



**Cors Geirch, Mathan Uchaf,
Boduan, Gwynedd.
September 2013**



aeon archaeology

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Report no. 0022 v1.0

Archaeological Watching Brief
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Project Code: A0004.2

Date: 05/09/2013

Client: National Resource Wales

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1.0 Non Technical Summary

1.0 NON-TECHNICAL SUMMARY

Aeon Archaeology was commissioned by National Resource Wales (NRW) to carry out an archaeological watching brief as a condition of a planning application during the extraction of peat and enriched soil, in order to support a programme of conservation to restore the wetland fen habitat at Cors Geirch, Mathan Uchaf.

The archaeological watching brief at Cors Geirch, Mathan Uchaf did not identify any archaeological remains or artefacts during any part of the works. In terms of the overall contribution of the project to the regional research agenda the mitigatory works can be seen as being disappointing. However, the future potential of the marshland to retain preserved archaeological remains and to greatly contribute to the knowledge and understanding of the historical development of this part of Wales should not be overlooked. Indeed, there is a distinct likelihood that preserved archaeological material may exist at lower levels and it is recommended that if a similar project arises which enables greater depths to be observed then a similar archaeological mitigation is placed upon the project.

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2.0 Introduction and Acknowledgements

2.0 INTRODUCTION AND AKNOWLEDGEMENTS

Aeon Archaeology was commissioned by National Resource Wales (NRW) to carry out an archaeological watching brief as a condition of a planning application (ref: **C12/1176/33/MW**) during the extraction of peat and enriched soil, in order to support a programme of conservation to restore the wetland fen habitat. The site comprised an area of wetland located near Boduan, Gwynedd towards the centre of the Llyn Peninsula (centred on NGR **SH 31484 36512**) (Figure.1; Plate 1).

The proposed scheme consisted of ditch infilling, surface re-profiling, ditch diversion, and the creation of constructed wetlands at the site. Specifically, the works entailed:

- Temporary re-routing of spring water to allow easier working conditions
- Permanent diversion of the main drain
- Ditch infilling of the main drain
- Removal of and re-profiling of agriculturally improved surface soils and peat to expose suitable topography and substrate
- Re-connection of 3 spring fed streams across the excavated surface
- Construction of 3 reed bed water treatment systems (constructed wetlands) which will treat the spring water prior to irrigating the new bare peat surfaces.
- Re-grassing of agricultural track post works.

An archaeological desk-based assessment was carried out by Aeon Archaeology in January 2013 (Aeon report 0003) that identified nine sites of archaeological interest within the site boundary, as detailed below. These sites are depicted on figure 1.

Table 1. Archaeological features

Number	Name	Primary Reference Number (PRN)	NGR
1	Field boundary ditch	36368	SH 31528 36570
2	Field boundary ditch	36369	SH 31687 36292
3	Gravel island and area of peat cutting	36370	SH 31594 36447
4	Gravel island	36371	SH 31255 36591
5	Field boundary dyke	36372	SH 31386 36415
6	Probable peat-cutting machinery	36373	SH 31519 36532
7	Field boundary ditch	36374	SH 31217 36689
8	Trackway	36375	SH 31504 36556
9	Trackway	36376	SH 31759 36425

The following people and organisations are thanked for their help and contribution to the project.
Dyfed Jones of NRW; Justin Hanson of NRW; Dewi James of G.H. James Cyf; and Jenny Emmett of the Gwynedd Archaeological Planning Service (GAPS).

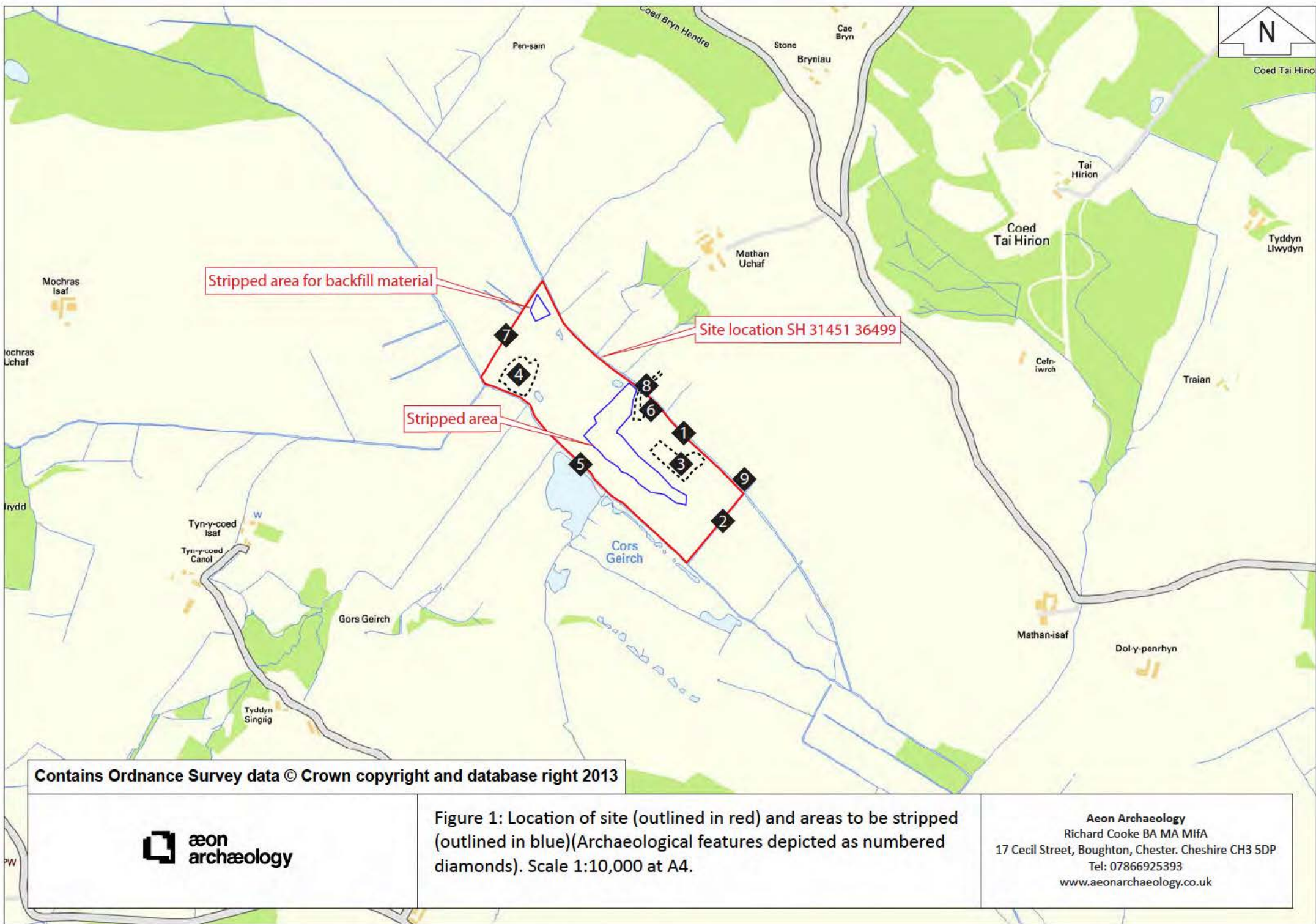




Plate 01: View across site prior to stripping, from the south.



