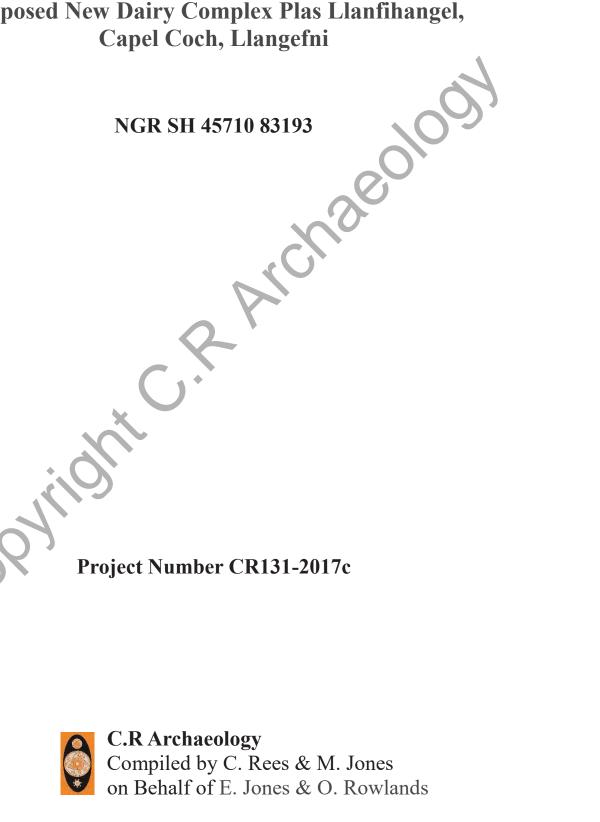
Results of Further Archaeological Works at

Proposed New Dairy Complex Plas Llanfihangel, Capel Coch, Llangefni





Results of Further Archaeological Works at: Proposed New Dairy Complex Plas Llanfihangel, Capel Coch, Llangefni

Planning Application Number: 23C280F

National Grid Reference:NGR SH 45710 83193Client:E. Jones & O. Rowlands

Report Authors: C. Rees

Project Number: CR131-2017c **Date:** 20-11-2017

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Appendix A. Specification for Archaeological Works
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1.0 Introduction

C.R Archaeology were instructed by E. Jones & O. Rowlands to conduct a programme of further archaeological works at the above site. It was proposed that a new agricultural shed, milking parlour, farm yard and small track be built at the site. The current works are the final phase of works at the site and covered the slurry pit associated with the new dairy unit at the site.

The site is located on agricultural land off the B5111 just to the north-west of the village of Capel Coch. The site is currently in use as grazing within an enclosed field boundary system. There is a large pond to the east of the development site.

The proposed development is positioned between two Bronze Age Standing Stones, Llech Golman (SAM AN070, NPRN 302477, PRN 2201) and Maen Addwyn (SAM AN069, NPRN 302478, PRN 2199) and it is considered to be the site of potential prehistoric activity.

This is the third phase of works at the site and in the first phase 3 trenches (1 measuring 30m x 2m, and 2 measuring 20m x 2m trenches) were excavated at the site. No archaeological features were identified in any of the trenches, although the presence of a single flint scrapper and a number of struck flints were considered indicative that there is likely to have been prehistoric activity within the area. It was unclear as to the extent of the damage to underlying deposits which has been caused by the ploughing of the land. The second phase of works was an archaeological watching brief which covered an area measuring a maximum of 58m x 120m which was stripped down to the underlying natural. No archaeological features were uncovered during the works and no further artefactual material was recovered during this phase of works. The area previously monitored under watching brief conditions covered the new agricultural shed, milking parlour and farm yard.

Given the presence of the flint on the site and the location of the development between two Standing Stones it was considered prudent to conduct an archaeological watching brief on these further site works

A specification for further works was written with reference to emails prepared by Jenny Emmett of GAPS as a methodology for an archaeological watching brief which is to be conducted at the site. This document is included as Appendix A.

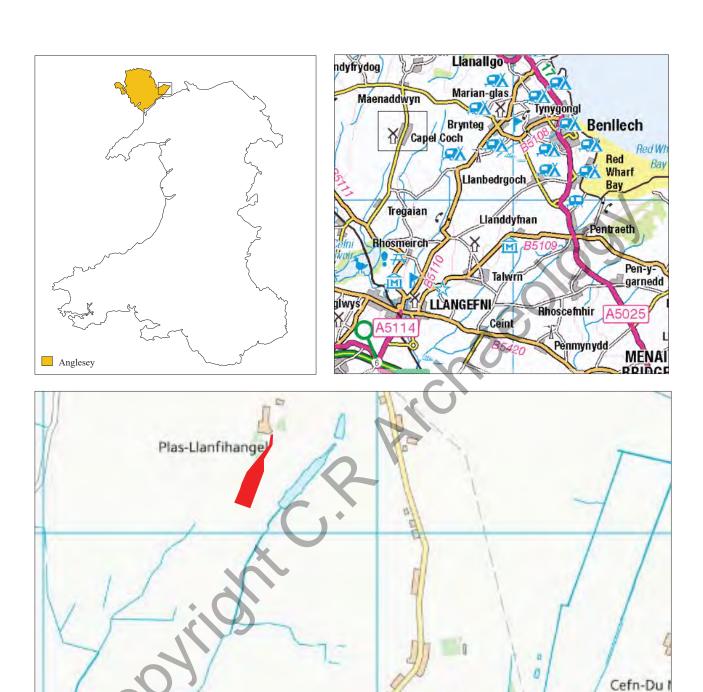
An area measuring a maximum of 70 x 25m was stripped down to the underlying natural. No archaeological features were uncovered during the works and no further artefactual material was recovered during this phase of works.

