly medieval house plot and associated small garden plot shown on the Lligwy Estate map of 1782, as well as additional

activity indicative of possible prehistoric or medieval archaeology. Recommendations were made for archaeological mitigation during construction groundworks.

2.3 Watching Brief of Ground Investigation Works

An archaeological watching brief was completed by GAT in August 2016 and monitored the geotechnical ground investigation works. No archaeological activity was identified within the confines of the monitored areas, which were characterised by shallow topsoil and a thick subsoil with the glacial horizon encountered at a minimum depth of 0.75m.

3 METHODOLOGY

3.1 Photographic Record & Written Descriptive Record

- The basic record will comprise a non-intrusive photographic record and written descriptive record
- All records will be completed using GAT pro-formas;
- Photographic images will be taken using a digital SLR (Nikon D40) camera set to maximum resolution (3008 x 2000 6.1 effective megapixels) in RAW format and will record all accessible portions of each hedgerow, with detailed images taken for any visible phasing. A scale bar will be used for all images.
- Images will be converted to TIFF and JPEG format for archiving using Adobe Photoshop. The photographic record completed using GAT pro-formas will then be digitised in *Microsoft Access* as part of the fieldwork archive and dissemination process. Photographic images will be archived in TIFF format; the archive numbering system will start from G2467_213. A figure indicating the location for each photographic image will be prepared for the archive and the report;
- The written descriptive record will include the dimension, form, fabric, orientation and condition of each field boundary.

3.2 Fieldwork Archiving

Following the completion of the fieldwork, a programme of fieldwork archiving will be completed 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;

All data will be processed and a report will be produced which will detail and synthesise the results.

4 PROCESSING DATA, ILLUSTRATION, REPORT AND ARCHIVING

Following completion of the stages outlined above, a report will be produced within one month incorporating the following:

- 1. Non-technical summary
- 2. Introduction
- 3. Background
- 4. Methodology
- 5. Results
- 6. List of sources consulted.
- 7. Appendix I approved GAT project specification

A draft copy of the report will be sent to the client prior to production of the final report.

5 DISSEMINATION AND ARCHIVING

A full archive including plans, photographs, written material and any other material resulting from the project will be prepared. The archaeological mitigation outlined in this project specification will be completed in February 2017. A draft report will be submitted within one month of fieldwork completion (March 2017); a final report will be submitted to the Historic Environment within six months of submitting the draft report (September).

The following dissemination will apply:

- A paper report(s) plus digital report(s) will be provided to the client and GAPS (draft report then final report);
- A paper report plus a digital report will be provided to the regional Historic Environment Record, Gwynedd Archaeological Trust; this will be submitted within six months of report completion (final report only);
- A digital report and archive (including photographic and drawn) data will be provided to Royal Commission on Ancient and Historic Monuments, Wales (final report only);
- Submission of digital information to the Royal Commission on the Ancient and Historical Monuments of Wales shall be undertaken in accordance with the RCAHMW Guidelines for Digital Archives Version 1. Digital information will include the photographic archive and associated metadata;

5.1 Historic Environment Record

In line with the regional Historic Environment Record (HER) requirements, the HER must 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. At the onset, the HER Enquiry Form provided by the HER, will be completed and submitted.

6 PERSONNEL

The project will be managed and completed by John Roberts, Principal Archaeologist GAT Contracts Section, who will be responsible for completing the photographic and written descriptive record sheets and the fieldwork archive itemised in <u>para. 3.2</u> and submitting a draft report GAPS review and approval. The report will then be submitted as per the arrangements defined in <u>para. 5</u>.

7 HEALTH AND SAFETY

The GAT Archaeologist will be CSCS certified. Any risks and hazards will be indicated prior to the start of work via a submitted risk assessment. Copies of the site specific risk assessment will be supplied to the client prior to the start of fieldwork.

8 INSURANCE

Public 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/000405

EXPIRY DATE 22/06/2017

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 24765101CHC/000405

EXPIRY DATE 22/06/2017

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

HU PI 9129989/1208

EXPIRY DATE 23/07/2017

9 SOURCES CONSULTED

English Heritage, 1991, Management of Archaeological Projects

Evans R., Hopewell D. and McGuiness, N. 2016 New Ysgol Bro Aberffraw Primary School, Newborough, Ynys Môn: Archaeological Assessment and Geophysical Survey: Phase 1 Field Evaluation. GAT report 1318.

Historic England, 2015, Management of Research Projects in the Historic Environment (MoRPHE).