3.0 Project Aims

3.0 PROJECT AIMS

The aim of the works was to monitor and where relevant characterise the known, or potential, archaeological remains uncovered during the removal of enriched soil at the site.

A design brief was not produced by GAPS for the archaeological watching brief, however recommendations were made in the desk-based assessment (Aeon Archaeology report 0003) for an initial intensive watching brief during stripping and in vicinity of the trackway feature 8 (PRN: 36375). This was then to be scaled down to a partial watching brief if limited or no archaeological remains were uncovered.

The broad aims of the archaeological watching brief were:

- To determine, as far as is reasonably possible, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains on the site, the integrity of which may be threatened by the site works.
- To assess the degree of archaeological survival of buried deposits of archaeological significance.

The detailed objectives of the archaeological watching brief were determined to be:

- Insofar as possible within methodological constraints, to explain any temporal, spatial or functional relationships between the structures/remains identified, and any relationships between these and the archaeological and historic elements of the wider landscape.
- Where the data allows, identify the research implications of the site with reference to the regional research agenda and recent work in Gwynedd.

An Archaeological Project Design (appendix II) was written by Aeon Archaeology and submitted to GAPS in April 2013. This formed the basis of a method statement submitted for the work. The archaeological watching brief was undertaken in accordance with this Project Design.

The management of this project has followed the procedures laid out in the standard professional guidance *Management of Archaeological Projects* (English Heritage, 1991), *Management of Research Projects in the Historic Environment Project Manager's Guide* (English Heritage 2006), and in the Institute for Archaeologists *Standard and Guidance for an archaeological watching brief* (1994 rev. 2001 and 2008). Five stages are specified:

- Phase 1: project planning
- Phase 2: fieldwork
- Phase 3: assessment of potential for analysis and revised project design
- Phase 4: analysis and report preparation
- Phase 5: dissemination

The current document reports on the phase 4 analysis and states the means to be used to disseminate the results. The purpose of this phase is to carry out the analysis identified in phase 3 (the assessment of potential phase), to amalgamate the results of the specialist studies, if required, with the detailed site narrative and provide both specific and overall interpretations. The site is to be set in its landscape context so that its full character and importance can be understood. All the information is to be presented in a report that will be held by Gwynedd Historic Environment Record so that it can be

accessible to the public and future researchers. This phase of work also includes archiving the material and documentary records from the project.



4.0 Methodology

4.0 METHODOLOGY

4.1 Watching Brief

(Reproduced from IFA. 2001. *Institute for Archaeologists 1994 rev. 2001 and 2008 Standard and Guidance for an archaeological watching brief*)

The definition of an archaeological watching brief 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.

This definition and standard do not cover chance observations, which should lead to an appropriate archaeological project being designed and implemented, nor do they apply to monitoring for preservation of remains *in situ*.

An archaeological watching brief is divided into four categories according to the IFA. 2001. *Institute for Archaeologists 2001 Standard and Guidance for an archaeological watching brief*:

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

An intensive watching brief was maintained during the initial excavation of the enriched soil and during excavations in proximity to trackway feature 8 (PRN: 36375). The watching brief was then scaled down to a partial watching brief during excavation across the rest of the site.

4.2 Data Collection from Site Records

A database of the site photographs was produced to enable active long-term curation of the photographs and easy searching. The site records were checked and cross-referenced and photographs were cross-referenced to contexts. These records were used to write the site narrative and the field drawings and survey data were used to produce an outline plan of the site.

All paper field records were scanned to provide a backup digital copy. The photographs were organised and precisely cross-referenced to the digital photographic record so that the Gwynedd Historic Environment Record (HER) can curate them in their active digital storage facility.

4.3 Artefact Methodology

All artefacts were to be collected and processed including those found within spoil tips. Finds numbers would be attributed and they would be bagged and labelled as well as any preliminary identification taking place on site. After processing, all artefacts would be cleaned and examined in-house at Aeon Archaeology.

4.4 Environmental Samples Methodology

The sampling strategy and requirement for bulk soil samples was related to the perceived character, interpretational importance and chronological significance of the strata under investigation. This ensured that only significant features would be sampled. The aim of the sampling strategy was to

recover carbonised macroscopic plant remains, small artefacts particularly knapping debris and evidence for metalworking.

4.5 Storage and curation

All artefacts recovered would be the property of the landowner but it is strongly recommended that these are donated to a museum for long-term storage. Acceptance of this report by the client is taken as agreement to this transfer of ownership to a museum; to be confirmed with the Gwynedd HER and GAPS.

4.6 Report and dissemination

This report will be placed in the public domain by submitting it to the Gwynedd HER within 6 months of completion unless the client specifically requests the report to remain confidential for a longer period. The report will also be archived with the Royal Commission on the Ancient and Historical Monuments in Wales (RCAHMW).



5.0 History of the site

5.0 HISTORY OF THE SITE

(Reproduced from Aeon Archaeology report 0003)

5.1 Prehistoric and Roman Period

It is probable that peat was cut, dried and burnt for domestic fuel from the earliest times, especially in areas rich in peat bogs. However, right up to the medieval period, peatlands were scarcely used except for game hunting and were mostly avoided, for the most part being unusable in their undrained state and liable to be flooded in winter (Taylor. J. A.). Indeed, Mesolithic sites have been discovered located on the coastal headlands of the Llyn Peninsula, around Uwchmynydd and Trwyn Bychestyn, which most likely represent the remains of hunting settlements which exploited the coastal plains (Gwynedd HER). Further activity can be seen in the Neolithic period with the quarrying of hard igneous stone from Mynydd Rhiw for the manufacture of polished stone axes in the area, but there is not currently any evidence for early prehistoric activity along marshland fringe within this region of Wales.

The prehistoric and Roman periods are fairly well represented in the wider landscape of the peninsula. Approximately 2.8km to the north of the proposed development area lays the prehistoric hillfort and Scheduled Ancient Monument of Garn Boduan (CN009). The fort covers a large area, approximately 10.0 hectares, and has the ruinous remains of at least 170 hut circles. The fort is constructed upon a natural rocky hill with large fortification walls constructed from rampart masonry and enclosing approximately 11.3 hectares. There are two periods of Iron Age construction, followed by a small fort of late Roman or post Roman date upon the summit.

