

MAENAN ABBEY, LLANRWST

Briff Gwylio Archeolegol/
Archaeological Watching Brief



Ymddiriedolaeth Archeolegol Gwynedd
Gwynedd Archaeological Trust

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Yr Amgylchedd Hanesyddol yn Cofnodi Prif Gyfeirnod /
Historic Environment Record Event Primary Reference Number 45428

Prosiect Rhif / Project No. G2616

Adroddiad Rhif / Report No. 1506

Wedi'i baratoi ar gyfer / Prepared for:
Cyngor Bwrdeistref Sirol Conwy / Conwy County Borough Council

Medi 2019 / September 2019

Ysgrifenydd gan / Written by: Robert Evans & Stuart Reilly

Delwedd clawr blaen / Front Cover image:
Lleoliad ar y toriad yn y wal gynnal, wedi'i osod ymhlith y bont, y giât a'r ffordd /
Location at the breach in the retaining wall, set amongst bridge, gate and road (G2616_006)

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Published by Gwynedd Archaeological Trust
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Bangor, Gwynedd, LL57 2RT

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Figure 02. Reproduction of Conwy Borough County Council Drawing No. T403 detailing proposed repair works, with Gwynedd Archaeological Trust amendments detailing location and orientation of pre-commencement survey images. Not to Scale.

CRYNODEB ANNHECHNEGOL

Roedd Ymddiriedolaeth Archeolegol Gwynedd ei dirprwyo gan Gyngor Bwrdeistref Sirol Conwy i ymgymryd lleddfiad archeolegol fel rhan o waith atgyweiriad i syrthiad mur cynhaliol ger Abaty Maenan, Llanrwst, Glan Conwy. Mae'r adran hon o'r wal wedi dioddef yn ddiweddar gan gwympiad rhannol ac yn gynyddol fod yn ansafadwy, er ganlyniad o'r afon erydu'r sefydliad gwaelodol. Roedd gwaith atgyweiriad yn gynnwys ailadeiladu adran o'r wal a'i lleoli wrth ymyl glan de o Nant Lechog, gydag atgyweirid bychain i'r bont gyfagos. Mae'r wal ffurfio rhan o olyniaeth hirach o ragfuriau sydd rhedeg wrth ymyl ddau ochr o'r nant. Roedd yr adran ategir ei lleoli oddeutu 30m dwyrain o'r lôn A470 a 53m gogledd-ddwyrain o'r safle Abaty Maenan.

Mae'r disgrifiad archeolegol ac arolwg ffotograffig, a'r briff gwylio dilynol, dan arolygaeth y dymchweliad a gwaith ailadeiladu o'r mur cynhaliol, ac yr atgyweiriad i'r bont. Roedd y bont yn ystyried i fod o'r 18fed ganrif mewn dyddiad, bosib i lôn flaenorol ag oedd cynyddio'r y A470, ac mae'r mur cynhaliol o ddyddiad 19eg ganrif ddiweddar i'r 20fed ganrif, a bosib ei adeiledig yn gysylltiedig gyda strategaeth rheolaeth dŵr mabwysiedig gan stad Abaty Maenan, sydd yn gynnwys y mewnosodiad o gored a llifddor sydd i'r gogledd o'r bont.

Nid oedd yna dystiolaeth archeolegol gynharach na'r 18fed ganrif ei chyfarfod, gan gynnwys amserau uwch ganol-oesoedd pan roedd yr ardal yn eiddo i'r Abaty Sistersaidd Maenan, neu pan oedd Abaty Maenan 17eg ganrif ei hun ei troedig mewn i brif breswyliaid.

NON-TECHNICAL SUMMARY

Gwynedd Archaeological Trust was commissioned by Conwy Borough County Council to undertake archaeological mitigation as part of repair works for a collapsed retaining wall near Maenan Abbey, Llanrwst, Glan Conwy. A section of this wall had recently suffered a partial collapse and become increasingly unstable, as a consequence of the river eroding away the underlying foundation. The repair works consisted of rebuilding a section of the wall which was located along the southern bank of Nant Llechog, and minor repairs to an adjacent bridge. The wall formed part of a longer sequence of revetment that runs along both sides of the stream. The repair section was located c.30m east of the A470 road and 53m northeast of the site of Maenan Abbey.

The archaeological descriptive and photographic survey, and subsequent watching brief, monitored the demolition and rebuilding works to the revetment wall, and the repairs to the bridge. The bridge was considered to be of 18th century date, probably for a former road that pre-dated the A470, and the revetment wall to be of late 19th century or 20th century in date, probably constructed in association with water management strategies adopted by the Maenan Abbey estate, which included the insertion of a weir and sluices to the north of the bridge.

No archaeological evidence from earlier than the 18th century was encountered, including high mediaeval times when the area was the property of the Cistercian Abbey of Maenan, or the 17th century when Maenan Abbey itself was converted into a grand residence.

1 INTRODUCTION

Gwynedd Archaeological Trust (GAT) was commissioned by Conwy Borough County Council (CBCC) to undertake archaeological mitigation as part of repair works for a collapsed retaining wall near Maenan Abbey, Llanrwst, Glan Conwy (NGR SH79046579; Figure 01). A section of this wall had recently suffered a partial collapse and become increasingly unstable, as a consequence of the river eroding away the underlying foundation. A site inspection by CCBC determined that the wall needed to be rebuilt over a 15 metre length, between an existing weir and stone bridge arch (cf. Figure 02). The average height of wall that was reconstructed measured approximately 3.3metres, of which 2.7metres was retaining. The new wall structure was designed to support and protect the existing side road entrance and utility services.

The key mitigation elements included:

1. a pre-commencement archaeological photographic survey of the repair section; and
2. an archaeological watching brief during repair works.

The mitigation was undertaken between May and June 2019 and was completed in accordance with the following guidance:

- Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2014);
- Management of Archaeological Projects (English Heritage, 1991);
- Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England, 2015); and

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 Fieldwork Aims and Objectives

The key aims and objectives of the mitigation were to:

- mitigate the loss of primary evidence by producing a suitable archive record and to improve understanding of the site;
- establish the date and nature of any archaeological remains identified and assess their implications for understanding the historical development of the area, in conjunction with the known archaeological record; and
- if no additional archaeological activity is identified, establish why this may be the case.

1.2 Monitoring Arrangements

The archaeological mitigation was monitored by the Gwynedd Archaeological Planning Service (GAPS) and completed in accordance with an approved written scheme of investigation (cf. [Appendix I](#)).

1.3 Historic Environment Record

In line with the Gwynedd Historic Environment Record (HER) requirements, the HER was contacted at the onset of the project to ensure that any data arising was formatted in a manner suitable for accession to the HER and follows the guidance set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (The Welsh Archaeological Trusts, 2018). The GAT HER Enquiry Number for this project was GATHER1164 and the Event PRN was 45428.

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The repair works were located along the southern bank of Nant Llechog and formed part of a longer sequence of revetment that runs along both sides of the stream. The repair section was located c.30m east of the A470 road and 53m northeast of the site of Maenan Abbey. The abbey was established at the end of the 12th century, but is no longer visible, with the site occupied by a former house, now a hotel, built in the mid nineteenth century. The abbey site (but not the hotel) is a scheduled monument (ref. Cn 082; NGR SH78906565).

GAT had previously completed an archaeological survey of Maenan Abbey and the environs in March 2012 (GAT Report 1039), which included a survey of the canalised portions of the stream on both sides of the A470 road and documentary research of the abbey site to provide a context for the stream and to inform scheduling recommendations. The survey concluded that the main portion of the retaining walls alongside the stream were dated to the 18th or 19th centuries, but a section of cobbling and portions of the walls were uncertain, with dates suggested for the 17th century. GAT subsequently completed a recording programme during repair and restoration works in 2014, along a 125m section of the walling west of the A470 (GAT Report 1212). The recording programme identified 14 separate sections of revetment and walling, based on structural style, phasing, material type and condition. The different sections were interpreted as evidence of frequent repair and improvement, with certain sections dating to the twentieth century, in addition to the 17th, 18th and 19th century elements previously identified.