2.0 Project Aims & Objectives

This phase of works for the development site aimed to undertake an archaeological watching brief. It aimed to examine the archaeological resource surviving on the site to assess the survival, character and date of any archaeological remains and to excavate, record and analyse all archaeological remains uncovered.

This scheme of works aimed to monitor all intrusive groundworks down to the development depth or the archaeological horizon/natural in order to assess the survival, character and date of any archaeological remains and to record any archaeological remains uncovered.

This project aimed to fulfil the criteria for undertaking an Archaeological Field Evaluation as specified in the CIfA Standard and Guidance documents (1994 Revised 2008 & 2014).



Capel Coch

Site Location

Figure 1. Site Location Map

(Source: OS Open Data Mapping. Contains Ordnance Survey data © Crown copyright and database right [2016])

The objectives of this programme of works were:

- To excavate/record all archaeological remains uncovered
- To enhance the existing archaeological record through the examination of the results of the fieldwork in relation to the relevant "Research Framework for the Archaeology of Wales"

3.0 Scheme of Works - Methodology

3.1 Desk Based Research

Desk based research was conducted as part of the previous phase of works and this has been reproduced as the historical background for this report.

The works were carried out in accordance with the CIfA Standards and Guidance for Historic Environment Desk-based Assessment (CIfA Revised 2014).

Further archival research was not deemed necessary due to the negative result of this phase of works.

3.2 Archaeological Watching Brief

The entirety of the development footprint for the slurry pit for the new dairy unit to be built at the site was stripped down to the archaeological horizon/level of the underlying natural. This work was undertaken using a mechanical excavator fitted with a toothless ditching bucket. No archaeological remains were encountered. All machine excavation was supervised by an archaeologist from C.R Archaeology.

C.R Archaeology notified GAPS as the date of the commencement of works.

Fieldwork was managed by Catherine Rees (MCIfA, MA) and Matthew Jones (MA) of C.R Archaeology and conducted by Matthew Jones.

The works were carried out in accordance with the CIfA Standard and Guidance documents (2014).

3.2.1 Recording

The record forms at C.R Archaeology are based on the English Heritage system and full written, graphic and photographic records were made in accordance with the English Heritage *Field Recording Manual*. Sample forms can be provided on request. The written record comprises completed *pro-forma* record sheets.

Plans, sections and elevations were produced on gridded, archive standard stable polyester film at scales of 1:10, 1:20 or 1:50, as appropriate. Representative measured sections were prepared as appropriate showing the sequence and depths of deposits. All drawings were numbered and listed in a drawing register, these drawing numbers being cross-referenced to written site records.

A high-resolution 13mp Sony Alpha digital camera was used to create a photographic record of the site. This was comprised of photographs of general photographs of the site due to the negative result of the works.

All photographic records were indexed and cross-referenced to written site records. Details concerning subject and direction of view were maintained in a photographic register, indexed by frame number. Images from photography will be stored in a loss-less digital format in this case '*.TIF'.

3.2.2 Additional Mitigation/Contingency Measures

No additional mitigation or contingency measures were necessary.

3.2.3 Recovery, Processing and Curation of Artefactual Material

No artefactual material was recovered during this phase of works.

3.2.4 Archive Compilation

All records created during the fieldwork were checked for consistency and accuracy and will form part of the *Primary Site Archive (P1)* (EH 2006). The archive will contain all data collected, including records and other specialist materials. It will be ordered, indexed, adequately documented, internally consistent, secure, quantified, conforming to standards required by the archive repository and signposted appropriately to ensure future use in research, as detailed in the English Heritage *Management of Research Projects in the Historic Environment* (MoRPHE) methodology.

The archive will be assembled in accordance with the guidelines published in, *Standards in the museum care of archaeological collections* (Museums & Galleries Commission 1994), *Guidelines for the preparation of excavation archives for long-term storage* (United Kingdom Institute for Conservation, 1990) and *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* (AAF 2007).

All materials contained within the *Primary Site Archive (P1)* that are subsequently identified by the *Assessment Report (P2)* as appropriate for analysis will be processed by suitable specialists and the resultant *Research Archive (P3)* will be checked and ordered according to *MoRPHE* criteria. The written archive and it is intended the artefactual material created/discovered during this archaeological project will be deposited at Anglesey Archives/Llangefni Museum. Archive material will be deposited in accordance with the archive's/museum's terms and conditions for archive deposition.

3.3 Timetable for Proposed Works

The watching brief was undertaken on the 15th October 2017 and was completed in a single day. Further time was allotted for report compilation and site archiving.

3.4 Staffing

The project was managed by Catherine Rees MCIfA, BA (Archaeology), MA (Archaeology) Postgraduate Diploma (Historic Environment Conservation) & Matthew Jones (BA (Archaeology), MA (Archaeology). The fieldwork was conducted by Matthew Jones (C.R Archaeology).

All staff have a skill set equivalent to the CIfA ACIfA/MCIFA level. C.Vs for all staff employed on the project can be provided on request. All projects are carried out in accordance with CIfA Standard and Guidance documents.

3.5 Monitoring

The project was subject to monitoring by Gwynedd Archaeological Planning Services who were informed as to the start date of the project.

3.6 Health and Safety

A risk assessment was conducted prior to the commencement of works and site staff were familiarised with its contents. A first aid kit was located in the site vehicle.

