PEN Y BONT EXTENSION, BALA: TRIAL TRENCHING

Gwerthuso Archaeolegol / Archaeological Evaluation

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

Pen Y Bont Extension, Bala: Trial trenching

Gwerthuso Archaeolegol / Archaeological Evaluation

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Front cover image: Post-ex view of Trench 02.A (G2749_27)

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CRYNODEB ANNHECHNEGOL

Comisiynwyd Ymddiriedolaeth Archaeolegol Gwynedd gan Caulmert i gynnal gwerthusiad archaeolegol cyn estyniad arfaethedig i reilffordd Pen y Bont a gorsaf newydd yn y Bala, Gwynedd. Ni ddarganfuwyd dim o arwyddocâd archaeolegol o fewn y chwe ffos brawf ar wahân i weddillion aflonyddwch modern o garej a ddymchwelwyd. Dangosodd y ffosydd hefyd ddilyniant o dyddodion allheulol o ganlyniad i weithredu rhewlifol a gorlifdir.

NON-TECHNICAL SUMMARY

Gwynedd Archaeological Trust was commissioned by Caulmert to undertake an archaeological evaluation in advance of a proposed extension of the Pen y Bont railway line and a new station at Bala, Gwynedd. Nothing of archaeological significance was discovered within the six trial trenches apart from remains of modern disturbance from a demolished garage. The trenches also demonstrated a sequence of alluvial deposits as a result of glacial and floodplain action.

1 INTRODUCTION

Gwynedd Archaeological Trust (GAT) was commissioned by Caulmert to undertake an archaeological evaluation in advance of a proposed extension of the Pen y Bont railway line and a new station at Bala, Gwynedd (NGR SH93023498; postcode: LL23 7PH; Figure 01, Plate 1 - 4). The existing railway measures 4.5 mile/7.2km in length and comprises a 2'/600mm gauge heritage railway formed on the track bed of the former Great Western Railway Ruabon to Barmouth branch. The railway first opened in 1972 and has operated between Llanwchllyn to the south of Bala Lake along its east shore to the existing northern terminus at Pen-y-Bont. The proposed scheme will extend the railway line from at Pen-Y-Bont, off the B4403 to Heol Aran at the town centre, where the new station will be located, as detailed on Caulmert Drawing No. 4267-CAU-XX-XX-DR-C-1800 P05 (Figure 02). The new station will incorporate three fields and an existing parking area. The archaeological evaluation comprised of 6No 20x2m trial trenches within the proposed new station site and a geophysical survey of a 0.13ha triangular shaped plot near the existing Pen y Bont station. All work was planned, managed and undertaken by GAT in accordance with the following standards and guidance:

1. *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs) Version 2 (The Welsh Archaeological Trusts, 2018);*
2. *Standard and Guidance for Archaeological Field Evaluation* (Chartered Institute for Archaeologists, 2020);
3. *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (Chartered Institute for Archaeologists, 2020);
4. *Management of Archaeological Projects* (English Heritage, 1991);
5. *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide* (Historic England, 2015); and
6. *Guidelines for digital archives* (Royal Commission on Ancient and Historic Monuments of Wales, 2015).

The project was monitored by the Gwynedd Archaeological Planning Service (GAPS) on behalf of the Local Planning Authority.

The GAT HER Enquiry Number for this project is GATHER 1715 and the Event PRN is 46314. The GAT HER was also responsible for supplying the Primary Reference Numbers (PRN) for any new identified and recorded assets discovered during the evaluation.

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 and a member of the Federation of Archaeological Managers and Employers (FAME).

1.1 Aims and Objectives

The key aims and objectives were to:

- establish the date and nature of any archaeological remains identified within the evaluation area and assess their implications for understanding local historical development, in conjunction with the known archaeological record.
- If no additional archaeological activity is identified, establish why this may be the case; and
- To place the results in context, reference shall be made to *A Research Framework for the Archaeology of Wales*.

1.2 Acknowledgements

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

- *GAT Project team:* Robert Evans, Bethan Jones, Michael Lynes;
- *Client: (*Caulmert*)*;
- *Contractor: (RG Hire)* ; and
- *Development Control Archaeologist Gwynedd Archaeological Trust:* Jenny Emmett and Tom Fildes.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

The regional Historic Environment Record Primary Reference Number (PRN) entry for Bala township (PRN 9885) describes Bala as astride the main road to Dolgellau, on the floodplain close to the confluence of the Dee and Tryweryn at the north end of Llyn Tegid, Wales' largest natural lake. There is little known prehistoric archaeology, but Roman archaeology is noted in the vicinity of the town. Bala is considered to be the 'best example of a planned English borough in Meirionnydd' (Cadw/ICOMOS 2001, 70), founded by Edward II and given its formal grant of privileges in 1324. After suffering a decline in the later medieval period, the town expanded in the 18th century due to development of a hosiery industry, and the rise of Bala as an important centre for Nonconformist religion in the 19th century was very significant.

The trial trenching area is situated at the southwest corner of the former medieval town, just beyond the known extent of medieval settlement, but likely to be closely related to it. The geophysical survey area is located close to Castell Gronw medieval motte (scheduled monument Me067).

2.2 Prehistoric and Roman Settlement

There is little in the way of evidence for prehistoric archaeology close to the study area. However, a significant complex of Roman enclosures have been identified in the immediate vicinity of Bala, at Llanfor, by aerial reconnaissance, whilst the Roman road from Chester to Caer Gai and Brithdir likely passed through the area (PRN 17760-8). At Llanfor (PRN 3211; SM Me092; SH937361) appeared to be a fort, containing a granary and barrack blocks, a stores compound with a second granary or storehouse, and a third enclosure, possibly the earliest. Subsequent geophysical survey revealed further details of the complex, along with a number of earlier Bronze Age burial and ritual sites, suggesting that the lack of knowledge of prehistoric sites in the area may be due to a lack of evidence rather than any real absence.

The Roman road from Chester must have passed through the area of modern Bala, close to the Roman complex at Llanfor, before running along the northwest side of the lake to the Roman garrison at Caer Gai. These Roman works form part of the consolidation of the area by the Romans.

2.3 Medieval and later Settlement

Llanfor continued to be of importance in the years following the Roman occupation, indicated by the early foundation of the church, indicated by its 6th century inscribed stone (PRN3204; SH93833670), and an unusual earthwork north of the church (PRN 3201; SH93823684), that may possibly represent the centre of an early lordship in the area (Cadw/ICOMOS 2001, 70; Davidson and Gwyn 2008, 5). In the medieval period the local power base was at Castell Carndochan (PRN4977; SM Me049; SH84703065) to the southwest, which has been dated to the mid-13th century, and described as 'an important citadel of the lords of Penllyn' (*ibid.*). It occupies a strong, commanding position on a high spur overlooking the entrance to the Lliw valley, but was increasingly eclipsed by the borough of Y Bala through the medieval period.

During the medieval period, Bala (PRN 70116) is thought to have been the maerdref of the commote of Uwch Tryweryn in the cantref of Penllyn; two, presumably Norman, mottes stand close by: Tomen y Bala at the north end of the later borough of Bala (PRN 3202; Me016, SH92803609), and Castell Gronw on the River Dee (PRN3203; SM Me067; SH9303503; cf. Figure 01) at the point where it leaves the lake, this latter being destroyed in 1202 by Llywelyn ab Iorwerth. In the Extent of Merioneth of 1285 a charge of 5 shillings was made upon the commote for the 'sustention of the houses of Bala', houses which are again referred to in 1289 when Robert de Slaundon was paid 'the sum of £20 which he expended in rebuilding the houses of Aber and Bala which had been unfortunately destroyed by fire (Johnstone and Reilly 1995, 22). The town remained in the medieval parish of Llanycil until the 19th century (Haslam *et al.* 2009, 545). The medieval church at Llanycil is located on the old road to Dollgellau on the banks of Llyn Tregid to the west of the town, and its large graveyard served the townsfolk of Bala from the times of the Maerdref until the 19th century.

In about 1310 a small town was founded by Roger Mortimer in an attempt to bring stability to the area and so that the town could serve as an administrative centre for the district; the borough was laid out with 53 burgage plots (Soulsby 1983, 74). The plots were laid out along one principal street, with two back lanes running parallel to it, now represented by Arenig and Plasey/Mount Streets. In 1315 the men of Penllyn petitioned that they were being forced to work on the maintenance of the houses and pay five shillings which they previously paid in lieu of their obligation to maintain the buildings of the commote (Johnstone and Reilly 1995, 22). The markets and fairs previously held at Llanfor were transferred to Bala in 1324, when it received its formal grants and priviliges (Soulsby 1983, 74). The town was never walled, however an earthen bank may have been thrown up at this time. Subsequent development, however, has destroyed most of the original plots and any enclosing bank present. By the time of Henry V the town had a barracks, a mill and a courthouse (Davidson and Gwyn 20089, 6).

A feature of the medieval town was the small chapel which stood near the town cross in High Street; there was no church at Bala until the building of Christ Church in 1811, but the chapel may have been contemporary with the foundation of the borough and continued to serve the community until the early 18th century when it was demolished and he site and associated graveyard developed.

The absence of any maintained castle means that the town does not figure in the Glyndwr revolt, although a small garrison place consisting of six timber houses was temporarily established. Limited archaeological work has been carried out at the location of the motte or the town of Bala itself. In the early 1990's, archaeologists conducting a watching brief at the site of the old gas works, immediately to the southwest of Tomen-y-Bala, identified what they believed to be part of the ditch around the base of the motte (Johnstone and Riley 1995, 23). Gwynedd Archaeological Trust also undertook a watching brief during the repair and maintenance of a partially collapsed stone retaining wall at the base of the motte (Smith & Ryan Young, 2016). The ground immediately behind the retaining wall revealed no evidence of being part of the original motte construction and was most likely re-deposited material dating to the wall building phase.

The Castell Gronw Scheduled Monument is located close to the existing Pen y Bont Station and comprises a motte (a large conical or pyramidal mound of soil and/or stone, usually surrounded by either a wet or dry ditch, and surmounted by a tower constructed of timber or stone). The motte is situated in the garden of Pen y Bont cottage and measures 23m in diameter at the base, between 4 and 4.5m high, and 10m diameter across the top. The north and east sides of the mound are terminated by retaining walls over 1m high, which mark the boundary of the cottage on the east and the pavement on the north. A wooded area west of the motte is thought to be the site of the bailey (one or more embanked enclosures surrounding, or adjacent to the motte). This area is bounded by a stream lying in a gully 2m deep on the west and south sides. The remains of a slight scarp or ditch are visible running in a south westerly direction from the motte, but it turns south before reaching the gully. There are no remains to suggest how the south side of the gully would have been connected to the motte. The monument is highlighted as being of national importance for its potential to enhance our knowledge of medieval settlement and defence; it retains significant archaeological potential, with a strong probability of the presence of associated archaeological features and deposits. The geophysical survey area will be outside but in proximity to the scheduled area.

By the 16th century, the town was described by Leyland as a 'poor little market', but the Hearth Tax returns of 1662, and patrician sponsorship evidenced through the families of the Lloyds of Rhiwaedog, Williams-Wynn of Wynnstay and the Annwyls indicate that some prosperity

was retained. Following the decline of the town from the later Middle Ages, the town retained some administrative status into post-medieval times, and also some renewed commercial activity from the 18th century onwards, including a hosiery industry the development of which led to the rebuilding of much of the town. This declined however during the 19th century due to competition from the English midlands. However during the 19th century Bala developed into an important and flourishing centre of Nonconformist religious movements in Wales, particularly during the ministry of Thomas Charles, the famous Welsh Methodist leader. In 1837 the Methodists established a college in the town, followed by a Congregationalist college in 1842. Influential men from the town connected with these colleges were influential worldwide, such as the liberal politician T.E. Ellis and Michael D. Jones, a protagonist for the Welsh colony in Patagonia. They are commemorated, amongst others, with several monuments in the town.

2.4 Cartographic Evidence

By the time of the tithe map of 1842 the centre of the town has seen further development and it had become the market centre of Penllyn again, although there is still only one street of any size.

2.4.1 Trial Trenching

In relation to the new station development, the First Edition 25-inch to 1-mile County Series Map of the area (Sheet XXII.3) dating from 1888 (Figure 03), shows the eastern spur of as incorporating part of Aran Lane and a terraced row of housing, whilst the remainder of proposed area incorporates parts of two large open fields. The Second Edition map of the same area, dating from 1901 (Figure 04), shows the eastern spur of the new station development with the terraced row of housing, but the two large open fields from 1888 have now been altered, with the smithy to the north occupying a larger building and enclosed field, whilst a small terraced housing block has been built to the west alongside the main road. A new field boundary is visible running north to south, creating a trapezoidal shaped field. This field is no longer present on modern mapping (Figure 01).

2.5 Previous Historical and Archaeological work

No previous archaeological work is known to have been carried out on the targeted areas. For Bala in general, the pre-conquest history in relation to the Welsh Princes' Llys and Maerdref at Bala is discussed by Johnstone and Reilly (1995). An urban characterisation was carried out by Gwynedd Archaeological Trust (Davidson and Longley 2008), which discusses the character and development of the town. The medieval town is discussed by Soulsby (1983) and Smith (2001). The wider landscape is also discussed in Cadw/ICOMOS' *Landscapes of Historic Interest in Wales Part 2.2: landscapes of Special Historic Interest*, 69-73 (2001).

An archaeological watching brief was undertaken by GAT on the Tomen y Bala medieval motte at Bala, which identified evidence of post-medieval activity (Smith S. & Ryan Young C., 2016). Close to the motte, an archaeological watching brief was carried out on the former gas works site on Mount Street (Reynish, 2015), although this only identified evidence relating to the gas works itself. A small watching brief at Gwynle close to the Tomen y Bala motte failed to identify any archaeological remains (Evans, R., & Roberts, J., 2018).

An archaeological assessment and geophysical survey of a proposed residential development on land to the rear of Red Lion Farm (NGR SH92333586; postcode: LL23 7AS), c.90m to the northwest of the proposed new station site, was completed by GAT in August 2020 (GAT Report 1557; HER Event PRN 45941). The report stated that the land to the rear of Red Lion Farm contained no known prehistoric or Roman period activity and the development was located on the southwestern edge of the medieval planned town. During the post-Medieval period the area became part of the Red Lion farm holdings, which formed part of the local estate of the Price family of Rhiwlas, before eventually falling under private ownership. No above ground archaeological features were identified and the site was characterised as improved agricultural pasture surrounded by 20th century housing, along with the High Street and Police and Ambulance stations to the south; visible activity across the site was limited to buried and overhead utility infrastructure. The geophysical survey (magnetometer) did not reveal any definite archaeological anomalies, but linear anomalies, small discrete positive anomalies and areas of increased magnetic response were identified, suggesting the remains of enclosure banks and ditches, modern agricultural activity or land drains, as well as pits or modern or naturally occurring features. The anomalies were subsequently investigated by GAT in October 2021 using trial trenching, with 14No trenches open across the development area (GAT Report 1607; HER Event PRN 46124). None of the anomalies targeted identified archaeological activity and no evidence associated with the medieval core of the town was

recovered. The trenches did suggest that the glacial and colluvial deposits across the site were very changeable and may have been responsible for some of the survey anomalies.