Immediately adjacent to the repair section is a weir and a fish pond (PRN 34134 and PRN 4616 respectively; NGR SH79046579). The weir has been interpreted as a nineteenth century feature (GAT Report 1039: 11), built before the publication of the First Edition 1-inch to 25-mile Ordnance Survey map in 1890 (Sheet XIV; Figure 03), with the pond an associated feature formed by the construction of the weir (GAT Report 1039: 11). As described in GAT Report 1039, the weir is a linear stone and brick structure measuring 9.0m long, 4.5m wide and 1.7m high on the downstream side. It is located across the stream and orientated NNW-SSE, with a main body of irregular stones forming a flat platform 2.7m wide across the stream. The top of the platform is formed of various sizes and shapes of stone, often placed on end, with patches of concrete visible and much of the platform eroded. There is a tunnel 0.8m high and 0.6m wide that runs under the whole structure at the southern side (*ibid.*). GAT Report 1039 also identified a trackway or ramp (PRN 34133; NGR SH79026579) to the immediate north of the weir leading to a former quarry (PRN 34136; NGR SH79046578). The trackway was described in the report as a linear platform measuring 7.0m

by 2.8m and orientated SW-NE. which was cut into the slope to the NW and built up to the SE, with the NW edge revetted by drystone walling to a height of 1.1m and the SE edge defined by a wall 1.1m high adjacent to the stream (*ibid.*: 12). The feature was interpreted as a ramp running from a local lane down to the stream; the direction of slope suggested this was not to take water from the stream but rather to function as an access ramp for the quarry. The quarry was interpreted in GAT Report 1039 as being in use after the publication of a 1788 map, where it is not present, and before the publication of the 1890 Ordnance Survey map; the suggestion being it was a quarry used for building what is now the Maenan Abbey Hotel (*ibid.*: 13).

Both GAT reports 1029 and 1212 were used as key resources and frames of reference during the current mitigation.

3 METHODOLOGY

3.1 Introduction

The repair works were located between the existing weir and existing stone bridge arch as detailed on Figure 02 and included the rebuilding of a 15 metre length of wall to support and protect the existing side road entrance and utility services. The new wall was also tied into the existing weir.

The archaeological mitigation included the following:

- a) a pre-commencement archaeological photographic survey of the repair section; and
- b) an archaeological watching brief during repair works.

The pre-commencement survey was undertaken on 07/05/2019 and the watching brief from 03/06/2019 to 02/09/2019.

3.2 Pre-Commencement Archaeological Photographic Survey of the Repair Section

The pre-commencement archaeological survey was completed along the 15m long repair section highlighted red in CBCC drawing T403 (Figure 02). A written record using GAT pro-formas was completed that included key dimensions and a description of structural form and any visible phasing. Photographic images were taken using a digital SLR (Nikon D5100) camera set to maximum resolution (4,928 x 3,264 16 effective megapixels) in RAW format and 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 (cf. [Appendix II](#)). Photographic images were archived in TIFF format using Adobe Photoshop; the archive numbering system was G2616_001 to G2616_037. A copy of CBCC drawing T403 was annotated to show location and orientation of images taken (cf. Figure X).

3.3 Archaeological watching brief during repair works

An archaeological watching brief is defined by the Chartered Institute for Archaeologists as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive (CiFA, 2014).

An archaeological watching brief can be divided into four categories:

- comprehensive (present during all ground disturbance)
- intensive (present during sensitive ground disturbance)
- intermittent (viewing the trenches after machining)
- partial (as and when seems appropriate).

The archaeological watching brief was completed on an **intensive** basis and incorporated the 15m long repair section highlighted red in CBCC drawing T403 (Figure 02). The watching brief monitored the removal of the existing wall, the rebuilding of the wall and the tying in to the existing weir, with a record made of the existing structural form and function of the wall and the visible portion of the weir. All attendances were recorded using GAT watching brief pro-formas and photographic images were taken using a digital SLR (Nikon D5100) camera set to maximum resolution (4,928 x 3,264 16 effective megapixels) in RAW format and 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 (cf. [Appendix II](#)). Photographic images were archived in TIFF format using Adobe Photoshop; the archive numbering system was G2616_038 to G2616_157.

The following dissemination will apply:

- A digital report has been provided to the client and GAPS (draft report then final report);
- A paper report plus a digital report has been provided to the Gwynedd Historic Environment Record along with an event summary, in accordance with the guidance set out in *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (The Welsh Archaeological Trusts, 2018); and

- A digital report and archive data has been prepared for submission to the Royal Commission on the Ancient and Historical Monuments of Wales in accordance with *Guidelines for digital archives* (Royal Commission on the Ancient and Historical Monuments of Wales, 2015). Digital information includes the photographic archive and associated metadata.

4 RESULTS

4.1 Pre-Commencement Archaeological Photographic Survey of the Repair Section

4.1.1 Introduction

The site was accessed through a modern aluminium gate, recessed off an unclassified road of the A470, opposite the Maenan Abbey Hotel. The gate is set at the northern entrance to a narrow, single arched stone bridge that spans the Nant Llechog north-east of the Maenan Abbey Hotel. Crossing the bridge provides access to the south bank of the river. Photographs of all key features were taken, and the location of these is shown on Figure 02.

4.1.2 The Retaining Wall

The retaining wall was a substantial stone wall, being of a maximum height of approximately 3.2m east from the bridge, as far as the weir (Plates 005, 014). East of the weir and the remnants of the sluice, the height of the wall declines sharply until it stops by the pool in front of the waterfall (Plate 008). The wall comprised locally sourced stones built in an uncoursed manner with no apparent bonding, which had probably been collected from the river. The stones ranged from small to large sub-angular and sub-rounded rocks, with large sub-rounded boulders at the base of the wall. A large mature tree grew from the south face of the wall, immediately adjacent to the bridge (Plate 002). The roots of the tree were clearly evident along the bottom of the wall breach and probably contributed to the partial collapse of this section of the wall (Plate 003). There was a smaller wall breach next to the west face of the stone front of the weir. Where the breach occurred the wall sagged was in danger of full collapse (Plate 010). There was no apparent phasing in the wall, which appears to be of a single construction. The main breach measures approximately 2.5m across and is 2.9m high. The second breach is 2.0m wide and 1.0m high.

4.1.3 The Weir

Set within the river, approximately 5.5m east of the bridge are the substantial remains of a weir (Plate 006, 009-010). The western face of the weir is comprised of large sub-angular and sub-rounded stones and boulders tightly packed, possibly bonded together, although any bonding agent is not readily apparent due to river erosion (Plates 006-007). The stone

face of the weir has a surviving width of about 6.6m and height of 1.6m. The river has breached the weir at the north edge, adjacent to the wall face. Set within the southern edge of the stone faced weir, there is an intact stone channel and culvert, with an opening 0.60m wide and 0.50m high (Plate 009). The lintel of the culvert consists of a large square dressed stone covered in moss; the stone is 1.10m wide, 0.75m high and 0.35m thick. Set at the rear of the channel/culvert there was a screw operated sluice gate made of cast iron. At the opposite north bank next to the wall there was an accompanying mechanism with a hand wheel crank, probably to operate another sluice (Plate 012). Set between the sluices there was a toppled brick wall that had subsided to a 45° angle (Plate 010). The brick wall had a surviving length of 4.7m and was orientated north-south. It is 1.0m in height and 0.22m in depth. The individual bricks were 0.22m long, 0.11m wide and 0.06m deep. The south bank operated sluice is 1.60m high, measured from the handle tips, 0.58m wide and 0.06m deep (Plate 011). The north bank sluice gate consisted of a cast iron metal shutter which is bracketed by narrow metal sheets, which were held in place and flanked by remnants of timber planks that were held together by metal bolts that were attached to the superstructure of the crank mechanism. The crank mechanism consisted of a toothed wheel at the centre, pierced by a metal rod, at the western end of which there was a handle with which to manually open the sluice. It measured 0.98m high, 0.54m wide and 0.30m thick (depth of the surviving timber sides). Here a more intact and complex mechanism survived, set between the brick and concrete wall on the south side and concrete block on the north side.