McGuinness, N. 2016 Archaeological Trial Trenching at New Ysgol Bro Aberffraw Primary School, Newborough. GAT Report 1329

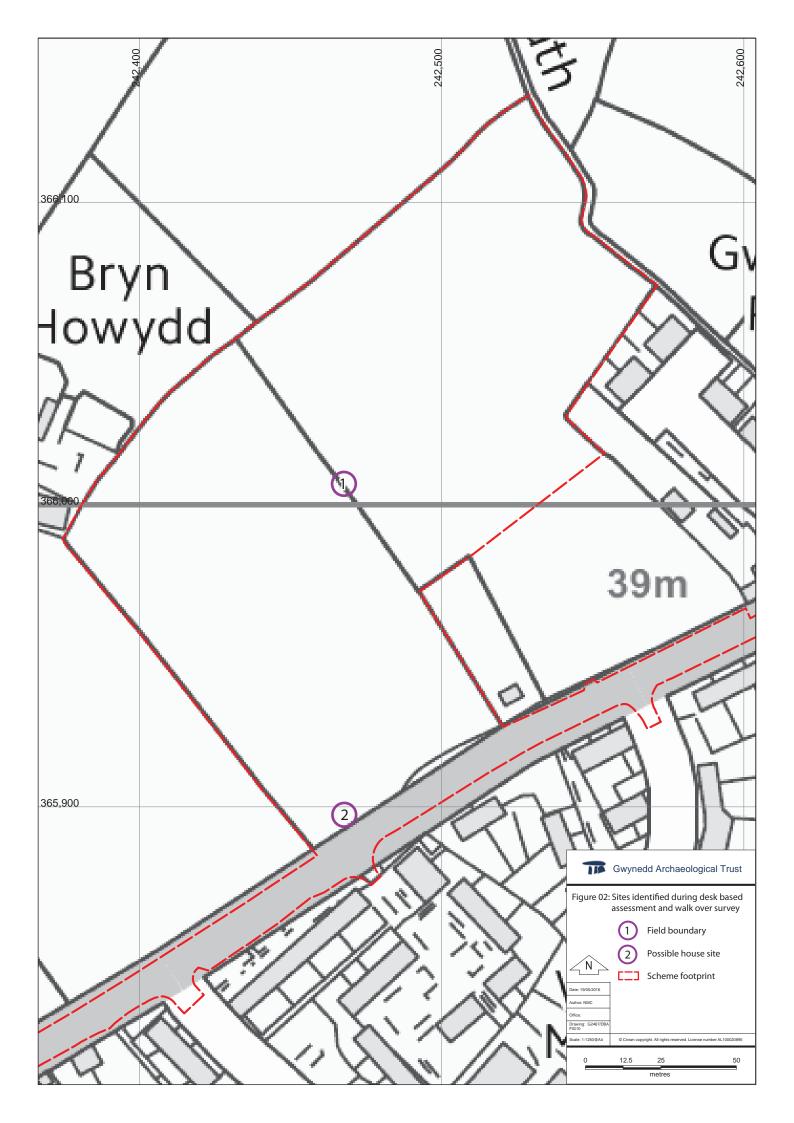
Oattes, A. M. 2016. New Ysgol Bro Aberffraw Primary School Newborough, Anglesey Archaeological Watching Brief. GAT Report 1330.