The fort's namesake, as with the town of *Boduan*, bears reference to *Buan*, who is believed to have been a grandson of Llywarch Hen, the 6th century prince of the Brythonic kingdom of Rheged, a ruling family in the Hen Ogledd 'Old North' of Britain. It is therefore possible that both the fort and area may have been his residence in the early 7th century AD.

Laying approximately 3.0km to the west is the prehistoric hillfort and Scheduled Ancient Monument of Carn Fadryn Camp (CN011). The hillfort was defended by two large stone walls, probably representing two periods of the pre-Roman fortification, a smaller fort of about 4.9 hectares having been succeeded by a larger of about 10.5 hectares. The defences enclose stone hut circles in addition to numerous small, irregularly shaped huts cut into the ruins of the earlier defensive wall. Within the fort enclosure and upon the summit of Carn Fadryn lies the robbed and ruined remains of a Bronze Age stone burial cist. The cist is constructed from large slabs set on edge, and scatterings of loose stones suggest the presence of a former cairn which may have been robbed to construct the nearby fortifications of the hillfort (Gwynedd HER).

Approximately 2.5km to the east of the proposed development site lies a suspected Roman cremation cemetery (PRN: 3650) found by Hyde Hall and near to Cefn Mine in Llanor parish, where vases containing ashes and suspected to be Roman were discovered at the start of the 19th century. Despite the presence of several Roman sites on the Llyn Peninsula, there are no known Roman military sites or roads within the localised area, and it is believed that Roman influence upon the native Celtic traditions within the area may have been relatively minor (GAT report 284).

5.2 Early Medieval and Medieval Periods

The Llyn Peninsula and Bardsey Island played an important part during the early Christian period. The ecclesiastical site on Bardsey is believed to have been founded by St Cadfan, and by the 12th century was believed to have been the burial place of twenty thousand saints, from which it became an important place of pilgrimage. On the mainland, the church at Aberdaron is dedicated to St Hywyn and is first mentioned in 1094 when the Augustinian canons provided a boat for Gruffydd ap Cynan to escape.

Lying approximately 3.5km to the northeast of the proposed development site is the Scheduled Ancient Monument and medieval motte and bailey castle of Ty Newydd (CN096). The motte lies at approximately 200ft above sea O.D. on ground which slopes away gently. A large hollow was excavated on the northern side to provide material for the construction of the motte and for a bank on the southern side to retain water from a small stream for a defensive moat.

In the later medieval period most of the peninsula fell within the cantref of the Llyn, and was divided into the commotes of Cymydmaen, Dinllaen, and Cafflogion, with the centres being located at Neigwl, Nefyn, and Pwllheli. Much of the land was held by the church and monasteries, in particular Bardsey, Clynog Fawr and Cymer. During the 13th and 14th centuries Nefyn flourished through the fishing industry and as a staging point for pilgrims travelling to Bardsey, becoming one of the principal towns of Gwynedd. The town became a borough after the Edwardian conquest but was devastated during the Glyndwr rebellion of 1400.

The nearest town to the proposed development site, Boduan, retains the roots of a medieval constituent township and gained its name from *Buan*, who is believed to have been a grandson of Llywarch Hen, the 6th century prince of the Brythonic kingdom of Rheged (see 5.1). The town exists today as a loosely nucleated settlement but its medieval origins is recognisable in the occurrence of *uchaf* or *isaf* in farm place names. This can be seen in close proximity to the proposed development area in the nearby farm *Mathan Uchaf*, which almost certainly has medieval origins and would have worked the land and proposed development area since such times.

There are no known medieval sites located within the proposed development area, however it is probable that the land had been utilised for the extraction of peat for burning as fuel since such times. The extraction of peat leaves little trace except for rectangular depressions where the peat was cut from, as well as occasionally peat drying platforms. Such evidence of peat cutting has been found approximately 840.0m to the west of the proposed development area, northwest of Tyn y Coed (PRN 1742).

5.3 Post Medieval Period

In approximately 1780 Pennant described the Llyn Peninsula:

The houses of the common people are very mean; made with clay, thatched, and destitute of chimneys. Notwithstanding the laudable example of the gentry, the country is in an unimproved state, neglected for the sake of the herring fishery. The chief produce is oats, barley and black cattle.

This reference to the land of the Llyn Peninsula is relevant to the proposed development site as the welsh name *Cors Geirch* means ‘marsh oats’. It therefore seems probable that the site was utilised for the farming of that crop, although it is probable that the name refers to a variety of wild oat which was gathered from the wetland site.

The Buan parish tithe map of 1849 depicts the proposed development area rather similarly to how it exists today, although the map appears to be inaccurate and the site boundary is only approximate. The site is depicted lying to the southwest of the farm *Mathan Uchaf* which is still in existence today, and is connected to the main road via a trackway. The modern car park in the eastern corner of the site is obviously not depicted, but the access trackway to it is shown connecting the main road with a building, which the tithe schedule refers to as *Mathan Ganol*. This building is depicted along with at least one outbuilding and is situated to the east and outside of the development site, although a small paddock extends into where the car park is now located. No standing remains of this building could be seen during the site walkover.

The tithe map does show however that the site was divided into a series of eight separate fields as detailed in the table below.

Table 2. The tithe apportionment of 1849

Plot	Landowner	Occupier	Plot Name	A/R/P
354	Lord Newborough	W. M. Evans of Machan Uchaf	Y Gors	0/3/8
355	Lord Newborough	W. M. Evans of Machan Uchaf	Y Gors	5/1/16
356	Lord Newborough	W. M. Evans of Machan Uchaf	Cae Rhimian	1/3/27
357	Lord Newborough	W. M. Evans of Machan Uchaf	Cae Mathan Bach	1/3/0
358	Lord Newborough	W. M. Evans of Machan Uchaf	Cae Mathan Bach	2/1/14
363	Lord Newborough	W. M. Evans of Machan Uchaf	Caer Odyn	0/1/36
395	Lord Newborough	John Williams of Mathan Ganol	House, offices, yards	1/1/31
396	Lord Newborough	John Williams of Mathan Ganol	Cae Cefn y Ardd	3/2/37

As can be seen from the 1849 tithe apportionment, the proposed development site was owned by Lord Newborough of the Glynllifon Estate. The majority of the site was tenanted by William. M. Evans of Machan Uchaf, who is recorded on the 1841 census as being a 35 year old farmer. He resided along with his wife Margaret Evans aged 30 years and three children Elizabeth (12 years), Sydney (2 years),

and Mary (8 months), as well as his mother Ellinor Evans aged 60 years. The farm was also home to four agricultural labourers, two men and two women.