All staff were issued with appropriate Personal Protective Equipment (PPE) for the site work. This consisted of:

- Mobile telephone (to be kept in site vehicle)
- Safety Helmets (EN397)
- Hi-visibility vests (EN471)

• Safety footwear – steel toecap and mid-sole boots and Wellingtons (EN345-47)

3.7 The Report

This report clearly and accurately incorporates information gained from the programme of archaeological works. It presents the documentary evidence gathered in such a way as to create a clear and coherent record. The report contains a site plan showing the locations of photographs taken.

The report includes:

- A copy of the agreed specification
- A location plan
- A plan showing the location of the watching brief area
- A full bibliography of sources consulted
- An archive compact disc

A copy of the report in Adobe PDF format will be sent to the appropriate monitoring archaeologist for approval before formal submission. A PDF digital copy of the report will be submitted to GAPS as part of the formal submission. A digital Adobe PDF version and a bound paper copy of the final report and will be lodged with the Gwynedd Historic Environment Record within six months of completion of fieldwork.

3.7.1 Copyright

C.R Archaeology and sub-contractors shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it hereby provides a licence to the client and the local authority for the use of the report by the client and the local authority in all matters directly relating to the project as described in the Project.

4.0 Geographical and Geological Context

4.1 Topography

The site is located in agricultural land off the B5111 just to the north-west of the village of Capel Coch. The site is located at the top of the rise of a low hill in a rural setting. The site had recently been ploughed and is set within an enclosed field boundary system. There is a large pond to the east of the development site.

4.2 Geology

The bedrock geology at the site is recorded as "Central Anglesey Shear Zone And Berw Shear Zone (undifferentiated) - Schist, Hornblende. Metamorphic Bedrock formed approximately 508 to 635 million years ago in the Cambrian and Ediacaran Periods. Original rocks without interpretation. Later crushed in fault zone or shear zone. These rocks have undergone low grade metamorphism, high grade regional metamorphism, or crushing in a fault or shear zone and it is not known whether they were of igneous, sedimentary or older metamorphic origin" (www.bgs.ac.uk).

The superficial geology of the site is recorded as "Till, Devensian - Diamicton. Superficial Deposits formed up to 2 million years ago in the Quaternary Period. Local environment previously dominated by ice age conditions. These rocks were formed in cold periods with Ice Age glaciers scouring the landscape and depositing moraines of till with outwash sand and gravel deposits from seasonal and post glacial meltwaters" (www.bgs.ac.uk).

5.0 Historical Background

Desk based research was conducted as an element of the previous phase of works. The results are reproduced below without the figures.

A search of archaeological sites within a 500m radius of the proposed development area was conducted and the results are summarised below. The results have been broadly divided by period. A detailed desk based analysis of the archaeological potential of this development was not requirement of this project.

Prehistoric

The proposed development is positioned between two Bronze Age Standing Stones, Llech Golman (SAM AN070, NPRN 302477, PRN 2201) and Maen Addwyn (SAM AN069, NPRN 302478, PRN 2199).

Llech Golman is described in the GAT HER as a Bronze Age standing stone situated on a rounded ridge in an undulating landscape. It is visible from all around except for the northern arc (W-E) where it is obscured by the hill slope within a few 100m. It is a large rough stone 2.4m high, 1.7m wide and 1.1m thick with a few stones around the base which may be packing. It is a red jasper like stone which has a flat southern side. The north side somewhat flattened and the stone is somewhat cracked.

The RCAHMW entry adds "stones such as this are usually identified as prehistoric, often Bronze Age, ceremonial or ritual monuments, however, a more recent date and a more mundane function cannot be ruled out. The stone is first depicted on the third edition of the OS County series (Anglesey VII.15 1921) on which it is not depicted as an antiquity. There is a small disused quarry some 50m to the north".

Maen Addwyn is similarly described by the RCAHMW as "a large standing stone or erect monolith built into a roadside wall. It is 3.4m tall, 1.2m wide and 0.9m thick. Stones such as these are usually ascribed a prehistoric, often a Bronze Age date and a ritual or ceremonial function. However, a more recent date and a more mundane function are also possible". The GAT HER entry adds that the stone "is set at centre of a wide natural basin visible from Bodafon Mountain".

Early Medieval & Medieval

There are 3 entries detailing Early Medieval and Medieval sites within 500m of the proposed development area, all associated with the Llanfihangel-tre'r-beirdd Parish Church.

The Church of St Michael is a Grade II Listed Building (ID 5390) and the following description has been taken from the Cadw building description.

"Location

Set back from the E side of a country road c350m S of the small hamlet of Maenaddwyn.

History

Simple Medieval rural church, repaired and refitted in 1811 and 1844, and extensively rebuilt by Henry Kennedy in 1888. Parts of the walling, and some features such as the N doorway and chancel windows, are C14.

Interior

Both nave and chancel have a late C19 exposed roof with arch braced collared trusses with angled braces, down to wall posts on shaped corbels; those in the chancel each with a single number set in a floriate boss which together read 1888.

Set into the S wall of the nave is a C13 grit slab gravestone; an incised cross with a double head. In the N wall of the nave there are another 2 stones, both much weathered gritstone pieces, probably

late medieval; one is the lower part of incised stem of a cross on a base of 3 steps, the other has a ring at the head and base and a small cross and 2 rings in the centre. Also set into the N wall is a medieval water stoup; a plain semi-octagonal gritstone bowl.