4.1.4 The Bridge

The upper courses of the bridge abut the south face of the retaining wall and the arch of the bridge is partially set within the lower courses of the retaining wall (Plate 001), with little evidence for any parapet. This would suggest that the retaining wall pre-dates or is broadly contemporary with the bridge. The style of the construction of the bridge and the former revetment wall is similar being of the same vernacular style and both use locally sourced stone, although the voussoirs are distinctive thin stones typical of the 18th century.

The upper courses of the bridge above the arch are roughly coursed, comprising of roughly shaped small to large angular and sub-angular stones to form a tidy outer east facing façade. The gap between the wall arch is defined by a string course of long, narrow schist stones, set length ways above the bridge voussoirs (Plate 013). The voussoirs consist of dressed rectangular blocks of predominantly schist stone bonded by rough lime mortar (Plate 013). The span of the arch is approximately 3.0m and the stones are up to 0.48m deep.

4.2 Archaeological watching brief during repair works

4.2.1 Introduction

Following initial tree clearance work, the intensive archaeological watching brief was undertaken from the 24th June 2019 and 2nd September 2019, and observed both the demolition phase of the old revetment walling on the west bank (100) of the river (Plates 015-016) and the subsequent rebuilding of the walling (Plates 027-031). The former weir to the north of the bridge was sandbagged, following the removal of some loose material from the river channel, and the removal of the lintel stones from the weir to encourage water flow away from the work area (Plates 014, 017). All stones that were removed from the revetment wall, which was noted to be heavily impacted by tree roots, were stockpiled for re-use in the rebuilt wall. Upon the removal of the stones, the soil behind the revetment wall was noted to be a humic light orangy brown silty clay loam with much root material (101), and both were noted to sit on the bedrock that formed the base of the river channel (105). The river bank was cut back by about 2m to allow for the construction of the new revetment, a process that involved the re-routing of some infrastructure cabling, and the removal of concrete inspection chambers that were located in the edge of the road carriageway (Plate 023). Some bedrock was also removed by pecking, prior to the setting down of the new concrete base (Plate 027).

The completed revetment walling extends to a height of 3.8m, with 1.1m of walling above the level of the north-west river bank by the roadside (Plates 029-031). It is set on a concrete plinth which is pinned to the bedrock at the river bank. A verge 2.3m wide with roadside kerbs has been created between the wall and the minor road (Plate 028). The walling re-uses the stone used in the former revetment and is capped with 'cock-and-hen' capping. It is bonded with the remains of the sluice mechanism, and with a butt joint to the 18th century bridge to the south-west. The bridge parapet has been capped on its northern side with 'cock-and-hen' capping, in a pleasing rustic style (Plate 031). At the northern end of the verge, immediately north-west of the parapet of the revetment wall, very large stones have been used to create steps that allow access onto the river bank south of the waterfall.

Deposits noted during the watching brief were given their own unique reference number, and these are listed below, and referenced in the text:

Context Number	Description
100	Rounded (5%) and subangular stones forming the revetment wall. The stones were of medium to large size, up to 1m x 0.6m
101	A light orangy brown silty clay loam with much bioturbation and root matter. Backfill behind the revetment walling
102	Large rock outcrop behind (101) and (100), behind the revetment wall
103	Sandy sily with clay, light-mid orangy brown, with small-medium rounded stone inclusions. This is a natural glacial deposit
104	Blue-grey silty clay in the river bed overlying the bedrock (105)
105	Shale bedrock in the river bed

4.2.2 *The Watching Brief*

The stones of the revetment walling were noted to be 5% rounded and 95% angular stones, and up to 1m x 0.6m is size, with larger stones forming the base (Plates 015-016). They were of the local field stone, being a schist/gneiss, and of the same material as that noted in the quarry to the north, from where some of the stones may have come. The rounded stones appear to have been river-worn. No bonding was used in the wall construction, however occasional lime mortar attached to some of the stones suggests that they may have been re-used in the walling. The wall was roughly coursed, and a minority of the stones may have been roughly worked. The backfill behind the revetment wall (101) was a substantial light orangey brown silty clay loam with much bioturbation and root matter. It contained small to medium rounded and subangular stones, consisting of about 2% of the matrix, with occasional charcoal inclusions as well. Packed stones were noted behind the revetment 3.5m north-east of the bridge.

The courses of revetment wall stone work immediately adjacent to the bridge were removed by hand, while the matted, heavily rooted soil and stones around a large ash tree stump were removed by the excavator, pushed into the river and lifted out and set into the rubble stockpile, with the remaining stones removed by hand (Plate 022). It was noted that a small widening gap had been created in the bridge arch due to the roots of the tree. No obvious interface between the revetment walling and the bridge was noted, with the stones of the revetment walling rough bonded into the bridge, suggesting that some bridge material may have been removed when the revetment walling was built (Plate 24). It is possible that the lowest 2.1m wide and 1.3m high stretch of walling on the revetment side adjacent to the bridge originally formed part of the bridge abutment, due to the large and more regular proportions of the stones at this point.

About 1.4m below the current road surface, and behind about 2m of backfill (101), a light-mid orangey brown sandy silt with clay deposit was noted (103). This had small to medium rounded stone inclusions and appeared to be a natural glacial deposit forming the naturally created north-west bank of the river. This appeared to overlie a blue-grey silty clay in the river bed (104) which directly overlay the bedrock (105).

Evidence of the brick weir and sluice structure at the northern end of the revetment walling was noted (Plates 017, 021). This was noted to have been cut into deposit (101) on the western bank of the river. Through this was a brown ceramic drainage pipe was noted, which had also cut through deposit (101). It was surrounded by a wooden frame as it passed through the weir (Plate 018). This suggests that the revetment walls may be of a relatively recent date, or at least heavily patched. The walling and sluice gates are believed to be contemporary, and most of this material remains *in-situ*. It is believed that the brick walling and weir was put in during the early-mid 20th century as part of a hydro-electric scheme by Lord Newborough for the Maenan Abbey estate.

About 1.2m south of the weir, bedrock was exposed on the north-west bank of the river (102). It was situated behind (101), but the revetment was built up against it, and was noted to be 2.7m tall and 1.4m wide.

5 CONCLUSION

The archaeological descriptive and photographic survey, and subsequent watching brief, monitored the demolition and repair works to a revetment wall between the existing weir and probable 18th century existing stone bridge arch north of Maenan Abbey. This included the rebuilding of a 15 metre length of wall to support and protect the existing side road entrance and utility services, which was also tied into the existing weir, and repairs to the parapet of the bridge.

The bridge appears to be 18th century in date, with narrow voussoirs stones with a string course above, bonded with a lime mortar matrix. The parapet was somewhat damaged, which has been repaired as part of the scheme of works. It is probably a former river crossing that was used prior to the construction of the A470 road and its forerunners.

To the north-east of the bridge a short 2.1m long and 1.3m high length of the revetment walling may have originally formed part of the bridge abutment on the western side of the river (Plates 004, 022), otherwise the revetment walling, which has been renewed, was all of later 19th or 20th century in date, and had undergone a number of phases of repair. It is believed that the revetment walling generally dates from a phase of water management systems, probably of late 19th or 20th century in date, possibly associated with the presence of a local mill or the hydro scheme proposed by Lord Newborough in the early-mid 20th century, which made use of the existing weir shown on the late 19th century 1st edition Ordnance Survey map.

No archaeological evidence from earlier than the 18th century was encountered, including from the 12th to 16th centuries when the area was the property of the Cistercian Abbey of Maenan, or the 17th century when Maenan Abbey itself was converted into a grand residence, despite the significance that the river had at these times. It is possible that any such activity was destroyed by later works.