The two fields (354 and 355) depicted at the western limit of the site are both called *Y Gors* (marsh) and clearly show that the site was a marshland at this time. Field number 363 is depicted towards the centre of the site and a trackway is shown linking this area with Mathan Uchaf farm to the northwest. This trackway is still visible today as a raised earth causeway (feature 8) and was almost certainly the main access route from the farm to the enclosed fields. The tithe schedule names this field as *Caer Odyn* (field kiln) which most likely refers to the use of this area for drying the oats, peat or perhaps some other commodity obtained from the marshes. It is not clear whether this kiln operated as a drying platform for example, or was a constructed feature.

The eastern part of the site is represented on the tithe map as one large field (396) and a small paddock (395) situated where the current car park lies, and continuing to the east of the development site. Both of these two fields were tenanted by John Williams of Mathan Ganol who according to the 1841 census was a farmer of 75 years of age, who resided with his wife Sarah Williams (60 years) and his daughter Mary (15 years). In addition the property was tenanted by two other men who were probably agricultural labourers. The tithe schedule names field 395 as *house, offices and yard* which refers to the property Mathan Ganol, which was situated to the immediate east of the proposed development site. The presence of offices at Mathan Ganol suggests that a business was being run from the farm, there is no further mention of this property in the archival sources but it is a possibility that marsh oats or peat were being obtained from the proposed development site and sold from the premises.

By the production of the first edition county series Ordnance Survey map in 1889 the proposed development area is depicted more like it exists today. The individual fields depicted on the 1849 tithe map have been subsumed into the large marshy site seen today, the only exception being the retention of field number 396 which was still in existence. The property of Mathan Ganol is not depicted on the first edition Ordnance Survey map and it can be surmised that it was demolished sometime between 1849 and 1889. The trackway (feature 8) linking the farm of Mathan Uchaf with the site is not depicted, and most probably had gone out of use by this point in time.

The second and third edition county series Ordnance Survey maps of 1900 and 1918 respectively, depict the site exactly the same as the first edition map. The eastern most field (396) is still divided from the rest of the site by a field boundary although no evidence of this boundary exists today, and it was clearly removed some time after 1918.



6.0 Quantification of results

6.0 QUANTIFICATION OF RESULTS

6.1 The Documentary Archive

The following documentary records were created during the archaeological watching brief.

Context sheets	3
Watching brief day sheets	9
Drawings	0
Digital photographs	36

6.2 Environmental Samples

No environmental samples were taken as part of the watching brief as no suitable archaeological deposits were encountered.

6.3 Artefacts

No artefacts were recovered during the archaeological watching brief.



7.0 Results of the archaeological watching brief

7.0 RESULTS OF THE ARCHAEOLOGICAL WATCHING BRIEF

An intensive watching brief was maintained during the initial stripping of the enriched soil from 2nd May 2013 to 3rd May 2013 and included four initial trial pits, as detailed below. The intensive watching brief was also maintained during the removal of soil to the immediate south of the trackway feature 8 (PRN: 36375) (figure 2).

After the initial stripping the watching brief was scaled down to a partial watching brief and the site was visited on six separate occasions, as detailed below. As part of the archaeological mitigation works a basic record of trackway feature 9 (PRN: 36376) was taken and is provided below.

The location and orientation of photographs are shown on figure 3.

7.1 Intensive Watching Brief

2nd May 2013

Trial Pit 1 (figure 2; Plate 2)

Trial pit 1 was centred on NGR SH 31492 36589 and measured 2.0m in width by 4.0m in length orientated from northwest to southeast. The pit was excavated through a dark black-brown peaty topsoil (1001) to a depth of 0.06m. No archaeological features or artefacts were observed.

Trial Pit 2 (figure 2; Plate 3)

Trial pit 2 was centred on NGR SH 31452 36499 and measured 2.5m in width, 3.0m in length and 0.3m in depth, orientated from northwest to southeast. The pit was excavated through a dark black-brown peaty topsoil (1001) measuring 0.15m in depth on to dark brown peat subsoil (1002) measuring >0.15m in depth. No archaeological features or artefacts were observed.

Trial Pit 3 (figure 2; Plate 4)

Trial pit 3 was centred on NGR SH 31433 36476 and measured 2.5m in width, 3.0m in length and 0.3m in depth, orientated from northwest to southeast. The pit was excavated through a dark black-brown peaty topsoil (1001) measuring 0.15m in depth on to dark brown peat subsoil (1002) measuring >0.15m in depth. No archaeological features or artefacts were observed.

Trial Pit 4 (figure 2; Plate 5)

Trial pit 4 was centred on NGR SH 31398 36444 and measured 2.0m in width, 3.0m in length and 0.5m in depth, orientated from northwest to southeast. The pit was excavated through a dark black-brown peaty topsoil (1001) measuring 0.15m in depth and through a dark brown peat subsoil (1002) measuring 0.35m in depth on to a naturally occurring light grey silt-clay substrata (1003). No archaeological features or artefacts were observed.

3rd May 2013

(figure 2; plate 6)

An intensive watching brief was maintained while an area measuring 0.13 hectares was stripped of enriched soil. At the northernmost end of the site approximately 0.2m depth of material was stripped comprising 0.15m of dark black-brown peaty topsoil (1001) and 0.05m of dark brown peat subsoil (1002) interspersed with frequent juncus roots. Towards the southern end of the stripped area approximately 0.35m-0.4m of material had been removed comprising 0.15m of dark black-brown

peaty topsoil (1001) and 0.2m-0.25m of dark brown peat subsoil (1002) interspersed with frequent juncus roots. No archaeological features or artefacts were observed.

Trackway feature 8 (PRN: 36375)

(figure 2; plate 7)

An intensive watching brief was maintained during the stripping of the enriched soil located to the immediate south of trackway feature 8 (PRN: 36375). Approximately 0.3m of material had been removed comprising 0.25m of dark black-brown peaty topsoil (1001) and 0.05m of dark brown peat subsoil (1002) interspersed with frequent juncus roots. No visible structure or greater soil depth was observed and it can be surmised that the trackway terminated before reaching this point.

7.2 Partial Watching Brief (figure 2)

14th May 2013

An area measuring 0.15 hectares had been stripped to the immediate north of the area observed by intensive watching brief. At the northernmost end of the site approximately 0.2m depth of material was stripped comprising a dark black-brown peaty topsoil (1001). Towards the southern end of the stripped area approximately 0.25m-0.3m of material had been removed comprising 0.25m-0.3m of dark black-brown peaty topsoil (1001) on to a dark brown peat subsoil (1002) interspersed with frequent juncus roots. No archaeological features or artefacts were observed.

