

**Results of Targeted Archaeological Excavation of
Area of Neolithic Activity at
Proposed Site for Ysgol y Llannau, Llanfaethlu
NGR SH 31389 87108**



Report Number CR84-2015



**C.R Archaeology
Compiled by C. Rees & M. Jones
On Behalf of Isle of Anglesey County Council**

**C.R Archaeology Would Like to Thank the Following People for all
Their Help, Advice & Support on the Project:**

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Continued Interest, Support, School Visits and
Generally Making us so Welcome

Thank You Everyone
Diolch yn Fawr i Bawb

**Results of Targeted Archaeological Excavation at:
Proposed Site for Ysgol y Llannau, Llanfaethlu**

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National Grid Reference:
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Pre-planning
NGR SH 31389 87108
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1.0 Introduction

C.R Archaeology were instructed by Isle of Anglesey County Council to conduct further archaeological works at the proposed site of a new primary school - Ysgol y Llannau, Llanfaethlu, Anglesey.

The site is located to the rear of St. Maethlu's Church, along the A5025 in the north of the village of Llanfaethlu, on the Isle of Anglesey (figure 1). The site is currently in use as grazing within an enclosed field boundary system which includes a rock outcrop. The site lies within the Anglesey Area of Outstanding Natural Beauty (AONB). The south-eastern site boundary is located adjacent to the limits of the Carreglwyd Historic Park & Gardens (ID 690). The site limits are within 500m of an area of restored ancient woodland and 650m of the Garreg-Lwyd Site of Special Scientific Interest.

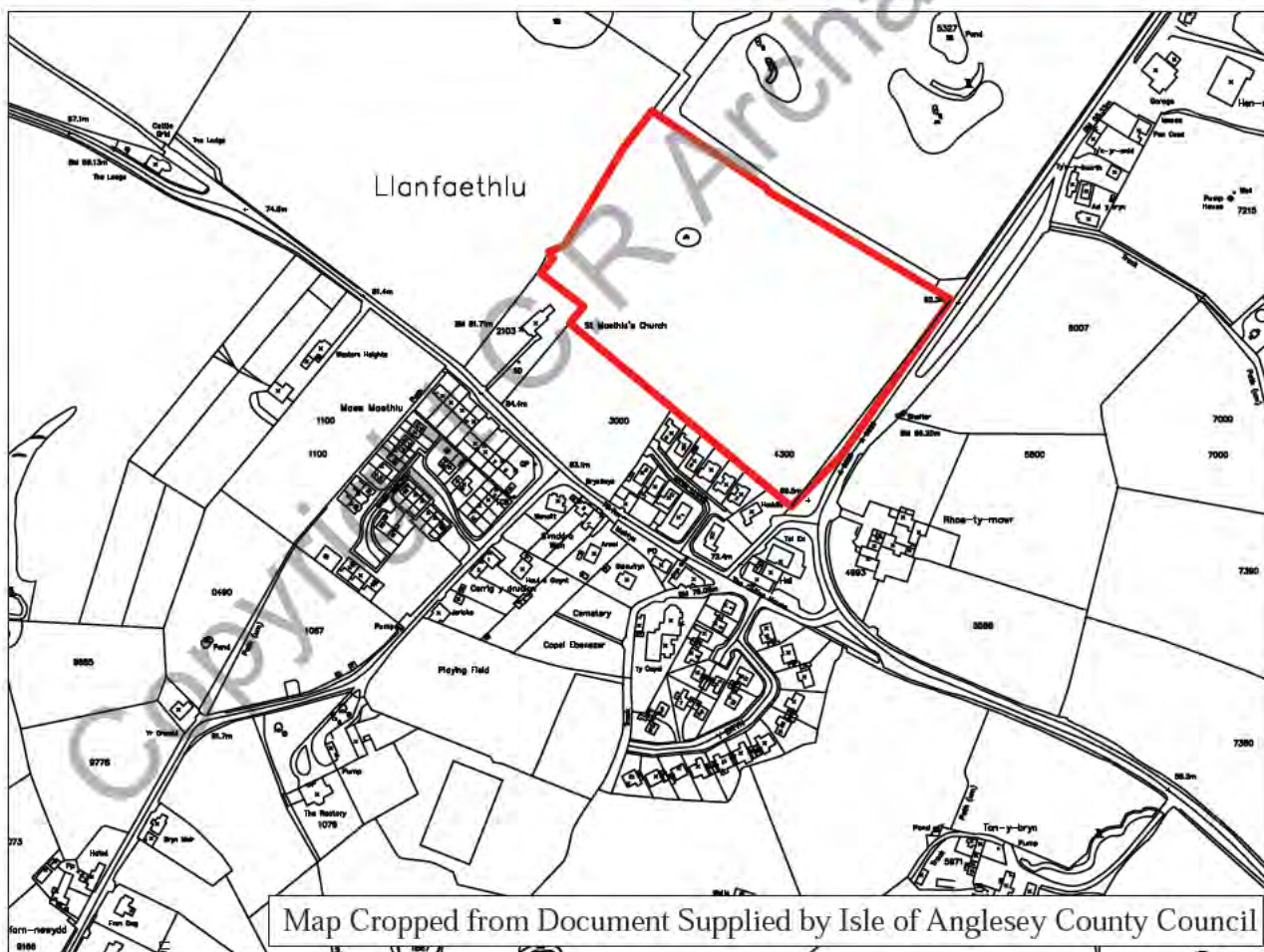
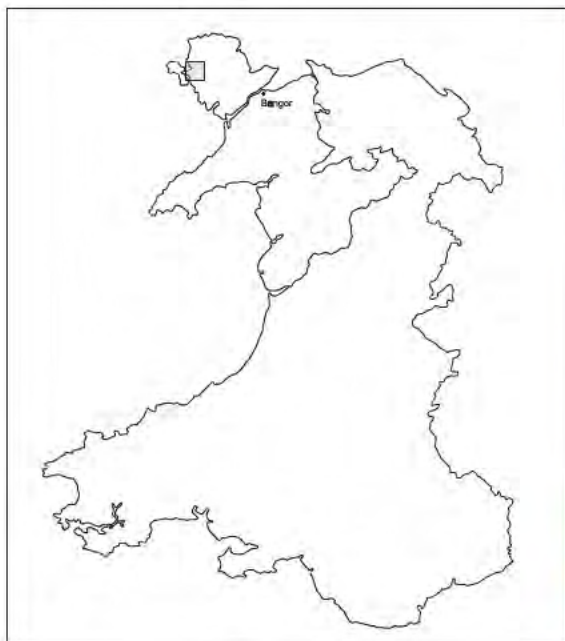
Within the vicinity of the proposed development area there are known sites of archaeological interest, and in addition to the aforementioned St. Maethlu's Church (which has Medieval origins) and Carreglwyd Estate, there are known to be Medieval cist cemeteries and Roman remains both at parish level and within 500m of the proposed site.

