

A5 Cymro Gate Retaining Wall, Cymro Gate, Gwynedd

Archaeological Assessment



Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

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Archaeological Assessment

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Prepared for: Ymgynhoriaeth Gwynedd Consultancy

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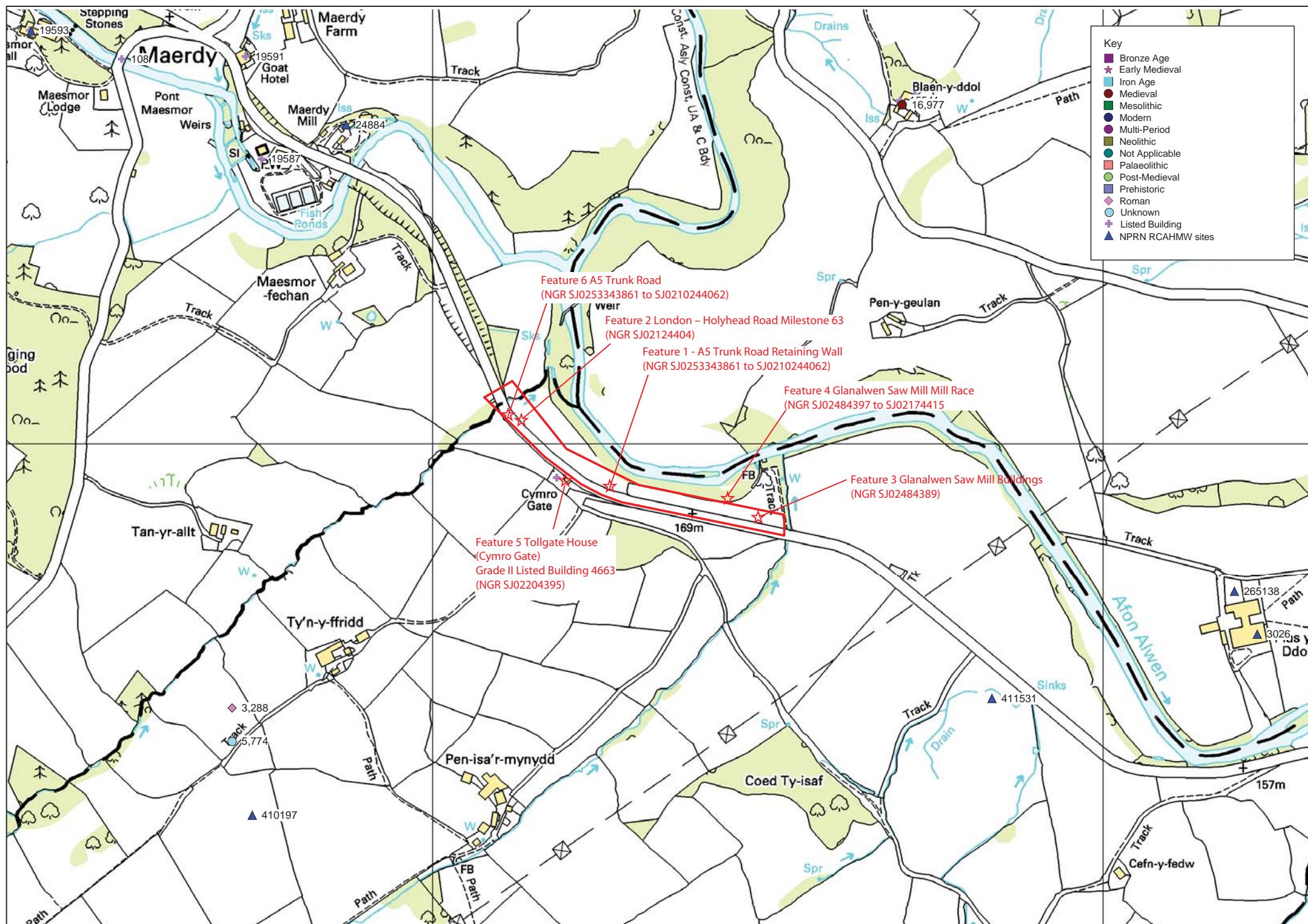


Figure 01 - Location of assessment zone (highlighted red), identified features (highlighted) and known archaeological features within the local area (cf. thematic key)

Based on 1:10000 Ordnance Survey map SJ04. (Crown Copyright. All Rights Reserved. License number AL100020895)