The chancel is a shallow pointed arch which rises from shaped corbels as springing course. The chancel is raised by a single step, the sanctuary a further 2 steps. The sanctuary has a mosaic tiled floor and a moulded rail on shaped stanchions with floriate brackets. The E window depicts St Michael and is flanked by marble memorials: that to R to John Lewis, Rector of Llandegfan d1743, that to L to Elizabeth, widow of John Lewis d1785.

At the W end of the nave are another pair of memorial tablets: one to William Thomas d1772, the other to Morys ap Rhisart Morys of Pentrerianell d1763.

The medieval font is an octagonal gritstone bowl, recut and probably slightly reshaped.

Exterior

Predominantly late C19 Gothic revival church comprising 3-bay nave with lower single bay chancel and NW porch. Built of rubble masonry with freestone dressings; nave has stepped angle buttresses. Slate roof with stone copings; cross gable finials and single W bellcote surmounted by a cross finial.

The outer porch doorway is a pointed arch above which is a tablet which bears the date 1888. The reset C14 inner doorway is a pointed arch with broach stop chamfered jambs. The nave has single trefoil headed lights; the W wall has a narrow rectangular light to the L of which is an inscribed stone which bears the date and initials: WW WT 1811. The E window is a late C19 ogee headed light with cusped tracery; the moodmould has medieval heads as terminals. The N wall of the chancel has a reset window of a single cinquefoil light and sunk spandrels, the S wall has a single trefoil headed light; both are repaired and appear to be late Medieval in date.

Reason for Listing

Listed as a well detailed late C19 rural church in a simple Gothic style, which includes some medieval features within its fabric and which retains some late C18 memorials" (www.britishlistedbuildings.co.uk).

Within the church is an earlier monument, an inscribed stone which has been inset in the souther n wall of the nave. PRN 2189 is recorded in the HER as a "roughly rectangular slab, 29ins x 9ins, of gritstone with incised decoration of large circle, 2 vertical bars with a shorter bar between, all conjoined, with 2 small circles and a larger circle respectively in upper and lower spaces. Inside church in S wall of nave. The significance of the device is obscure. Possibly C7th-C11th". This description slightly differs in date from that included above in the interior section of the Listed Building description.

Post Medieval

Within 500m of the proposed development site lie two reocrds of Post Medieval date. The first is PRN 61540, a relict Post Medieval field system. It is recorded as "relict rectilinear field system visible on aerial photographs beneath the modern field boundaries. It appears to align with Plas Llanfihangel and although not shown on the Tithe Map for Llandyfrydog and Llanfihangel Tre'r Beirdd, the fields predate the earliest Ordnance Survey maps". The second record is for the Capel Coch Character Area PRN 17128which is described as "Small area of (C19) ribbon settlement along a straight road, with small cluster around cross roads at Maenddwyn".

Cartographic Sources

A brief examination of the historic Ordnance Survey mapping of the proposed development area was made and there were no changes to the land marked between the 1887 – 1949 editions. The removal of several field boundaries has however taken place since 1949 to create the single very large field within which the development is situated. None of these boundary changes lie within the development area. Of interest with regards to the two standing stones is that neither appears on the First Edition OS Map. Maen Addwyn is first marked on the 1899 edition, whilst Llech Golman is not marked until 1915. This is not to suggest that the stones are not of considerable antiquity but a simple point of reference.

A spring is marked in the north-east of the field near to the farm access track and up until the 1963 OS map this spring has a south-west run. This is changed with the creation of a large pond to the east of the site when the spring run was redirected east down the hill. This shown on the 1973 OS map.

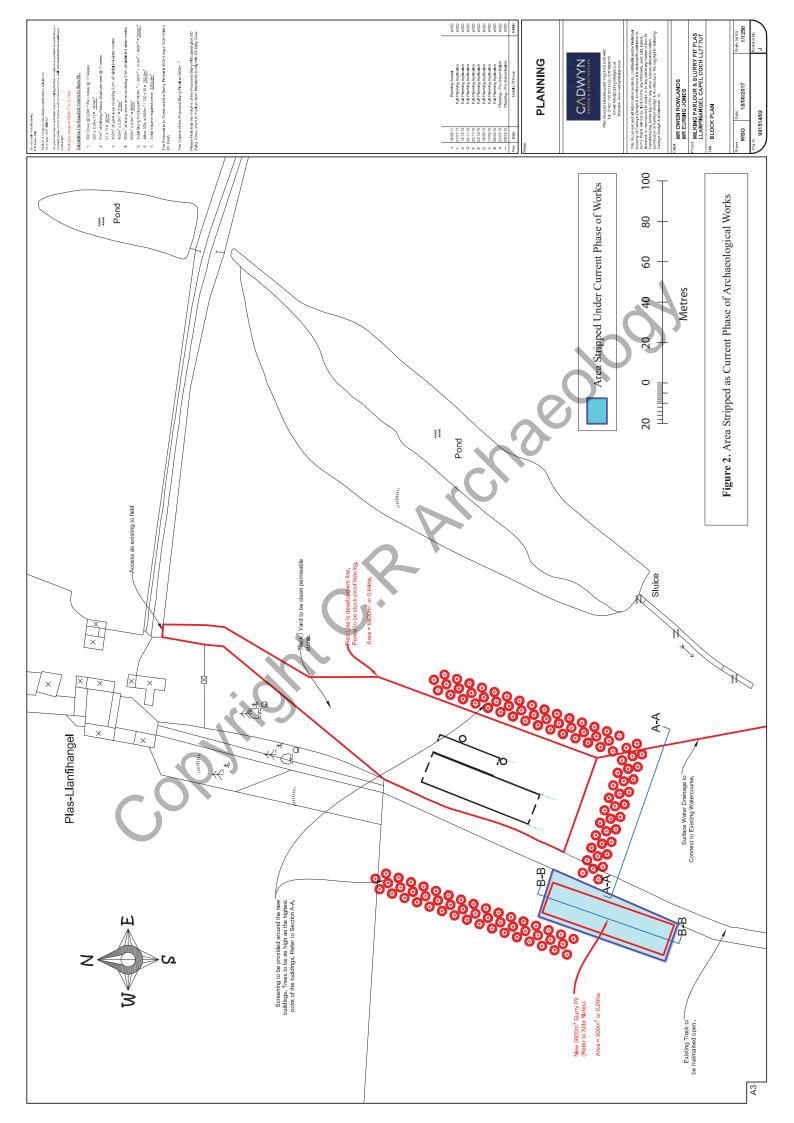
6.0 Results of Archaeological Works (Figure 2, Plates 1 -4)