This excavation was conducted with reference to specification CR87-2015 (Appendix A) which was written as a methodology for further works. This excavation is the third stage in a programme of archaeological works at the site, with the first stage being an archaeological desk based assessment and geophysical survey (Document CR82-2014) which was followed by a programme of evaluation trenching (Document CR84-2014). Previous phases of archaeological works yielded positive results and the geophysical survey/desk-based assessment concluded that the site was of high archaeological potential, and that the remains uncovered on site could be highly significant. Further evaluation of the site was therefore deemed necessary and twenty 20m x 2m evaluation trenches were excavated. The trenches were specifically targeted to evaluate features of interest shown on the geophysical survey.

The results of the evaluation trenching revealed that although the majority of features identified through geophysical survey were of geological origin, 7 out of the 20 evaluation trenches were found to contain archaeological features. The remains in 6 of the 7 trenches were undated as no artefactual material was recovered, but it is thought that most are likely to be of Post-Medieval date and are of agricultural origin. A field boundary drawn on an 1801 estate map was identified in 3 trenches.

In one trench (trench 6) a significant archaeological discovery was made. In an area measuring 6m x 10m a total of 62 features were identified, of which 55 were excavated and found to be of Neolithic date. Hearths, structural evidence (including postholes with stone packing) and pits were identified and a considerable assemblage of artefactual material including over 500 pottery sherds (predominately of Mortlake design, although Irish Sea Ware and Grooved Ware vessels were present) and over 80 pieces of worked/modified stone and flint (including imported flint from in excess of 200 miles away and Griag Llywd axe fragments) was recovered.

The remains uncovered in Trench 6 were considered to be of national importance. Based on the initial interpretation of findings, it appeared that the majority of Neolithic activity at the site had been located and excavated by the evaluation. It was felt that this reduced the merits of preservation *in situ* and that the considerable benefits to archaeological knowledge and outreach to be gained from full excavation would adequately mitigate the loss of the site to development. Full excavation of the remaining features was therefore considered to be the most appropriate mitigation strategy. A methodology was adopted for the excavation of an area measuring 40m x 40m around the features uncovered in trench 6 with the aim of fully exposing and excavating the limits of the Neolithic