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16. Watkinson, D and Neal, V, 2001, *First aid for finds* (3rd edition)

APPENDIX I

**Gwynedd Archaeological Trust written scheme of investigation, May
2019**

APPENDIX II

Gwynedd Archaeological Trust photographic metadata pro-forma

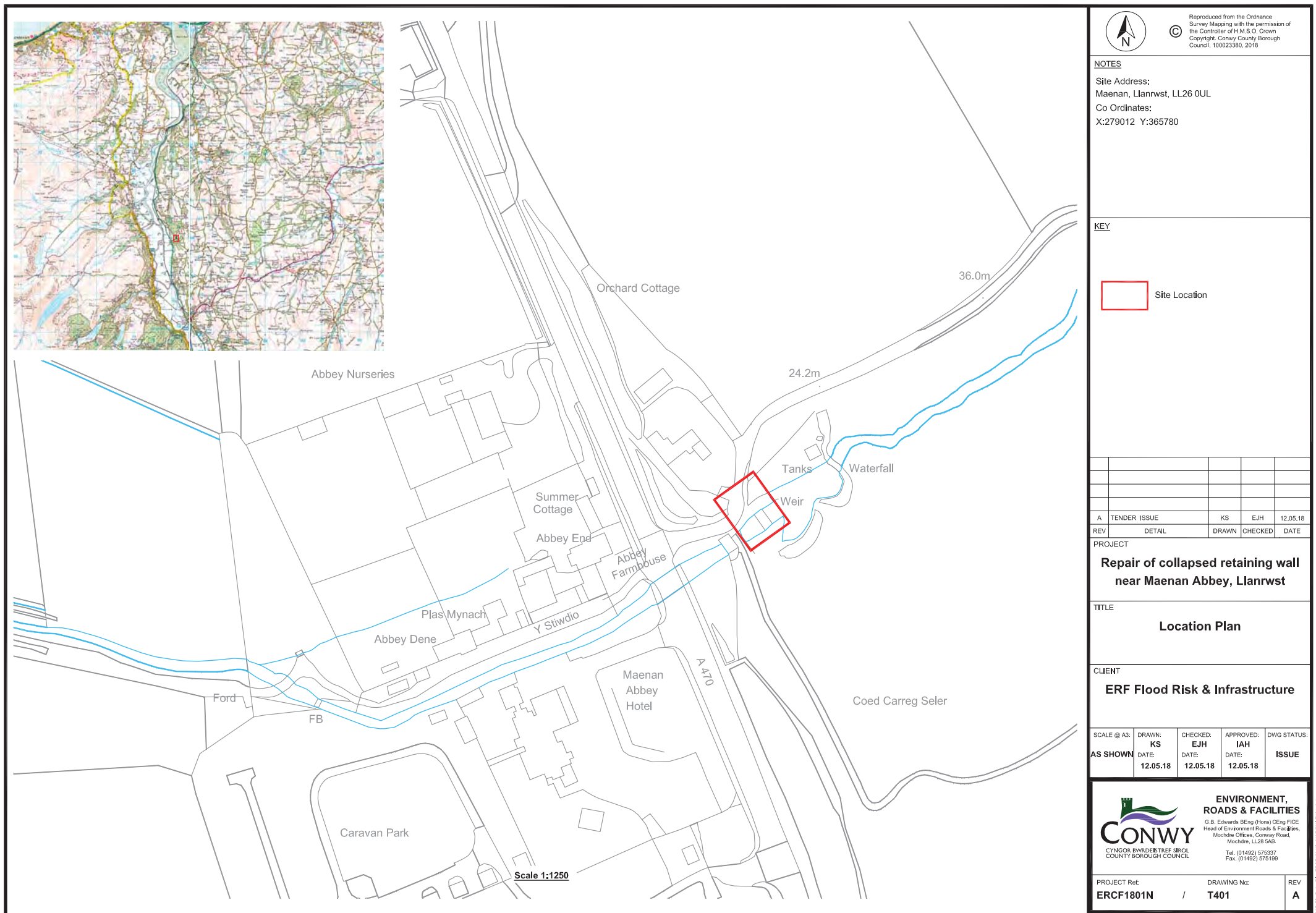


Figure 01: Reproduction of Conwy Borough County Council Drawing No. T401 locating repair zone.

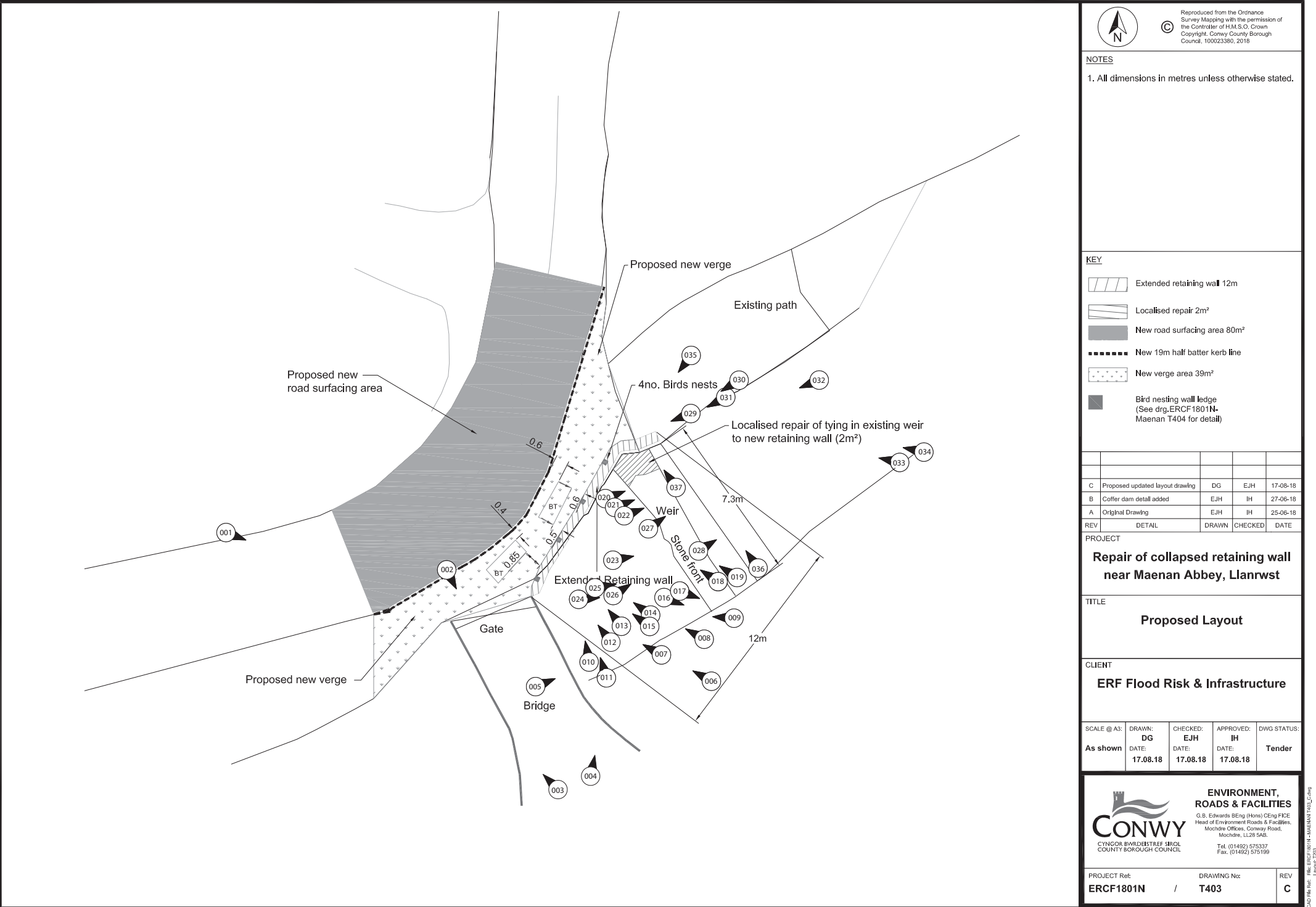


Figure 02. Reproduction of Conwy Borough County Council Drawing No. T403 detailing proposed repair works, with Gwynedd Archaeological Trust amendments detailing location and orientation of pre-commencement survey images. Not to Scale.



Plate 1: Location at the breach in the retaining wall, set amongst bridge, gate and road; scale: 1 x 1m; view from: SE (archive reference: G2616_006).



Plate 2: Location at the breach in the retaining wall; scale: 1 x 1m; view from: SE (archive reference: G2616_007).



Plate 3: Breached section at wall; scale: 1 x 1m; view from: SE
(archive reference: G2616_014).



Plate 4: Section at retaining wall adjacent to bridge
with tree growing out of the wall; scale: 1 x 1m;
view from: SSE (archive reference: G2616_011).