An area measuring a maximum of 70m x 25m (see figure 2) was stripped down to the level of the underlying natural. Two contexts were identified deposit (101) was a turf/mixed plough soil layer. It was a mid-brown silty-clay c.0.08 - 0.20m in depth. Below this the underlying natural (102) was a compact yellow and red-brown clay with some grey banding and rare sub-angular large and medium stones.

No archaeological features or artefacts were uncovered during this phase of works. Plates 1-4 show the site following machine stripping and the location and direction of photographic plates are shown on appendix b.

7.0 Conclusion

Despite the potential for encountering prehistoric remains identified in the Evaluation Trenching works no archaeological features or finds were uncovered during this phase of works.





(Note wet, heavily disturbed area in front of gate)



Plate 4. Post-excavation view of development area



Plate 3. Post-excavation view of development area (Heavily disturbed area in front of gate still visible)

8.0 Bibliography

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Specification for Further Archaeological Works at

Project Number CR131c-2017 New Dairy Complex Plas Llanfihangel,



C.R Archaeology

Compiled by C. Rees & M. Jones

On Behalf of E. Jones & O. Rowlands



Specification for Further Archaeological Works at: New Dairy Complex Plas Llanfihangel, Capel Coch, Llangefni

Planning Application Number: 23C280F

National Grid Reference: NGR SH 45710 83193 Client: E. Jones & O. Rowlands

Report Authors: C. Rees **Project Number:** CR131c-2017

Date: 06-10-2017

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5.0 Bibliography

Illustrations

Figure 1. Site Location Map

Appendices

Appendix A. Proposed Site Development Plans

1.0 Introduction

C.R Archaeology were instructed by E. Jones & O. Rowlands to conduct a programme of archaeological works at the above site. It is proposed that a new Dairy Unit be built at the site.

The site is located on agricultural land off the B5111 just to the north-west of the village of Capel Coch (figure 1). The site is currently in use as grazing within an enclosed field boundary system. There is a large pond to the east of the development site.

The proposed development is positioned between two Bronze Age Standing Stones, Llech Golman (SAM AN070, NPRN 302477, PRN 2201) and Maen Addwyn (SAM AN069, NPRN 302478, PRN 2199) and it is considered to be the site of potential prehistoric activity.

This is the third phase of works at the site and in the first phase 3 trenches (1 measuring 30m x 2m, and 2 measuring 20m x 2m trenches) were excavated at the site. No archaeological features were identified in any of the trenches, although the presence of a single flint scrapper and a number of struck flints were considered indicative that there is likely to have been prehistoric activity within the area. It was unclear as to the extent of the damage to underlying deposits which has been caused by the ploughing of the land. The second phase of works was an archaeological watching brief which covered an area measuring a maximum of 58m x 120m which was stripped down to the underlying natural. No archaeological features were uncovered during the works and no further artefactual material was recovered during this phase of works. The area previously monitored under watching brief conditions covered the new agricultural shed, milking parlour and farm yard.

Given the presence of the flint on the site and the location of the development between two Standing Stones it was considered prudent to conduct an archaeological watching brief on further works at the site. There is likely to be at least some plough damage to any buried features should they survive but that it is considered that it is very unlikely to be so extensive so as to have removed all traces of earlier activity.

This specification lays out the methodology for a continuation of archaeological watching brief conditions which are to be conducted at the site. The plans detailing the area to be stripped under watching brief conditions is shown in Appendix A.

2.0 Project Aims & Objectives

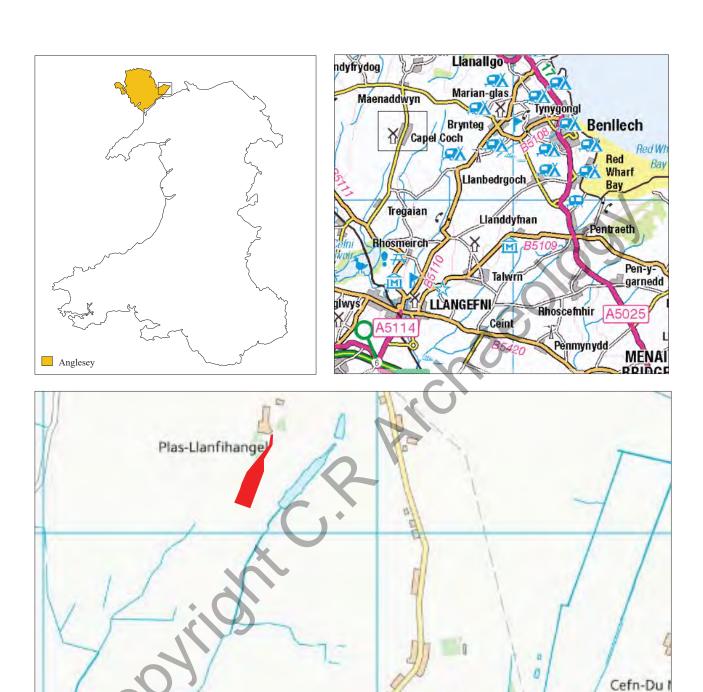
This phase of works for the development site aims to undertake an archaeological watching brief. It aims to examine the archaeological resource surviving on the to assess the survival, character and date of any archaeological remains and to excavate, record and analyse all archaeological remains uncovered.