A watching brief was maintained while an area measuring 0.02 hectares was stripped of approximately 0.25m of dark black-brown peaty topsoil (1001) on to a dark brown peat subsoil (1002) interspersed with frequent juncus roots. No archaeological features or artefacts were observed.

15th May 2013

A watching brief was maintained while an area measuring 0.04 hectares was stripped of enriched soil. At the northernmost end approximately 0.25m of material had been removed consisting of 0.15m depth dark black-brown peaty topsoil (1001) and 0.1m depth dark brown peat subsoil (1002) interspersed with frequent juncus roots. At the southernmost end approximately 0.35m of material had been removed consisting of 0.15m depth dark black-brown peaty topsoil (1001) and 0.2m depth dark brown peat subsoil (1002) interspersed with frequent juncus roots. No archaeological features or artefacts were observed.

20th May 2013

An area measuring 0.05 hectares had been stripped to the immediate south of the area observed by intensive watching brief. Approximately 0.3m depth of material had been stripped comprising 0.25m depth dark black-brown peaty topsoil (1001) on to a dark brown peat subsoil (1002) interspersed with frequent juncus roots (plate 9). No archaeological features or artefacts were observed.

23rd May 2013

An area measuring 0.28 hectares had been stripped to the north of the site (plate 8). Approximately 0.25m depth of material had been stripped comprising 0.15m depth dark black-brown peaty topsoil (1001) on to a dark brown peat subsoil (1002) interspersed with frequent juncus roots. No archaeological features or artefacts were observed.

5th June 2013

An area measuring 0.12 hectares had been stripped to the west of the site. Approximately 0.25m depth of material had been stripped comprising 0.15m depth dark black-brown peaty topsoil (1001) on to a dark brown peat subsoil (1002) interspersed with frequent juncus roots.

In addition the area east of trackway feature 8 had been stripped measuring 0.18 hectares. Approximately 0.25m depth of material had been stripped comprising 0.15m depth dark black-brown peaty topsoil (1001) on to a dark brown peat subsoil (1002) interspersed with frequent juncus roots. Towards the eastern limit of the strip approximately 0.2m of material had been removed comprising 0.15m depth dark black-brown peaty topsoil (1001) on to a dark brown peat subsoil (1002).

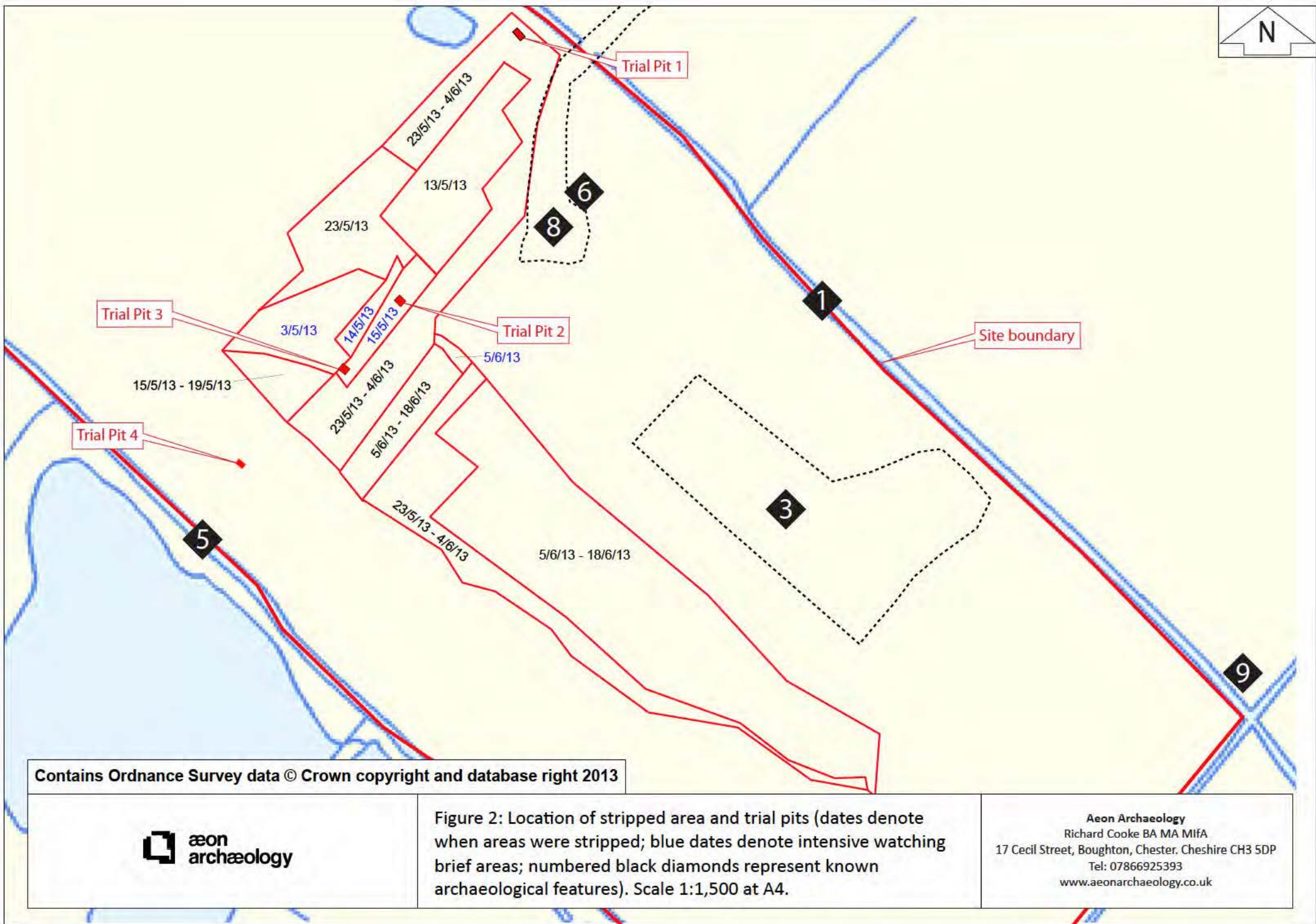
An area to the far west of the site had also been stripped of material measuring 0.13 hectares, to extract soil to backfill the main drain. Approximately 0.2m of dark black-brown peaty topsoil (1001) had been removed. No archaeological features or artefacts were observed.

18th June 2013

An area measuring 0.58 hectares had been stripped to the west of the site completing the proposed works (plate 10). Approximately 0.15m-0.2m depth of material had been stripped comprising a dark black-brown peaty topsoil (1001). No archaeological features or artefacts were observed.