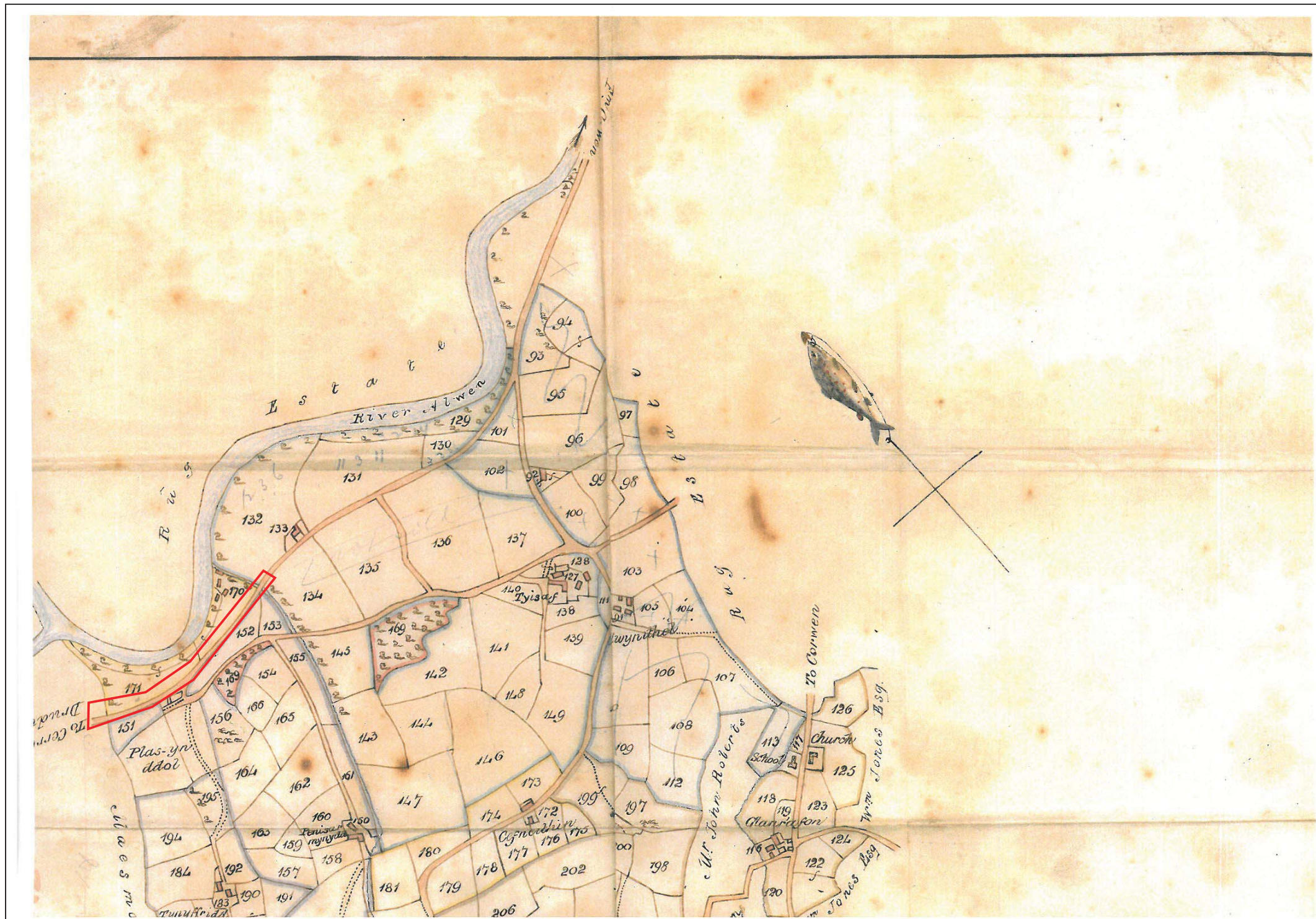
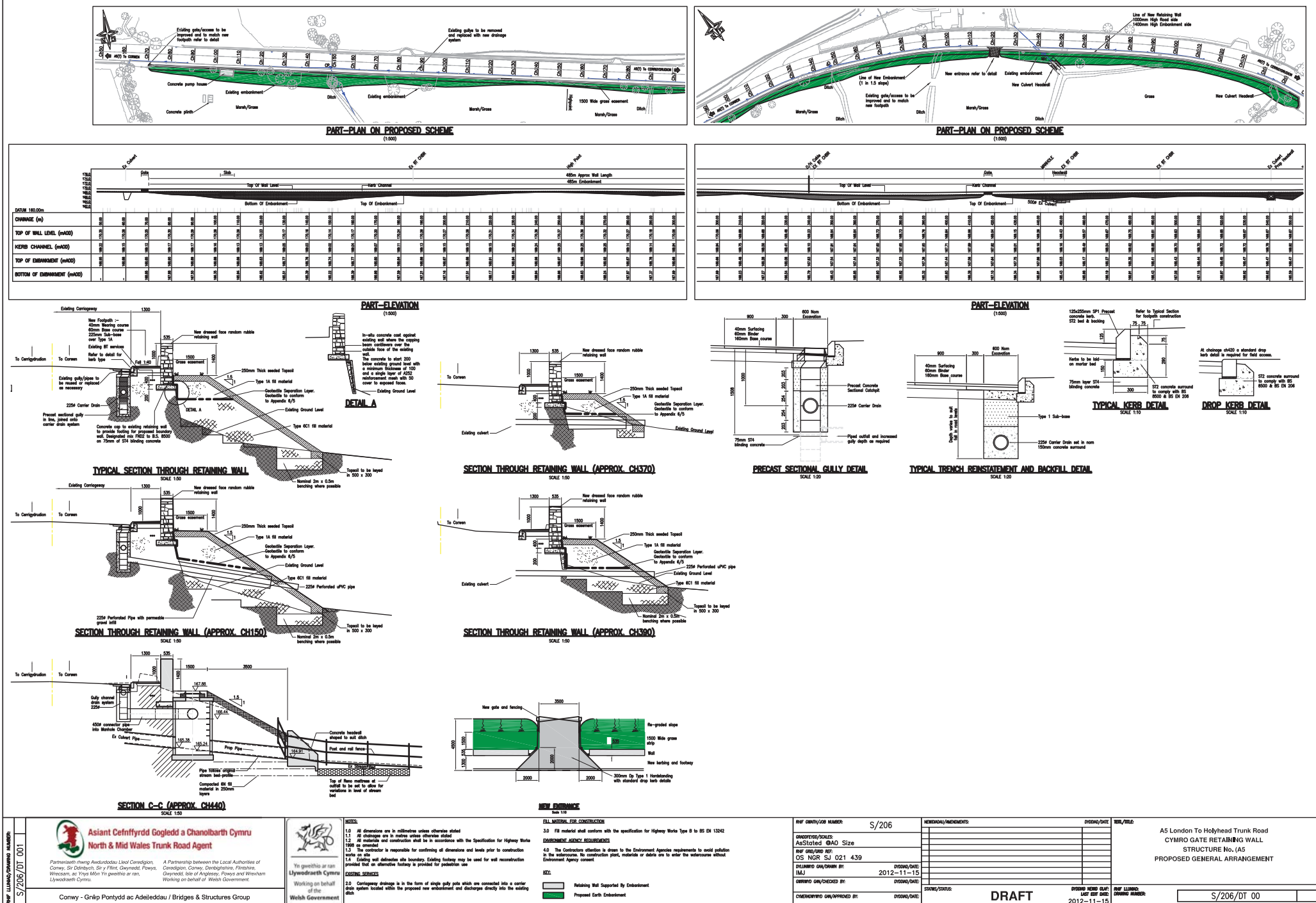
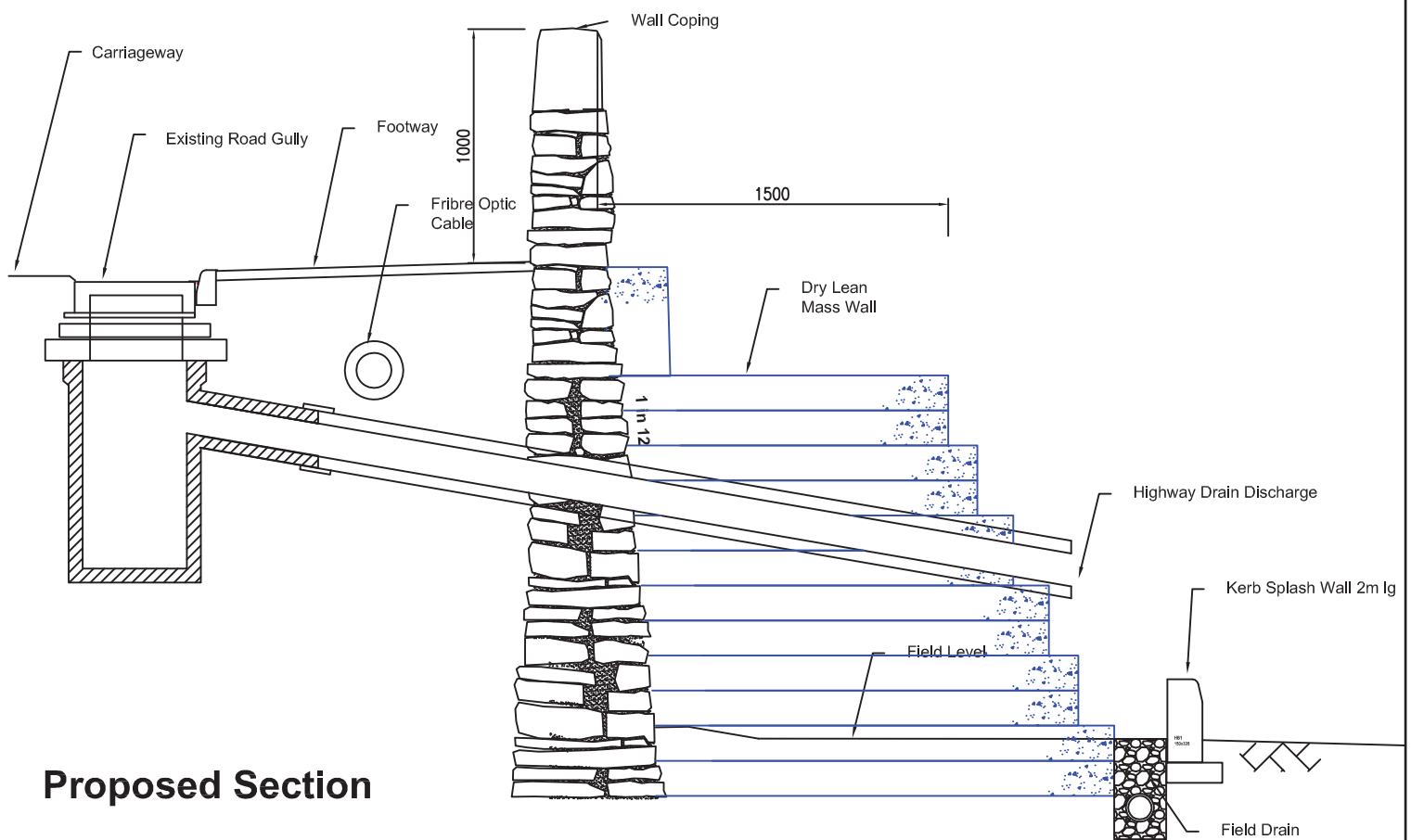
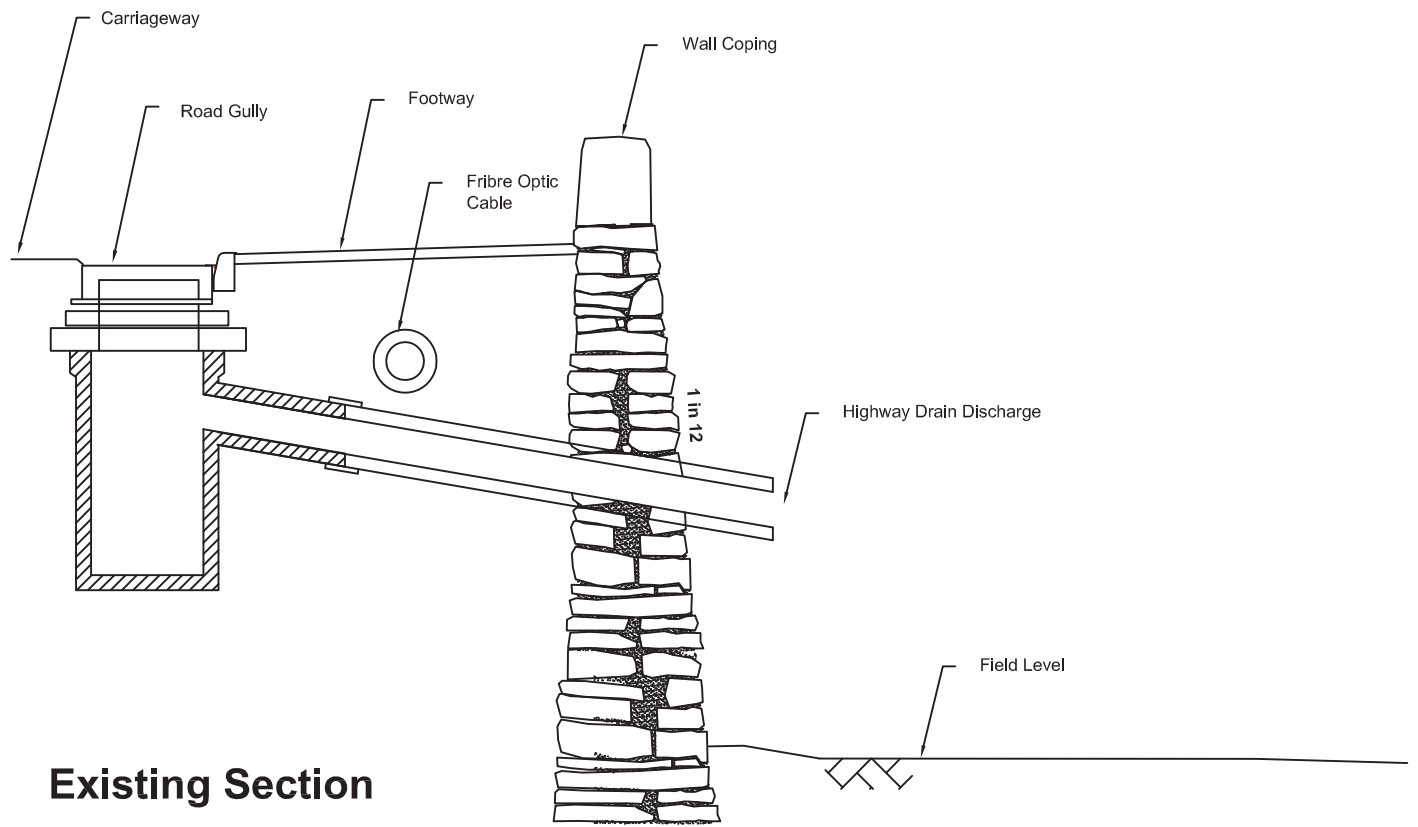