This scheme of works aims to monitor all intrusive groundworks down to the development depth or the archaeological horizon/natural in order to assess the survival, character and date of any archaeological remains and to record any archaeological remains uncovered.

This project aims to fulfil the criteria for undertaking an Archaeological Field Evaluation as specified in the CIfA Standard and Guidance documents (1994 Revised 2008 & 2014).

The objectives of this programme of works are:

- To excavate/record all archaeological remains uncovered
- To enhance the existing archaeological record through the examination of the results of the fieldwork in relation to the relevant "Research Framework for the Archaeology of Wales"



Capel Coch

Site Location

Figure 1. Site Location Map

(Source: OS Open Data Mapping. Contains Ordnance Survey data © Crown copyright and database right [2016])

3.0 Historical Background

Desk based research was conducted as an element of the previous phase of works. The results are reproduced below without the figures.

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Interior

Both nave and chancel have a late C19 exposed roof with arch braced collared trusses with angled braces, down to wall posts on shaped corbels; those in the chancel each with a single number set in a floriate boss which together read 1888.

Set into the S wall of the nave is a C13 grit slab gravestone; an incised cross with a double head. In

the N wall of the nave there are another 2 stones, both much weathered gritstone pieces, probably late medieval; one is the lower part of incised stem of a cross on a base of 3 steps, the other has a ring at the head and base and a small cross and 2 rings in the centre. Also set into the N wall is a medieval water stoup; a plain semi-octagonal gritstone bowl.

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The outer porch doorway is a pointed arch above which is a tablet which bears the date 1888. The reset C14 inner doorway is a pointed arch with broach stop chamfered jambs. The nave has single trefoil headed lights; the W wall has a narrow rectangular light to the L of which is an inscribed stone which bears the date and initials: WW WT 1811. The E window is a late C19 ogee headed light with cusped tracery; the moodmould has medieval heads as terminals. The N wall of the chancel has a reset window of a single cinquefoil light and sunk spandrels, the S wall has a single trefoil headed light; both are repaired and appear to be late Medieval in date.

Reason for Listing

Listed as a well detailed late C19 rural church in a simple Gothic style, which includes some medieval features within its fabric and which retains some late C18 memorials" (www.britishlistedbuildings.co.uk).

Within the church is an earlier monument, an inscribed stone which has been inset in the souther n wall of the nave. PRN 2189 is recorded in the HER as a "roughly rectangular slab, 29ins x 9ins, of gritstone with incised decoration of large circle, 2 vertical bars with a shorter bar between, all conjoined, with 2 small circles and a larger circle respectively in upper and lower spaces. Inside church in S wall of nave. The significance of the device is obscure. Possibly C7th-C11th". This description slightly differs in date from that included above in the interior section of the Listed Building description.

Post Medieval

Within 500m of the proposed development site lie two reocrds of Post Medieval date. The first is PRN 61540, a relict Post Medieval field system. It is recorded as "relict rectilinear field system visible on aerial photographs beneath the modern field boundaries. It appears to align with Plas Llanfihangel and although not shown on the Tithe Map for Llandyfrydog and Llanfihangel Tre'r Beirdd, the fields predate the earliest Ordnance Survey maps". The second record is for the Capel Coch Character Area PRN 17128which is described as "Small area of (C19) ribbon settlement along a straight road, with small cluster around cross roads at Maenddwyn".

Cartographic Sources

A brief examination of the historic Ordnance Survey mapping of the proposed development area was made and there were no changes to the land marked between the 1887 – 1949 editions. The removal of several field boundaries has however taken place since 1949 to create the single very large field within which the development is situated. None of these boundary changes lie within the development area. Of interest with regards to the two standing stones is that neither appears on the First Edition OS Map. Maen Addwyn is first marked on the 1899 edition, whilst Llech Golman is not marked until 1915. This is not to suggest that the stones are not of considerable antiquity but a simple point of reference.

A spring is marked in the north-east of the field near to the farm access track and up until the 1963 OS map this spring has a south-west run. This is changed with the creation of a large pond to the east of the site when the spring run was redirected east down the hill. This shown on the 1973 OS map.

3.1 Topography

The site is located in agricultural land off the B5111 just to the north-west of the village of Capel Coch. The site is located at the top of the rise of a low hill in a rural setting. The site had recently been ploughed and is set within an enclosed field boundary system. There is a large pond to the east of the development site.