10 FIGURE 01

10.1 Site Location

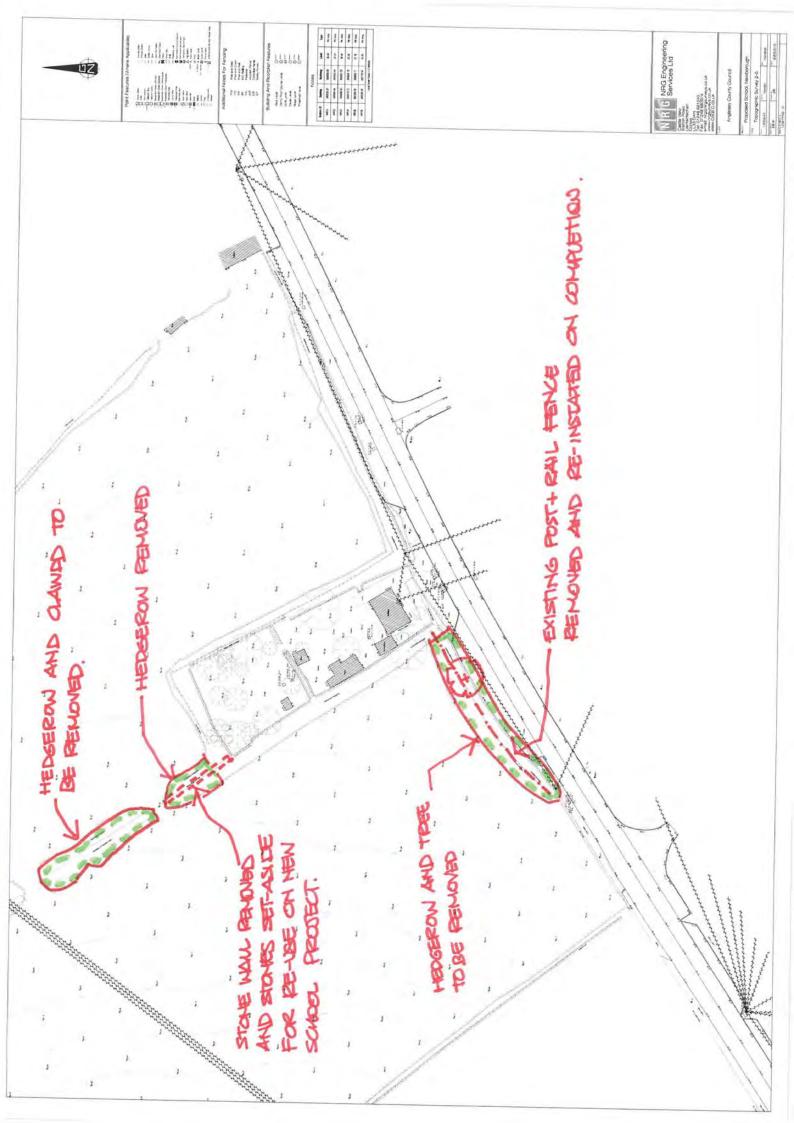
11 FIGURE 02:

11.1 Sites identified during desk based assessment and walk over survey



12 FIGURE 03:

12.1 Client sketch plan designating targeted hedgerows



APPENDIX I

Gwynedd Archaeological Trust photographic metadata pro-forma

Ymddiriedolaeth Archaeolegol Gwynedd Gwynedd Archaeological Trust

Digital Photographic Record

Include main context numbers for each shot, drawing numbers for sections and any other relevant numbers for cross referencing.

Delete any unwanted photos immediately from the camera.

Regularly upload photographs to computer.

Projec	Project Name:		Project Number:	-			
Photo No.	Sub - Division	Description	Contexts	Scales	View From	Initials	Date

APPENDIX II

Gwynedd Archaeological Trust Basic Record pro-forma

YMDDIRIEDOLAETH ARCHAEOLEGOL	GWYNEDD ARCHAEOLOG	ICAL TRUST
BASIC RECORDING FORM Project name		Project number
Feature name		Feature Number
NGR		1
Description		
Recommendations for further assessment		
Photographic record numbers		
Digital		
	T	
	Visit date	Visit by

APPENDIX II

Gwynedd Archaeological Trust Photographic Record Metadata

File reference	Project name	Project phase	Sub- division	Description	View from	Scale (s)	Date	Originating person	Originating organisation	Plate
		basic		Boundary 1 west facing side:		(-)		posessi	o game a se	01
G2467_214	New Ysgol Bro Aberffraw	record	Field 1	first 20m length	W	2x1m	22/02/17	JAR	GAT	
_		basic		Boundary 1 west facing side:						02
G2467_215	New Ysgol Bro Aberffraw	record	Field 1	second 20m length	W	2x1m	22/02/17	JAR	GAT	
		basic		Boundary 1 west facing side:						03
G2467_216	New Ysgol Bro Aberffraw	record	Field 1	third 20m length	W	2x1m	22/02/17	JAR	GAT	
		basic		Boundary 1 west facing side:						04
G2467_217	New Ysgol Bro Aberffraw	record	Field 1	fourth 20m length	W	2x1m	22/02/17	JAR	GAT	
		basic		Boundary 1 west facing side:						05
G2467_218	New Ysgol Bro Aberffraw	record	Field 1	fifth 20m length	W	2x1m	22/02/17	JAR	GAT	
		basic		Boundary 1 west facing side:						06
G2467_219	New Ysgol Bro Aberffraw	record	Field 1	sixth 20m length	W	2x1m	22/02/17	JAR	GAT	
		basic		Boundary 1 west facing side:						07
G2467_220	New Ysgol Bro Aberffraw	record	Field 1	seventh 20m length	W	2x1m	22/02/17	JAR	GAT	
		basic		Boundary 1 west facing side:						08
G2467_221	New Ysgol Bro Aberffraw	record	Field 1	eight 20m length	W	2x1m	22/02/17	JAR	GAT	
				Boundary 1 view from west						09
		basic		of gateway through						
G2467_222	New Ysgol Bro Aberffraw	record	Field 1	boundary	W	3x1m	22/02/17	JAR	GAT	
				Boundary 1 view from north						10
		basic		detailing stone gatepost on						
G2467_223	New Ysgol Bro Aberffraw	record	Field 1	southern side of gateway	N	1x1m	22/02/17	JAR	GAT	
		basic		Boundary 1 view from south						11
G2467_224	New Ysgol Bro Aberffraw	record	Field 1	of stone-built gatepost	S	1x1m	22/02/17	JAR	GAT	
				Boundary 1 view from the						
		basic .		east of gateway as viewed						
G2467_225	New Ysgol Bro Aberffraw	record	Field 2	from Field 2	E	3x1m	22/02/17	JAR	GAT	
		.		Boundary 1 view from west						
		basic .		detailing clawdd						
G2467_226	New Ysgol Bro Aberffraw	record	Field 1	construction	W	2x1m	22/02/17	JAR	GAT	