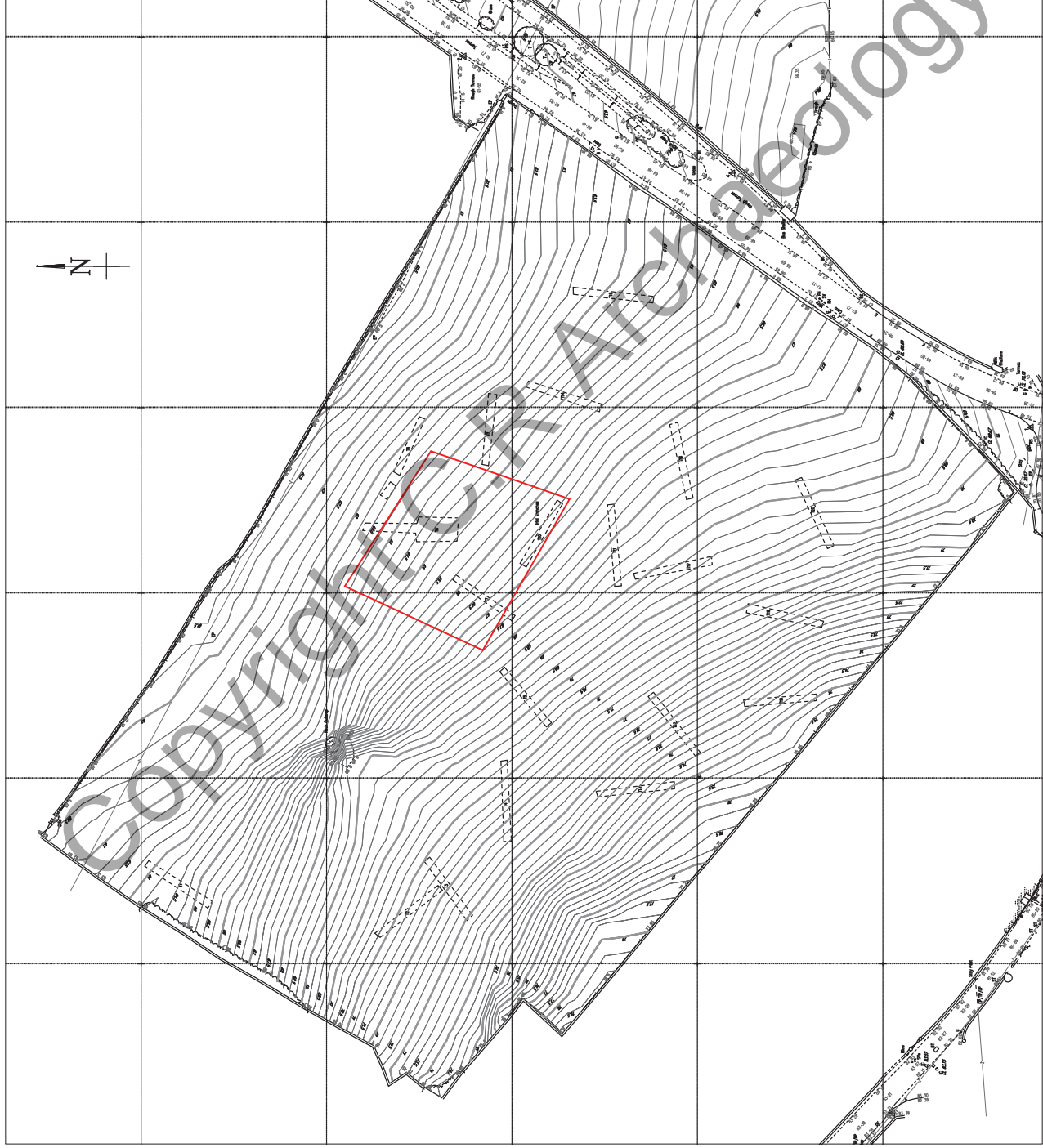


Map Cropped from Document Supplied by Isle of Anglesey County Council

Figure 1. Site Location Map

(Source: OS Open Data Mapping Contains Ordnance Survey data
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Figure 2. Location of
Excavation Area
(Marked in Red)



activity area (figure 2). By agreement with GAPS and Isle of Anglesey County Council, it was decided to undertake this immediately, in the interests of ensuring that adequate resourcing would be available to complete the work.

When the area was stripped and intensively hand cleaned it became apparent that the archaeological remains uncovered at Llanfaethlu were rather more extensive than expected, and although the extents of the features identified during the previous works were defined and excavated they were found to be part of a larger settlement.

On excavation it was found that the large pit group identified in the previous phase of works did not extend a great deal beyond the limits of the previous excavation area. Postholes previously identified as possibly belonging to a Neolithic house were confirmed to be part of two larger structures. In addition to the identification of the structural remains from the previous phase as belonging to two Neolithic houses a third large Neolithic house was also partially excavated, although this feature extended beyond the trench limits. Also uncovered were three Post-Medieval agricultural ditches and a group of five pits of undetermined date. The size of the artefact assemblage from this site is exceptional and a total of over 1500 artefacts have been recovered to date.

This phase of excavation has confirmed and very much reinforced the view that this is a site of national importance. It is therefore deemed that further archaeological mitigation is necessary at Llanfaethlu with the following works being recommended 1) the excavation of the remaining portion of the third Neolithic House, 2) a programme of Strip, Map and Record on the school building footprint, 3) a watching brief on all additional groundworks and 4) post excavation works.

2.0 Project Aims & Objectives

This phase of works for the development site aimed to undertake a targeted archaeological excavation. It aimed to examine the archaeological resource identified within this area of the site and to fully excavate features identified. It aimed to retrieve artefactual and environmental data which will enhance the corpus of available material for the Neolithic period both locally and nationally.

This scheme of works aimed to strip an area of 40m x 40m down to the archaeological horizon/natural in order to assess the survival, character and date of any archaeological remains and to excavate/record all archaeological remains uncovered. It aimed to expose the full extent of the concentration of Neolithic features identified during the evaluation trenching and to determine whether this was the remains of a house or large structure.