3.2 Geology

The bedrock geology at the site is recorded as "Central Anglesey Shear Zone And Berw Shear Zone (undifferentiated) - Schist, Hornblende. Metamorphic Bedrock formed approximately 508 to 635 million years ago in the Cambrian and Ediacaran Periods. Original rocks without interpretation. Later crushed in fault zone or shear zone. These rocks have undergone low grade metamorphism, high grade regional metamorphism, or crushing in a fault or shear zone and it is not known whether they were of igneous, sedimentary or older metamorphic origin" (www.bgs.ac.uk).

The superficial geology of the site is recorded as "Till, Devensian - Diamicton. Superficial Deposits formed up to 2 million years ago in the Quaternary Period. Local environment previously dominated by ice age conditions. These rocks were formed in cold periods with Ice Age glaciers scouring the landscape and depositing moraines of till with outwash sand and gravel deposits from seasonal and post glacial meltwaters" (www.bgs.ac.uk).

4.0 Scheme of Works - Methodology

4.1 Desk Based Research

Desk based research was conducted as part of the previous phase of works and will be reproduced as the historical background for the forthcoming report.

The works were carried out accordance with the CIfA Standards and Guidance for Historic Environment Desk-based Assessment (CIfA Revised 2014).

Further archival research will only be conducted in the event of a positive result of the watching brief and will be undertaken should further information be required to place the site within its local, regional and national context.

4.2 Archaeological Watching Brief

The entirety of the development footprint for the new Dairy Unit, including the slurry pit, is to be stripped down to the development depth or the archaeological horizon/level of the underlying natural depending on which is encountered first. This work will be undertaken using a mechanical excavator fitted with a toothless ditching bucket. If archaeological remains are encountered then machine excavation will cease at this level until it is clear in plan that the full extent of any features have been uncovered within the development area.

Should significant remains be uncovered or should archaeological deposits extend beyond the limits of the development area it may then be necessary to follow the procedures for Additional Mitigation/Contingency Measures. All machine excavation will be supervised by an archaeologist from C.R Archaeology.

All archaeological remains/potential archaeological remains identified during works will be marked using spray paint and excavated by C.R Archaeology staff. Any archaeological features, structures or remains will be trowel cleaned by hand. Investigation of such features, structures or deposits will be sufficient to determine their character, date, significance and quality. Excavation would generally involve the removal of 50% of pits/posthole fills and 10% of the fills of ditches/large linear features but given the sensitivity of the site and the archaeological significance of the area this will be discussed with GAPS immediately following the stripping of the site, and excavation of up to 100% of all features may be deemed appropriate. Should it be deemed necessary to understand the archaeological remains uncovered the area may be extended by up to 2m around the development area. This will be subject to prior agreement with GAPS and the client.

If features yield suitable material for dating/environmental processing then samples will be taken for processing off site. The size of these samples will depend on the size of the feature but for smaller features a sample of up to 95% will be taken. For larger features generally a sample of up to 40 litres will be taken but in the event of a significant discovery then up to 95% of a fill may be taken if deemed necessary by GAPS.

C.R Archaeology will notify GAPS as the date of the commencement of works. A site visit visit will be arranged to allow for the inspection of works. In the event of a significant discovery GAPS will be informed of the discovery and a mitigation strategy agreed before works will progress. Fieldwork is to be conducted and managed by Catherine Rees (MCIfA, MA) and Matthew Jones (MA) of C.R Archaeology.

The works will be carried out in accordance with the CIfA Standard and Guidance documents (2014).

4.2.1 Recording

The record forms at C.R Archaeology are based on the English Heritage system and full written, graphic and photographic records will be made in accordance with the English Heritage *Field Recording Manual*. Sample forms can be provided on request. The written record shall comprise completed *pro-forma* record sheets.

Plans, sections and elevations will be produced on gridded, archive standard stable polyester film at scales of 1:10, 1:20 or 1:50, as appropriate. Representative measured sections will be prepared as appropriate showing the sequence and depths of deposits. Where possible plans, elevations and sections will contain grid and level information relative to OS data. All drawings will be numbered and listed in a drawing register, these drawing numbers being cross-referenced to written site records. A 'harris matrix' diagram will be constructed for the excavated area.

A high-resolution 13mp Sony Alpha digital camera will be used to create a photographic record of the site. This will be comprised of photographs of archaeological features and appropriate groups of features and structures. Included in each photograph will be an appropriate scale, north arrow and a record board detailing the site name, number and context number. General photographs will also be taken in the event of a negative result.

All photographic records will be indexed and cross-referenced to written site records. Details concerning subject and direction of view will be maintained in a photographic register, indexed by frame number. Images from photography will be stored in a loss-less digital format in this case '*.TIF'.

4.2.2 Additional Mitigation/Contingency Measures

In the event of a significant archaeological discovery being made during the excavation C.R Archaeology will immediately inform both the client and the development control archaeologist Jenny Emmett. Consultation will take place between C.R Archaeology, GAPS and the client with regards to the most suitable course of action.

In the event that human remains are encountered site work will cease with immediate effect. The coroner, client and monitoring body will be informed immediately. The company will abide by the requirements of Section 25 of the Burial Act 1857. Any arrangements regarding the discovery of human remains will be at the discretion of HM Coroner whose instruction/permission will be sought. All human remains are to be preserved *in situ*, covered and protected. They will only be removed in exceptional circumstances and with the appropriate Ministry of Justice licence, environmental health regulations, Coroner's permission and, if appropriate, in compliance with the Disused Burial Grounds (Amendment) Act 1981 or other local Act, with adequate security provided in such cases.

Any artefacts recovered that fall within the scope of the Treasure Act 1996 will be reported to the landowner, GAPS and to HM Coroner.