3 METHODOLOGY

3.1 Archaeological Trial Trenching

The evaluation entailed the excavation of six trenches using a mechanical excavator under the supervision of a GAT archaeologist in order to investigate possible archaeological features prior to any intrusive groundworks (Figure 05). The details of each trench are listed below:

Trench No.	Size	Orientation	Centreline start point	Centreline endpoint
Trench 2A	20x2m	NW-SE	E 292449.04 N 335757.36	E 292468.94 N 335772.48
Trench 2B	20x2m	NE-SW	E 292465.67 N 335779.21	E 292473.98 N 335766.71
Trench 3	20x2m	NE-SW	E 292458.78 N 335742.14	E 292479.74 N 335755.64
Trench 4	20x2m	NW-SE	E 292471.01 N 335745.20	E 292489.54 N 335728.41
Trench 5	20x2m	NE-SW	E 292484.51 N 335711.85	E 292497.10 N 335733.45
Trench 7	20x2m	NNE-SSW	E 292512.05 N 335664.69	E 292517.97 N 292517.97
Trench 8	20x2m	NNW-SSE	E 292518.35 N 335658.35	E 292531.57 N 335637.58

- The six trenches were excavated as far as the glacial horizon or an archaeological horizon, whichever was encountered first. The trenches were excavated by machinery supplied by RG Hire;
- All six trenches and any identified features were recorded using GAT pro-formas. The trenches, and identified features, were located using a *Trimble* R8 GPS unit;
- Photographic images were taken using a digital SLR (Nikon D3100) camera set to maximum resolution (4,608 × 3,072 14.2 effective megapixels) in RAW format; a photographic record was maintained on site using GAT pro-formas and digitised in *Microsoft Access* as part of the fieldwork archive and dissemination process. Photographic images were archived in TIFF format using Adobe Photoshop; the archive numbering system starts from **G2749_001 to G2749_46**. A photographic ID

board was used during the evaluation to record site code, image orientation and any relevant context numbers.

- The archaeological features encountered were manually cleaned and examined to determine extent, function, date and relationship to adjacent activity.
- All sections were drawn at 1:10 scale using GAT A4 or A2 pro-forma permatrace;
- All plans were drawn at 1:20 scale on GAT A4 or A2 pro-forma permatrace;

4 RESULTS

All individual features, deposits and fills identified within the trenches were given a unique context number. For a complete list of the contexts identified, depths of topsoil and plough soil and descriptions of the natural substrate see Appendix III. Trenches 01 and 06 were discarded from the evaluation due to the possibility of live services. While Trench 02 was extended into a 'T' shape to cover a larger area by the request of the county archaeologist to counter the abandoned trenches.

4.1 Trench 02 A

Trench 02 A was part of a 'T' shaped trench orientated northwest to southeast located on the western part of the field (Figure 05). The trench contained no archaeology, however revealed a series of alluvial soils (2002), with the natural horizon (2003) varying from frequent cobbling, clay and gravely clay being reached at 0.76m (Plate 05 and 06).

4.2 Trench 02 B

Trench 02 B was part of a 'T' shaped trench extending from Trench 2 B in southwest-northeast orientation (Figure 05). The trench contained no archaeology, however revealed a series of alluvial soils (2002) beneath the topsoil, with the natural horizon (2003) revealing a glacial light orangey sandy clay, with patches and lenses of gravel and stones being reached at 0.6m (Plate 07 and 08).

4.3 Trench 03

Trench 03 was located in the centre of field and orientated on a northeast-southwest axis (Figure 05). The trench contained no archaeology, however, revealed a series of multiple alluvial layers along with recent demolition rubble from a former garage demolished in the last couple of years (Plate 09 and 10). The demolition rubble was present within the topsoil and from a garage located to the northeast of the trench. The alluvial layers ranged from a light grey sandy gravelly clay lens (3002), medium to dark brown layer with some sub-rectangular stones (3003), medium brown clay with orange hue, alluvial soil (3004) with charcoal lay on the natural horizon (3005). The natural glacial clay horizon was reached at 1.20m in depth and composed of a light brown / orange with some cobbling.

4.4 Trench 04

Trench 03 was located in the centre of field and orientated on a northwest-southeast axis (Figure 05). Similar to Trench 03, it contained a series of alluvial soils being capped by demolition rubble present within the topsoil (4001). There was three alluvial layers present, (4002) located below the topsoil composed of light yellowish brown clay with gravel and small stone inclusions. (4003) was a mid orangey brown silty clay with small stone / gravel inclusions. Beneath lay a layer of gravel and pebbles (4004) which capped the natural clay horizon. The glacial horizon (4005) composed of a mid-orangey brown glacial clay with small to medium angular and rounded stone inclusions and patches of gravel and was reached at a depth of 0.95m (Plate 11 and 12).

4.5 Trench 05

Trench 05 was located in the centre of field and orientated on a northeast-southwest axis (Figure 05). Similar to Trench 03 and 04, it contained a series of alluvial soils being capped by demolition rubble and patches of tarmacadam. The demolition rubble was present both within the topsoil (5001) and plough soil (5002), however, (5002) could be a layer of sub-base associated with the former tarmacked area. Below this, the two alluvial layers were made up of mid-greyish brown silty alluvial clay with sand (5003) and mid-orangey brown alluvial silty clay with frequent small rounded stone inclusions (5004). The natural horizon consisted of mid-orangey brown glacial clay with small to medium angular and sub-angular stone inclusions and patches of gravel which was reached at a depth of 0.98m (Plate 13 and 14).

4.6 Trench 07

Trench 07 was located south eastern side of the field on the river / lake floodplain and orientated on a northeast-southwest axis (Figure 05). The topsoil consisted of a mid-greyish brown sandy silt which is very rooty with occasional rounded and sub-angular stone inclusions. The ploughsoil consisted of a mid-orangey brown sandy silt clay and capped the natural horizon. The natural was reached at a depth of 0.4m and consisted of a mid-greyish brown silty clay with gravel (60%) and small to medium stone inclusions (Plate 15 and 16).

4.7 Trench 08

Trench 08 was located south eastern side of the field on the river / lake floodplain and orientated on a northwest-southeast axis (Figure 05). Similar to Trench 07 the topsoil (8001) consisted of a mid-greyish brown sandy silt which is very rooty with occasional rounded and sub-angular stone inclusions. The ploughsoil (8002) consisted of a mid-orangey brown sandy

silt clay and capped the natural horizon. The natural (8003) was reached at a depth of 0.48m and consisted of a mid-greyish brown silty clay with gravel (60%) and small to medium stone inclusions (Plate 17 and 18). In addition, evidence of metal detecting could be seen in the area of the trench location (Plate 19).

5 CONCLUSION

A total of six trenches were opened by machine in advance of a proposed extension of the Pen y Bont railway line and a new station at Bala, Gwynedd (NGR SH93023498) (Figure 05).

Trenches 01 and 06 were discarded and Trench 02 extended into a 'T' shape. The 'T' shape trench (02 A and B) located at the northwest part of the field was archaeologically sterile, although, showed alluvial layering above the natural glacial horizon. The location of the trenches being behind a row of houses showed some landscaping and agricultural use due to the depth of the topsoil.

Moving towards the centre of the working area, Trenches 03 to 05 had modern evidence of construction rubble present within the topsoil / plough soil which corresponds with the recent demolition of a garage a few metres away to the south-east. The construction rubble which also contained fragments of tarmacadam was interpreted as an old trackway providing access to the garages and capped the alluvial layers below.

The remaining two trenches, Trenches 07 and 08 located to the southeast were positioned in an area that had not been disturbed as it was located in floodplain associated with Llyn Tegid. Although the trench was archaeologically sterile, evidence of metal detecting was observed next to the two trenches.

In conclusion, the working area showed a build-up of silting of Llyn Tegid which shows the area has not been previously disturbed in the location of Trench 07 and 08, apart from sub-surface modern construction rubble from the recent garage demolition present at the centre of the site, and landscaping at the north-western end. The presence of a metal detecting artefact in the form of a Queen Elizabeth I coin was a residual find, likely lost due to the close proximity of the area to the medieval town of Bala.

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FIGURE 01

Location plan denoting areas targeted for evaluation (outlined blue) and proximity assets. The Castell Gronw scheduled monument (Me067) is located east of the geophysical survey area and is visible as the sub-rectangular shaped area outlined in red. Scale 1:5,000@A4. Base map taken from Ordnance Survey 1:10 000 Series sheet SH9235.

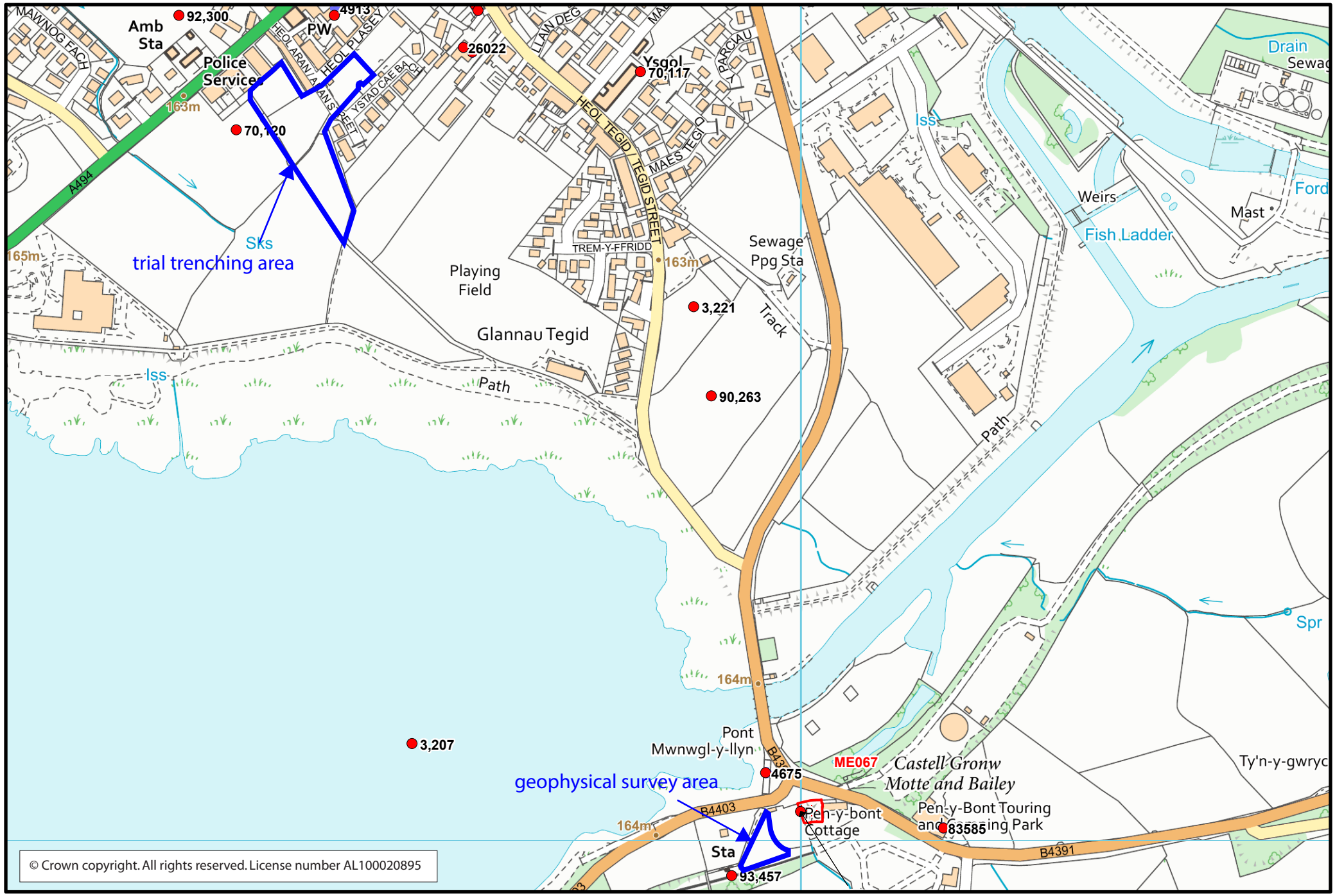


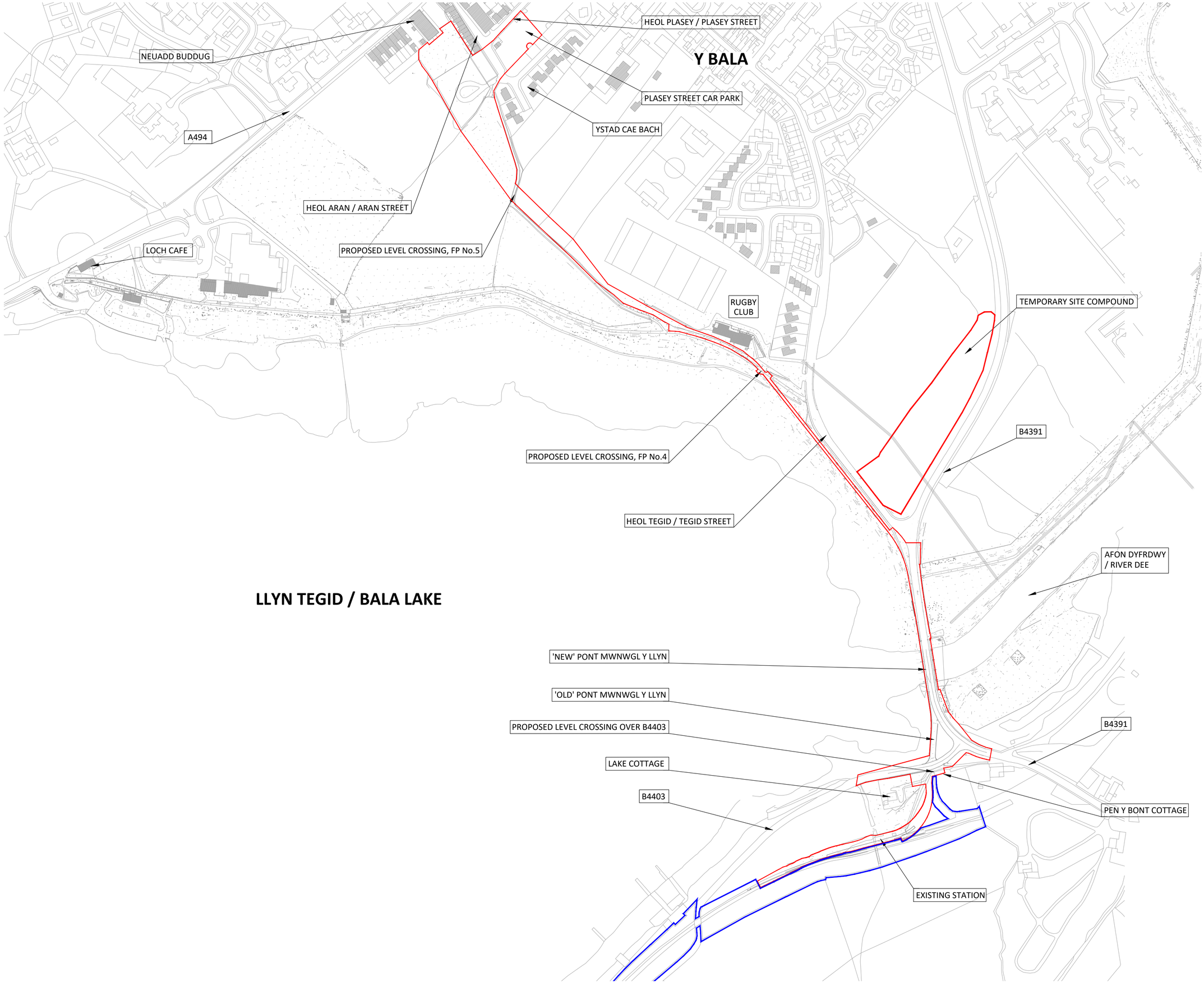
Figure 01: Location plan denoting areas targeted for evaluation (outlined blue) and proximity assets. The Castell Gronw scheduled monument (Me067) is located east of the geophysical survey area and is visible as the sub-rectangular shaped area outlined in red. Scale 1:5,000@A4.