7.3 Trackway feature 9 (PRN: 36376)

9. Trackway	
PRN: 36376	
Figure: 2	Plate: 11
NGR: SH 31759 36425	Period: Post-Medieval
Description A trackway depicted on the tithe map of 1849 connects the site at this point with the main road to the north. The trackway was the original access to the farm of Mathan Ganol which is now demolished. The track currently provides access from the main road to the car park in the eastern corner of the proposed development site, but will be covered with turf and reseeded as part of the works.	
Category of importance: Local	



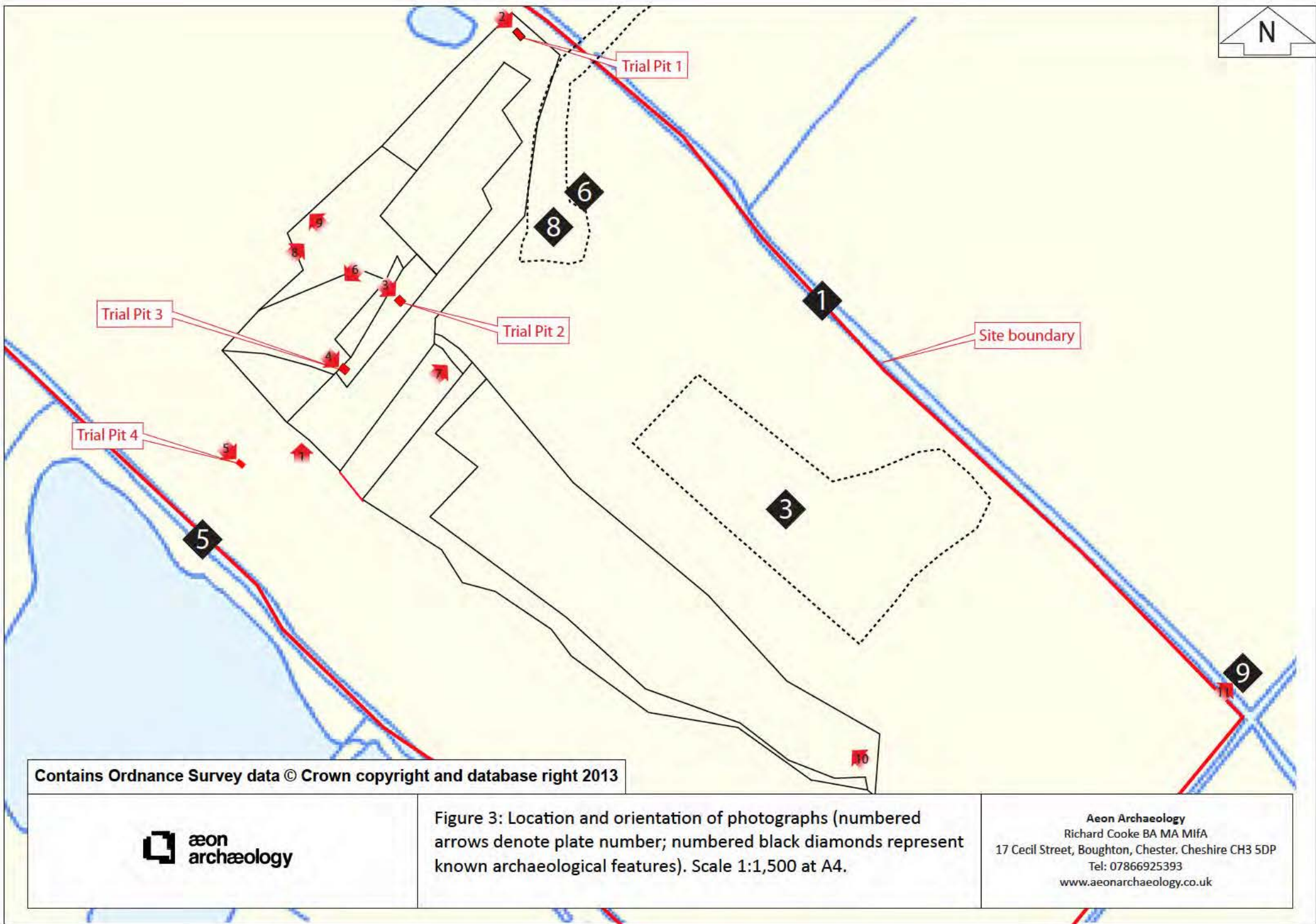




Plate 02: Trial pit 1, from the northwest. Scale 1.0m.



Plate 03: Trial pit 2, from the northwest. Scale 1.0m.



Plate 04: Trial pit 3, from the northwest. Scale 1.0m.



Plate 05: Trial pit 4, from the northwest. Scale 1.0m.



Plate 06: Intensive watching brief during peat stripping, from the northeast. Scale 1.0m.



Plate 07: Peat stripping immediately south of trackway feature 8, from the southwest. Scale 1.0m.



Plate 08: Peat stripping to the west of the site, from the southwest. Scale 1.0m.



Plate 09: Limit of excavation, from the southeast. Scale 0.5m.



Plate 10: Completed peat strip, from the southeast. Scale 1.0m.



Plate 11: Trackway feature 9, from the southwest. Scale 1.0m.



8.0 Conclusion and recommendations

8.0 CONCLUSION AND RECOMMENDATIONS

The archaeological watching brief at Cors Geirch, Mathan Uchaf did not identify any archaeological remains or artefacts during any part of the works. In terms of the overall contribution of the project to the regional research agenda the mitigatory works can be seen as being disappointing. However, the potential of the marshland to retain preserved archaeological remains and to greatly contribute to the knowledge and understanding of the historical development of this part of Wales should not be overlooked. As the archaeological mitigation work focused upon monitoring the excavation of enriched soil rather than actively searching for archaeological remains, the depth of material removed was dictated by the scheme of works. As such this meant that a maximum depth of 0.4m of soil was removed at the site and if it is expected that a centimetre of peat accumulates every ten years, then the active window into the past is estimated at only 400 years.

This would help to explain the absence of archaeological remains and associated artefacts despite the waterlogged conditions being favourable for the preservation of organic remains. Indeed, there is a distinct likelihood that preserved archaeological material may exist at lower levels and it is recommended that if a similar project arises which enables greater depths to be observed then a similar archaeological mitigation is placed upon the project.



9.0 Sources

9.0 SOURCES

Aeon Archaeology report 0003, 2013. *Cors Geirch, Mathan Uchaf, Boduan, Gwynedd: Archaeological desk-based assessment*

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English Heritage, 1991. *Management of Archaeological Projects*

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Institute of Field Archaeologists, 1994, rev. 2001 & 2008. *Standard and Guidance for Archaeological Watching Brief*

Institute of Field Archaeologists, 1995 revised Oct 2008. *Standards and Guidance: Excavation*

Leigh, D. 1972. *First Aid for Finds*

Robinson, W. 1998. *First Aid for Underwater Finds*



Appendix I: Details of recorded contexts

APPENDIX I – DETAILS OF RECORDED CONTEXTS

Context Number	Form	Description	Artefacts
1001	Topsoil	0.15m in depth and constituted a soft dark black-brown peat.	None.
1002	Subsoil	0.35m in depth and constituting a dark brown peat with frequent juncus root inclusions.	None.
1003	Glacial substrata	light grey silt-clay substrata	None.