The “*Research Framework for the Archaeology of Wales – Neolithic & Earlier Bronze Age*” details the key themes and priorities for enhancing our understanding of this period and it is aimed that all works will be conducted with reference to this document and the specific paper produced for North-West Wales. These topics will be addressed in the forthcoming final report which will correlate the results of archaeological works from all phases and will make specific reference to the results of the environmental sampling and the radio-carbon dates from the site.

This project aims to fulfil the criteria for undertaking an Archaeological Excavation as specified in the CIfA Standard and Guidance documents (2014).

It is intended that this document be utilised to inform further archaeological planning decisions and conditions at the site.

The objectives of this programme of works are:

- To excavate/record all archaeological remains uncovered
- To maximise the information gained through excavation with a comprehensive environmental sampling strategy
- To enhance the existing archaeological record through the examination of the results of the fieldwork in relation to the “*Research Framework for the Archaeology of Wales – Neolithic & Earlier Bronze Age*”
- To maximise the information gained through comprehensive artefactual analysis (specifically related to the Research Framework and advice from pottery and lithic specialists)
- To help inform future decision making, design solutions, further evaluation & mitigation strategies

3.0 Scheme of Works - Methodology

The following section outlines the methodologies to be employed for desk based research, site excavation, on site sampling, sample processing and post excavation including artefactual analysis and specialist services to be procured.

3.1 Desk Based Research

As part of the previous phase of works a complete and coherent history of the site was compiled utilising material sourced from Anglesey Archives and the Bangor University Archives. A full map progression of the area was undertaken and where appropriate the archive information was supplemented with information from local libraries and specialist interest websites & journals.

In order to identify the character of archaeological remains in the vicinity of the site a search of the Gwynedd HER was conducted examining an area within a 1000m radius of the proposed works (the grid reference for the search is taken as the centre point of the development area). The RCAHMW database and aerial photographs of the site were also examined. The information gathered will not be reproduced in the following report but rather the reader will be referred to document CR82-2014.

Further desk-based research was conducted as an important element of this phase of works with existing sources examined to place the archaeological remains uncovered within their chronological, regional and national context. This work is ongoing and will be continued in order to facilitate the production of the final site report. Due to the initial works carried out at the site a broad chronological period has been identified with the majority of finds belonging to the earlier Neolithic. Therefore research will be undertaken with specific reference to the “*Research Framework for the Archaeology of Wales – Neolithic and Earlier Bronze Age*” (www.archaeoleg.org.uk)

Given the results of the fieldworks to date it is believed that a number of the points in the framework can be addressed. The salient points discussed below have been identified based on the results to date. The framework will also be re-examined in light of the excavation results to ensure that all questions which may be even partially answered in relation to our findings are given due consideration. The following section will be addressed in the final report when all excavation and post-excavation works have been completed.

“*Later Mesolithic – Earlier Neolithic transitions*” - This area of study has been considered a research priority “*The nature of the Mesolithic/Neolithic transition - There is a need to study sea level change and the origin of sedentism. There should be a particular focus on those locations with mixed date assemblages (eg cave sites) including subsurface investigation linked with comprehensive dating and palaeoenvironmental sampling*”. The identification of material at this stage is tentative but a small number of Mesolithic artefacts have been discovered at the site and although the most likely explanation for their appearance is that, as on many other Neolithic sites,

they are simply residual it is possible that further excavation may produce unexpected results. This is particularly true of samples which are to be sent for radio-carbon dating and any Mesolithic material will be studied with an awareness of the potential to provide information as to interactions at this vital archaeological juncture.

“Settlement” - Given the distinctly domestic character of the material and features uncovered during the previous phase of works all questions raised within this section of the agenda will be considered although it may not prove possible to provide answers in all instances. The points raised are:

“Why do we have so few house sites from the Neolithic – in contrast with Ireland and the continent? Was settlement in the earlier Neolithic landscape characterised by its mobility? Was there a change to more permanent settlement during the later Neolithic/earlier Bronze Age?”

There are also the following points which have been identified as research priorities:

“Settlements throughout the Neolithic and Early Bronze Age are poorly represented in Wales and in particular for the early Neolithic. Where did the monument builders live? On the basis of present evidence, it has also been observed that there is very little continuity of settlement from the early Neolithic to BA and beyond”.

The artefactual assemblage is known to contain imported and axe-factory material and it is therefore considered pertinent that it is examined in relation to the following points - *“Industrial processes and access to resources and trade connections”* and *“The distribution and context of material culture deposition”*. The specific points of relevance in relation to industrial process and access to resources and trade connections are:

“What stone was being employed for implements and where was it procured? What were the mechanisms for dispersal? Were the raw materials or finished products formally traded by a merchant class or passed hand to hand by neighbours? Was there a seaborne trade? What was the nature of the contact with the lands to the east and west?”

The relevant questions within the distribution and context of material culture deposition are:

“What can we understand about the nature and use of material culture through its depositional context? What was the nature of Neolithic stone-axe and Bronze Age metalwork deposition?”

The in-depth study of the site and the detailed analysis of the artefacts and environmental material has yet to be completed and the above points will be addressed in the final site report when all the information is available for interpretation rather than at this preliminary phase.

The works will be carried out accordance with the CIfA Standards and Guidance for historic environment desk-based assessment (CIfA 2014).