Figure 03 Reproduction of 1857 Rug Estate Map (Caernarfon Archives ref XD2/3941). Note the presence of Glanalwen Saw Mill (Feature 3) in Field 170





A5 Cymru Gate Retaining Walls Typical Section Before & After



Asiant Cefnffyrdd Gogledd a Chanolbarth Cymru
North & Mid Wales Trunk Road Agent



Yn gweithio ar ran
Llywodraeth Cymru
Working on behalf of the
Welsh Government

Drg No S204/SK E
Dec'2013

SUMMARY

Gwynedd Archaeological Trust (GAT) was commissioned by Ymgynghoriaeth Gwynedd Consultancy (YGC) to complete an archaeological assessment in advance of proposed structural works to a 560m length of wall on the A5 trunk road between Corwen and Cerrigydrudion, Conwy County Borough Council.

The proposed works are designed to rectify structural failures and will include the replacement of the existing retaining wall with a taller structure, along with footpath and drainage system alterations. The existing embankment will be replaced by a wider embankment that will extend further north.

The proposed scheme zone is characterised principally by the A5 trunk Road and associated retaining wall and embankment. The retaining wall itself was constructed between 1824 and 1826 as part of the London to Holyhead road, later renumbered as the A5. The general alignment of this road follows the postulated route of both the Roman Road from Rhyn Park to Caer Llugwy and the medieval road from Corwen to Cerrigydrudion.

A total of 6No archaeological features were identified within the scheme route and immediate environs: these included the affected portion of retaining wall and trunk road, an original London to Holyhead road milestone and former Glanalwen Saw Mill outbuildings. A former tollgate house and the Glanalwen Saw Mill mill race were also in immediate proximity but do not appear to be directly impacted by the scheme.

The potential for the identification of below ground archaeological remains on the proposed scheme is medium and a watching brief should be maintained over the entire works site including areas set aside for the construction of site compounds. Specific mitigation is recommended for the retaining wall, milestone and trunk road, including detailed recording of the wall prior to modification and a watching brief during groundworks to record additional information. Detailed recording is also recommended for the affected Glanalwen yard buildings, followed by a watching brief during groundworks to identify any additional subsurface remains. Avoidance of the mill race and tollgate house is recommended, whilst retention in situ is also recommended for the milestone on completion of works.

1. INTRODUCTION

Gwynedd Archaeological Trust (GAT) was commissioned by *Ymgynghoriaeth Gwynedd Consultancy* (YGC) to complete an archaeological assessment in advance of proposed improvement works to a 560m length of wall on the northern side of the A5 trunk road between Corwen and Cerrigydrudion, Conwy County Borough Council (centred on NGR **SJ02204395**).