Appendix II: Project design for archaeological watching brief

PROJECT DESIGN FOR ARCHAEOLOGICAL WATCHING BRIEF v4.0

PROJECT CODE: A0004

SITE: Mathan Uchaf (Cors Geirch), Boduan, Gwynedd

NGR: 231484/ 336512

PLANNING REF: C12/1176/33/MW

DATE: 18th April 2013

PREPARED FOR: Countryside Council for Wales (CCW)

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1. INTRODUCTION

Aeon Archaeology has been asked by The Countryside Council for Wales (CCW) to provide a cost and project design for carrying out an archaeological watching brief as a condition of a planning application (ref: **C12/1176/33/MW**) for the extraction of peat and enriched soil, in order to support a programme of conservation to restore the wetland habitat. The site comprises a c.3.6ha area of wetland located near Boduan, Gwynedd towards the centre of the Llyn Peninsula (centred on NGR **SH 31484 36512**).

A mitigation brief has not been prepared for this work by **The Gwynedd Archaeological Planning Services** (GAPS), but GAPS has agreed with the recommendation by Aeon Archaeology for a programme of archaeological monitoring (watching brief) (Aeon Archaeology report 0003). It is recommended that the content of this design be approved by GAPS.

The watching brief is to be undertaken on an **intensive** basis while parts of the trackway (feature 8) are stripped and initially during the strip across the rest of the site. The watching brief will be scaled down to a **partial** basis across the rest of the site if no archaeological remains or artefacts are encountered initially, or if the waterlogged conditions make observation impossible. The watching brief will continue on a **partial** basis during peat cutting across the site away from the gravel islands (features 3 and 4) and the trackway (feature 8). Furthermore, a basic record of the trackway (feature 9) will be taken prior to the commencement of works.

The client has stated that the two gravel islands (features 3 and 4) and the peat-cutting machinery (feature 6) will all be avoided by the proposed scheme and thus no further mitigatory work is required in these areas.

This design does not provide a methodology and quote for an archaeologically controlled strip as requested by Jenny Emmett of GAPS for the migration of the gravel island (feature 4), as this feature is to be avoided.

Reference will also be made to the guidelines specified in Standard and Guidance for Archaeological Watching Brief (Institute for Archaeologists, 1994, rev. 2001 and 2008).

2. STATUTORY AND NON-STATUTORY DESIGNATIONS

The site lies within or in proximity to the following designated areas:

- (i) Within the Cors Geirch National Nature Reserve (NNR).
- (ii) Within the Cors Geirch Special Area of Conservation (SAC).
- (iii) Within the Cors Geirch Site of Special Scientific Interest (SSSI).
- (iv) Within the Cors Geirch Ramsar site.
- (v) Approximately 0.6 km northeast of the grade II Listed Building of Neuadd Bodgadle (PRN: 11336).
- (vi) Approximately 0.7 km east of the grade II Listed Building of Ty'n-y-Coed (PRN: 11547).

3. ARCHAEOLOGICAL BACKGROUND

The wetland of Cors Geirch is believed to have been in existence since at least the medieval period. In close proximity to the site lies the grade II Listed Building of Neuadd Bodgadle Farmhouse (PRN: 11336), a 17th century two storey cottage. Also in close proximity to the site is the grade II Listed Building of Ty'n-y-Coed (PRN: 11547), an early 18th century two storey cottage and features associated with peat cutting (PRN: 1742) have been observed, although the age of these is not currently known.

In the wider landscape the prehistoric and Roman periods are fairly well represented, with the prehistoric hillfort and Scheduled Ancient Monument of Garn Boduan (PRN: 446) lying approximately 2.8 km to the north, and the prehistoric hillfort and Scheduled Ancient Monument of Carn Fadryn Camp (PRN: 425) lying approximately 3.0 km to the west. In addition to this, a suspected Roman cremation cemetery (PRN: 3650) was found approximately 2.5 km to the east of the site and the Scheduled Ancient Monument of a Roman hut circle settlement (PRN: 447) is located approximately 3.0 km to the north.

As well as having been included within the Historic Landscape Characterisation project (PRN: 33495), an archaeological desk-based assessment of the site was carried out in January 2013 by Aeon Archaeology (Aeon report 003). This report identified nine archaeological sites within or in close proximity to the proposed development area. The report made recommendations for an intensive watching brief to be maintained during works in proximity to the gravel island (PRN 36371) and for a partial watching brief to be maintained during all other ground disturbance works. Furthermore, possible peat cutting machinery (PRN 36373) and a trackway (PRN 36375) identified within the extraction zone are to be cordoned off and avoided by the scheme.

4. ARCHAEOLOGICAL AIMS

The **watching brief** will consist of the following:

- Observation of excavation works associated with the scheme.
- A drawn, written and photographic record of any archaeological features, including structures that may be revealed by the work.
- Preparation of a full archive report.

If archaeological remains are encountered during the watching brief it may be necessary to suspend development work in that area. The client should have a suitable contingency in place in case of such a scenario.

5. PROGRAMME OF WORK

5.1 Archaeological Watching Brief

(Reproduced from IFA. 2001. *Institute for Archaeologists 1994 rev. 2001 and 2008 Standard and Guidance for an archaeological watching brief*)

The definition of an archaeological watching brief 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.

This definition and *Standard* do not cover chance observations, which should lead to an appropriate archaeological project being designed and implemented, nor do they apply to monitoring for preservation of remains *in situ*.

An archaeological watching brief is divided into four categories according to the IFA. 2001. *Institute for Archaeologists 2001 Standard and Guidance for an archaeological watching brief*:

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

An **intensive** watching brief is to be maintained during the strip of the trackway (feature 8) and during initial groundworks across the site. A **partial** watching brief is to be maintained if no archaeological remains and/or artefacts are encountered during the intensive watching brief phase.

A photographic record will be maintained throughout, using a digital SLR camera (Canon 550D) set to maximum resolution and any subsurface remains will be recorded photographically, with detailed notations and a measured survey using a handheld GPS (Satmap Active 10). The archive produced will be held at Aeon Archaeology under the project code A0004.