Plate 5: Entire width at the wall opposite the weir; scale: 1 x 1m; view from: SE
(archive reference: G2616_018).



Plate 6: View of weir and river from the bridge; scale: not used; view from: SW
(archive reference: G2616_005).



Plate 7: East limits of retaining wall, beneath trees; scale: 1 x 1m; view from: SE
(archive reference: G2616_033).



Plate 8: Close-up of east limits of retaining wall; scale: 1 x 1m; view from: SE
(archive reference: G2616_034).



Plate 9: Stone (w facing) at weir; scale: 1 x 1m; view from: W (archive reference: G2616_023).



Plate 10: Close-up of remains of brick wall of weir sluice and sluice mechanism; scale: 1 x 1m; view from: W (archive reference: G2616_022).



Plate 11: Stone channel/culvert with metal sluice gate in the background; scale: 1 x 1m; view from: W (archive reference: G2616_026).



Plate 12: Close-up of north bank sluice gate; scale: 1 x 1m; view from: E (archive reference: G2616_030).



Plate 13: Span of the arch at the bridge (no board); scale 1 x 1m; view from ESE (archive reference: G2616_009).



Plate 14: View from NE of weir showing sandbagging and the bridge to the rear; scale 1 x 1m; view from NE (archive reference: G2616_039).



Plate 15: General view of revetment wall removal by machine; scale ; view from E
(archive reference: G2616_055).



Plate 16: General view, as 54, but wider angled shot (from the river); scale ; view from NE
(archive reference: G2616_056).



Plate 17: As above, but with a clay drainage/sewerage pipe cutting through the base of the weir wall; scale ; view from S (archive reference: G2616_062).



Plate 18: Detail showing the clay pipe and base of weir ; scale 1 x 1m; view from S (archive reference: G2616_066).



Plate 19: Detail showing collapsed walling in the return of the revetment wall near the bridge; scale: not used ; view from E (archive reference: G2616_072).



Plate 20: Rough section, machine cut, through revetment 100 and backfill 101, from the NW riverbank; scale 1 x 1m; view from NE (archive reference: G2616_078).



Plate 21: Remnants of brick wall (weir) and sluice at the N bank; scale 2 x 1m; view from WSW (archive reference: G2616_087).



Plate 22: View of revetment walling [104] adjacent to the bridge part removed to enable the tree root removal; scale 1 x 1m; view from SSE (archive reference: G2616_110).



Plate 23: View of NW bank of the river showing BT box in bank profile to the NE of the bridge; scale 2 x 1m; view from SE (archive reference: G2616_099).



Plate 24: Exposed bridge arch after removal of tree and wall; scale 1x 1m; view from E (archive reference: G2616_119).



Plate 25: As above, but showing the bridge with sandbagging at the NW end of the bridge; scale not used; view from NE (archive reference: G2616_123).



Plate 26: View of NW bank of the river at the conclusion of excavation works with foundation preparation being undertaken; scale not used; view from ESE (archive reference: G2616_133).

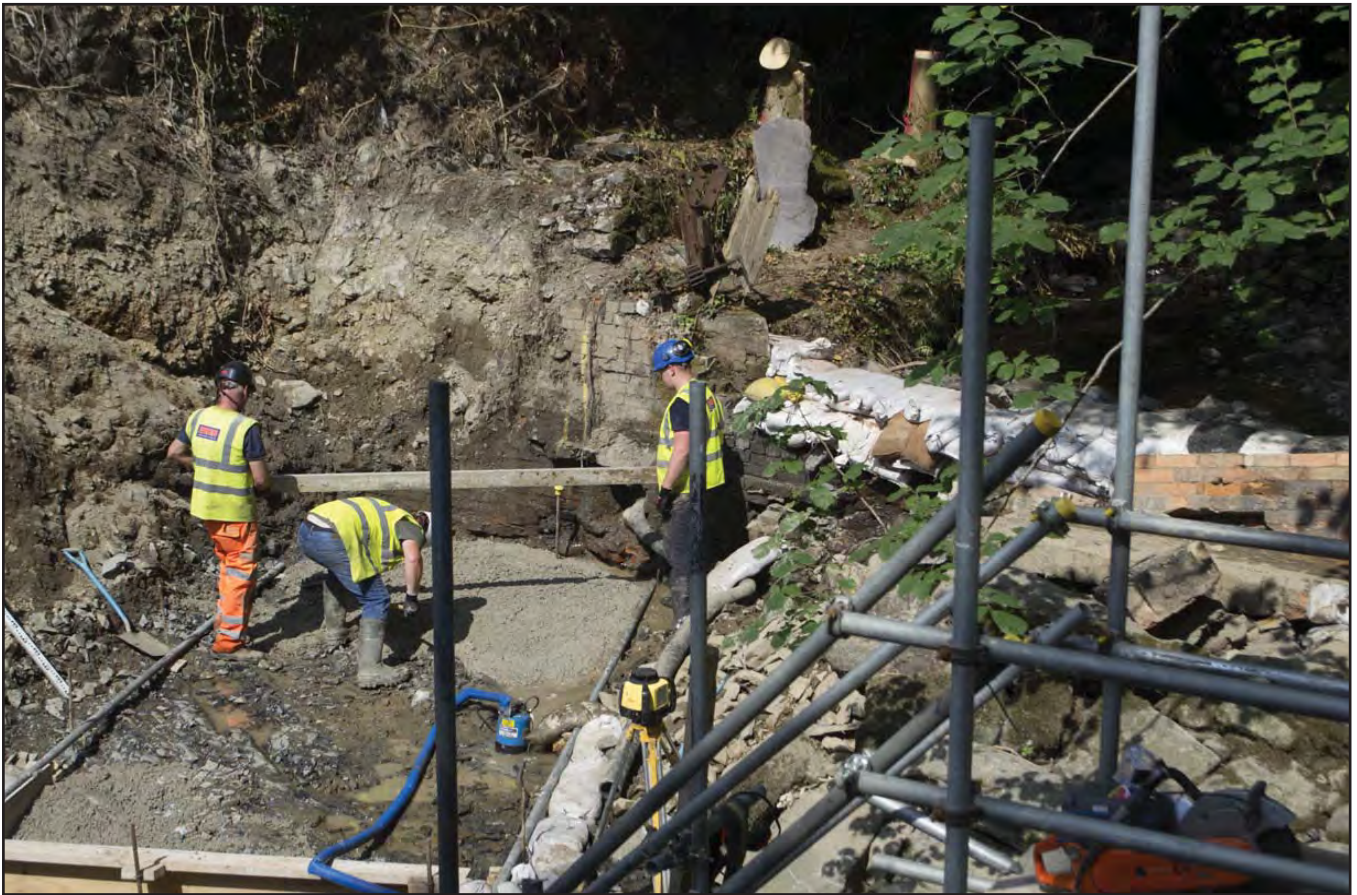


Plate 27: View of the concrete laying from the bridge, showing the weir; scale not used; view from S (archive reference: G2616_138).



Plate 28: View of the retaining wall parapet from the side of the minor road; scale 1 x 1m; view from SW (archive reference: G2616_144).



Plate 29: View of the retaining wall, 3m high, from the river to the NE of the bridge; scale 1 x 2m; view from NE (archive reference: G2616_145).



Plate 30: General view showing the butt joint of the revetment walling with the 18th century bridge; scale not used; view from SE (archive reference: G2616_148).



Plate 31: General view of revetment walling from the bridge showing bonding with the sluice; scale not used; view from SSW (archive reference: G2616_152).