According to information within YGC document *CPF 3748 – A5 (T) East of Cymro Gate Retaining Wall Phase 1 Environmental Assessment Report Version 0.01*, the scheme is designed to rectify structural failures along the following sections:

- Nant Heulog Retaining Wall A5 170 W87
- Cymro Gate Retaining Wall A5 170 W84
- East of Cymro Gate 3 Retaining Wall A5 170 W83
- East of Cymro Gate 2 Retaining Wall A5 170 W82
- East of Cymro Gate 1 Retaining Wall A5 170 W75

These works involve the placement of an earth embankment behind the northern side of these structures to provide lateral support. The work will extend 10 metres beyond the A5 trunk road on its northern side and will require ground clearance and a scrape back of existing topsoil (down to 300mm), the import of new embankment with a rock-based substrate and the reinstatement of topsoil. The existing retaining wall will be replaced, along with the footpath and drainage system. The proposed works are detailed on scheme drawings S/206/DT 001 (Draft) and S204/SK E (Figures 05 and 06 respectively).

Scheme drawing S/206/DT 001 (Draft) includes a plan of the scheme with chainage marker points every 10m along the length of the scheme (from chainage CH000 to CH0560). The included section data suggests that the improvement works on the carriageway will include:

- A concrete cap to the existing retaining wall to provide footing for the proposed retaining wall;
- An in-situ concrete cast against the existing wall where the capping beam cantilevers over the existing wall; the concrete will start 200mm below the existing ground level with a minimum thickness of 100mm;
- A new dressed face random rubble retaining wall on the same alignment as the existing wall, built to a standard height of 1000mm (c.350mm higher than the existing wall) and a width of 535mm;
- A new 1.30m wide footpath parallel to the proposed wall (on the roadside);
- A new precast sectional gully drainage system that would incorporate the existing gully and pipes where possible;
- A 1.5:1 embankment sealing the existing embankment profile, with a nominal 2.0m wide and 0.5m deep bench at the base at the embankment dug into the existing ground level.

Due to the varying topography, the proposed embankment at CH0370 (c.370m from scheme start point) will be less extensive and a new gully will not be excavated but the existing gully used. A similar approach will be used at CH0390 (c.390m from scheme start point), except the embankment will be more extensive and of similar scale to that used elsewhere on the scheme. At CH440 (c.440m from scheme start point), a manhole chamber is proposed that will form part of the embankment; the chamber will measure 1.5m in width and will be fed by a connector pipe that will run from the roadside gully channel and underneath the retaining wall to the chamber. A concrete headwall will be built at the base

of the embankment where it meets a stream bed and a post and rail fence will run from the stream bank to the headwall.

An entrance to a local field is also proposed at chainage CH0420 (c.420m from scheme start point). The entrance measures up to 7.5m wide and 4.5m in length and will include a new gate and fencing.

2. DESIGN BRIEF AND SPECIFICATION

Gwynedd Archaeological Planning Services (GAPS) has not prepared an archaeological brief for this scheme but YGC has requested an archaeological assessment, including a desk based study and walkover survey of the proposed scheme.

Gwynedd Archaeological Planning Services will monitor the works and will be responsible for advising the Local Authority on the suitability of the work recommended and subsequently undertaken.

A desk-based assessment is defined as ‘a programme of assessment of the known or potential archaeological resource within a specified area or site on land, inter-tidal zone or underwater. It consists of a collation of existing written, graphic, photographic and electronic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional, national or international context as appropriate’. (*Standard and Guidance for Archaeological Desk-based Assessment*, IFA 2001{revised 2012}, 2). This report follows the criteria laid down in this guidance document.

The aims of the assessment as given in the specification are:

- to identify and record the cultural heritage within the defined study area;
- to evaluate the importance of what has been identified;
- to recommend ways in which impact upon the cultural heritage can be avoided or minimised.

To comply fully with the aims expressed above it can be necessary to undertake a programme of Field Evaluation following the Desktop study and Field Visit. This is because some sites cannot be assessed by desktop or field visit alone, and additional fieldwork is therefore required. This typically takes the form of geophysical survey or trial excavation, although measured survey is also a possible option. A full programme of assessment and evaluation may therefore consist of:

- Desktop study
- Field walkover
- Initial report
- Field evaluation
- Draft report
- Final report

This phase of the project concerns the first three phases, and recommendations are made concerning further archaeological evaluation or mitigation.

3. METHODS AND TECHNIQUES

3.1 Desk top study

The desktop study comprised the consultation of maps, documents, computer records, written records and reference works, which form part of the Historic Environment Record (HER), located at Gwynedd Archaeological Trust (GAT), Bangor. The HER located at the Clwyd Powys Archaeological Trust (CPAT), Welshpool was also consulted. Information about listed buildings was consulted by means of the CARN (Core Archaeological Index), which is the online index of the Royal Commission on Ancient and Historic Monuments, Wales (RCAHMW), Aberystwyth.

The desk-based archaeological assessment studied a 2.5km wide radius around the scheme, with the field walkover survey subsequently targeting a 200m zone from the centre line of the road and associated retaining wall.

Sites, buildings and find spots listed in the regional HERs were identified (Fig. 2), with PRN referring to the unique Primary Record Number given to each individual site. Those sites, buildings and find spots listed in CARN were identified, with NPRN referring to the unique National Primary Record Number given to each individual site.

3.2 Field Search

The field search was undertaken on 29th April 2013, when the area of the proposed works and environs were examined. Notes were taken and a photographic record was made. The weather was overcast, and ground conditions were good underfoot.

3.3 Report

The available information was synthesised to give a summary of the archaeological and historic background and of the assessment and recommendations, as set out below. The separate features, their evaluation and recommendations are listed separately, and a summary of the overall assessment of the area is given at the end.

The criteria used for assessing the value of features was based upon those used by the Secretary of State for Wales when considering sites for protection as scheduled ancient monuments, as set out in the Welsh Office circular 60/96. The definitions of categories used for impact, field evaluation and mitigation are set out in Appendix 2.

4. ARCHAEOLOGICAL RESULTS

4.1 Geology and Topographic description

The scheme is situated on the southern bank of the Afon Alwen, on low lying ground close to the valley floor at a height of about 180m OD, in an area of pasture which forms part of the extensive Rûg Estate (Figure 01).

The surrounding land slopes gently from the south from a height of about 235m OD, to where it meets the terrace on which the A5 trunk road was constructed in the nineteenth century. Below the A5 trunk road retaining wall, the ground is crossed by a network of drainage channels which run north towards the Afon Alwen.

The drift geology is mainly Alluvial, consisting of clay, silt, sand and gravel over Penstrowed Grits Formation Sandstone. <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>. A considerable depth of previously unrecorded silts was found during construction of the A5 trunk road improvement at Pont Melin Rûg (Nichol and Reynolds 2002, 247-256) 2.5km to the east.

4.2 Archaeological and historical background

4.2.1. Prehistoric and Roman sites

The area around Cymro Gate has some clear evidence for land use in the prehistoric period. A stone mace head was found on the Maesmor Estate in the mid nineteenth century (PRN 3278; **SJ 01004400**) 1.1km north west. It is of a very unusual, decorative type and so far is without parallel from the region.