3.2 Excavation

An area measuring approximately 40m x 40m was excavated within the proposed development area using a mechanical excavator with a toothless bucket. This area is shown on figure 2 and was located so as to allow for as wide an area as possible around the features of Neolithic date in trench 6 to be exposed to ensure that the site limits are reached.

All machine excavation was supervised by an archaeologist from C.R Archaeology. The area was excavated until an archaeological horizon or the bedrock/natural were reached. Due to the known

presence of a large concentration of features containing a wealth of artefactual material extreme caution was exercised and the spoil heaps were examined closely for stray finds.

All archaeological features, structures or remains identified were trowel cleaned by hand. Due to the national significance of this site an intensive approach was continued during the excavation and for all features associated with the Neolithic settlement identified in the previous phase of works 100% excavation will be undertaken.

For features which were encountered in the remainder of the stripped area investigation of such features, structures or deposits will be sufficient to determine their character, date, significance and quality. In these instances excavation will generally involve the removal of 50% of pits/posthole fills and 25% of the fills of ditches/large linear features. Should it be deemed necessary to understand the archaeological remains uncovered the area may be extended. This will be subject to prior agreed with GAPS and the client.

As has been identified above the features forming part of the Neolithic area are considered to be of national importance and an intensive sampling policy was continued. To allow for complete retrieval of artefacts, charcoal and charred plant remains and for a meaningful analysis to be conducted on the site assemblage as a whole there was as close to 100% retention of the fills of all features as possible. This material is to be wet sieved off site. The sample strategy and methodology are discussed in detail below.

Other than those associated with Neolithic material no features were uncovered which yielded suitable material for environmental sampling.

GAPS were kept informed of the discoveries on site and were kept up to date with the progress of site works.

The works were carried out in accordance with the CIfA Standard and Guidance documents for Archaeological Excavation (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*. The written record comprises completed *pro-forma* record sheets.

Plans, sections and elevations have been produced on gridded, archive standard stable polyester film at scales of 1:10, 1:20 or 1:50, as appropriate. A temporary benchmark (TBM) was established on the site and where possible plans, elevations and sections will contain grid and level information relative to OS data. All drawings are numbered and listed in a drawing register, these drawing numbers being cross-referenced to written site records. A 'harris matrix' diagram has been constructed for the excavated area.

A high-resolution 13mp Sony Alpha digital camera was used to create a photographic record of the site. This is comprised of photographs of archaeological features and appropriate groups of features and structures. Included in each photograph is an appropriate scale, north arrow and a record board detailing the site name, number and context number. General photographs were taken of the excavation process and significant finds/insitu artefactual material.

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

3.2.2 Additional Mitigation/Contingency Measures

Further significant archaeological discoveries were made during the excavation and C.R Archaeology informed both the client and the development control archaeologists Jenny Emmett. Consultation took place between C.R Archaeology, GAPS and it was agreed that the excavation area would not be extended at this time as the remains uncovered satisfied the original aims. It was decided that further works would be more appropriately undertaken at a subsequent stage.

No human remains or artefacts that fall within the scope of the Treasure Act 1996 were recovered during site works.

3.2.3 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 is to create a stable, ordered, well-documented, accessible material archive forming a resource for current and future research (CIfA 2014).

All artefactual material was 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, Neolithic ceramics will be examined by Frances Lynch and the lithic assemblage will be analysed by Dr. Ian Brooks. A list of specialists has been submitted to GAPS and the relevant expertise will be sought as necessary. Any specialist conservation 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 all archaeological material recovered will 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 CIFA: *Standard and Guidance for Archaeological Excavation* (2014).

3.2.4 Environmental Sampling & Processing Strategy

This section was compiled following advice from environmental specialist Elizabeth Chambers (BA, MA). Reference has also been made to the sampling strategy adopted by Gwynedd Archaeological Trust during their excavation of a similar site type at Llandegai, Bangor (GAT 2007) and the English Heritage publication “*Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition)*” (2011).

The samples were collected in accordance with this sampling strategy but the processing and assessment of this material is to be undertaken as a further stage of works.

Although labour and resource intensive a sampling strategy whereby all uncontaminated fills of features associated with the Neolithic settlement area were sampled and retained was adopted. This material has been collected to be floated and wet sieved off-site. The aim of this undertaking is the retrieval of carbonised macroscopic plant remains and the recovery of any small artefacts which may not have been identified during excavation – particularly flint/stone knapping debris.

The adoption of a 100% soil processing strategy has been informed by a number of factors. The first is the scarcity of this site type in the archaeological record and the limited number of opportunities to undertake this work that are therefore likely to be presented in the future. The second is the importance placed upon such information in the Research Framework for the Archaeology of Wales

– Neolithic and Earlier Bronze Age. The final influence was a case study presented in the English Heritage 2011 publication (English Heritage 2011: 29). This example was the species analysis of plant remains from a Neolithic pit group in Yorkshire. The research showed that when only a proportion of the samples from a site were analysed the results were biased and very different from the picture which emerged when the complete assemblage was studied – this included the processing of a pit fill which was found to contain over a thousand barley seeds which were not visible during excavation. It is therefore felt that in order that any plant remains assemblage can be meaningfully studied it must be done so in its entirety.