MAENAN ABBEY, LLANRWST (G2616)

WRITTEN SCHEME OF INVESTIGATION FOR
ARCHAEOLOGICAL MITIGATION

Prepared for

Conwy Borough County Council

May 2019



Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

Approvals Table				
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Approved by	Principal Archaeologist			

Revision History			
Rev No.	Summary of Changes	Ref Section	Purpose of Issue
01	Date of pre-commencement archaeological survey has been changed; Changes to the methodology for the pre-commencement archaeological survey and watching brief	3.1 3.2 & 3.3	GAPS Approval

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

MAENAN ABBEY, LLANRWST (G2616)

WRITTEN SCHEME OF INVESTIGATION FOR AN ARCHAEOLOGICAL MITIGATION

Prepared for *Conwy Borough County Council*, May 2019

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1 INTRODUCTION

Gwynedd Archaeological Trust (GAT) has been commissioned by Conwy Borough County Council (CBCC) to prepare a Written Scheme of Investigation (WSI) for archaeological mitigation as part of repair works for a collapsed retaining wall near Maenan Abbey, Llanrwst, Glan Conwy (NGR SH79046579; Figure 01). A section of this wall has recently suffered a partial collapse and become increasingly unstable, as a consequence of the river eroding away the underlying foundation. A site inspection by CCBC has determined that the wall will need to be rebuilt over a 15 metre length, between the existing weir and existing stone bridge arch (cf. Figure 02). The average height of wall to be reconstructed is approximately 3.3metres, of which 2.7metres is retaining. The new wall structure will support and protect the existing side road entrance and utility services within the aforementioned length.

The key mitigation elements will include:

1. a pre-commencement archaeological record of the repair section; and
2. an archaeological watching brief during repair works.

The mitigation will be undertaken between May and June 2019 and will be completed in accordance with the following guidance:

- Standard and Guidance for Archaeological Watching Brief (Chartered Institute for Archaeologists, 2014);
- Management of Archaeological Projects (English Heritage, 1991);
- Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England, 2015); and

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 Fieldwork Aims and Objectives

The key aims and objectives of the mitigation are to:

- mitigate the loss of primary evidence by producing a suitable archive record and to improve understanding of the site;
- establish the date and nature of any archaeological remains identified and assess their implications for understanding the historical development of the area, in conjunction with the known archaeological record; and
- if no additional archaeological activity is identified, establish why this may be the case.

1.2 Monitoring Arrangements

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

The GAPS Archaeologist will need to be informed of the project timetable and of the subsequent progress and findings. This will allow the GAPS Archaeologist time to arrange monitoring visits and attend site meetings (if required) and enable discussion about the need or otherwise for further archaeological works (if required) if features of potential archaeological significance are encountered. The curator contact number is 01248 370926.

1.3 Historic Environment Record

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

The GAT HER Enquiry Number for this project is GATHER1164 and the Event PRN is 45428. 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

The repair works are located along the southern bank of Nant Llechog and form part of a longer sequence of revetment that runs along both sides of the stream. The repair section is located c.30m east of the A470 road and 53m northeast of the site of Maenan Abbey. The abbey was established at the end of the 12th century, but is no longer visible, with the site occupied by a former house, now a hotel, built in the mid nineteenth century. The abbey site (but not the hotel) is a scheduled monument (ref. Cn 082; NGR SH78906565).

GAT had previously completed an archaeological survey of Maenan Abbey and the environs in March 2012 (GAT Report 1039), which included a survey of the canalised portions of the stream on both sides of the A470 road and documentary research of the abbey site to provide a context for the stream and to inform scheduling recommendations. The survey concluded that the main portion of the retaining walls alongside the stream were dated to the 18th or 19th centuries, but a section of cobbling and portions of the walls were uncertain, with dates suggested for the 17th century. GAT subsequently completed a recording programme during repair and restoration works in 2014, along a 125m section of the walling west of the A470 (GAT Report 1212). The recording programme identified 14 separate sections of revetment and walling, based on structural style, phasing, material type and condition. The different sections were interpreted as evidence of frequent repair and improvement, with certain sections dating to the twentieth century, in addition to the 17th, 18th and 19th century elements previously identified.

Immediately adjacent to the repair section is a weir and a fish pond (PRN 34134 and PRN 4616 respectively; NGR SH79046579). The weir has been interpreted as a nineteenth century feature (GAT Report 1039: 11), built before the publication of the First Edition 1-inch to 25-mile Ordnance Survey map in 1890 (Sheet XIV; Figure 03), with the pond an associated feature formed by the construction of the weir (GAT Report 1039: 11). As described in GAT Report 1039, the weir is a linear stone and brick structure measuring 9.0m long, 4.5m wide and 1.7m high on the downstream side. It is located across the stream and orientated NNW-SSE, with a main body of irregular stones forming a flat platform 2.7m wide across the stream. The top of the platform is formed of various sizes and shapes of stone, often placed on end, with patches of concrete visible and much of the platform eroded. There is a tunnel 0.8m high and 0.6m wide that runs under the whole structure at the southern side (*ibid.*). GAT Report 1039 also identified a trackway or ramp (PRN 34133; NGR SH79026579) to the immediate north of the weir leading to a former quarry (PRN 34136; NGR SH79046578). The trackway was described in the report as a linear platform measuring 7.0m

by 2.8m and orientated SW-NE. which was cut into the slope to the NW and built up to the SE, with the NW edge revetted by drystone walling to a height of 1.1m and the SE edge defined by a wall 1.1m high adjacent to the stream (*ibid.*: 12). The feature was interpreted as a ramp running from a local lane down to the stream; the direction of slope suggested this was not to take water from the stream but rather to function as an access ramp for the quarry. The quarry was interpreted in GAT Report 1039 as being in use after the publication of a 1788 map, where it is not present, and before the publication of the 1890 Ordnance Survey map; the suggestion being it was a quarry used for building what is now the Maenan Abbey Hotel (*ibid.*: 13).

Both GAT reports 1029 and 1212 will be used as key resources and frames of reference during the current mitigation.

3 METHODOLOGY

3.1 Introduction

The repair works will be located between the existing weir and existing stone bridge arch as detailed on Figure 02 and will include the rebuilding of a 15 metre length of wall to support and protect the existing side road entrance and utility services. The new wall will also be tied into the existing weir.

The archaeological mitigation will include the following:

- a) a pre-commencement archaeological record of the repair section; and
- b) an archaeological watching brief during repair works.

The pre-commencement survey is scheduled to be undertaken on 13/05/2019, with the watching brief scheduled from 03/06/2019 for an estimated two weeks.

3.2 Pre-Commencement Archaeological Survey of the Repair Section

The pre-commencement archaeological survey will be completed along the 15m long repair section highlighted red in CBCC drawing T403 (Figure 02). A written record using GAT proformas will also be completed (cf. [Appendix I](#)), including dimensions and a description of structural form and any visible phasing. Photographic images will be taken using a digital SLR (Nikon D5100) camera set to maximum resolution (4,928 x 3,264 16 effective megapixels) in RAW format; a photographic record will be maintained on site using GAT proformas ([Appendix III](#)) and digitised in *Microsoft Access* as part of the fieldwork archive and dissemination process. Photographic images will be archived in TIFF format using Adobe Photoshop; the archive numbering system will start from G2616_001. Photographic scales will be used and a copy of CBCC drawing T403 will be annotated to show location and orientation of images taken.

A scaled section of the retaining wall will be drawn at a minimum 1:20 scale, using GAT A2 pro-forma permatrace, if it is practical to do so.

3.3 Archaeological watching brief during repair works

An archaeological watching brief is defined by the Chartered Institute for Archaeologists as a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive (CiFA, 2014).

An archaeological watching brief can be divided into four categories:

- comprehensive (present during all ground disturbance)
- intensive (present during sensitive ground disturbance)
- intermittent (viewing the trenches after machining)
- partial (as and when seems appropriate).

The archaeological watching brief will be completed on an **intensive** basis and will incorporate the 15m long repair section highlighted red in CBCC drawing T403 (Figure 02). The watching brief will monitor the removal of the existing wall, the rebuilding of the wall and the tying in to the existing weir, with a record made of the existing structural form and function of the wall and the visible portion of the weir, as well as any visible stratigraphy behind the existing wall as it is being removed. The archaeologist in attendance must be allowed time by the site contractor to record and/or investigate any archaeological activity encountered as well as being allowed suitable opportunities to record the repair works as they proceed; this may include stopping the repair works for a limited period to allow this to happen.

It is recommended that the bridge adjacent to the weir is not used by any plant or construction vehicle during the repair works.