Settlements have been recorded at Nant Heulog (PRN 3288; **SJ01704360**) and Ty'n y Ffridd (PRN 5774; **SJ01704350**) both 0.6km south west. Both these sites were not recognised until identified through aerial photography in 1979 and 1993 respectively, and neither has yet been excavated. Both appear on morphological grounds to date to the late Iron Age or early Roman Period.

Ty'n y Wern Hillfort (NPRN 309060; **SJ03404415**) is a defended enclosure which lies 1.2km north east of the scheme and was probably occupied at the same time as the settlements at Nant Heulog and Ty'n y Ffridd. This site has been significantly damaged by agricultural activity, and now appears as a cropmark.

A Roman Road from Rhyn Park (**SJ03747029**) to Caer Llugwy (**SH74605725**) is suggested to run in the valley of the Afon Alwen. The suggested line of this road is along the modern A5 trunk road between two locations where remains of the road embankment were identified (PRN 93612; **SJ03454354**) 1.2km east and PRN 93613; **SJ02024401**) 220m west. A Roman coin hoard (PRN 3274) was found at Bryndedwydd (**SJ02104490**), 0.9km north, suggesting some degree of cash economy in the area during the Roman period.

4.2.2 Medieval

An early medieval square barrow cemetery was identified close to Druid in 1975 (NPRN 404711; **SJ03874339**), 1.7km south east. The cemetery respected the line of the Roman Road which ran past it, suggesting the road network was still in use during this time, including the section identified above.

A mound in the garden of Maesmor Hall is scheduled as a medieval motte (PRN 100798; **SJ01284458**) DE 149), 1.1km north west, although the shape and morphology suggest that if it was originally a castle mound, it has been heavily modified subsequently and may well be a post-medieval garden feature.

4.2.3 Post-Medieval and Modern

The large Rûg estate, which currently covers 12,500 acres and includes the scheme area, influenced the character of the surrounding landscape in the post medieval period. Later medieval farms associated with this estate are located at Plas yn Ddol (NPRN 3026; **SJ03234371**) 1km south east and Blaen y Ddol (PRN 16977; **SJ02704450**) 1km south east. The Melin Maerdy Corn Mill, 0.6km northwest (NPRN 24884; **SJ01874447**) also part of the estate survives intact, although unused since 1932.

In 1810 a Parliamentary Select Committee was established to inquire into the possible routes that could be improved from London to Holyhead (Quartermaine *et. al.* 2003: 3). The route selected is still in use as the A5 trunk road, although sections have been bypassed or upgraded as required, including a section at Ty Nant, (**SJ02993443**) 2.6km north west which has now been scheduled as an ancient monument (DE 287).

The area of the scheme falls within a construction 'Lot' known as T (Telford) 13 (Quartermaine *et. al.* 2003: 46). A survey carried out in 1999 by Lancaster University Archaeological Unit identified that the toll house at Cymro Gate survives but has been much altered by rendering and the insertion of modern windows (Quartermaine *et. al.* 2003: 161). To the south of this the survey found that walling constructed as part of the A5 construction continues only intermittently and in varying condition, although retaining walls about 3m high survive well on the north side (Quartermaine *et. al.* 2003: 61-63). The retaining walls mentioned are the retaining walls which are the subject of this archaeological assessment.

Parliamentary Papers from 1817 to 1836 detail the work carried out between the coaching inn at Cernioge (**SJ06000500**) and Corwen (**SJ07844347**) to improve the quality of the road (Quartermaine *et. al.* 2003: 140-141) and the revenues of the new toll house at Cymro Gate (known as Druid Gate in the Parliamentary Papers) is also recorded (Quartermaine *et. al.* 2003 145 -146). The Milestone within this section (Milestone 63) was recorded during the survey (Quartermaine *et. al.* 2003: 163) as being an original milestone in its original location.

Landowner	Occupier	No. on Plan	Name and Description of lands and premises	State of Cultivation	Area in Statute Measure A R P
			<i>Ty Isa</i>		
Vaughan, Sir R.W. Bart	Evan Jones	17	Llindir		3 2 4
		18	Gwerglodd		3 3 36
		19	Dol Gain		6 3 39
		20	Fridd fawr waste		4 3 21
		21	Cae'r Plas		12 3 31
			<i>Penisa'r Mynydd</i>		
	John Davies	22	Werglodd		3 3 2
		23	Do		3 - 22
		24	-		2 2 6
		26	Llechwedd Bach		3 28
		27	Llechwedd Mawr		1 1 25
		28	Cae Michael		1 3 4
			<i>Ty Isa</i>		
	Evan Jones	29	Ffrydd Fawr		9 - -
		30	Ffridd Bach		7 2 34
		31	Wern		10 2 27
	Turnpike Trust	25	Cymro Gate Turnpike Gate		-

The above table is the tithe apportionment for the parish of Llanfor, assessed in 1847, with the field names, the landowners and occupiers noted, for the fields adjacent and close to the proposed works at Cymro Gate. The field numbers relate to those shown on the 1847 tithe map (Figure 02, Gwynedd Archives, Caernarfon). The landowner, Sir R.W. Vaughan is the proprietor of the Rûg Estate.

The London to Holyhead road received financial support from Parliament until 1851 (Quartermaine *et. al.* 2003: 4), by which time the expanding railway network connecting these two locations allowed for more rapid travel on them than by road.

The scheme area lies within land which was tenanted to Penisa'r Mynydd farm during the mid-nineteenth century and included the Rûg estate Saw Mill of Glanalwen on the south east bank of the river, with the mill being present on a map dated 1857 (Figure 03, Gwynedd Archives, Dolgellau XD2/3941).

The Glanalwen Saw Mill NPRN 40911; **SJ02504397**) is now demolished, although some of the mill machinery, mill race, outbuildings and mill weir all survive in good condition between 1m and 20m south of the proposed scheme.

4.3 Statutory and non-statutory designations

Sites on the Gwynedd and Clwyd-Powys HER and the Royal Commission for the Ancient and Historical Monuments of Wales NMR within 2.5km of the study area are listed in Appendix 1. One of the sites is a Scheduled Ancient Monument (SAM), and the numbers of prehistoric and Roman sites in the vicinity of the scheme indicate that the area was an important one for settlement activity. These are listed in Appendix 1. There are seven Listed Buildings within 2.5km of the scheme, which are of either medieval or post-medieval date, and other medieval and post-medieval sites are believed to exist in the area.

The scheme is not located within a landscape of outstanding or special historic interest, as defined in Cadw's 1998 *Register of Landscapes of Outstanding Historic Interest in Wales*.

Natural Resources Wales own a fish hatchery at Maerdy which when operational discharges into the Afon Ceirw, 300m from its confluence with the Afon Alwen. This confluence is 200m north west of the scheme.

4.4 The Archaeological Survey (Fig. 2)

The feature listed below (located on Fig. 2) was identified during the survey, with recommendations for further assessment and mitigatory measures, where appropriate. The recommendations reflect the information currently provided by YGC, and assume impact only within the development zone defined by YGC. Any change to the boundary of the proposed development area will require the recommendations below to be changed also.

Feature 1 A5 Trunk Road Retaining Wall (Plates 1 - 8)

SJ 02533 43861 to SJ 02102 44062

Period: Post-medieval

Category: B Impact: Considerable

The scheme consists of the repair and / or rebuilding and or / replacing of up to 560m of the current retaining wall to the north of the A5 trunk road between **SJ0253343861** and **SJ0210244062**. The wall was originally constructed between 1824 and 1826 (Quartermaine *et. al.* 2003: 140-141).