6.0 FURTHER ARCHAEOLOGICAL WORKS

- The discovery of substantial buried archaeological remains during the watching brief may result in the requirement for a wider programme of archaeological mitigation. This may require the submission of revised quotes to the client.
- This design does not include a methodology or cost for examination, conservation and archiving of finds discovered during the watching brief, nor of any radiocarbon dates required, nor of examination of palaeoenvironmental samples. The need for these will be identified in the post-fieldwork programme (if required), and a new design will be issued for approval by the GAPS Archaeologist.

7.0 ENVIRONMENTAL SAMPLES

If necessary, relevant archaeological deposits will be sampled by taking bulk samples (a minimum of 10.0 litres and maximum of 30.0 litres) for flotation of charred plant remains. Bulk samples will be taken from waterlogged deposits for macroscopic plant remains, small bones, and small artefacts.

8.0 HUMAN REMAINS

Any human remains or suspected human remains will be covered, protected and left in-situ. The coroner and the GAPS archaeologists will be informed immediately of the find, and if removal is required then it will take place under the relevant regulations.

9.0 SMALL FINDS

All finds are the property of the landowner but it is recommended that finds are donated to an appropriate museum for conservation and research. Furthermore, the client agrees to granting access to all finds recovered by Aeon Archaeology for analysis, study and publication as necessary.

Initial identification of artefacts will be carried out by Aeon Archaeology, but additional conservation and analysis will be undertaken by a suitably qualified specialist, if required.

Any organic remains encountered, including timber and wood, skin and gut products, skeletal material, keratin based finds, fibres, stems, hair, wool, paper, sold foodstuffs, environmental material, liquid and semi-liquid foodstuffs and preparations, resinous and mineral substances will be treated as per the recommendations provided in *First Aid for Underwater Finds* by Wendy Robinson (1998). All finds will be stored as per the requirements for their material, but in general terms all finds will be immersed in water, cooled or refrigerated, and covered or placed in the dark.

Where larger preserved sites are encountered they will be left in-situ and covered with tarpaulin to ensure that they stay moist. Guidance will be sought immediately from Cardiff Conservation Services and if necessary additional staff will be used to ensure the correct excavation and recording of the site.

The cost of additional staff and guidance from Cardiff Conservation Services are not included within this quote. Any such requirement will result in the production of a new project design with additional fees.

Depending upon the material of the remains the following experts will be consulted regarding the conservation of waterlogged material:

- Organic material: Mr Phil Parkes, Cardiff Conservation Services (tel: +44(0)29 2087 5628)
- Non-organic material: Mr Phil Parkes, Cardiff Conservation Services (tel: +44(0)29 2087 5628)

Once waterlogged material has been stabilised and conserved the following experts will be consulted:

- Bone: Nora Bermingham
- Glass: Hilary Cool, Barbican Research Associates.
- Metal artefacts: Phil Parkes, Cardiff Conservation Services, Cardiff.
- Slag, burnt clay, hammerscale: Dr. Tim Young, Geoarch, Cardiff.
- Stone artefacts: George Smith, Gwynedd Archaeological Trust, Bangor.
- Wood artefacts: Jane Foley, Foley Conservation, Builth Wells.
- Leather: Quita Mould, Barbican Research Associates.
- Environmental Material: Dr Mike Allen, Allen Environmental Archaeology.
- Numismatics: Peter Guest, Barbican Research Associates.

The cost for examination, conservation and archiving of finds discovered during the watching brief are not included within this quote.

If well preserved materials are found it may be necessary to employ additional staff. Furthermore, it may be necessary to suspend work within a specific region of the site, or across the whole site, while conservation and excavation/recording takes place. Aeon Archaeology accepts no responsibility for any costs incurred from delays as a result of unexpected archaeological finds.

The cost for the additional staff, resources, and time required to excavate/ record unexpected archaeological finds/ features are not included within this quote and a separate project design and costs will be submitted to the client if necessary.

10.0 REPORT PRODUCTION

Following completion of the watching brief as outlined above, a report will be produced incorporating the following:

- Non-technical summary
- Introduction
- Project Design
- Methodology
- Archaeological Background
- Description of the results of the watching brief
- Summary and conclusions
- Bibliography of sources consulted.

Illustrations will include plans of the location of the study area and archaeological sites. Historical maps, when appropriate and if copyright permissions allow, will be included. Photographs of relevant sites and of the study area where appropriate will be included.

A draft copy of the report will be sent to the regional curatorial archaeologist and to the client prior to production of the final report.

11. ARCHIVING

A full archive including plans, photographs, written material and any other material resulting from the project will be prepared. All plans, photographs and descriptions will be labelled, and cross-referenced, and lodged in an appropriate place within six months of the completion of the project. The location is to be agreed with the Curatorial Archaeologist.

Bound copies of the report and an archive CD will be sent to the regional HER (Gwynedd Archaeological Trust, Craig Beuno, Garth Road, Bangor, Gwynedd LL57 2RT) and to The Royal Commission on the Ancient and Historic Monuments of Wales (RCAHMW) for long term archiving.

7. PERSONNEL

The work will be managed and undertaken by Richard Cooke, Archaeological Contractor and Consultant at Aeon Archaeology.

8. MONITORING

Monitoring visits can be arranged during the course of the project with the clients and with the appropriate Development Control archaeologist.

9. HEALTH AND SAFETY

Aeon Archaeology has a Health and Safety Policy Statement which can be supplied upon request. Furthermore, site-specific Risk Assessments and Method Statements are compiled and distributed to every member of staff involved with the project prior to the commencement of works.

10. INSURANCE

Liability Insurance – Towergate Insurance Policy 000467

- Employers' Liability: Limit of Indemnity £10m in any one occurrence
- Public Liability: Limit of Indemnity £2m in any one occurrence
- Legal Defence Costs (Health and Safety at Work Act): £250,000

The current period expires 30/09/13

Professional Indemnity Insurance – Towergate Insurance Policy 2011025521290

- Limit of Indemnity £250,000 any one claim

The current period expires 30/09/13

11. SOURCES CONSULTED

GAPS brief: D1721

Reproduction of Client Drawing **222-1196-01**

Robinson. W. 1998. *First Aid for Underwater Finds*

Standard and Guidance for Archaeological Watching Brief (Institute for Archaeologists, 1994, rev. 2001 and 2008).

COST ESTIMATE

1. Intensive watching brief of trackway (feature 8) and during initial groundworks.	5 days	
2. Partial watching brief across the rest of the site and basic record of trackway feature 9).	4 days	
3. Report, illustration and archiving	5 days	
TOTAL		

By commissioning Aeon Archaeology to undertake this work the client agrees to be invoiced directly at the end of each calendar month for works to date or once the project concludes, whichever occurs first. In addition, the client agrees to pay the invoice no more than 1 calendar month after issue from Aeon Archaeology.