File		Project	Sub-		View	Scale		Originating	Originating	Plate
reference	Project name	phase	division	Description	from	(s)	Date	person	organisation	
				Boundary 1 oblique view						
		basic		from west detailing clawdd						
G2467_227	New Ysgol Bro Aberffraw	record	Field 1	construction	W	2x1m	22/02/17	JAR	GAT	
				Boundary 1 oblique view						
		basic		from east of breach in						
G2467_228	New Ysgol Bro Aberffraw	record	Field 2	clawdd	Е	1x1m	22/02/17	JAR	GAT	
		basic		Boundary 1 view from west						
G2467_229	New Ysgol Bro Aberffraw	record	Field 1	of clawdd and defunct fence	W	2x1m	22/02/17	JAR	GAT	
				Boundary 1 view north of						
		basic		breach in the clawdd						
G2467_230	New Ysgol Bro Aberffraw	record	Field 1	detailing construction	S	2x1m	22/02/17	JAR	GAT	
				Boundary 1 view from east						
		basic		of breach in clawdd and						
G2467_231	New Ysgol Bro Aberffraw	record	Field 2	clawdd construction	Е	2x1m	22/02/17	JAR	GAT	
				Boundary 1 view west of						16
		basic		clawdd construction						
G2467_232	New Ysgol Bro Aberffraw	record	Field 2	detailing stone	Е	2x1m	22/02/17	JAR	GAT	
				Boundary 1 oblique view						15
		basic		from southeast along						
G2467_233	New Ysgol Bro Aberffraw	record	Field 2	eastern side of boundary	SE	1x1m	22/02/17	JAR	GAT	
				Boundary 1 view from the						
				east of the clawdd detailing						
		basic		dilapidated construction						
G2467_234	New Ysgol Bro Aberffraw	record	Field 2	caused by vegetation growht	E	2x1m	22/02/17	JAR	GAT	
				Boundary 1 oblique view						14
				from south of breach in						
		basic		clawdd towards northern						
G2467_235	New Ysgol Bro Aberffraw	record	Field 1	end of boundary	S	2x1m	22/02/17	JAR	GAT	
				Boundary 1 view from west						13
		basic		of breach in clawdd towards						
G2467_236	New Ysgol Bro Aberffraw	record	Field 1	northern end of boundary	W	2x1m	22/02/17	JAR	GAT	

File		Project	Sub-		View	Scale		Originating	Originating	Plate
reference	Project name	phase	division	Description	from	(s)	Date	person	organisation	
				Boundary 1 oblique view						12
				from north at northern end						
		basic		of boundary detailing clawdd						
G2467_237	New Ysgol Bro Aberffraw	record	Field 1	construction	N	1x1m	22/02/17	JAR	GAT	
				Boundary 1 view from west						
				of western side of boundary						
		basic		detailing change in clawdd						
G2467_238	New Ysgol Bro Aberffraw	record	Field 1	styles	W	2x1m	22/02/17	JAR	GAT	
				Boundary 1 view from north						17
		basic		of breach in clawdd and						
G2467_239	New Ysgol Bro Aberffraw	record	Field 1	denuded clawdd bank	N	1x1m	22/02/17	JAR	GAT	
				Boundary 1 view from north						
		basic		of breach in clawdd and						
G2467_240	New Ysgol Bro Aberffraw	record	Field 2	denuded clawdd bank	N	1x1m	22/02/17	JAR	GAT	
				Boundary 1 view from east						
				of eastern side of boundary						
		basic		and dilapidated drystone						
G2467_241	New Ysgol Bro Aberffraw	record	Field 2	wall	Е	1x1m	22/02/17	JAR	GAT	
				Boundary 1 view from east						
				of eastern side of boundary						
		basic		and dilapidated drystone						
G2467_242	New Ysgol Bro Aberffraw	record	Field 2	wall	E	1x1m	22/02/17	JAR	GAT	
				Boundary 1 oblique view						
		basic		from northwest of southern						
G2467_243	New Ysgol Bro Aberffraw	record	Field 2	end of boundary	NW	1x1m	22/02/17	JAR	GAT	
				Boundary 1 oblique view						18
		basic		from the south of eastern						
G2467_244	New Ysgol Bro Aberffraw	record	Field 1	side of boundary	S	n/a	22/02/17	JAR	GAT	
		basic		Detail of point where						
G2467_245	New Ysgol Bro Aberffraw	record	Field 1	boundaries 1 and 2 meet	NW	n/a	22/02/17	JAR	GAT	
G2467_246	New Ysgol Bro Aberffraw	basic	Field 1	Boundary 2 view from north	N	2x1m	22/02/17	JAR	GAT	19