The retaining wall was examined during the archaeological assessment and revealed several phases of wall rebuilding, ranging in materials, quality and date from the 19th century to the 21st century.

YGC drawings S/206/DT 001 (Draft) and S204/SK E indicate that the proposed retaining wall will replace the existing wall and this will remove existing structural phasing for the current retaining wall and raise the current height of the wall. The proposed retaining wall will measure 1000mm in height and 535mm in width.

Recommendations for further assessment: *Detailed Recording of the existing retaining wall prior to main works.*

Recommendations for mitigatory measures: *Watching Brief during main works. Sympathetic design of the replacement structure.*

Feature 2 London – Holyhead Road Milestone 63 (Plates 9 - 10)

SJ 0212 4404

Period: Post-medieval

Category: A Impact: Considerable

A standard Telford milestone in its original location is now incorporated into the current retaining wall. The milestone specification issued by Thomas Telford for the London – Holyhead road called for a pillar of Limestone from Red Wharf Bay, Anglesey which was 2.1m in height, of which 0.61m were to be buried as a foundation (Quartermaine *et. al.* 2003: 37-38). The text on the plate on the milestone reads: HOLY-HEAD 63 CERNIOGE 9M-2F CORWEN 3M-6F.

The milestone is located c.520m along the scheme route at chainage CH520.

The milestone currently stands 0.65m tall, suggesting it has not been raised up as the road surface has been subsequently re-laid. The milestone would not have originally been incorporated into the retaining wall, suggesting the retaining wall has been realigned at least once since its original construction. It is recommended that the milestone is not subsumed by the proposed works and that appropriately maintained in line with the milestone restoration programme (LUAU 2000)

A watching brief is recommended during main works to monitor against any direct or indirect scheme impact.

Recommendations for further assessment: Detailed Recording prior to main works.

Recommendations for mitigatory measures: Watching Brief during main works/retention in situ.

Feature 3 Glanalwen Saw Mill Buildings (Plates 11 - 14)

SJ 0248 4389

Period: Post-medieval

Category: C Impact: Considerable

The Glanalwen Saw Mill (NPRN 40911; **SJ02504397**) was built during the mid-nineteenth century by the Rûg Estate as a saw mill and was in use until at least the mid-twentieth century. The is now demolished, although some of the mill machinery, mill race, outbuildings and mill weir all survive in good condition between 1m and 20m south of the proposed scheme. The mill was recorded by the RCAHMW prior to demolition.

Substantial concrete foundations survive of the latest phase of the Glanalwen saw mill: these appear to include a ramped loading platform and storage facility that were part of the timber yard visible on the 2nd Edition 25" County Series Ordnance Survey map of the area (Denbighshire Series Sheet XI.2).

Based on the information within YGC scheme drawing S/206/DT 001 (Draft), the surviving yard structures will be impacted by the scheme as they are located close to the retaining wall. A structure, recorded on scheme drawing S/206/DT 001 (Draft) as a 'Concrete pump house' is constructed directly against the wall).

As it appears that they cannot be avoided to accommodate the scheme, it is recommended that these features are recorded in advance of the works and all scheme groundworks at this location are subsequently monitored to allow additional recording of subsurface remains, particularly foundations.

Recommendations for further assessment: Detailed Recording prior to main works.

Recommendations for mitigatory measures: Watching Brief during main works/additional recording.

Feature 4 Glanalwen Saw Mill Mill Race (Plates 15 - 18)

SJ02484397 to SJ02174415

Period: Post-medieval

Category: C Impact: Possible

The 493m long mill race which fed the Glanalwen saw mill (Feature 3) survives relatively intact from NGR SJ02484397 to SJ02174415. Constructed as a lined channel, it has been broken through by a series of water channels diverting water off the A5. The drain hole to allow the water to be diverted back into the Afon Alwen for maintenance of the race and the mill still survives.

It appears from YGC drawing S/206/DT 001 (Draft) that the feature will not be directly impacted by the embankment. It is recommended that indirect impact from groundworks traffic and material storage is avoided and that this is monitored as part of the general archaeological watching brief mitigation programme.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Avoidance/Watching Brief during main works in the area.

Feature 5 Tollgate House (Cymro Gate) Grade II Listed Building 4663

SJ02204395

Period: Post-medieval

Category: A Impact: None

This tollgate house was constructed for the London to Holyhead Road. According to Quartermaine, J. et al. 2003, “(the tollgate house) has been much altered by rendering and the insertion of modern windows” (Quartermaine *et. al.* 2003: 61) and is now a private dwelling.

According to information in YGC drawing S/206/DT 001 (Draft), the tollgate house will be located on the opposite side of the retaining wall/embankment works (location: Chainage CH400) and will not be impacted by the works.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Avoidance.

Feature 6 A5 Trunk Road / London to Holyhead Road / Probable Medieval Road from Corwen to Cerrigydrudion / Probable Roman Road from Rhyn Park to Caer Llugwy

SJ 02533 43861 to SJ 02102 44062

Period: Roman to Post-medieval

Category: A Impact: Possible

The A5 trunk road appears to lie in part on the probable Roman Road from Rhyn Park to Caer Llugwy (from Chainage 50 to Chainage 350) (CPAT PRN 93612 and PRN 93613). The probable medieval road from Corwen to Cerrigydrudion may either run from Chainage 50 to Chainage 350 or from Chainage 50 to Chainage 550. This may be overlain either in part or completely by the later London to Holyhead and A5 trunk road.

According to information in YGC drawing S/206/DT 001 (Draft), it is not currently clear how much of the earlier road surfaces will be impacted. The London to Holyhead milestone is still in its original location and would have marked the edge of the road, and it is unknown whether a pavement was specified for this assigned Lot (T13) of works (Quartermaine *et. al.* 2003: 46). There is now a modern pavement and the milestone has been subsumed by this and online road improvements works, which may suggest that the earlier pavement and road surfaces may be extant or part extant beneath the current pavement and road.

The proposals include replacing the footpath and the existing sectional gully system which runs parallel to the footpath. The existing services beneath the footpath will be retained. It is possible therefore that the groundworks associated with replacing the footpath and gully system will impact or expose earlier pavement and or road surfaces. To mitigate this, a watching brief is recommended during groundworks associated with replacement works. There is also potential for foundation level works associated with the wall reinstatement to expose earlier phases of pavement and or road.

Recommendations for further assessment: None

Recommendations for mitigatory measures: Watching Brief during footpath, gully works and wall reinstatement works.

5. SUMMARY OF ARCHAEOLOGICAL POTENTIAL

5.1 Location Summary

The scheme is situated on the southern bank of the Afon Alwen, on low lying ground close to the valley floor at a height of about 180m OD, in an area of pasture which was part of the extensive Rûg Estate. The surrounding land slopes gently from the south from a height of about 235m OD, to where it meets the terrace on which the A5 trunk road was constructed in the nineteenth century. Below the A5 trunk road retaining wall, the ground is crossed by a network of drainage channels which run north towards the Afon Alwen.

5.2 Environmental Remains and Soil Morphology

The land on which the works are due to take place are improved pasture, and it is thought the potential for the survival of environmental remains is low to medium. The drift geology is mainly Alluvial, consisting of clay, silt, sand and gravel over Penstrowed Grits Formation Sandstone. <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>.