Base map taken from Ordnance Survey 1:10 000 Series sheet SH9235.

FIGURE 02

Reproduction of Caulmert Drawing No. 4267-CAU-XX-XX-DR-C-1800 P05. Scale as shown.

LLYN TEGID / BALA LAKE



NOTES

1. DO NOT SCALE FROM THIS DRAWING, WORK FROM FIGURED DIMENSIONS ONLY. ALL DIMENSIONS ARE IN METRES AND ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM UNLESS NOTED OTHERWISE.

2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALIST DRAWINGS AND SPECIFICATIONS.

LEGEND

EXTENT OF PLANNING APPLICATION

OTHER LAND UNDER CONTROL OF THE APPLICANT

REV					
P04	BLUE BOUNDARY AMENDED	DA	DH	DH	19.11.21
P04	BLUE BOUNDARY AMENDED	DA	DH	DH	02.07.21
P03	RED BOUNDARY AMENDED	LJ	DH	DH	08.12.19
P02	RED/BLUE BOUNDARYS AMENDED	EJD	DH	DH	02.12.19
P01	ISSUED FOR DISCUSSION	DA	CR	DH	02.12.19
REV	MODIFICATIONS	BY	RE	AP	DATE

PURPOSE OF ISSUE: FOR INFORMATION

STATUS: S2

CLIENT: RHEILFFORDD LLYN TEGID

PROJECT: NEW LINE (PEN Y BONT)

TITLE: LOCATION PLAN

DESIGNED BY	DRAWN BY	REVIEWED BY	AUTHORISED BY
DH	DA	CR	DH
DATE	SCALE @ A2	JOB REF:	REVISION
02.12.19	1:2500	4267	P05

DRAWING NUMBER: 4267-CAU-XX-XX-DR-C-1800

Caulmert engineering environmental planning

Registered Office: InTec, Parc Menai, Bangor, Gwynedd, LL57 4FG Company Registered No: 06716319

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FIGURE 03

Reproduction of Ordnance Survey First Edition Merioneth County Series Map of 1888, sheet XXII.3 showing the targeted trial trenching area outlined in blue. Scale 1:5000@A4.

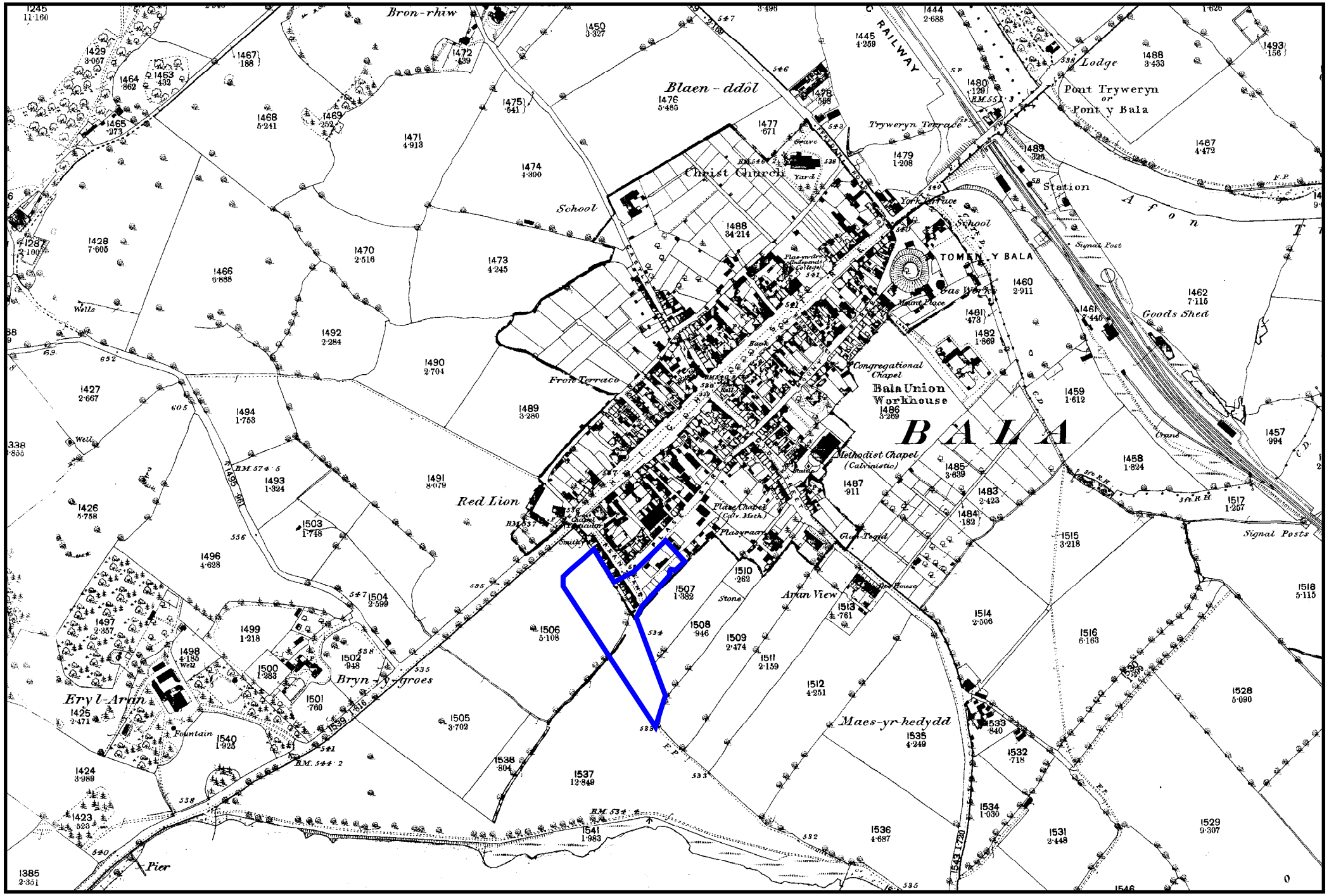

Figure 03: Ordnance Survey First Edition Merioneth County Series Map of 1888, sheet XXII.3 showing the targeted area outlined in red. Scale 1:5000@A4

FIGURE 04

Reproduction of Ordnance Survey Second Edition Merioneth County Series Map of 1901, sheet XXII.3 showing the targeted trial trenching area outlined in blue. Scale 1:5000@A4.

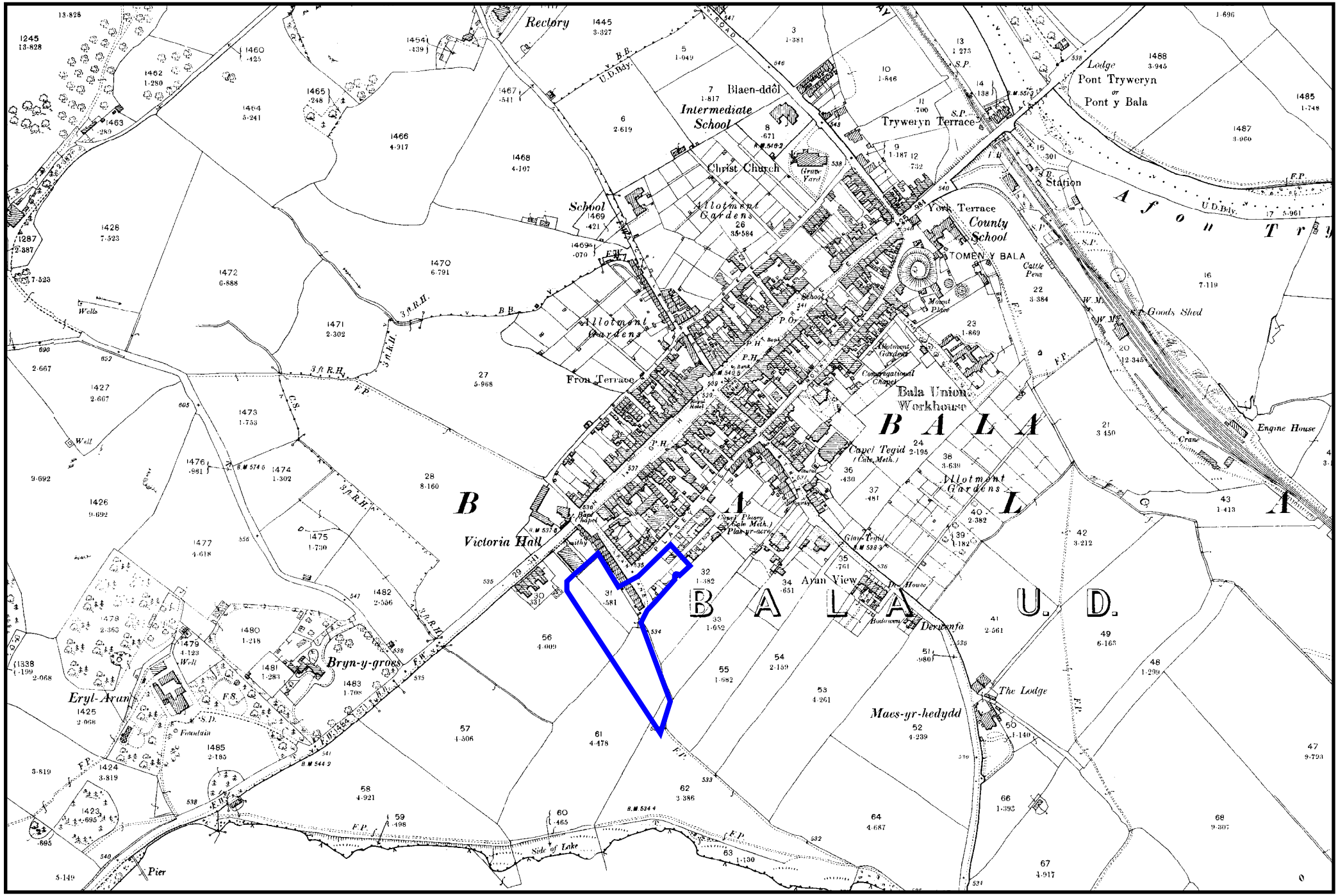

Figure 04: Ordnance Survey Third Edition Merioneth County Series Map of 1918, sheet XXII.3 showing the targeted area outlined in red. Scale 1:5000@A4

FIGURE 05

Trench Location Plan and outline of proposed new station area (in blue). Scale: 1 to 1250@A4. É Crown Copyright Ordnance Survey AL10002089.

Figure 05: Trench Location Plan and outline of proposed new station area (in blue).
Scale: 1 to 1250@A4. © Crown Copyright Ordnance Survey AL10002089

Plate 01: Condition survey of eastern field with 'T' Trench 02 - ; scale: Not used. View from: West (archive reference: G2749_09).

Plate 02: General view of central field plot - condition survey (no board or scale) - ; scale: Not used. View from: Southwest (archive reference: G2749_04).

Plate 03: Condition survey of eastern field with Trenches 07 and 08 - ; scale: Not used.
View from: South (archive reference: G2749_07).

Plate 04: Condition survey of eastern field with Trenches 07 and 08 - ; scale: Not used.
View from: North (archive reference: G2749_08).

Plate 05: Post-ex view of Trench 02.A - ; scale: 2x1m. View from: Southeast (archive reference: G2749_27).

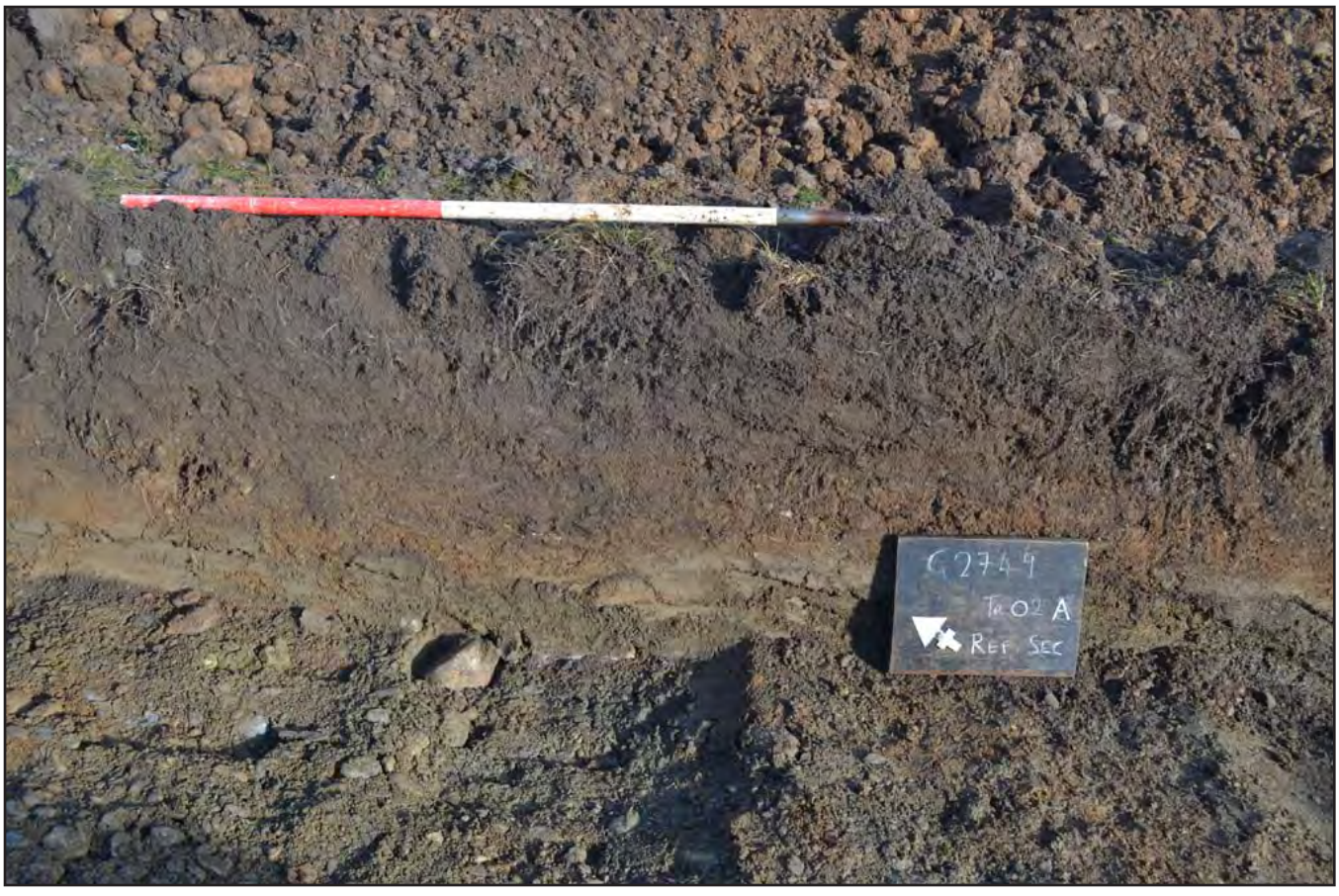

Plate 06: Representative section in Trench 02.A - ; scale: 1x1m. View from: Northwest (archive reference: G2647_31).

Plate 07: Post-ex view of Trench 02.B - ; scale: 2x1m. View from: Northeast (archive reference: G2749_29).

Plate 08: Representative section in Trench 02.B - ; scale: 1x1m. View from: Southwest (archive reference: G2749_32).

Plate 09: Post-ex view of Trench 03 - ; scale: 2x1m. View from: Northeast (archive reference: G2749_11).

Plate 10: Representative section in Trench 03 - ; scale: 2x1m. View from: Northwest (archive reference: G2749_13).

Plate 11: Post-ex view of Trench 04 - ; scale: 1x1m. View from: South-southeast (archive reference: G2749_16).