File		Project	Sub-		View	Scale		Originating	Originating	Plate
reference	Project name	phase	division	Description	from	(s)	Date	person	organisation	
		record		of boundary detailing gate						
				and stone wall construction						
				Boundary 2 view from north						20
				of boundary detailing						
		basic		transition from stone wall to						
G2467_247	New Ysgol Bro Aberffraw	record	Field 1	earth bank	N	2x1m	22/02/17	JAR	GAT	
				Boundary 2 view from north						
				of boundary detailing						
		basic		transition from stone wall to						
G2467_248	New Ysgol Bro Aberffraw	record	Field 1	earth bank	N	2x1m	22/02/17	JAR	GAT	
				Boundary 2 view from north						21
		basic		of boundary detailing earth						
G2467_249	New Ysgol Bro Aberffraw	record	Field 1	bank section	N	2x1m	22/02/17	JAR	GAT	
				Boundary 2 view from north						22
		basic		of boundary detailing earth						
G2467_250	New Ysgol Bro Aberffraw	record	Field 1	bank section	N	2x1m	22/02/17	JAR	GAT	
				Boundary 2 view from north						
				of boundary detailing						
		basic		transistion from stone wall						
G2467_251	New Ysgol Bro Aberffraw	record	Field 1	to earth bank	N	2x1m	22/02/17	JAR	GAT	
				Boundary 2 oblique view						
				east of boundary						
		basic		emphasising shape of bank						
G2467_252	New Ysgol Bro Aberffraw	record	Field 1	section	W	1x1m	22/02/17	JAR	GAT	
				Boundary 2 view from north						
		basic		detailing construciton of						
G2467_253	New Ysgol Bro Aberffraw	record	Field 1	stone wall	N	2x1m	22/02/17	JAR	GAT	
				Boundary 2 side on view						23
		basic		from west of gate detailing						
G2467_254	New Ysgol Bro Aberffraw	record	Field 1	construction	W	1x1m	22/02/17	JAR	GAT	
G2467_255	New Ysgol Bro Aberffraw	basic	Field 1	Boundary 2 general view	SW	n/a	22/02/17	JAR	GAT	

File		Project	Sub-		View	Scale		Originating	Originating	Plate
reference	Project name	phase	division	Description	from	(s)	Date	person	organisation	
		record		from southwest across Field						
				1						
				Boundary 2 view from south						24
		basic		of transition from stone wall						
G2467_256	New Ysgol Bro Aberffraw	record	n/a	to earth bank	S	1x1m	22/02/17	JAR	GAT	
				Boundary 2 oblique view						
				from south of transition						
		basic		from stone wall to earth						
G2467_257	New Ysgol Bro Aberffraw	record	n/a	bank	S	1x1m	22/02/17	JAR	GAT	
		basic		Boundary 2 view from south						25
G2467_258	New Ysgol Bro Aberffraw	record	n/a	of earth bank	S	1x1m	22/02/17	JAR	GAT	
				Boundary 2 oblique view						
		basic		from east of south facing						
G2467_259	New Ysgol Bro Aberffraw	record	n/a	side of boundary	Е	2x1m	22/02/17	JAR	GAT	
		basic		Boundary 2 view from south						
G2467_260	New Ysgol Bro Aberffraw	record	n/a	of earth bank	S	2x1m	22/02/17	JAR	GAT	
				Boundary 2 oblique view						26
		basic		from east of earth bank on						
G2467_261	New Ysgol Bro Aberffraw	record	n/a	south side of boundary	E	2x1m	22/02/17	JAR	GAT	