5.3 Artefactual Potential

The potential for the survival of medieval or earlier artefacts is low to medium, given the results of previous archaeological excavations in the valley in similar soils at Druid square barrow cemetery (NPRN 404711).

6. SUMMARY OF RECOMMENDATIONS

6.1 Summary of Specific Recommendations

Number	Name	Importance	Impact	Recommendation for further assessment	Mitigation measures
1	A5 Trunk Road Retaining Wall (560m long section)	B	Considerable	Detailed Recording of the existing retaining wall prior to main works	Watching Brief during main works. Sympathetic design of the replacement structure
2	London – Holyhead Road Milestone 63	A	Considerable	Detailed Recording prior to main works	Watching Brief during main works/retention in situ
3	Glanalwen Saw Mill Buildings	C	Considerable	Detailed Recording prior to main works	Watching Brief during main works/retention in situ
4	Glanalwen Saw Mill Race	C	Possible	None	Avoidance/Watching Brief during main works in the area
5	Tollgate House (Cymro Gate) Grade II Listed Building 4663	A	None	None	Avoidance
6	A5 Trunk Road / London to Holyhead Road / Probable Medieval Road from Corwen to Cerrigydrudion / Probable Roman Road from Rhyn Park to Caer Llugwy	A	Possible	None	Watching Brief during footpath, gully works and wall reinstatement works

6.2 General Recommendations

In addition to the specific recommendations given above the following scheme wide general recommendations are made.

- The potential for the identification of below ground archaeological remains on the proposed scheme is medium and a **watching brief** should be maintained over the entire works' site during intrusive groundworks, including areas set aside for the construction of site compounds (Appendix 2).
- It is recommended that any of the drainage channels which carry surface water off the A5 trunk road and across the field to the north to discharge into the Afon Alwen should be subject to the watching brief maintained over the entire works site (Appendix 2).

7. CONCLUSIONS

The archaeological assessment of the proposed A5 Cymro Gate Retaining Wall scheme identified that it was situated within a landscape of medium to high archaeological potential for all periods, and includes one SAM within 1.25km of the site. The landscape contains sites from the prehistoric to post-medieval medieval periods, of which the Early Medieval square barrow cemetery at Druid has been excavated archaeologically.

The proposed scheme zone is characterised principally by the A5 trunk road and associated retaining wall and embankment. The retaining wall itself was constructed between 1824 and 1826 during the construction of, and improvements to, the London to Holyhead road. Documentary evidence for the scheme dates to between 1817 and 1836, including the provision of a Toll House and Gate immediately opposite the retaining wall. The land was the property of the Rûg Estate and a Saw Mill and associated Mill Race was constructed to the north of the road during the Mid Nineteenth Century. The general alignment of this road follows the postulated route of both the Roman Road from Rhyn Park to Caer Llugwy and the medieval road from Corwen to Cerrigydrudion.

A total of 6 No archaeological features were identified within the scheme route and immediate environs: these included the affected portion of retaining wall and trunk road, an original milestone and former Glanalwen Mill outbuildings. A former tollgate house and Glanalwen mill race were also in immediate proximity but do not appear to be directly impacted by the scheme.

The assessment identified that the retaining wall area has been modified on several occasions since its original construction and contains within its fabric a record of the type of works carried out along the London to Holyhead Road (later renumbered as the A5 trunk road), which has now been lost at other sites where previous improvement works have been carried out. The Glanalwen Saw Mill expanded from its original location close to the south bank of the Afon Alwen and came to occupy a much larger area which included a timber storage yard and loading facilities. These expanded facilities reached northwards to the road retaining wall and in at least one case were constructed against it.

The potential for the identification of below ground archaeological remains on the proposed scheme is medium and a **watching brief** should be maintained over the entire works site including areas set aside for the construction of site compounds. Specific mitigation is recommended for the retaining wall, milestone and trunk road, including **detailed recording** of the wall prior to modification and a **watching brief** during groundworks to record additional information. **Detailed recording** is also recommended for the affected Glanalwen yard buildings, followed by a **watching brief** during groundworks to identify any additional subsurface remains. **Avoidance** of the mill race and tollgate house is recommended, whilst **retention in situ** is also recommended for the milestone on completion of works.

8. ARCHIVE

The archive consists of historic maps, plans and aerial photographs, along with notes and digital images taken on the field visit. The archive is currently held by GAT under project code **G2321**.

One copy of the bound report will be sent to the GAPS archaeologist, and a further copy sent to the HER Archaeologist at the curatorial division of Gwynedd Archaeological Trust, Bangor, for deposition in the Regional HER. A copy of the report will be provided to the National Monument Record, Royal Commission on the Ancient and Historic Monuments of Wales, Aberystwyth.

9. REFERENCES AND OTHER SOURCES CONSULTED

IFA 1994 *Standard and Guidance for Archaeological Desk-based Assessment* (rev. 2001 and 2008).

Lancaster University Archaeological Unit 2000 *Telford's Holyhead Road (A5), milestone restoration*, Unpublished Report.

Nichol, D, and Reynolds, J.M., 2002 Application of reflection seismology to foundation investigations at A5 Pont Melin Rûg, North Wales, *Quarterly Journal of Engineering Geology and Hydrogeology*, 35, 247-256.

Ymgynghoriaeth Gwynedd Consultancy document CPF 3748 – A5 (T) East of Cymro Gate Retaining Wall Phase 1 Environmental Assessment Report Version 0.01.

Ymgynghoriaeth Gwynedd Consultancy drawings S/206/DT 001 (Draft) and S204/SK E.

Gwynedd Archives, Dolgellau

1847 Tithe Map, Llanfor Parish

Gwynedd Archives, Caernarfon

1857 Rûg Estate Map XD2/3941

Gwynedd Archaeological Trust Historic Environment Record

Ordnance Survey maps:

1875 1st Edition 25" County Series Ordnance Survey map of the area (Denbighshire Series Sheet XI.3

1900 2nd Edition 25" County Series Ordnance Survey map of the area (Denbighshire Series Sheet XI.3

1913 3rd Edition 25" County Series Ordnance Survey map of the area (Denbighshire Series Sheet XI.3

Clwyd Powys Archaeological Trust Historic Environment Record

RCAHMW Aberystwyth Aerial Photographs

C841282 AP_2005_1613 Ty'n-y-wern Hillfort

C859356 AP_2006_3971 Ty'n-y-Wern Hillfort

C876208 AP_2006_0702 Druid Square Barrows



Plate 01 - View of the proposed works location from Chainage 330 westwards towards Chainage 560. The retaining wall to be replaced is on the right hand side of the image. Cymro Gate Tollhouse is in the centre left of the image.



Plate 02 - The north face of the retaining wall at Chainage 140 showing different phases of repair identified during the archaeological assessment. Visible to the right of the ranging pole is the current road surface water drainage scheme at this point.



Plate 03 - The north face of the retaining wall at Chainage 160 showing the different phases of repair identified during the archaeological assesment. Visible to the right of the ranging pole is the current road surface water drainage scheme at this point.



Plate 04 - The north face of the retaining wall at Chainage 170 showing the different phases of repair identified during the archaeological assessment. Visible to the right of the ranging pole is the current road surface water drainage scheme at this point, and appears to be an original Telford specification drain.