Plate 12: Representative section in Trench 04 - ; scale: 1x1m. View from: West-northwest (archive reference: G2749_15).

Plate 13: Post-ex view of Trench 05 - ; scale: 2x1m. View from: East-southeast (archive reference: G2749_20).

Plate 14: Representative section in Trench 05 - ; scale: 1x1m. View from: North-northeast (archive reference: G2749_22).

Plate 15: Post-ex view of Trench 07 - ; scale: 2x1m. View from: South-southeast (archive reference: G2749_38).

Plate 16: Representative section in Trench 07 - ; scale: 1x1m. View from: West-southwest (archive reference: G2749_41).

Plate 17: Post-ex view of Trench 08 - ; scale: 2x1m. View from: Southeast (archive reference: G2749_36).

Plate 18: Representative section in Trench 08 - ; scale: 1x1m. View from: Southwest (archive reference: G2749_40).

Plate 19: Evidence of metal dectecting within Trench 08 location - ; scale: Not used. View from: South (archive reference: G2749_34).

Plate 20: View of shadow on gable end of house on the street showing where former garage was located - ; scale: 1x1m. View from: South (archive reference: G2749_46).

APPENDIX I

Gwynedd Archaeological Trust approved Written Scheme of Investigation, January 2023

PEN Y BONT EXTENSION, BALA (G2749)

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL EVALUATION

Prepared for Caulmert

January 2023

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

PEN Y BONT EXTENSION, BALA (G2749)

WRITTEN SCHEME OF INVESTIGATION FOR ARCHAEOLOGICAL EVALUATION

Prepared for *Caulmert*, January 2023

CONTENTS

1 INTRODUCTION

Gwynedd Archaeological Trust (GAT) has been asked by Caulmert to undertake an archaeological evaluation in advance of a proposed extension of the Pen y Bont railway line and a new station at Bala, Gwynedd (NGR SH93023498; postcode: LL23 7PH; Figure 01). The existing railway measures 4.5 mile/7.2km in length and comprises a 2'/600mm gauge heritage railway formed on the track bed of the former Great Western Railway Ruabon to Barmouth branch. The railway first opened in 1972 and has operated between Llanwchllyn to the south of Bala Lake along its east shore to the existing northern terminus at Pen-y-Bont. The proposed scheme will extend the railway line from at Pen-Y-Bont, off the B4403 to Heol Aran at the town centre, where the new station will be located, as detailed on Caulmert Drawing No. 4267-CAU-XX-XX-DR-C-1800 P05 (Figure 02). The new station will incorporate three fields and an existing parking area. The archaeological evaluation will comprise trial trenches within the proposed new station site and a geophysical survey of a 0.13ha triangular shaped plot near the existing Pen y Bont station.

The evaluation will be undertaken in accordance with the following guidelines:

- *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); and
- *Standard and Guidance for Archaeological Field Evaluation* (Chartered Institute for Archaeologists, 2020).
- *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (Chartered Institute for Archaeologists, 2020); and
- *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives* (Chartered Institute for Archaeologists, 2020).

GAT 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.

The trial trenching will be undertaken in December 2022 and the geophysical survey during 2023.

1.1 Aims and Objectives

The key aims and objectives are to:

- establish the date and nature of any archaeological remains identified within the evaluation area and assess their implications for understanding local historical development, in conjunction with the known archaeological record. The site of the new railway station was noted to lie on the edge of the medieval planned market town of Bala and there is potential for archaeological activity, whilst the targeted area next to the existing Pen y Bont station is close to the medieval Castell Gronw motte; and
- If no additional archaeological activity is identified, establish why this may be the case.

1.2 Monitoring Arrangements

The archaeological evaluation will be monitored by both Gwynedd Archaeological Planning Service (GAPS) and Cadw. The content of this WSI and all subsequent reporting by GAT must be approved by GAPS and Cadw prior to final issue. GAPS and Cadw will be kept informed of the project timetable and of the subsequent progress and findings. This will allow time to arrange monitoring visits and attend site meetings (if required) and enable discussion about the need or otherwise for further works (if required) as features of potential archaeological significance are encountered.

1.3 Historic Environment Record

In line with the GAT 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). In line with this guidance, all submitted reporting will need to include the equivalent of a non-technical summary in Welsh and English at the front of the report combined with short bilingual summaries of the principal Historic Assets recorded during the event. These requirements are mandatory.

- The GAT HER enquiry number for the trial trenching is 1715 and the event primary reference number is 46314; and
- The GAT HER enquiry number for the geophysical survey is 1749 and the event primary reference number is 46513.

The GAT HER will also be responsible for supplying Primary Reference Numbers (PRN) for any new assets identified and recorded.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

The regional Historic Environment Record Primary Reference Number (PRN) entry for Bala township (PRN 9885) describes Bala as astride the main road to Dolgellau, on the floodplain close to the confluence of the Dee and Tryweryn at the north end of Llyn Tegid, Wales' largest natural lake. There is little known prehistoric archaeology, but Roman archaeology is noted in the vicinity of the town. Bala is considered to be the 'best example of a planned English borough in Meirionnydd' (Cadw/ICOMOS 2001, 70), founded by Edward II and given its formal grant of privileges in 1324. After suffering a decline in the later medieval period, the town expanded in the 18th century due to development of a hosiery industry, and the rise of Bala as an important centre for Nonconformist religion in the 19th century was very significant.

The trial trenching area is situated at the southwest corner of the former medieval town, just beyond the known extent of medieval settlement, but likely to be closely related to it. The geophysical survey area is located close to Castell Gronw medieval motte (scheduled monument Me067).

2.2 Prehistoric and Roman Settlement

There is little in the way of evidence for prehistoric archaeology close to the study area. However, a significant complex of Roman enclosures have been identified in the immediate vicinity of Bala, at Llanfor, by aerial reconnaissance, whilst the Roman road from Chester to Caer Gai and Brithdir likely passed through the area (PRN 17760-8). At Llanfor (PRN 3211; SM Me092; SH937361) appeared to be a fort, containing a granary and barrack blocks, a stores compound with a second granary or storehouse, and a third enclosure, possibly the earliest. Subsequent geophysical survey revealed further details of the complex, along with a number of earlier Bronze Age burial and ritual sites, suggesting that the lack of knowledge of prehistoric sites in the area may be due to a lack of evidence rather than any real absence.

The Roman road from Chester must have passed through the area of modern Bala, close to the Roman complex at Llanfor, before running along the northwest side of the lake to the Roman garrison at Caer Gai. These Roman works form part of the consolidation of the area by the Romans.

2.3 Medieval and later Settlement

Llanfor continued to be of importance in the years following the Roman occupation, indicated by the early foundation of the church, indicated by its 6th century inscribed stone (PRN3204; SH93833670), and an unusual earthwork north of the church (PRN 3201; SH93823684), that may possibly represent the centre of an early lordship in the area (Cadw/ICOMOS 2001, 70; Davidson and Gwyn 2008, 5). In the medieval period the local power base was at Castell Carndochan (PRN4977; SM Me049; SH84703065) to the southwest, which has been dated to the mid-13th century, and described as 'an important citadel of the lords of Penllyn' (*ibid.*). It occupies a strong, commanding position on a high spur overlooking the entrance to the Lliw valley, but was increasingly eclipsed by the borough of Y Bala through the medieval period.

During the medieval period, Bala (PRN 70116) is thought to have been the maerdref of the commote of Uwch Tryweryn in the cantref of Penllyn; two, presumably Norman, mottes stand close by: Tomen y Bala at the north end of the later borough of Bala (PRN 3202; Me016, SH92803609), and Castell Gronw on the River Dee (PRN3203; SM Me067; SH9303503; cf. Figure 01) at the point where it leaves the lake, this latter being destroyed in 1202 by Llywelyn ab Iorwerth. In the Extent of Merioneth of 1285 a charge of 5 shillings was made upon the commote for the 'sustention of the houses of Bala', houses which are again referred to in 1289 when Robert de Slaundon was paid 'the sum of £20 which he expended in rebuilding the houses of Aber and Bala which had been unfortunately destroyed by fire (Johnstone and Reilly 1995, 22). The town remained in the medieval parish of Llanycil until the 19th century (Haslam *et al.* 2009, 545). The medieval church at Llanycil is located on the old road to Dollgellau on the banks of Llyn Tregid to the west of the town, and its large graveyard served the townsfolk of Bala from the times of the Maerdref until the 19th century.

In about 1310 a small town was founded by Roger Mortimer in an attempt to bring stability to the area and so that the town could serve as an administrative centre for the district; the borough was laid out with 53 burgage plots (Soulsby 1983, 74). The plots were laid out along one principal street, with two back lanes running parallel to it, now represented by Arenig and Plasey/Mount Streets. In 1315 the men of Penllyn petitioned that they were being forced to work on the maintenance of the houses and pay five shillings which they previously paid in lieu of their obligation to maintain the buildings of the commote (Johnstone and Reilly 1995, 22). The markets and fairs previously held at Llanfor were transferred to Bala in 1324, when it received its formal grants and priviliges (Soulsby 1983, 74). The town was never walled, however an earthen bank may have been thrown up at this time. Subsequent development, however, has destroyed most of the original plots and any enclosing bank present. By the

time of Henry V the town had a barracks, a mill and a courthouse (Davidson and Gwyn 20089, 6).

A feature of the medieval town was the small chapel which stood near the town cross in High Street; there was no church at Bala until the building of Christ Church in 1811, but the chapel may have been contemporary with the foundation of the borough and continued to serve the community until the early 18th century when it was demolished and he site and associated graveyard developed.

The absence of any maintained castle means that the town does not figure in the Glyndwr revolt, although a small garrison place consisting of six timber houses was temporarily established. Limited archaeological work has been carried out at the location of the motte or the town of Bala itself. In the early 1990's, archaeologists conducting a watching brief at the site of the old gas works, immediately to the southwest of Tomen-y-Bala, identified what they believed to be part of the ditch around the base of the motte (Johnstone and Riley 1995, 23). Gwynedd Archaeological Trust also undertook a watching brief during the repair and maintenance of a partially collapsed stone retaining wall at the base of the motte (Smith & Ryan Young, 2016). The ground immediately behind the retaining wall revealed no evidence of being part of the original motte construction and was most likely re-deposited material dating to the wall building phase.

The Castell Gronw Scheduled Monument is located close to the existing Pen y Bont Station and comprises a motte (a large conical or pyramidal mound of soil and/or stone, usually surrounded by either a wet or dry ditch, and surmounted by a tower constructed of timber or stone). The motte is situated in the garden of Pen y Bont cottage and measures 23m in diameter at the base, between 4 and 4.5m high, and 10m diameter across the top. The north and east sides of the mound are terminated by retaining walls over 1m high, which mark the boundary of the cottage on the east and the pavement on the north. A wooded area west of the motte is thought to be the site of the bailey (one or more embanked enclosures surrounding, or adjacent to the motte). This area is bounded by a stream lying in a gully 2m deep on the west and south sides. The remains of a slight scarp or ditch are visible running in a south westerly direction from the motte, but it turns south before reaching the gully. There are no remains to suggest how the south side of the gully would have been connected to the motte. The monument is highlighted as being of national importance for its potential to enhance our knowledge of medieval settlement and defence; it retains significant archaeological potential, with a strong probability of the presence of associated archaeological features and deposits. The geophysical survey area will be outside but in proximity to the scheduled area.

By the 16th century, the town was described by Leyland as a ‘poor little market’, but the Hearth Tax returns of 1662, and patrician sponsorship evidenced through the families of the Lloyds of Rhiwaedog, Williams-Wynn of Wynnstay and the Annwyls indicate that some prosperity was retained. Following the decline of the town from the later Middle Ages, the town retained some administrative status into post-medieval times, and also some renewed commercial activity from the 18th century onwards, including a hosiery industry the development of which led to the rebuilding of much of the town. This declined however during the 19th century due to competition from the English midlands. However during the 19th century Bala developed into an important and flourishing centre of Nonconformist religious movements in Wales, particularly during the ministry of Thomas Charles, the famous Welsh Methodist leader. In 1837 the Methodists established a college in the town, followed by a Congregationalist college in 1842. Influential men from the town connected with these colleges were influential worldwide, such as the liberal politician T.E. Ellis and Michael D. Jones, a protagonist for the Welsh colony in Patagonia. They are commemorated, amongst others, with several monuments in the town.

2.4 Cartographic Evidence

By the time of the tithe map of 1842 the centre of the town has seen further development and it had become the market centre of Penllyn again, although there is still only one street of any size.

2.4.1 Trial Trenching

In relation to the new station development, the First Edition 25-inch to 1-mile County Series Map of the area (Sheet XXII.3) dating from 1888 (Figure 03), shows the eastern spur of as incorporating part of Aran Lane and a terraced row of housing, whilst the remainder of proposed area incorporates parts of two large open fields. The Second Edition map of the same area, dating from 1901 (Figure 04), shows the eastern spur of the new station development with the terraced row of housing, but the two large open fields from 1888 have now been altered, with the smithy to the north occupying a larger building and enclosed field, whilst a small terraced housing block has been built to the west alongside the main road. A new field boundary is visible running north to south, creating a trapezoidal shaped field. This field is no longer present on modern mapping (Figure 01).

2.4.2 Geophysical Survey

In relation to the existing station development area, the First Edition 25-inch to 1-mile County Series Map of the area (Sheet XXII.7) dating from 1888 (Figure 06), shows the targeted area as being immediately north of the station, with the station listed as disused. The targeted area forms part of a trapezoidal shaped open plot with a footpath ("*F.P.*") running diagonally through the plot. In the Second Edition map of the same area, dating from 1901 (Figure 07), the station is no longer listed or visible, but the plot boundaries and footpath in the targeted area remain the same. On modern mapping, the footpath has become a solid boundary, separating the targeted area into a triangular shaped plot, with a new Pen y Bont station (opened in the 1970s) located to the south.

2.5 Previous Historical and Archaeological work

No previous archaeological work is known to have been carried out on the targeted areas. For Bala in general, the pre-conquest history in relation to the Welsh Princes' Llys and Maerdref at Bala is discussed by Johnstone and Reilly (1995). An urban characterisation was carried out by Gwynedd Archaeological Trust (Davidson and Longley 2008), which discusses the character and development of the town. The medieval town is discussed by Soulsby (1983) and Smith (2001). The wider landscape is also discussed in Cadw/ICOMOS' *Landscapes of Historic Interest in Wales Part 2.2: landscapes of Special Historic Interest*, 69-73 (2001).

An archaeological watching brief was undertaken by GAT on the Tomen y Bala medieval motte at Bala, which identified evidence of post-medieval activity (Smith S. & Ryan Young C., 2016). Close to the motte, an archaeological watching brief was carried out on the former gas works site on Mount Street (Reynish, 2015), although this only identified evidence relating to the gas works itself. A small watching brief at Gwynle close to the Tomen y Bala motte failed to identify any archaeological remains (Evans, R., & Roberts, J., 2018).

An archaeological assessment and geophysical survey of a proposed residential development on land to the rear of Red Lion Farm (NGR SH92333586; postcode: LL23 7AS), c.90m to the northwest of the proposed new station site, was completed by GAT in August 2020 (GAT Report 1557; HER Event PRN 45941). The report stated that the land to the rear of Red Lion Farm contained no known prehistoric or Roman period activity and the development was located on the southwestern edge of the medieval planned town. During the post-Medieval period the area became part of the Red Lion farm holdings, which formed part of the local estate of the Price family of Rhiwlas, before eventually falling under private ownership. No above ground archaeological features were identified and the site was characterised as improved agricultural pasture surrounded by 20th century housing, along with the High Street and Police and Ambulance stations to the south; visible activity across the site was limited to buried and overhead utility infrastructure. The geophysical survey (magnetometer) did not reveal any definite archaeological anomalies, but linear anomalies, small discrete positive anomalies and areas of increased magnetic response were identified, suggesting the remains of enclosure banks and ditches, modern agricultural activity or land drains, as well as pits or modern or naturally occurring features. The anomalies were subsequently investigated by GAT in October 2021 using trial trenching, with 14No trenches open across the development area (GAT Report 1607; HER Event PRN 46124). None of the anomalies targeted identified archaeological activity and no evidence associated with the medieval core of the town was recovered. The trenches did suggest that the glacial and

colluvial deposits across the site were very changeable and may have been responsible for some of the survey anomalies.