4.2.3 Recovery, Processing and Curation of Artefactual Material

All recovered artefactual material will be retained, cleaned, labelled and stored according to *Standard* and Guidance for the collection, documentation, conservation and research of archaeological materials (CIfA 2014) and First Aid for Finds (Watkinson & Neal 2001). The aim will be to create a stable, ordered, well-documented, accessible material archive forming a resource for current and future research (CIfA 2014).

All artefactual material will be bagged and labelled with the site code and context number prior to their removal from site. The archive reference number will be clearly marked on all finds. Each assemblage will be examined according to typological or chronological criteria and conservation needs identified. An assessment report of all post-medieval material will be produced by Matthew Jones and further specialists will be appointed as required. It is proposed that Dr Ian Brooks will assess any lithic material and the Frances Lynch will assess any Prehistoric ceramic material. A list of specialists has been submitted to GAPS and the relevant expertise will be sought. Any specialist conservation necessary will be undertaken by Cardiff Conservation Services, Cardiff University. This will be conducted in accordance with guidelines issued by the Institute for Conservation.

Following analysis, it has been requested that all archaeological material recovered be deposited in Llangefni Museum. Processed assemblages will be boxed according to issued guidelines and a register of contents compiled prior to deposition. The works will be carried out in accordance with The Chartered Institute for Archaeologists: *Standard and Guidance for Archaeological Excavation* (Revised 2014).

4.2.4 Archive Compilation

All records created during the fieldwork will be checked for consistency and accuracy and will form part of the *Primary Site Archive (P1)* (EH 2006). The archive will contain all data collected, including records and other specialist materials. It will be ordered, indexed, adequately documented, internally consistent, secure, quantified, conforming to standards required by the archive repository and signposted appropriately to ensure future use in research, as detailed in the English Heritage *Management of Research Projects in the Historic Environment* (MoRPHE) methodology.

The archive will be assembled in accordance with the guidelines published in, *Standards in the museum care of archaeological collections* (Museums & Galleries Commission 1994), *Guidelines for the preparation of excavation archives for long-term storage* (United Kingdom Institute for Conservation, 1990) and *Archaeological Archives: A guide to best practice in creation, compilation, transfer and curation* (AAF 2007).

All materials contained within the *Primary Site Archive (P1)* that are subsequently identified by the *Assessment Report (P2)* as appropriate for analysis will be processed by suitable specialists and the resultant *Research Archive (P3)* will be checked and ordered according to *MoRPHE* criteria. The written archive and it is intended the artefactual material created/discovered during this archaeological project will be deposited at Anglesey Archives/Llangefni Museum. Archive material will be deposited in accordance with the archive's/museum's terms and conditions for archive deposition.

4.3 Timetable for Proposed Works

It is envisaged that the evaluation trenching will be undertaken within the next two weeks and an estimated time frame of 2-5 days has been allotted. Further time has been allotted for HER research, report compilation and site archiving.

4.4 Staffing

The project will be managed by Catherine Rees MCIfA, BA (Archaeology), MA (Archaeology) Postgraduate Diploma (Historic Environment Conservation) & Matthew Jones (BA (Archaeology), MA (Archaeology). The fieldwork will be conducted by Matthew Jones (C.R Archaeology) with additional suitably qualified field staff brought in as necessary.

All staff will have a skill set equivalent to the CIfA ACIfA/MCIFA level. C.Vs for all staff employed on the project can be provided on request. All projects are carried out in accordance with CIfA Standard and Guidance documents.

4.5 Monitoring

The project will be subject to monitoring by Gwynedd Archaeological Planning Services. A projected time-scale and copy of the risk assessment can be provided on request to the monitoring body prior to the commencement of works.

4.6 Health and Safety

A risk assessment will be conducted prior to the commencement of works and site staff will be familiarised with its contents. A first aid kit will be located in the site vehicle.

All staff will be issued with appropriate Personal Protective Equipment (PPE) for the site work. Initially this is anticipated to consist of:

- Mobile telephone (to be kept in site vehicle)
- Safety Helmets (EN397)
- Hi-visibility vests (EN471)
- Safety footwear steel toecap and mid-sole boots and Wellingtons (EN345-47)

Any further PPE required will be provided by C.R Archaeology

C.R Archaeology staff will also comply with any Health and Safety Policy or specific on-site instructions provided by the client or their appointed Principal contractor or H&S coordinator.

4.7 The Report

The report will clearly and accurately incorporate information gained from the programme of archaeological works. It will present the documentary evidence gathered in such a way as to create a clear and coherent record. The report will contain a site plan showing the locations of any photographs taken.

The report will include:

- A copy of the agreed specification
- A location plan
- A plan showing the location of the watching brief area
- All identified features and significant finds plotted on an appropriately scaled site plan
- Full dimensional and descriptive detail of all identified finds and features
- A full bibliography of sources consulted
- An archive compact disc

A copy of the report in Adobe PDF format will be sent to the appropriate monitoring archaeologist for approval before formal submission. A PDF digital copy of the report will be submitted to GAPS as part of the formal submission. A digital Adobe PDF version and a bound paper copy of the final report and will be lodged with the Gwynedd Historic Environment Record within six months of completion of fieldwork.

4.7.1 Copyright

C.R Archaeology and sub-contractors shall retain full copyright of any commissioned reports, tender documents or other project documents, under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it hereby provides a licence to the client and the local authority for the use of the report by the client and the local authority in all matters directly relating to the project as described in the Project.

5.0 Bibliography

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Appendix A. Proposed Development Plans