The bulk samples collected are to be processed utilising a floatation tank. The volume of each sample will be measured and large stones removed prior to being placed into the tank. Material floated over the sluice will be collected using a 0.1mm mesh and the heavy fraction will be retained using a 1mm mesh. The heavy fraction will be separated using a 1cm sieve and the stone removed. Following this initial processing the flot, the 1cm residue and the 1mm residue will be dried before being further analysed. Following the drying of the residue fractions it is to be hand sorted to check for small artefacts and following this work they will be discarded.

It was noted in the GAT report (2007) that the flotation failed to separate all the charred remains from the 1mm residue and this problem was resolved by bucket floating. This strategy will be adopted should C.R Archaeology encounter a similar issue during works.

The flots will be weighed and catalogued prior to being sent to Wessex Archaeology Geoarchaeology & Environmental Archaeology Department for palaeoenvironmental assessment/analysis.

There were no suitable deposits identified on site from which a soil column sample could be taken.

Following the sample processing on completion of the site works the material which may yield positive dating results will be identified and analysed against specific dating criteria such as chronological or artefactual associations. Material will be sent to Beta Analytic Radiocarbon Dating for dating. It is envisaged that a similar number of dates to those obtained for the Neolithic House at Llandegai will be obtained (16 samples). There will also remain the possibility of further dating being undertaken as the remaining charcoal/charred remains will be deposited in Llangefni museum and will be available to future researchers.

Samples were collected for lipid analysis. As this is a destructive process smaller pieces were selected and at least one example of Irish Sea Ware and one piece of Mortlake will be examined. It is aimed that around 10 sherds be processed as this is a very small percentage of the material to sacrifice in the hope of recovering additional information.

The methodology for the collection of pottery for lipid analysis as set out by Bradford University was followed on site – pottery to be analysed was not handled, the excavator lifting the sample wore neoprene gloves and used tweezers or the point of a trowel and place the sherd directly into aluminium foil in which it was wrapped before being placed in a labelled ziploc bag. Prior to any sample being sent for analysis it will be discussed with ceramic specialist Frances Lynch to ascertain whether it is considered an acceptable loss. C.R Archaeology are currently in discussion with individuals at Bradford and Bristol Universities as to whether either institution will be able to conduct the work. Should neither prove viable options then GAPS will be informed prior to an alternative source being selected.

3.2.5 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. Any archive/artefactual material created/discovered during this archaeological project will be deposited at Llangefni Museum. Archive material will be deposited in accordance with the museum's terms and conditions for archive deposition.

3.3 Timetable for Proposed Works

The excavation began on Monday 2nd February and the field work ran until March 7th. Further time has been allotted for post-excavation works including sample processing, archive research, specialist analysis, report compilation and site archiving.

3.4 Staffing

The project was managed by Catherine Rees (BA (Archaeology), MA (Archaeology) Postgraduate Diploma (Historic Environment Conservation) & Matthew Jones (BA (Archaeology), MA (Archaeology)). The fieldwork was conducted by Matthew Jones and Catherine Rees with additional suitably qualified field staff brought in as necessary. Initially there were three staff on site with numbers raising to 5 as works demanded.

All staff had a skill set equivalent to the IfA AIfA/MIFA level. C.Vs for all staff employed on the project can be provided on request. All projects are carried out in accordance with IfA *Standard and Guidance* documents.

3.5 Monitoring

The project was subject to monitoring by Gwynedd Archaeological Planning Services who received regular site updates and made monitoring visits as necessary.

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 with an additional kit stored in the site cabin.

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

- Safety Helmets (EN397)
- Safety footwear – steel toecap and mid-sole boots and Wellingtons (EN345-47)

- Hi-visibility vests (EN471)
- Mobile Telephone (to be kept in site vehicle)
- Suitable Waterproofs

C.R Archaeology staff 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.

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.

This report includes:

- A copy of the agreed specification
- A location plan
- A plan showing the locations of the excavation area within the development site
- All identified features plotted on an appropriately scaled site plan
- A full bibliography of sources consulted
- An archive compact disc

This is an interim document which has been produced following the completion of fieldwork and records the excavation site results but omits the results of the specialist post-excavation analysis.

Due to the intensive sampling regime and the extensive artefactual assemblage post excavation work is likely to take place over a period of several months and waiting for the results could potentially cause long delays to the building project. As interpretation is best made when in possession of all available information much of the comparative site work will also be included in the final document rather than this interim report.

A copy of the report in Adobe PDF format will be sent to the appropriate monitoring archaeologist for approval before formal submission. A bound paper copy and 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.

Given that the results of works to date have yielded significant information articles are proposed for relevant journals. An initial article will be submitted to the Archaeology in Wales Journal, with local (Transactions of the Anglesey Antiquarian Society) and wider publications (Archaeologica Cambrensis, Current Archaeology and Proceedings of the Prehistoric Society) have also been approached and have expressed an interest in the site. There is also the aim that a BAR Report (either recording the results of this site taking a whole volume or as part of a collection of the results of excavations on Neolithic sites in Wales) be produced.