3 METHODOLOGY

3.1 Trial Trenching

The trial trenching programme will be centred on NGR SH9250356 and will comprise 6No 20x2m trenches that will be located across three fields at the western end of the proposed new station development area (Figure 05). The aim will be to characterise the archaeological potential of the development area. Trenches 02 to 05 should capture the former field boundary visible on the Second Edition 25-inch to 1-mile County Series Map (Sheet XXII.3) dating from 1901 (Figure 04).

At the location of the trial trenching the local geology comprises a Moelfryn Mudstones Formation, which includes interbedded siltstone and mudstone; these comprise pale grey, brown-weathering burrow-mottled mudstones with thin siltstone and locally, sandstone beds. The sedimentary bedrock formed between 449 and 443.8 million years ago during the Ordovician period. Superficial deposits include an alluvium of clay, silt, sand and gravel that was formed 11.8 thousand years ago and the present during the Quaternary period (BGS, 2022). Soils consist of freely draining loamy floodplain soils (Soilscapes, 2022).

The trenches will be located with a Trimble GPS unit. The trenches will be opened and closed by a 9-tonne or above tracked mechanical excavator supplied by GAT and operated by a sub-contractor. The trenches will be carefully de-turfed by the mechanical excavator fitted with a toothless bucket, the turf will be stored close to the trench and re-laid following the backfilling process. All fieldwork will be completed in accordance with industry standards and the GAT Fieldwork Manual.

- The trench locations will be demarcated in advance by GAT staff using a Trimble R8 GNSS/R6/5800 GPS receiver (<10cm accuracy) and scanned with a cable avoidance tool; prior to opening to determine the presence or absence of any services. In support of this, existing service drawings will also be consulted;

- The trenches will be opened using a 9-tonne rubber tracked excavator fitted with a toothless bucket and excavated in controlled layers. Turf/topsoil, and subsoil will be stored in separate bunds;

- Excavation by machine will continue until the first significant archaeological horizon, or the glacial horizon, whichever is encountered first;

- A record will be made on GAT pro-formas of the topsoil and subsoil depths, as well as the composition of the glacial horizon (cf. Appendix I, II and III). All encountered subsurface features will be recorded on GAT pro-formas with detailed notations and will

be recorded photographically with an appropriate scale. Photographic images will be taken using a digital SLR camera set to maximum resolution in RAW format; the photographic record will be 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 **G2749_001**. A photographic ID board will be used during the evaluation to record site code, image orientation and any relevant trench and context numbers.

- Any archaeological features/deposits/structures encountered will be manually cleaned and examined to determine extent, function, date and relationship to adjacent activity. The following 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 more discrete features are identified, these will be 100% excavated as will any exposed segments of linear features. For more substantial features, such as spread or structures, will be cleaned and recorded but but not excavated at this stage;
- The location of the trenches, and any identified features, will be recorded using a Trimble R8 GPS unit. Hand drawn plans will also be completed for any trenches containing archaeological activity; this will include a plan of the trench and features therein as well as individual plans/sections of features encountered. Any required plans or sections will be drawn at a minimum 1:10 scale using GAT A4, A3 or A2 pro-forma permatrace;
- Should dateable artefacts and/or ecofacts be recovered recommendations for any subsequent post-excavation assessment will be made in line with the MAP2 process. Post-excavation assessment may include the in-house processing (wet sieving) of ecofact samples, followed by external specialist assessment and radiocarbon dating, as well as the external assessment of diagnostic artefacts. *Additional time, resourcing and costs will be required to undertake any post-excavation programme of works*.

3.1.1 Human Remains

Whilst human remains are not expected, if any human remains are identified that cannot be preserved in situ, any excavation 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).

3.1.2 Ecofacts

Should any archaeological features and/or sealed deposits be identified that are deemed suitable for assessment and analysis, ecofact samples will be taken of not less than 40 litres for bulk samples, or 100% if the feature is smaller; samples will by GAT staff using 10 litre sampling buckets. All suitable deposits will be sampled at this stage.

The samples will be subsequently assessed and analysed for plant species and charcoal, with the results used to inform agrarian practices and wood fuel use, as well as possibly dating. Initial assessment would be completed by the GAT Project Archaeologist team using wet sieving, with the subsequent species identification assessment completed by an ecofact specialist (Jackeline Robertson | AOC Archaeology | telephone: 0208 843 7380). Any deposits deemed suitable for dating will be submitted to a laboratory specialising in radiocarbon dating (e.g., SUERC).

Any ecofact assessment/analysis proposals will require additional resourcing and cost and will only be undertaken further to agreement with GAPS and the client.

3.1.3 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. Any artefacts recovered will be treated according to guidelines issued by the UK Institute of Conservation (Watkinson and Neal 2001) in particular the advice provided within *First Aid for Finds* (Rescue 1999) and Historic England.

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 | email: lucy.whittingham@aocarchaeology.com).

Any specialist assessment/analysis proposals will require additional resourcing and cost and will only be undertaken further to agreement with GAPS and the client.

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 Storiel, Ffordd Gwynedd, Bangor, Gwynedd, LL57 1DT), 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 (via client) for agreement regarding the transfer of artefacts, initially to GAT and subsequently to the relevant museum (Storiel). 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 will be transferred to Storiel in accordance with their guidelines.

3.1.4 Reporting

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
10. Appendix III – drawing register

Illustrations will be included for any trenches containing archaeological activity; this will include a scaled plan of the trench and features therein as well as individual scaled plans/sections of features encountered. The reports will also include any received specialist input (ecofacts and/or artefacts).

3.2 Geophysical Survey

3.2.1 Summary

The geophysical survey will be undertaken by GAT and will incorporate the 0.13ha triangular area defined in Figure 01 (NGR SH92953499) and will be carried out in a series of 20m grids, which will be tied into the Ordnance Survey grid using a Trimble R8 high precision GPS system. The survey will be conducted as a **magnetometer survey** using a Bartington Grad 601-2 dual fluxgate gradiometer with a 1.0m traverse interval and a 0.25m sample interval. The survey will be undertaken during 2023. Based on the results of the survey, targeted trenching may be undertaken to investigate the results. The survey area will be located close to Castell Gronw medieval motte (Scheduled Monument Me067).

At the location of the geophysical survey the local geology comprises a Glyn Gower Siltstone Member - Siltstone; this comprises pale grey, brown-weathering burrow-mottled mudstones with thin siltstone and locally, sandstone beds. The sedimentary bedrock formed between 455.25 and 454 million years ago during the Ordovician period. Superficial deposits include Devensian Diamicton Till - that was formed between 116 and 11.8 thousand years ago and the present during the Quaternary period (BGS, 2022). Soils consist of freely draining loamy floodplain soils (Soilscapes, 2022).

3.2.2 Instrumentation

The Bartington Grad 601-2 dual fluxgate gradiometer uses a pair of Grad-01-100 sensors. These are high stability fluxgate gradient sensors with a 1.0m separation between the sensing elements, giving a strong response to deeper anomalies. The instrument detects variations in the earth's magnetic field caused by the presence of iron in the soil. This is usually in the form of weakly magnetized iron oxides which tend to be concentrated in the topsoil. Features cut into the subsoil and backfilled or silted with topsoil, therefore contain greater amounts of iron and can therefore be detected with the gradiometer. This is a simplified description as there are other processes and materials which can produce detectable anomalies. The most obvious is the presence of pieces of iron in the soil or immediate environs which usually produce very high readings and can mask the relatively weak readings produced by variations in the soil. Strong readings are also produced by archaeological features such as hearths or kilns as fired clay acquires a permanent thermo-remnant magnetic field upon cooling. This material can also get spread into the soil leading to a more generalized magnetic enhancement around settlement sites. Not all surveys can produce good results as results can be masked by large magnetic variations in the bedrock

or soil or high levels of natural background “noise” (interference consisting of random signals produced by material with in the soil). In some cases, there may be little variation between the topsoil and subsoil resulting in undetectable features. The Bartington Grad 601 is a hand held instrument and readings can be taken automatically as the operator walks at a constant speed along a series of fixed length traverses. The sensor consists of two vertically aligned fluxgates set 500mm apart. Their cores are driven in and out of magnetic saturation by a 1,000Hz alternating current passing through two opposing driver coils. As the cores come out of saturation, the external magnetic field can enter them producing an electrical pulse proportional to the field strength in a sensor coil. The high frequency of the detection cycle produces what is in effect a continuous output. The gradiometer can detect anomalies down to a depth of approximately one meter. The magnetic variations are measured in nanoTeslas (nT). The earth’s magnetic field strength is about 48,000 nT; typical archaeological features produce readings of below 15nT although burnt features and iron objects can result in changes of several hundred nT. The machine is capable of detecting changes as low as 0.1nT.

3.2.3 Data Collection

The gradiometer includes an on-board data-logger. Readings are taken along parallel traverses of one axis of a 20m x 20m grid. The traverse interval is 1.0m and readings are logged at intervals of 0.25m along each traverse. Marked guide ropes are used to ensure high positional accuracy during the high-resolution survey. The data is transferred from the data-logger to a computer where it is compiled and processed using ArchaeoSurveyor2 software. The data is presented as a grey scale plot where data values are represented by modulation of the intensity of a grey scale within a rectangular area corresponding to the data collection point within the grid. This produces a plan view of the survey and allows subtle changes in the data to be displayed. This is supplemented by an interpretation diagram showing the main feature of the survey with reference numbers linking the anomalies to descriptions in the written report. It should be noted that the interpretation is based on the examination of the shape, scale and intensity of the anomaly and comparison to features found in previous surveys and excavations etc. In some cases the shape of an anomaly is sufficient to allow a definite interpretation e.g. a Roman fort. In other cases all that can be provided is the most likely interpretation. The survey will often detect several overlying phases of archaeological remains and it is not usually possible to distinguish between them. Weak and poorly defined anomalies are most 4 susceptible to misinterpretation due to the propensity of the human brain to define shapes and patterns in

random background “noise”. An assessment of the confidence of the interpretation is given in the text.

3.2.4 Data Processing

The data collected in each 20m x 20m grid is transferred from the data-logger to a personal computer where it is compiled and processed using TerraSurveyor v.3.0.33.10 software. Additional analysis of the data is carried out using MagPick v3.25.

The numeric data are converted to a greyscale plot where data values are represented by modulation of the intensity of a greyscale within a rectangular area corresponding to the data collection point within the grid. This produces a plan view of the survey and allows subtle changes in the data to be displayed. X-Y trace plots of the collected data are also used to aid interpretation.

The Bartington Grad 601-2 captures raw data in the range of +/- 3000 nT. When raw data is presented in greyscale format all but the extreme high or low readings are rendered in the central range of the greyscale and therefore not visible against the background. The data is minimally processed by clipping as archaeological features tend to produce readings within the +/-15nt range.

Corrections may also be made to the data to compensate for instrument drift and other data collection inconsistencies. These corrections may include:

- de-striping using zero mean traverse which sets the background mean of each traverse within each grid to zero, removing striping effects and edge discontinuities;
- de-staggering in order to correct for slight differences in the speed of walking on forward and reverse traverses;
- de-spiking to remove high or low readings caused by stray pieces of iron, fences, etc. in order to reduce background magnetic noise;
- the application of a high pass filter to remove low frequency, large scale spatial detail for example a slowly changing geological background;
- the application of a low pass filter to remove high frequency, small scale spatial detail in order to smooth data or to enhance larger weak anomalies; and
- interpolation to produce a smoothed grayscale plot with more but smaller pixels in order to aid clarity.

3.2.5 Presentation of Results & Interpretation

The results of the survey are presented as a minimally processed greyscale plot (raw data clipped to +/- 15nT) and a processed greyscale plot if further processing or enhancement has been performed. X-Y trace plots of the collected data may also be included if they are necessary to support the interpretation of specific anomalies visible on the greyscale plots.

Magnetic anomalies are identified, interpreted and plotted onto an interpretative plot with reference numbers linking the anomalies to descriptions within the written report. When interpreting the results, several factors are taken into consideration, including the shape, scale and intensity of the anomaly and the local conditions at the site (geology, pedology, topography, etc.). Anomalies are categorised by their potential origin. Where responses can be related to other existing evidence, the anomalies will be given specific categories, such as Abbey Wall or Roman Road. Where the interpretation is based largely on the geophysical data, levels of confidence are implied, for example: Probable, or Possible Archaeology. The former is used for a confident interpretation, based on anomaly definition and/or other corroborative data such as cropmarks. Poor anomaly definition, a lack of clear patterns to the responses and an absence of other supporting data reduces confidence, hence the classification *Possible.*

3.2.6 Data Processing and Report Compilation

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

1. Front cover;
2. Inner cover;
3. Figures and Plates List;
4. Non-technical summary (Welsh/English);
5. Introduction;
6. Methodology;
    i. Geophysical survey;
7. Results;
    a. Geophysical survey
    b. Gazetteer of features;
8. Conclusions and recommendations;
    a. Conclusion;
    b. Table of sites and recommendations;
9. Acknowledgements;
10. Bibliography;
    a. Primary sources;
    b. Secondary sources;
11. Figures; inc.:
    - location plan;
    - historic mapping;
    - location plan with identified features;
    - grey scale plot;
    - anomaly identification and interpretation;
12. Appendix I (approved written scheme of investigation);

    Back cover.

3.3 Working Project Archive

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.*

The site archive data will then be processed, final illustrations will be compiled and a report will be produced which will detail and synthesise the results.

3.4 Data Management Plan

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 Selection Strategy document appended to the final report.

3.5 Dissemination

The trial trenching and geophysical survey will be issued as two separate reports. On final approval, the following dissemination and archiving of the reports 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).

The data will be trial trenching and geophysical survey will be issued to the respective archives separately, due to the different completion schedules.

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.

A selection strategy is summarised in Appendix IV and will be confirmed in the final reporting for the trial trenching and geophysical survey; 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(s). The Project Archaeologist will be responsible for following:

- All archaeological evaluation duties on site;
- Client liaison;
- Plant operator liaison (trial trenching only);
- GAPS/Cadw liaison, with regular updates;
- specialist liaison (if relevant);
- completing all on site pro-formas and the fieldwork archive itemised above, including the digital project register;
- 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 assessments will be supplied to the client prior to the start of fieldwork, with any risks and hazards clearly indicated, along with suitable control measures. Separate risk assessments will be issued for the trial trenching and geophysical survey, whilst a utilities search will be undertaken for the trial trenching prior to completion of that risk assessment, with a cable avoidance tool scan of the site undertaken prior to trenching. For the trial trenching, all GAT staff will be issued with required personal safety equipment, including high visibility jacket, steel toe-capped boots and hard hat; for the geophysical survey, all GAT staff will be issued with non-metallic clothing and footwear. All GAT fieldwork is undertaken in accordance with the Trust's Health and Safety Manual, Policy and Handbook. All work will be undertaken in accordance with the client and site contractors Health and Safety requirements.

All fieldwork will be undertaken in accordance with the latest Welsh Government Covid-19 guidelines, as well the GAT Covid-19 Operating Strategy and Sanitising Strategy.