The following methodology will be applied for the watching brief:

- All attendances and any identified features will be recorded using GAT watching brief pro-formas ([Appendix II](#));
- Photographic images will be taken using a digital SLR (Nikon D5100) camera set to maximum resolution (4,928 x 3,264 16 effective megapixels) in RAW format; a photographic record will be maintained on site using GAT pro-formas ([Appendix III](#)) and

digitised in *Microsoft Access* as part of the fieldwork archive and dissemination process. Photographic images will be archived in TIFF format using Adobe Photoshop; the archive numbering system will start from the next sequential number to be used after completion of the pre-commencement survey. When practical, a photographic ID board will be used and will include site code, image orientation and any relevant context numbers.

- Any subsurface features identified will be recorded photographically, with detailed notations and a measured survey (completed using a *Trimble R8* GPS unit);
- Any archaeological features/deposits/structures encountered within the watching brief area will be manually cleaned and examined to determine extent, function, date and relationship to adjacent activity. Whilst the monitored works will mostly involve upstanding remains and possibly exposed stratigraphy when the existing wall is removed, there may still be potential for identifying other activity, particularly at foundation level. If applicable, therefore, the following excavation strategy will generally apply: 50% sample of each sub-circular feature, 10% sample of each linear feature (terminal ends and intersection points with other features will be prioritised). However, if more discrete features are identified, these will be 100% excavated as will any exposed segments of linear features. *In the event of the identification of extensive/complex remains, additional time, resourcing and costs may be required for GAT to complete an appropriate programme of works. All archaeological investigations will be undertaken in accordance with the main contractor health and safety requirements, but the archaeologist in attendance must be allowed time by the site contractor to record and/or investigate any archaeological activity encountered;*
- Any required plans or sections to be drawn at a minimum 1:10 scale using GAT A4 or A2 pro-forma permatrace;
- Should dateable artefacts and/or ecofacts be recovered, an **interim report** will be submitted summarising the results of the watching brief, along with an assessment of potential for analysis post-excavation project design (in line with the MAP2 process). *Additional time, resourcing and costs will be required to undertake any post-excavation programme of works (if applicable).*

3.3.1 Human Remains

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

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

If human remains are recovered that are deemed suitable for further assessment/analysis, this will be completed in accordance with the osteologist's requirements and with *Human Bones from Archaeological Sites Guidelines for producing assessment documents and analytical reports* (Chartered Institute for Archaeologists, 2017).

3.3.2 Ecofacts

Should any archaeological features and/or sealed deposits be identified that are deemed suitable for dating , ecofact samples will be taken. The sampling procedure will be informed by specialist advice upon discovery, particularly for waterlogged/organic deposits. The specialist contact will be Jackeline Robertson (AOC Archaeology | telephone: 0208 843 7380). The sampling strategy will also be undertaken in accordance with the principles set out in *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* (Historic England, 2011).

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

3.3.3 Artefacts

Diagnostic artefacts and artefacts from sealed deposits will be retained for further examination and identification. The artefacts will be treated according to guidelines issued by the UK Institute of Conservation, in particular the advice provided within *First Aid for Finds* (Watkinson and Neal 2001).

Any waterlogged artefacts (e.g. wood or leather) that are to be recovered for post-excavation assessment and analysis will be processed in accordance with *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage, 2011) and specifically in accordance with Brunning and Watson (2010) for waterlogged wood and Historic England (2012) for waterlogged leather. In such cases an external specialist will be contacted to agree an appropriate sampling and recovery strategy via Lucy Whittingham | Project Manager (post-excavation) | AOC Archaeology | telephone: 0208 843 7380 | 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 Conwy Archive Service, Old Board School, Lloyd Street, Llandudno LL30 2YG), 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 (Conwy Archive Service). 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 Conwy Archive Service in accordance with their guidelines.

3.4 Fieldwork Archiving

Following the completion of the respective mitigation stages, fieldwork archiving will be completed based on following task list:

1. Pro-formas: all cross referenced and complete;
2. Photographic Metadata: completed in *Microsoft Access* and cross-referenced with all pro-formas;
3. Survey data: downloaded using a Computer Aided Design package;
4. Sections: all cross referenced and complete (to include matrices);
5. Plans: 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;
9. Site Matrix (if relevant).

All data will be processed, final illustrations will be compiled and a report will be produced which will detail and synthesise the results.

4 REPORTING

Following completion of the fieldwork, a separate report will be produced within one month incorporating the following:

1. Non-technical summary (Welsh and English)
2. Introduction
3. Background
4. Methods and techniques, including details and location of project archive
5. Results
6. Summary and conclusions (including any further recommendations – if relevant)
7. List of sources consulted.
8. Appendix I – approved GAT written scheme of investigation

Illustrations will include plans of the location, site plans and individual plans and sections of archaeological features identified as appropriate. Historical maps, when appropriate and if copyright permissions allow, will be included. A draft copy of the report will be sent to the client prior to production of the final report.

The report will incorporate all three mitigation stages and will be submitted within one month of completion of the watching brief and subsequently to Gwynedd Historic Environment Record (Craig Beuno, Garth Road, Bangor, Gwynedd, LL57 2RT) within six months of approval.

5 DISSEMINATION AND ARCHIVING

The following dissemination will apply:

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

6 PERSONNEL

The project will be managed by John Roberts, Principal Archaeologist GAT Contracts Section and attended by a project archaeologist. The project archaeologist will be responsible for the completing the mitigation, including all field management duties, e.g. GAPS liaison, main contractor liaison, osteologist or palaeoenvironmentalist liaison (if relevant). The project archaeologist will be responsible for completing the fieldwork proformas and the fieldwork archive itemised in Sec 3.7. The project archaeologist will also be responsible for submitting a draft final report (or interim report) for each of the mitigation stages to the project manager for review and approval. The reports will then be submitted as per the arrangements defined in Sec 5.

7 HEALTH AND SAFETY

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

8 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.

9 INSURANCE

9.1 Public/Products Liability

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

INSURER Aviva Insurance Limited

POLICY TYPE Public Liability

POLICY NUMBER 24765101CHC/UN/000375

EXPIRY DATE 21/06/2019

9.2 Employers Liability

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

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

INSURER Aviva Insurance Limited

POLICY TYPE Employers Liability

POLICY NUMBER 24765101 CHC / UN/000375

EXPIRY DATE 21/06/2019

9.3 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 9446015

EXPIRY DATE 22/07/2019

10 SOURCES CONSULTED

1. A Research Framework for the Archaeology of Wales Version 03, Final Refresh Document March 2017
2. Brunning, R and Watson, J 2010, *Waterlogged Wood: Guidelines on the Recording*,
3. Chartered Institute for Archaeologists, 2014, *Standard and Guidance for Archaeological Excavation*
4. Chartered Institute for Archaeologists, 2014, *Standard and Guidance for Archaeological Watching Brief*
5. Chartered Institute for Archaeologists, 2014, *Standard and guidance for the collection, documentation, conservation and research of archaeological materials*
6. Chartered Institute for Archaeologists, 2014, *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives*
7. Chartered Institute for Archaeologists, 2017, *Updated Guidelines to the Standards for Recording Human Remains*
8. Davidson, J. 2014, Maenan Stream Wall, Conwy Valley. Archaeological Mitigation. Gwynedd Archaeological Trust report 1212.
9. English Heritage, 1991, *Management of Archaeological Projects (MAP2)*
10. English Heritage, 2011, *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation*
11. Historic England, 2012, *Waterlogged Organic Artefacts Guidelines on their Recovery, Analysis and Conservation*
12. Historic England, 2015, *Management of Research Projects in the Historic Environment (MoRPHE)*
13. Kenney, J. 2012. Assessment and Scheduling Enhancement. Maenan Abbey, Llanrwst. Gwynedd Archaeological Trust report 1039.
14. Royal Commission on Ancient and Historic Monuments of Wales, 2015, *Guidelines for digital archives*
15. *Sampling, Conservation and Curation of Waterlogged Wood* (3rd edition)
16. The Welsh Archaeological Trusts, 2018, *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)*

17. Watkinson, D and Neal, V, 2001, *First aid for finds* (3rd edition)

FIGURE 01

**Reproduction of Conwy Borough County Council Drawing No. T401
locating repair zone.**



Reproduced from the Ordnance
Survey Mapping with the permission of
the Controller of H.M.S.O. Crown
Copyright. Conwy County Borough
Council, 1000233580, 2018

NOTES

Site Address:
Maenan, Llanrwst, LL26 0UL
Co Ordinate:
X:279012 Y:365780

KEY

1001

A	TENDER ISSUE		KS	EJH	12.05.18	
REV	DETAIL					
PROJECT						

Repair of collapsed retaining wall near Maenan Abbey, Llanrwst

TITLE

Location Plan

CLIENT

ERF Flood Risk & Infrastructure

SCALE @ A3:	DRAWN: KS	CHECKED: E J H	APPROVED: IAH	DWG STATUS:
AS SHOWN	DATE: 12.05.18	DATE: 12.05.18	DATE: 12.05.18	ISSUE



**ENVIRONMENT,
ROADS & FACILITIES**

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Head of Environment Roads & Facilities,
Mochdre Offices, Conway Road,
Mochdre, LL28 5AB.