As there is an awareness that specialist publication will not provide access to information for many local inhabitants, C.R Archaeology has a commitment to involving neighbouring communities in our archaeological sites. An open day for local schools is planned to follow-up on visits for children who would attend the new school which were made during the previous phase. Interest has also been expressed in an exhibition in the local village hall and this is to be followed up. Talks have been agreed with local historical societies.

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 Topological & Geological Background

4.1 Topography

The site is located along the A5025 as it passes through the village of Llanfaethlu. The site is currently in use as grazing within an enclosed field boundary system. It is positioned to the rear of St. Maethlu's Church. The site lies just outside within the Anglesey Area of Outstanding Natural Beauty (AONB). The south-eastern site boundary is located adjacent to the limits of the Carreglwyd Historic Park & Gardens (ID 690). The site limits are within 500m of an area of restored ancient woodland and 650m of the Llŷn Garreg-Lwyd Site of Special Scientific Interest

4.2 Geology

The bedrock geology at the site is recorded as “Gwna Group - Schist. Metamorphic Bedrock formed approximately 508 to 635 million years ago in the Cambrian and Ediacaran Periods. Originally sedimentary rocks formed in deep seas by chaotic deposition from underwater gravity slide. Later altered by low-grade metamorphism. Formed in deep seas by chaotic deposition from underwater gravity slide. These rocks were first formed in the deep sea by chaotic deposition from underwater gravity slides, and then later metamorphosed, though there is evidence of their sedimentary origin” (www.bgs.ac.uk).

Also recorded in the immediate vicinity of the site are “Gwna Group – Metabasaltic-rock. Metamorphic Bedrock formed approximately 508 to 635 million years ago in the Cambrian and Ediacaran Periods. Originally igneous rocks formed by eruptions of silica-poor magma. Later altered by low-grade metamorphism. Originally igneous rocks formed by eruptions of silica-poor magma. These rocks were first formed by volcanic eruptions of silica-poor magma, and then later metamorphosed, though there is evidence of their igneous origin”. A rocky outcrop is visible within the site boundaries (www.bgs.ac.uk).

The superficial geology of the site is not recorded. During the excavation of evaluation trenches it was found to be variable and of a mixture of clay, sand and gravel bands with limestone outcrops either at or just below the surface.

5.0 Historical Background

A full history of the site and the surrounding area was produced as an element of the Desk-Based Assessment section of report CR82-2014. It was therefore not deemed necessary to reproduce this section in full in this document and the following text is a summary only.

A search of the Gwynedd Historic Environment Record database recorded 15 known sites of archaeological/historical interest within a 1000m search radius of the site. Of these results the majority of entries relate to sites of post-medieval or modern date, although there are earlier sites of significance very near the site boundaries.

5.1 Prehistoric

There is a single site of Prehistoric date (in this instance Bronze Age) recorded within 1000m of the proposed development site. There is also a further site which could possibly be of Neolithic/Early Bronze Age date within the vicinity of the proposed development area.

Maen Hir, (also known as Llanfaethlu or Soar Standing Stone PRN 2021, NPRN 302298) is a schist standing stone located approximately 2/3 of a mile to the south-east of the proposed school site. The second site, PRN 2035, is an underground passage at Bryn Maethlu Farm. Although on the Gwynedd HER this site has been interpreted as an artificial fox earth by Frances Lynch there does remain the possibility that this site may be of prehistoric origin as was believed by its excavators in 1894 (Griffith 1895: 232).

The RCAHMW Inventory for Anglesey (RCAHMW 1937: 68-69) records a further significant site within the parish – Castell, a promontory fort on the coast near Trefadog which is located approximately 1.2 miles to the south-west of the site). The site is recorded as PRN 1.

5.2 Roman

Llanfaethlu is known to be an area associated with Roman activity. Lewis records that *“It is supposed to have been known at a very early period to the Romans, who are thought to have had a smelting place here, for the ore of the Parys mountain. This supposition is confirmed in some degree by the discovery of a cake of copper-ore, weighing fifty-four lb., and stamped with a mark resembling the Roman letter L, about the year 1757, and by the quantities of charcoal and scoria of copper which are frequently turned up by the plough in tilling the land upon the higher grounds* (Lewis 1833: 115). It is recorded in the HER as PRN 2030. The HER also records a Roman coin hoard (PRN 2046) within the 1000m search radius of the site. This hoard contained 39 coins, some 20 of which were of Republican issue.

5.3 Early Medieval/ Medieval

Two Early Medieval cist cemeteries have been discovered within 1000m of the proposed development site. The first (PRN 2028) was uncovered in 1860 when the remains of five skeletons were found whilst building a road to Carreglwyd. The second site (PRN 2029) was excavated in 1894 following the discovery of a number of graves following the removal of a fence.

There are two entries of Medieval date recorded in the HER. The first is St. Maethlu's Church (PRN's 2022 & 6983), the graveyard of which borders the proposed development site. The exact date of the foundation of this church is not clear but it is possible that part of the current building dates from 13th century, although the building was extensively restored in the 19th century. St Maethlu's Church is a Grade II* Listed Building.