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 occurrence and in the aggregate in respect of Product Liability

INSURER Ecclesiastical Insurance Office Plc.

POLICY TYPE Public/Products Liability

POLICY NUMBER UN/000375

EXPIRY DATE 21st June 2023

7.2 Employers Liability

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

INSURER Ecclesiastical Insurance Office Plc.

POLICY TYPE Employers Liability

POLICY NUMBER 24765101 CHC / UN/000375

EXPIRY DATE 21st June 2023

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-PSC10002389775/01

EXPIRY DATE 22nd July 2023

8 SOURCES CONSULTED

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FIGURE 01

Location plan denoting areas targeted for evaluation (outlined blue) and proximity assets. The Castell Gronw scheduled monument (Me067) is located east of the geophysical survey area and is visible as the sub-rectangular shaped area outlined in red. Scale 1:5,000@A4. Base map taken from Ordnance Survey 1:10 000 Series sheet SH9235.

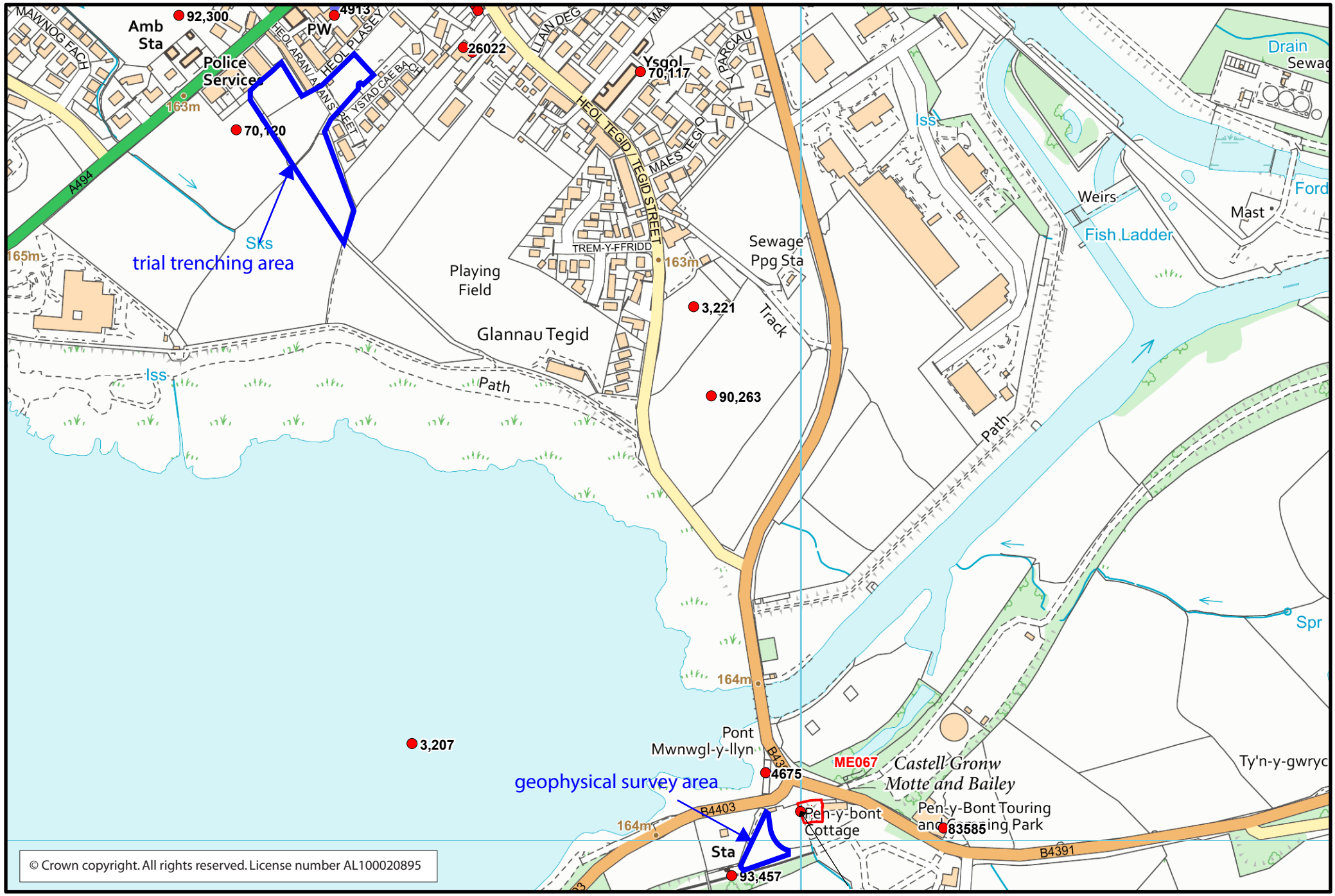
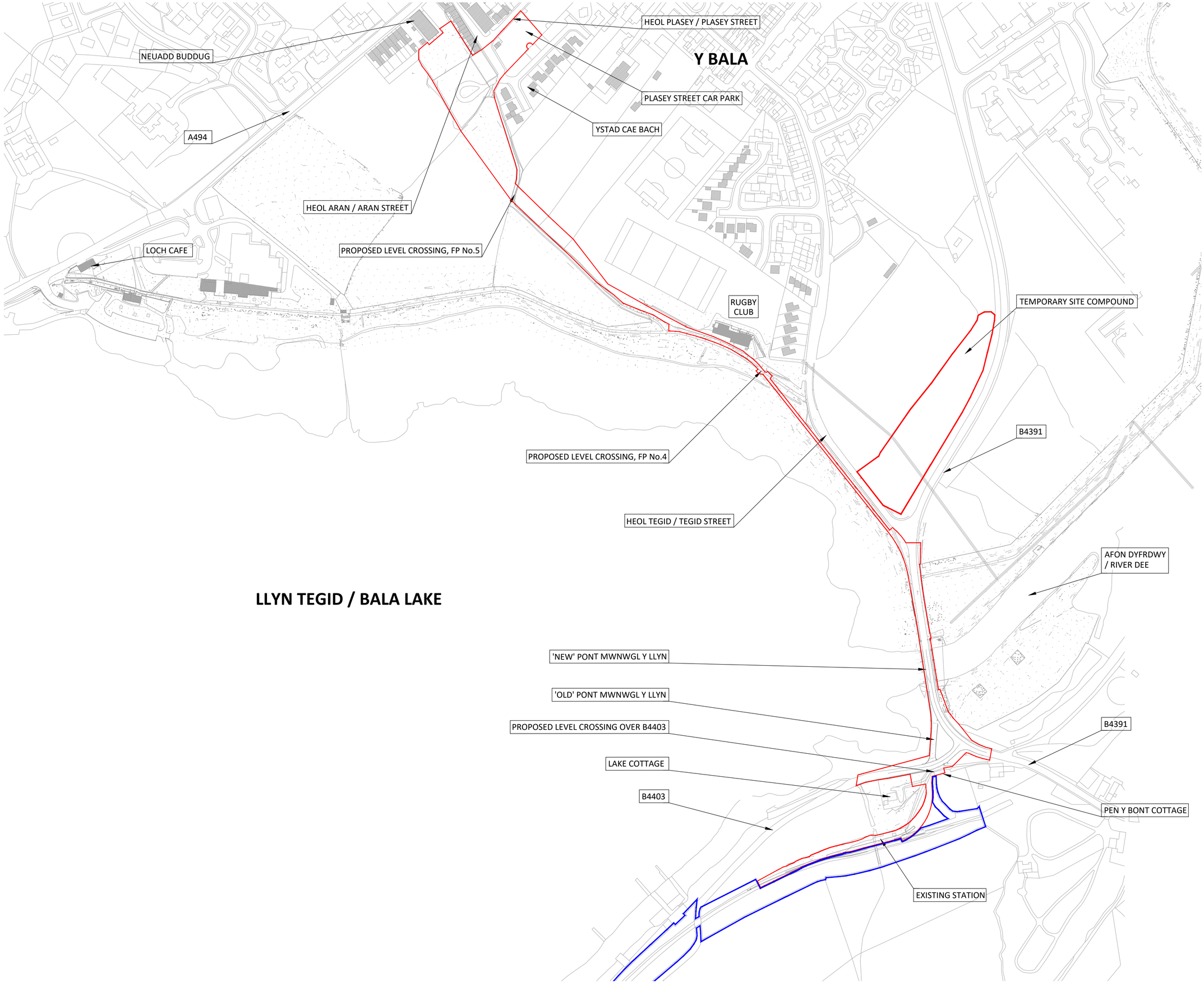


Figure 01: Location plan denoting areas targeted for evaluation (outlined blue) and proximity assets. The Castell Gronw scheduled monument (Me067) is located east of the geophysical survey area and is visible as the sub-rectangular shaped area outlined in red. Scale 1:5,000@A4.

Base map taken from Ordnance Survey 1:10 000 Series sheet SH9235.

FIGURE 02

Reproduction of Caulmert Drawing No. 4267-CAU-XX-XX-DR-C-1800 P05. Scale as shown.



LLYN TEGID / BALA LAKE

NOTES

1. DO NOT SCALE FROM THIS DRAWING, WORK FROM FIGURED DIMENSIONS ONLY. ALL DIMENSIONS ARE IN METRES AND ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM UNLESS NOTED OTHERWISE.

2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALIST DRAWINGS AND SPECIFICATIONS.

LEGEND

EXTENT OF PLANNING APPLICATION

OTHER LAND UNDER CONTROL OF THE APPLICANT

REV	MODIFICATIONS	BY	RE	AP	DATE
P04	BLUE BOUNDARY AMENDED	DA	DH	DH	19.11.21
P04	BLUE BOUNDARY AMENDED	DA	DH	DH	02.07.21
P03	RED BOUNDARY AMENDED	LJ	DH	DH	08.12.19
P02	RED/BLUE BOUNDARYS AMENDED	EJD	DH	DH	02.12.19
P01	ISSUED FOR DISCUSSION	DA	CR	DH	02.12.19

PURPOSE OF ISSUE: FOR INFORMATION

STATUS: S2

CLIENT: RHEILFFORDD LLYN TEGID

PROJECT: NEW LINE (PEN Y BONT)

TITLE: LOCATION PLAN

DESIGNED BY	DRAWN BY	REVIEWED BY	AUTHORISED BY
DH	DA	CR	DH

DATE	SCALE @ A2	JOB REF:	REVISION
02.12.19	1:2500	4267	P05

DRAWING NUMBER: 4267-CAU-XX-XX-DR-C-1800

Caulmert
engineering environmental planning
WWW.CAULMERT.COM
Registered Office: inTec, Parc Menai, Bangor, Gwynedd, LL57 4FG Company Registered No: 06716319

FIGURE 03

Ordnance Survey First Edition Merioneth County Series Map of 1888, sheet XXII.3 showing the targeted trial trenching area outlined in blue. Scale 1:5000@A4

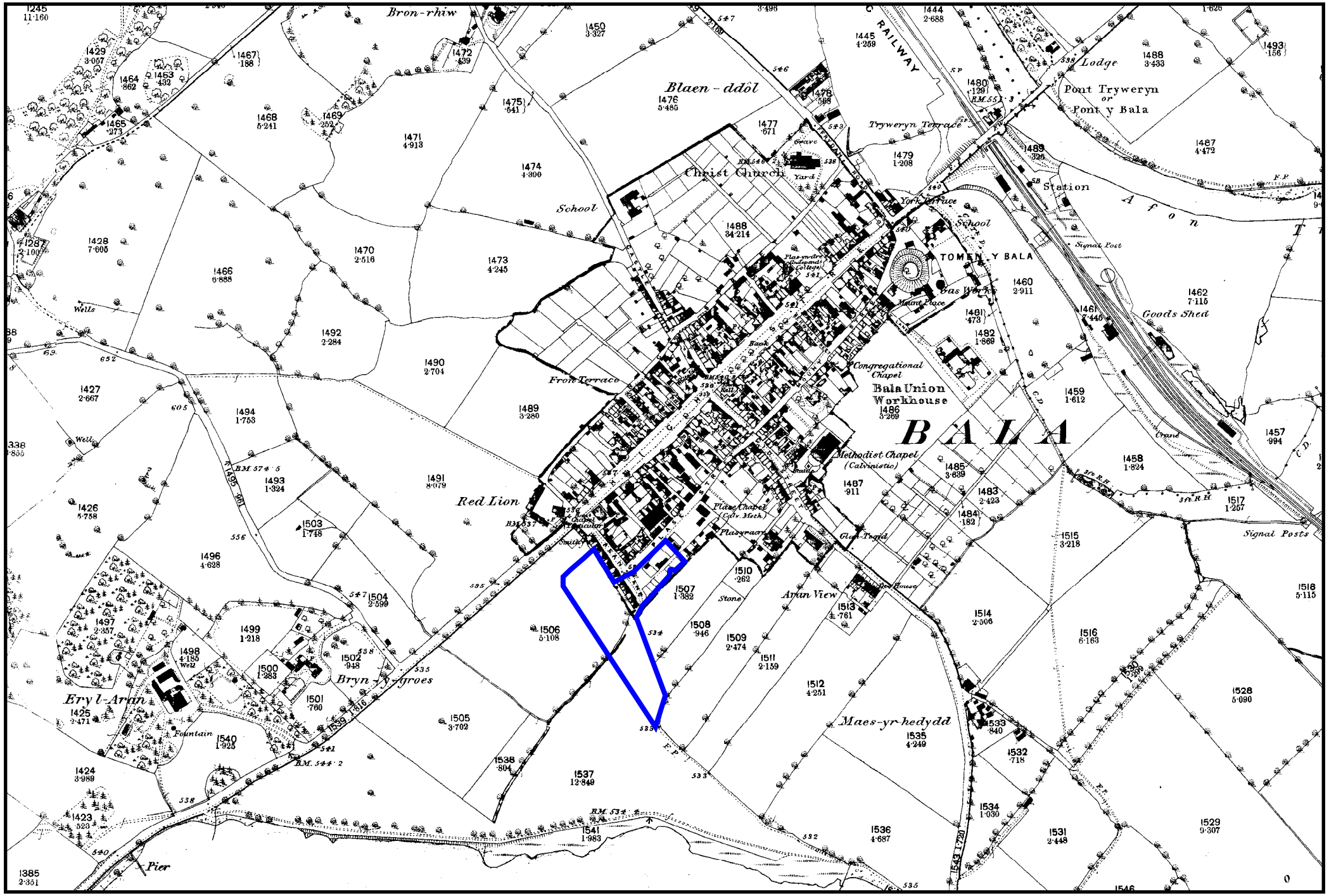


Figure 03: Ordnance Survey First Edition Merioneth County Series Map of 1888, sheet XXII.3 showing the targeted area outlined in red. Scale 1:5000@A4

FIGURE 04

Ordnance Survey Second Edition Merioneth County Series Map of 1901, sheet XXII.3 showing the targeted trial trenching area outlined in blue. Scale 1:5000@A4