Tel. (01492) 575337
Fax. (01492) 575199

PROJECT Ref: **ERCF1801N** / **T401** DRAWING No:



Scale 1:1250

FIGURE 02

**Reproduction of Conwy Borough County Council Drawing No. T403
detailing proposed repair works.**



Reproduced from the Ordnance Survey Mapping with the permission of the Controller of H.M.S.O. Crown Copyright. Reproduced by permission of the Controller of H.M.S.O. Crown Copyright. 100023360, 2018

NOTES

1. All dimensions in metres unless otherwise stated.

KEY

- Extended retaining wall 12m
- Localised repair 2m²
- New road surfacing area 80m²
- New 19m half batter kerb line
- New verge area 39m²
- Bird nesting wall ledge (See drg.ERCFL1801N-Maenan T404 for detail)

REV	DETAIL	DRAWN	CHECKED	DATE
C	Proposed updated layout drawing	DG	EJH	17-08-18
B	Coiffer dam detail added	EJH	IH	27-06-18
A	Original Drawing	EJH	IH	25-06-18

PROJECT

Repair of collapsed retaining wall near Maenan Abbey, Llanrwst

TITLE

Proposed Layout

CLIENT

ERF Flood Risk & Infrastructure

SCALE @ A3:	DRAWN:	CHECKED:	APPROVED:	DWG STATUS:
As shown	DG	EJH	IH	
	DATE:	DATE:	DATE:	
	17.08.18	17.08.18	17.08.18	Tender



ENVIRONMENT, ROADS & FACILITIES
G.B. Edwards BEng (Hons) CEng FICE
Head of Environment Roads & Facilities
Maenan Abbey, Llanrwst, Conwy, LL28 5AB
Tel: (01462) 575337
Fax: (01462) 575199

PROJECT Ref:	DRAWING No:	REV
ERCFL1801N	T403	C

FIGURE 03

Reproduction of Ordnance Survey First Edition 1-inch to 25-mile County Series Map Sheet XIV.9, published 1890. Scale 1:2500@ A4.

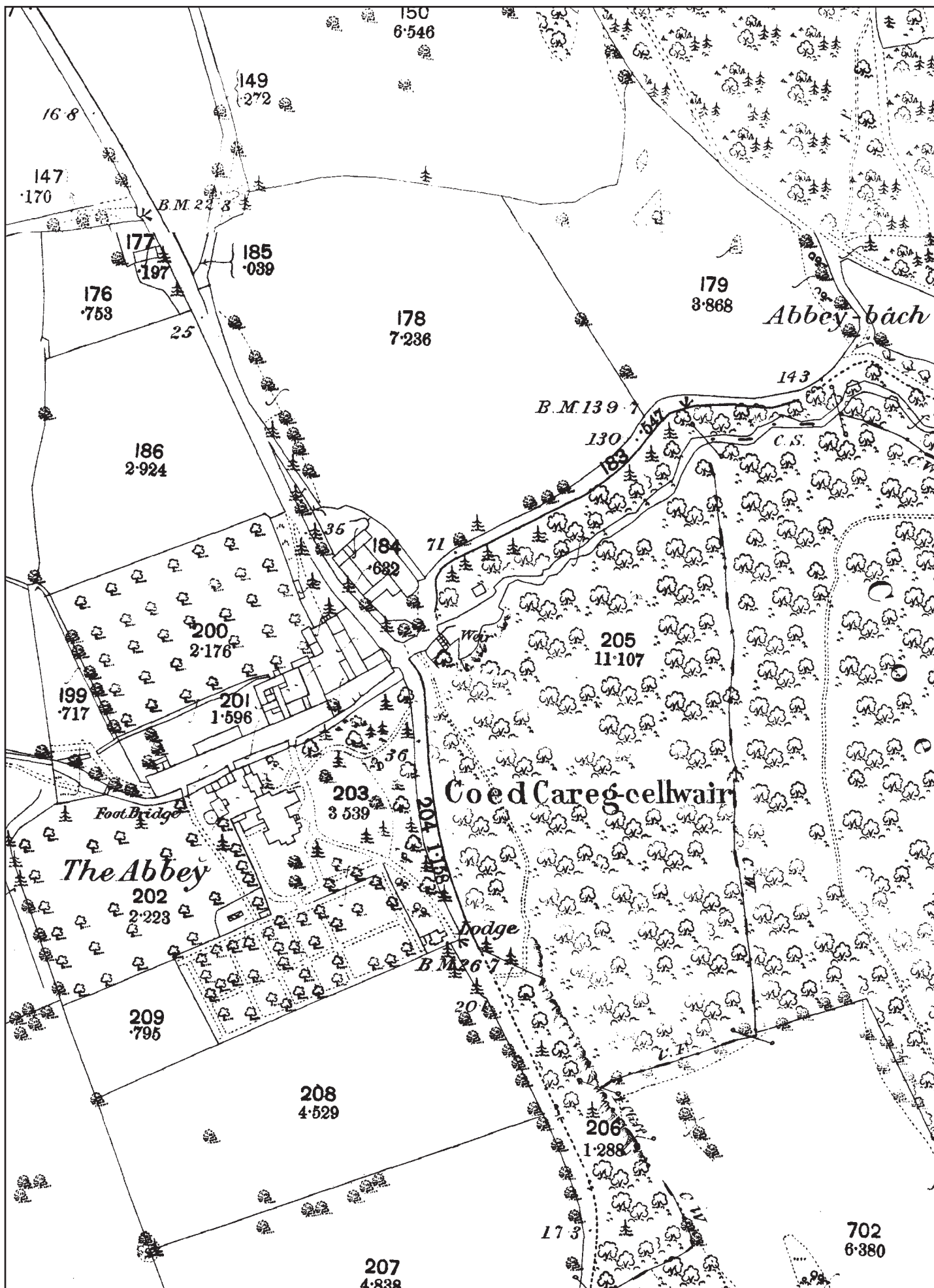


FIGURE 03: Reproduction of Ordnance Survey First Edition 1-inch to 25-mile County Series Map Sheet XIV.9, published 1890. Scale 1:2500@ A4.

APPENDIX I

Gwynedd Archaeological Trust basic recording pro-forma

YMDDIRIEDOLAETH ARCHAEOLEGOL GWYNEDD ARCHAEOLOGICAL TRUST		
BASIC RECORDING FORM	Project name	Project number
Feature name		Feature Number
NGR		
Description		
<div></div>		
Recommendations for further assessment		
<div></div>		
Photographic record numbers		
Digital		
	Visit date	Visit by

APPENDIX II

Gwynedd Archaeological Trust watching brief pro-forma

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

APPENDIX III

Gwynedd Archaeological Trust photographic metadata pro-forma

Digital Photographic Record

Include main context numbers for each shot, drawing numbers for sections and any other relevant numbers for cross referencing. Regularly upload photographs to computer. Delete any unwanted photos **immediately** from the camera.

[illegible]



Gwynedd Archaeological Trust
Ymddiriedolaeth Archaeolegol Gwynedd

Craig Beuno, Ffordd y Garth, Bangor, Gwynedd. LL57 2RT
Ffon: 01248 352535. Ffacs: 01248 370925. email: gat@heneb.co.uk