Plate 05 - Road embankment constructed against the face of the retaining wall at Chainage 290. Not indicated on Scheme Drawing S/206/DT 001 (DRAFT) as an embankment.



Plate 06 - The north face of the retaining wall at Chainage 350 showing the different phases of repair identified during the archaeological assessment. Visible to the right of the ranging pole is the current road surface water drainage scheme at this point, and appears to be an original Telford specification drain fed into by modern drainage.



Plate 07 - The north face of the retaining wall at Chainage 400 showing different phases of repair identified during the archaeological assessment. Visible to the left of the ranging pole is the current road surface water drainage scheme at this point.



Plate 08 - The north face of the retaining wall at Chainage 530 showing different phases of repair identified during the archaeological assessment. In the centre of the image at Chainage 550 is the culvert under the A5(T) carrying Nant Heulog from south to north to discharge into the Afon Alwen.



Plate 09 - London to Holyhead road Milestone 63 in its original location at Chainage 520. The Milestone has now been subsumed by an additional 0.84 metres since its placement. Different phases of wall replacement and repair are visible to the left and right of the Milestone.



Plate 10 - London to Holyhead road Milestone 63 in its original location at Chainage 520. The ranging pole is in the same location as Plate 09. The original embankment can be seen to the left of the wall.



Plate 11 - Location of Glanalwen Saw Mill immediately north of the Afon Alwen. The Mill wheel pit and associated machinery drive wheel can be seen to the left of the image.



Plate 12 - The north face of the retaining wall at Chainage 120 showing different phases of repair identified during the archaeological assessment. The open fronted concrete structure is recorded on Scheme Drawing S/206/DT 001 (DRAFT) as 'Concrete pump house'.



Plate 13 - View westwards of the Post-Medieval structures to the north of the retaining wall between Chainage 70 and Chainage 120.



Plate 14 - View southwards of the Post-Medieval structures to the north of the retaining wall between Chainage 70 and Chainage 120.



Plate 15 - View westwards of the Glanalwen Saw Mill Mill Race to the east of its take off point from the Afon Alwen. The remains of the inner stone facing of the Mill Race can be seen to the right of the ranging pole. Nant Heulog is visible entering centre left of the image to drain into the Afon Alwen and also formerly into the Mill Race.



Plate 16 - View westwards of Glanalwen Saw Mill Mill Race. The Mill Race has been cut by a road surface water drainage channel which runs from Chainage 450.



Plate 17 - Former line of the Glanalwen Saw Mill Mill Race looking eastwards at approximately Chainage 230. The ranging pole marks the approximate line of the northern edge of the Mill Race.



Plate 18 - Former line of the Glanalwen Saw Mill Mill Race. The Glanalwen Saw Mill Wheel Pit is immediately behind the photographer.

APPENDIX 1

Definitions of terms used within the report

Categories of importance

The following categories were used to define the importance of the archaeological resource.

Category A - Sites of National Importance.

Scheduled Ancient Monuments, Listed Buildings of grade II* and above, as well as those that would meet the requirements for scheduling (ancient monuments) or listing (buildings) or both.

Sites that are scheduled or listed have legal protection, and it is recommended that all Category A sites remain preserved and protected *in situ*.

Category B - Sites of regional or county importance.

Grade II listed buildings and sites which would not fulfil the criteria for scheduling or listing, but which are nevertheless of particular importance within the region.

Preservation *in situ* is the preferred option for Category B sites, but if damage or destruction cannot be avoided, appropriate detailed recording might be an acceptable alternative.

Category C - Sites of district or local importance.

Sites which are not of sufficient importance to justify a recommendation for preservation if threatened.

Category C sites nevertheless merit adequate recording in advance of damage or destruction.

Category D - Minor and damaged sites.

Sites that are of minor importance or are so badly damaged that too little remains to justify their inclusion in a higher category.

For Category D sites, rapid recording, either in advance of or during destruction, should be sufficient.

Category E - Sites needing further investigation.

Sites, the importance of which is as yet undetermined and which will require further work before they can be allocated to categories A - D are temporarily placed in this category, with specific recommendations for further evaluation. By the end of the assessment there should usually be no sites remaining in this category. In this case several areas of unknown potential have been allocated to this category.

Definition of Impact

The impact of the proposed development on each feature was estimated. The impact is defined as *none, slight, unlikely, likely, significant, considerable or unknown* as follows:

None:

There is no construction impact on this particular site.

Slight:

This has generally been used where the impact is marginal and would not by the nature of the site cause irreversible damage to the remainder of the feature, e.g. part of a trackway or field bank.

Unlikely:

This category indicates sites that fall within the band of interest but are unlikely to be directly affected. This includes sites such as standing and occupied buildings at the margins of the band of interest.

Likely:

Sites towards the edges of the study area, which may not be directly affected, but are likely to be damaged in some way by the construction activity.

Significant:

The partial removal of a site affecting its overall integrity. Sites falling into this category may be linear features such as roads or tramways where the removal of part of the feature could make overall interpretation problematic.

Considerable:

The total removal of a feature or its partial removal which would effectively destroy the remainder of the site.

Unknown:

This is used when the location of the site is unknown, but thought to be in the vicinity of the proposed works.

Definition of field evaluation techniques

Field evaluation is necessary to fully understand and assess most class E sites and to allow the evaluation of areas of land where there are no visible features but for which there is potential for sites to exist. Two principal techniques can be used for carrying out the evaluation: geophysical survey and trial trenching. Topographic survey may also be employed where sites are thought to survive as earthworks.

Geophysical survey most often involves the use of a magnetometer, which allows detection of some underground features, depending on their composition and the nature of the subsoil. Other forms of geophysical survey, including resistivity survey and ground penetrating radar might also be of use.

Trial trenching allows a representative sample of the development area to be investigated at depth. Trenches of appropriate size can also be excavated to evaluate category E sites. Trenching is typically carried out with trenches of between 20 to 30m length and 2m width. The topsoil is removed by machine and the resulting surface is cleaned by hand, recording features. Depending on the stratigraphy encountered the machine may be used to remove stratigraphy to deeper levels.

Definition of Mitigatory Recommendations

Below are the measures that may be recommended to mitigate the impact of the development on the archaeology.

None:

No impact so no requirement for mitigatory measures.

Detailed recording:

This requires a full photographic record and measured survey prior to commencement of works.

Archaeological excavation may also be required depending on the particular feature and the extent and effect of the impact.

Basic recording:

Requiring a photographic record and full description prior to commencement of works.

Strip, Map and Sample:

The technique of Strip, Map and Sample involves the examination of machine-stripped surfaces to identify archaeological remains. The stripping is undertaken under the supervision of an archaeologist. Stripping and removal of the overburden is undertaken in such a manner as to

ensure damage does not take place to surfaces that have already been stripped, nor to archaeological surfaces that have not yet been revealed.

Stripping is undertaken in as careful a manner as possible, to allow for good identification of archaeological features. A small team of archaeologists will be responsible for subsequently further cleaning defined areas where necessary. Complex sites which cannot be avoided will need to be fully excavated.

Watching brief:

This is a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, 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.

Avoidance:

Features, which may be affected directly by the scheme, or during the construction, should be avoided. Occasionally a minor change to the proposed plan is recommended, but more usually it refers to the need for care to be taken during construction to avoid accidental damage to a feature. This is often best achieved by clearly marking features prior to the start of work.

Reinstatement:

The feature should be re-instated with archaeological advice and supervision.



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