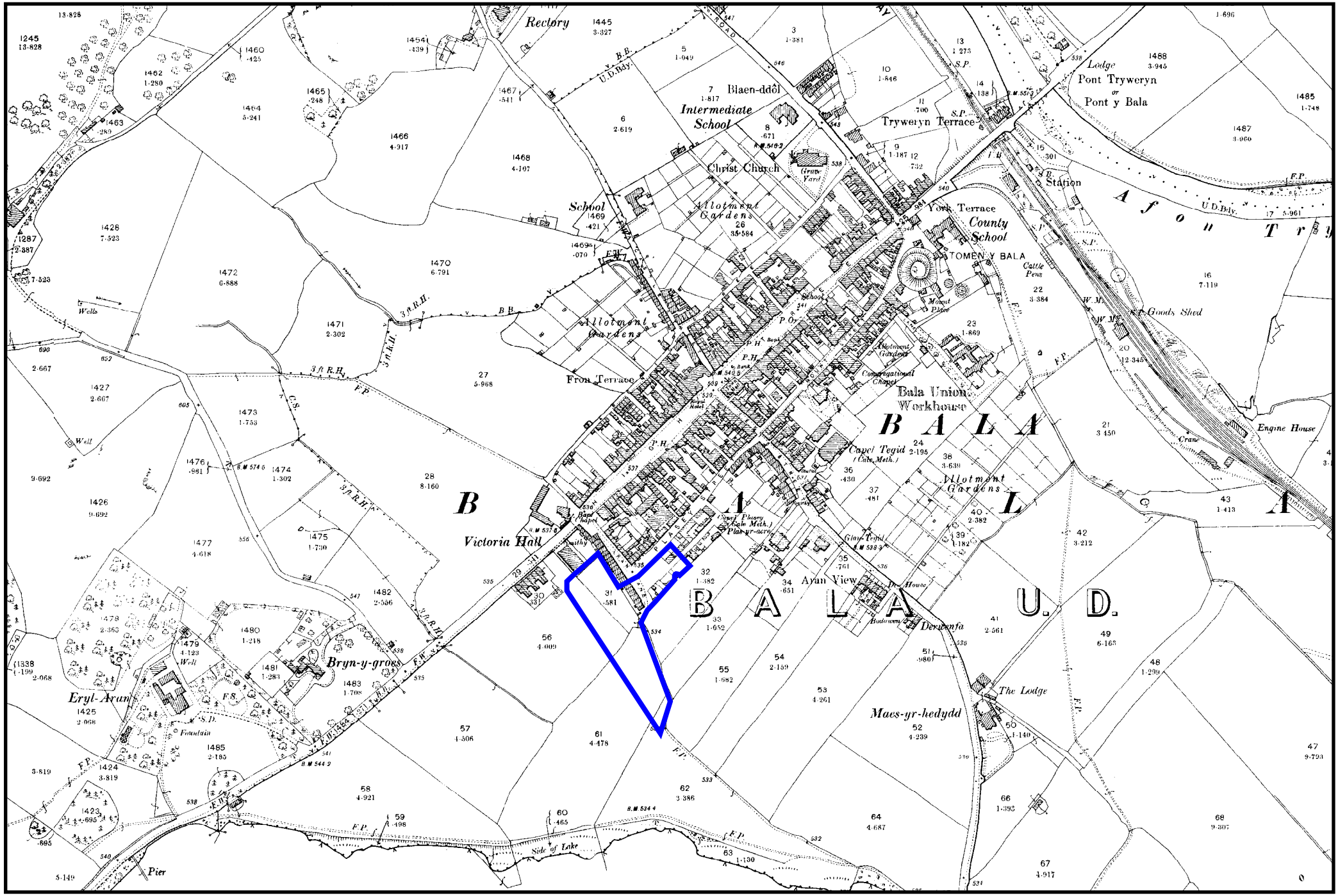


Figure 04: Ordnance Survey Third Edition Merioneth County Series Map of 1918, sheet XXII.3 showing the targeted area outlined in red. Scale 1:5000@A4

FIGURE 05

Trench Location Plan and outline of proposed new station area (in blue). Scale: 1 to 1250@A4. © Crown Copyright Ordnance Survey AL10002089

Figure 05: Trench Location Plan and outline of proposed new station area (in blue).
Scale: 1 to 1250@A4. © Crown Copyright Ordnance Survey AL10002089

FIGURE 06

Ordnance Survey First Edition Merioneth County Series Map of 1888, sheet XXII.7 showing the targeted geophysical survey area outlined in blue. Scale 1:5000@A4

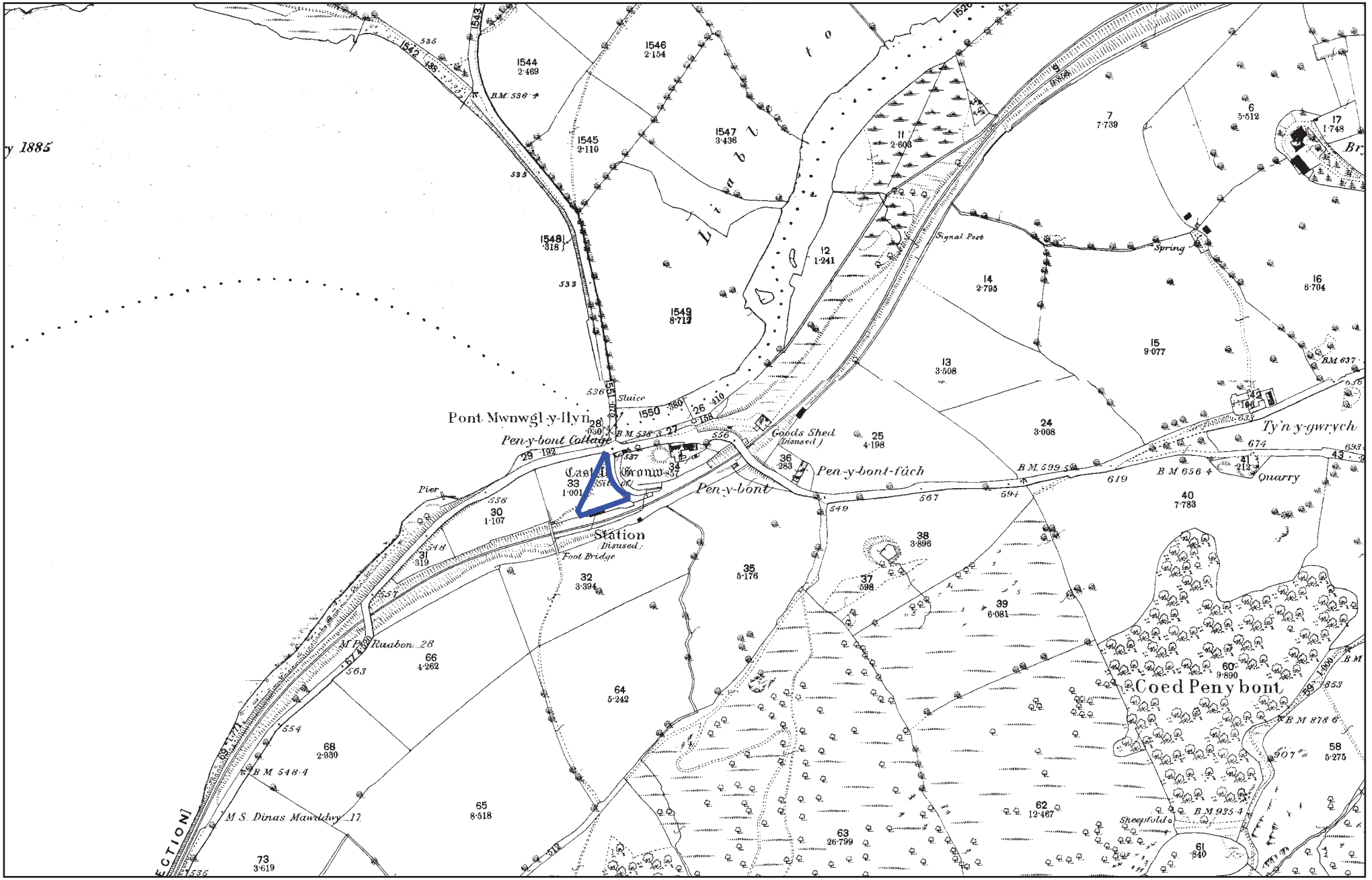


FIGURE 06: Ordnance Survey First Edition Merioneth County Series Map of 1888, sheet XXII.7 showing the targeted geophysical survey area outlined in blue. Scale 1:5000@A4

FIGURE 07

Ordnance Survey Second Edition Merioneth County Series Map of 1901, sheet XXII.7 showing the targeted geophysical survey area outlined in blue. Scale 1:5000@A4

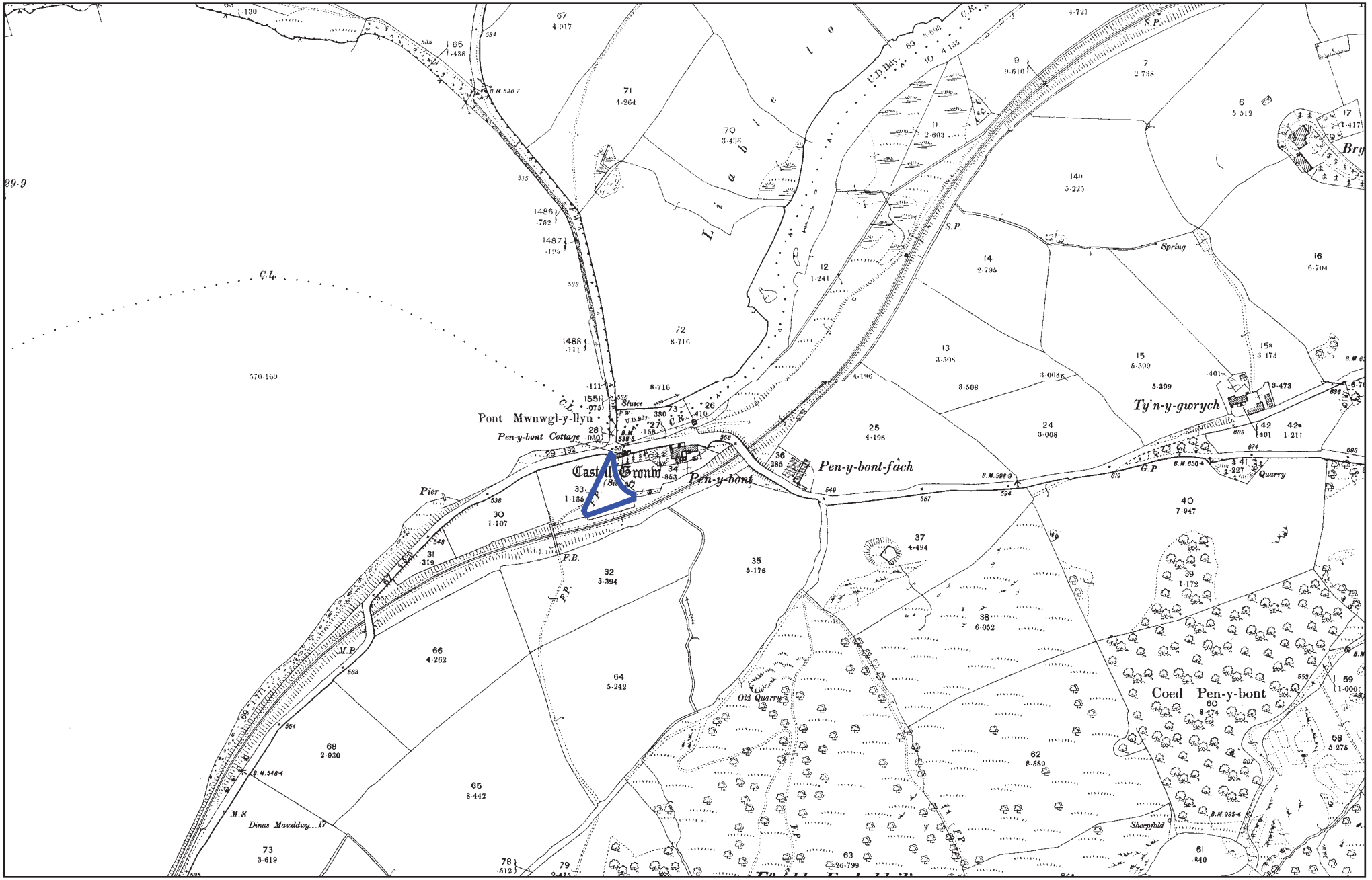


FIGURE 07: Ordnance Survey Second Edition Merioneth County Series Map of 1901, sheet XXII.7 showing the targeted geophysical survey area outlined in blue. Scale 1:5000@A4

APPENDIX I

Gwynedd Archaeological Trust Trench Sheet pro-forma

TRENCH SHEET

Project Name and Number			**Trench number**	
Trench size		Plans		
Max. trench depth		Sections		
Orientation		Photos		
Date/Initials		Area/chainage		

List of layers and/or features in trench (continue on back of sheet if necessary)

Context No.	Depth below surface	Brief description

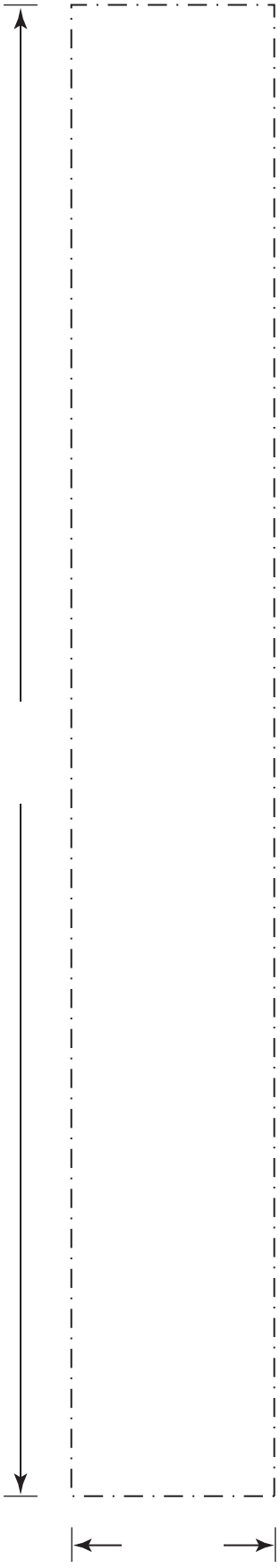
General summary

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

Test Pit/Trial Trench Record

Sketch plan:

Add north arrow:



Sketch section:

Notes:

☐ Continuation sheet

APPENDIX II

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.

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

APPENDIX III

Gwynedd Archaeological Trust Context Sheet pro-forma

GWYNEDD ARCHAEOLOGICAL TRUST **CONTEXT RECORD FORM**

SITE CODE	**GRID SQUARE**	**SITE SUB-DIV**	**CONTEXT NUMBER**
CATEGORY/TYPE	**PROVISIONAL DATE/PERIOD/PHASE**		
LENGTH	**BREADTH**	**DIAMETER**	**DEPTH/HEIGHT**
DEPOSIT			**CUT**
1. Compaction			1. Shape in plan
2. Colour			2. Corners
3. Matrix Composition			3. Break of slope top
4. Inclusions			4. Sides
5. Clarity of Interface			5. Break of slope base
6. Other comments			6. Base
7. Methods & conditions			7. Orientation
			8. Truncated (if known)
			9. Other comments
			Draw sketches overleaf

FILLED BY	[ ] [ ] [ ] [ ] [ ] [ ] This [ ] context [ ] [ ] [ ] [ ] [ ] [ ]
FILL OF	**Stratigraphic matrix**

PLANS	**SECTIONS**
Sheet No.	Sheet No.
Drawing No.	Drawing No.
PHOTOGRAPHS - Film No./ Frame No.	
SAMPLE Nos.	**FIND Nos.**

FEATURE No		**GROUP No**	**CONSISTS OF**
INTERPRETATION/DISCUSSION		**SAME AS**	

	CHECKED BY (initials/date)	**INITIALS/DATE**

SKETCH

DESCRIPTION/INTERPRETATION CONTINUED

APPENDIX IV

Gwynedd Archaeological Trust Selection Strategy

G2749_Bala 29/09/2022 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	28/09/2022 & 18/11/2022
	RCAHMW	On completion of Project Archive
	Storiel, Ffordd Gwynedd, Bangor, Gwynedd, LL57 1DT	If applicable for the trial trenching, post-fieldwork based on artefact recovery
Project Lead / Project Assurance	Gwynedd Archaeological Planning Services; Cadw	tbc
Landowner / Developer	Private landowner	Contact via client
Other (client)	Caulmert	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 WSI.

> Gwynedd Archaeological Trust (GAT) has been asked by Caulmert to undertake an archaeological evaluation in advance of a proposed extension of the Pen y Bont railway line and a new station at Bala, Gwynedd (NGR SH93023498; postcode: LL23 7PH; WSI Figure 01). The existing railway measures 4.5 mile/7.2km in length and comprises a 2'/600mm gauge heritage railway formed on the track bed of the former Great Western Railway Ruabon to Barmouth branch. The railway first opened in 1972 and has operated between Llanwchllyn to the south of Bala Lake along its east shore to the existing northern terminus at Pen-y-Bont. The proposed scheme will extend the railway line from at Pen-Y-Bont, off the B4403 to Heol Aran at the town centre, where the new station will be located, as detailed on Caulmert Drawing No. 4267-CAU-XX-XX-DR-C-1800 P05 (WSI Figure 02). The new station will incorporate three fields and an existing parking area. The archaeological evaluation will comprise trial trenches within the proposed new station site and a geophysical survey of a 0.13ha triangular shaped plot near the existing Pen y Bont station.

Gwynedd Archaeological Trust. 2022. Pen Y Bont Extension, Bala: Written Scheme of Investigation. Project G2749.

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 therefor 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.**	

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;
Jenny Emmett – Senior Planning Archaeologist, Gwynedd Archaeological Planning Service;
Curatorial Officer at Storiel

- 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.
- 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.
- The artefacts will be treated according to guidelines issued by the UK Institute of Conservation (Watkinson and Neal 2001) in particular the advice provided within *First Aid for Finds* (Rescue 1999) and Historic England.
- 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 | email: lucy.whittingham@aocarchaeology.com).
- 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 Storiel, Ffordd Gwynedd, Bangor, Gwynedd, LL57 1DT), where they can receive specialist treatment and study.
- GAT will contact the landowner via client for agreement regarding the transfer of artefacts, initially to GAT and subsequently to the relevant museum (Storiel). 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 will be transferred to the Oriel in accordance with their guidelines.

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

APPENDIX II

Gwynedd Archaeological Trust Photographic Metadata

PHOTO RECORD NUMBER*	DESCRIPTION*	CONTEXT(S)	VIEW FROM	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO*	PLATE
G2749_01	Pre-ex view of Trench 03 (with board)	N/A	W	1x1m	Robert Evans	16/01/2023	
G2749_02	Pre-ex view of Trench 03 (with board)	N/A	E	1x1m	Robert Evans	16/01/2023	
G2749_03	General view of central field plot - condition survey (no board or scale)	N/A	NW	Not used	Robert Evans	16/01/2023	
G2749_04	General view of central field plot - condition survey (no board or scale)	N/A	SW	Not used	Robert Evans	16/01/2023	4
G2749_05	General view of central field plot - condition survey (no board or scale)	N/A	NE	Not used	Robert Evans	16/01/2023	
G2749_06	General view of central field plot - condition survey (no board or scale)	N/A	NW	Not used	Robert Evans	16/01/2023	
G2749_07	Condition survey of eastern field with Trenches 07 and 08	N/A	S	Not used	Robert Evans	16/01/2023	3
G2749_08	Condition survey of eastern field with Trenches 07 and 08	N/A	N	Not used	Robert Evans	16/01/2023	4
G2749_09	Condition survey of eastern field with 'T' Trench 02	N/A	W	Not used	Robert Evans	16/01/2023	1
G2749_10	Condition survey of eastern field with Trenches 07 and 10	N/A	E	Not used	Robert Evans	16/01/2023	

PHOTO RECORD NUMBER*	DESCRIPTION*	CONTEXT(S)	VIEW FROM	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO*	PLATE
G2749_11	Post-ex view of Trench 03	N/A	NE	2x1m	Bethan Jones	16/01/2023	9
G2749_12	Post-ex view of Trench 03	N/A	SW	2x1m	Bethan Jones	16/01/2023	
G2749_13	Representative section of Trench 03	(3001-5)	W	2x1m	Bethan Jones	16/01/2023	10
G2749_14	Post-ex view of Trench 04	N/A	NNW	2x1m	Robert Evans	16/01/2023	
G2749_15	Representative section of Trench 04	(4001-5)	WNW	1x1m	Robert Evans	17/01/2023	12
G2749_16	Post-ex view of Trench 04 (no board, in snowy conditions)	N/A	SSE	1x1m	Robert Evans	17/01/2023	11
G2749_17	Post-ex view of Trench 04 (no board, in snowy conditions)	N/A	NNW	1x1m	Robert Evans	17/01/2023	
G2749_18	Pre-ex view of Trench 05	N/A	W	1x1m	Robert Evans	17/01/2023	
G2749_19	Pre-ex view of Trench 06	N/A	E	1x1m	Robert Evans	17/01/2023	
G2749_20	Post-ex view of Trench 05	N/A	ESE	2x1m	Robert Evans	17/01/2023	13
G2749_21	Post-ex view of Trench 05	N/A	WNW	2x1m	Robert Evans	17/01/2023	
G2749_22	Representative section of Trench 05	(5001-5)	NNE	1x1m	Robert Evans	17/01/2023	14
G2749_23	Repeat shot of photo 21 as lighting conditions poor	N/A	WNW	2x1m	Robert Evans	17/01/2023	
G2749_24	General view showing Trench 05 in context	N/A	W	Not used	Robert Evans	17/01/2023	
G2749_25	Pre-ex view of Trench 02.A	N/A	SE	1x1m	Bethan Jones	18/01/2023	
G2749_26	Pre-ex view of Trench 02.B	N/A	SW	1x1m	Bethan Jones	18/01/2023	

PHOTO RECORD NUMBER*	DESCRIPTION*	CONTEXT(S)	VIEW FROM	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO*	PLATE
G2749_27	Post-ex view of Trench 02.A	N/A	SE	2x1m	Bethan Jones	18/01/2023	5
G2749_28	Post-ex view of Trench 02.A	N/A	NW	2x1m	Bethan Jones	18/01/2023	
G2749_29	Post-ex view of Trench 02.B	N/A	E	2x1m	Bethan Jones	18/01/2023	7
G2749_30	Post-ex view of Trench 02.B	N/A	SW	2x1m	Bethan Jones	18/01/2023	
G2749_31	View of NW facing representative section in Trench 02.A	(2001-3)	NW	1x1m	Bethan Jones	18/01/2023	6
G2749_32	View of NW facing representative section in Trench 02.B	(2001-3)	SE	1x1m	Bethan Jones	18/01/2023	8
G2749_33	General view of Trench 02A&B excavation in western paddock area	N/A	W	Not used	Robert Evans	18/01/2023	
G2749_34	Evidence of metal detecting within Trench 08 location	N/A	S	Not used	Bethan Jones	18/01/2023	19
G2749_35	Evidence of metal detecting within Trench 08 location	N/A	N	Not used	Bethan Jones	18/01/2023	
G2749_36	Post-ex view of Trench 08	N/A	SE	2x1m	Jessie Baumgardner	19/01/2023	17
G2749_37	Post-ex view of Trench 08	N/A	NW	2x1m	Jessie Baumgardner	19/01/2023	
G2749_38	Post-ex view of Trench 07	N/A	S	2x1m	Jessie Baumgardner	19/01/2023	15
G2749_39	Post-ex view of Trench 07	N/A	N	2x1m	Jessie Baumgardner	19/01/2023	

PHOTO RECORD NUMBER*	DESCRIPTION*	CONTEXT(S)	VIEW FROM	SCALE(S)	CREATOR OF DIGITAL PHOTO*	DATE OF CREATION OF DIGITAL PHOTO*	PLATE
G2749_40	Representative section of Trench 08	(8001-3)	SW	1x1m	Robert Evans	19/01/2023	18
G2749_41	Representative section of Trench 07	(7001-3)	W	1x1m	Robert Evans	19/01/2023	16
G2749_42	View of deep sondage cut by machine	(8003)	SW	1x1m	Robert Evans	19/01/2023	
G2749_43	General view of central plot post-reinstatement	N/A	N	1x1m	Robert Evans	19/01/2023	
G2749_44	General view of northern plot post-reinstatement	N/A	NW	Not used	Robert Evans	19/01/2023	
G2749_45	General view of southern plot post-reinstatement	N/A	S	Not used	Robert Evans	19/01/2023	
G2749_46	View of shadow on gable end of house on the street showing where former garage was located	N/A	S	Not used	Robert Evans	19/01/2023	20

APPENDIX III

Detail of Evaluation Trenches

Trench No.	02A	**Maximum Depth (m)**	0.76
Length/Width (m)	20/2.0	**Orientation**	NW - SE
OSGB centre point	E 292449.04 N 335757.36	**Photos**	27, 28, 32

Context	Depth	Description
2001	0-0.21m	Topsoil: Mid brown sandy silt with some charcoal and Post-Med ceramic inclusions.
2002	0.21-0.51m	Subsoil: Mid-orangey brown sandy clay alluvial soil.
2003	0.051m +	Natural: Variable natural glacial horizon with frequent cobbling – mostly clay with some grey gravely silty lenses (water channelling).

Trench No.	02 B	**Maximum Depth (m)**	0.60
Length/Width (m)	20/2.0	**Orientation**	NE - SW
OSGB centre point	E 292465.67 N 335779.21	**Photos**	29, 30, 32

Context	Depth	Description
2001	0-0.35m	Topsoil: Mid-greyish brown with much bioturbation and rooting, sandy silt in composition with occasional small rounded and angular stone and gravel inclusions
2002	0.35-0.6m	Subsoil alluvial: Mid-orangey brown silty clay sand with small to medium rounded and sub-angular stone inclusions.
2003	0.60m +	Natural: Glacial bright orangey brown sandy clay, with patches / lenses of gravel and small to medium rounded and sub-angular stone inclusions.

Trench No.	03	**Maximum Depth (m)**	1.27
Length/Width (m)	20/2.0	**Orientation**	NE - SW
OSGB centre point	E 292458.78 N 335742.14	**Photos**	01, 02, 10, 11, 12

Context	Depth	Description
3001	0-0.20m	Topsoil: Loose dark silty clay with demolition debris.
3002	0.20-0.39m	Clay lens: Light grey sandy gravelly clay lens
3003	0.39-0.64m	Layer: Medium to dark brown layer with some sub-rectangular stone inclusions
3004	0.64-1m	Layer: Medium brown clay with orange hue. Alluvial soil with charcoal inclusions
3005	1m +	Natural: Glacial clay horizon, light brown with orange hue and some cobble inclusions.

Trench No.	04	**Maximum Depth (m)**	0.95
Length/Width (m)	20/2.0	**Orientation**	NW - SE
OSGB centre point	E 292471.01 N 335745.20	**Photos**	03-06, 13-15, 16, 17

Context	Depth	Description
4001	0-0.32m	Topsoil: Loose dark silty clay with demolition debris and large stones (up to 0.4 x 0.1m).
4002	0.30-0.40m	Layer: Light yellowish brown silty clay with gravel and small stone inclusions.
4003	0.40-0.63m	Alluvial deposit: Mid-orangey brown silty clay with small stone / gravel inclusions.
4004	0.63-0.75m	Alluvial deposit: Gravel and pebbles in a mid orangey brown silty matrix.
4005	0.75m +	Natural: Mid-orangey brown glacial clay with small to medium angular and sub-angular stone inclusions. Also, gravel deposits, likely glacial deposit.

Trench No.	05	**Maximum Depth (m)**	0.98
Length/Width (m)	20/2.0	**Orientation**	NE - SW
OSGB centre point	E 292484.51 N 335711.85	**Photos**	3-6, 18-22

Context	Depth	Description
5001	0-0.08m	Tarmac: Thin tarmacadam surface associated with the garage.
5002	0.08-0.35m	Layer: Layer of sub-base beneath tarmac with the inclusion of construction rubble.
5003	0.35-0.65m	Alluvial deposit: Mid-greyish brown alluvial silty clay with sand inclusions.
5004	0.65-0.88m	Alluvial deposit: Mid-orangey brown alluvial silty clay with frequent stone inclusions, mainly rounded.
5005	0.88m +	Natural: Mid-orangey brown glacial clay with small to medium angular and sub-angular stone inclusions. Also, gravel deposits, likely glacial deposit.

Trench No.	07	**Maximum Depth (m)**	0.65
Length/Width (m)	20/2.0	**Orientation**	NNE - SSW
OSGB centre point	E 292512.05 N 335664.69	**Photos**	38-39, 41-42,

Context	**Depth**	**Description**
7001	0-0.23m	Topsoil: Mid-greyish brown sandy silt, very rooty with occasional rounded and sub-angular stone inclusion.
7002	0.23-0.40m	Alluvial layer: Mid-orangey brown sandy silt with clay.
7003	0.40m +	Natural: Mid-greyish brown silty clay with small stone / gravel inclusions (60%).

Trench No.	08	**Maximum Depth (m)**	0.5
Length/Width (m)	20/2.0	**Orientation**	NNW - SSE
OSGB centre point	E 292518.35 N 335658.35	**Photos**	34-37, 40

Context	**Depth**	**Description**
8001	0-0.25m	Topsoil: Mid-greyish brown sandy silt, very rooty with occasional rounded and sub-angular stone inclusion.
8002	0.25-0.48m	Alluvial layer: Mid-orangey brown sandy silt with clay.
8003	0.48m +	Natural: Mid-greyish brown silty clay with small stone / gravel inclusions (60%).

APPENDIX IV

Gwynedd Archaeological Trust Selection Strategy

G2749_Bala 29/09/2022 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	28/09/2022 & 18/11/2022
	RCAHMW	On completion of Project Archive
	Storiel, Ffordd Gwynedd, Bangor, Gwynedd, LL57 1DT	N/A
Project Lead / Project Assurance	Gwynedd Archaeological Planning Services; Cadw	19/01/2023
Landowner / Developer	Private landowner	Contact via client
Other (client)	Caulmert	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 WSI.

> Gwynedd Archaeological Trust (GAT) has been asked by Caulmert to undertake an archaeological evaluation in advance of a proposed extension of the Pen y Bont railway line and a new station at Bala, Gwynedd (NGR SH93023498; postcode: LL23 7PH; WSI Figure 01). The existing railway measures 4.5 mile/7.2km in length and comprises a 2'/600mm gauge heritage railway formed on the track bed of the former Great Western Railway Ruabon to Barmouth branch. The railway first opened in 1972 and has operated between Llanwchllyn to the south of Bala Lake along its east shore to the existing northern terminus at Pen-y-Bont. The proposed scheme will extend the railway line from at Pen-Y-Bont, off the B4403 to Heol Aran at the town centre, where the new station will be located, as detailed on Caulmert Drawing No. 4267-CAU-XX-XX-DR-C-1800 P05 (WSI Figure 02). The new station will incorporate three fields and an existing parking area. The archaeological evaluation will comprise trial trenches within the proposed new station site and a geophysical survey of a 0.13ha triangular shaped plot near the existing Pen y Bont station.

Gwynedd Archaeological Trust. 2022. Pen Y Bont Extension, Bala: Written Scheme of Investigation. Project G2749.

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 was 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 was 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 was added to a digital project register specific to this project, which was prepared in *Microsoft Excel.*

This data was then used as the basis for the physical and digital dataset archives. Information from these was used to compile the project report. The physical archive was stored in a designated project folder and the location confirmed in the Trust project database; the digital dataset was 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 therefor 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

Gwynedd Archaeological Trust
Ymddiriedolaeth Archaeolegol Gwynedd

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