The second Medieval era site from within the 1000m search radius is the possible site of a mill – Melin Carreglwyd. The existence of this feature has not been possible to verify and it is not recorded on historic maps. The classification for Melin Carreglwyd is given as “Folklore” and therefore little further can be said of this feature.

5.4 Post-Medieval/ Modern

The remaining sites within the 1000m search radius are of Post-Medieval/modern date. By far the most significant of these sites are Carreglwyd House and grounds (PRN 2044 & 17281). The limits of the essential setting for the Carreglwyd park boundary is the north-western boundary of the proposed development site. We have been informed by the current estate owner that the proposed development site has been part of the Carreglwyd Estate since at least 1634, possibly earlier. The current Carreglwyd House is a Grade II* Georgian manor house set in wooded grounds.

5.5 Cartographic Evidence

Archive research identified a number of historic maps which show the proposed development site. These range in date from 1800 – 1949 and show that although the plot has remained unchanged since at least 1887 there are earlier interior divisions within the plot. An estate map of 1801 shows the plot divided into four plots, and by the production of the 1839 tithe map this has been reduced to

two and the remaining interior boundary is removed by the production of the 1887 Ordnance Survey map and the field layout is as is seen today. This boundary was identified during evaluation trenching at the site.

6.0 Results of Archaeological Works

Following the machine stripping of the excavation area down to the archaeological horizon it was evident that, although the full extent of the pit group and the Neolithic structures identified during the previous stage of works had been uncovered, the extent of the Neolithic activity at the site continued beyond the excavation limits.

Plate 1 is an overhead shot showing the excavation area, clearly illustrating the wealth, density and significance of the archaeology uncovered. Provisional dating based on artefactual evidence provides a range for the majority of the excavated features from the Early Neolithic (c. 3800 – 3600 cal B.C) through to Middle Neolithic (c. 3300 – 3000 cal BC). There were also a number of Late Mesolithic flint artefacts recovered although these are believed to be residual and as yet none of the features have been attributed a pre-Neolithic date. Interestingly two features also contained Grooved Ware pottery which is generally related to the later Neolithic.

In addition to the Neolithic features a series of shallow ditches were excavated which were the remains of much later, Post Medieval field boundaries. These and similar features were also identified during the previous phases of works. No artefacts or features belonging to any period between (and including) the beginning of the Bronze Age and the end of the Medieval period were uncovered during this phase of works.

To broadly summarise the Neolithic remains uncovered during this excavation there is a pit group containing Mortlake pottery and three Early Neolithic Houses, characterised by the presence of Irish Sea Ware pottery. Associated with one of the houses is a relict soil which contained a large quantity of worked stone.

Although it is understood by the author that the term “house” can be problematic as a label for the Neolithic structures it is none the less used in this instance as the debris and detritus which has been recovered is clearly of a domestic nature. This is not however to deny a ritual or symbolic association with these buildings, and indeed the evidence from this site clearly points to deliberate and ritualised behaviour and the careful selection of “special” items for deposition at important spacial and temporal locations.

There were no surviving floor layers within the Neolithic structures and it is believed that later ploughing/activity has probably removed a minimum of 0.10m from the original site level. There are however no plough scars visible in the natural and the site has clearly never been deep ploughed – presumably due to the outcropping of the bedrock and the high incidence of stone within the features. This site was historically in use as grazing and it is this that is largely to thank for the exceptional preservation on site.

As mentioned above there were a number of distinct areas of activity identified within the site and the results have therefore been subdivided into the following general groups for ease of discussion:

Plate 1. Aerial Photograph
Of Excavation Area
Largely Post Excavation
Although Some Further
Work was Carried Out



- Area 1** - The pit group identified during the previous phase of works which contained predominately Mortlake type pottery
- Area 2** - Stone lined Neolithic postholes and Associated Features (named Neolithic House 3)
- Area 3** - The square Neolithic building and associated features (named Neolithic House 2)
- Area 4** - The large rectangular Neolithic Building and associated features (named Neolithic House 1)
- Area 5** - Outlying features - largely Post-Medieval field boundaries

Figure 3 details the locations of the separate areas, and more detailed plans of each individual area are included within the relevant sections. It must be stressed that the results of this phase of works are preliminary and following further post-excavation works there may be some reinterpretation required, particularly within Areas 1 – 3 due to the close proximity of the feature groups. Appendix B details the direction and location of the photographic plates.

Area 1 (figures 4 & 5, Plates 2 - 9).

Due to the somewhat fortuitous positioning of Trench 6 during the previous phase of site works Area 1 was largely excavated as part of the preceding evaluation trenching phase, although there were a small number of additional outlying features uncovered during the open area excavation. Report CR84-2014 discusses the results of the previous works but for ease of discussion elements of these findings will be incorporated into this report, although the full text should also be referred to.

In the previous phase of works the material recovered and features excavated were indicative that the activity undertaken within this area was of a domestic character, but it was noted that the relatively mundane nature of this material should not be taken to exclude the possibility of a ritual element and there appeared to be a definite structure to some of the choices of material, and its careful placement within certain features.

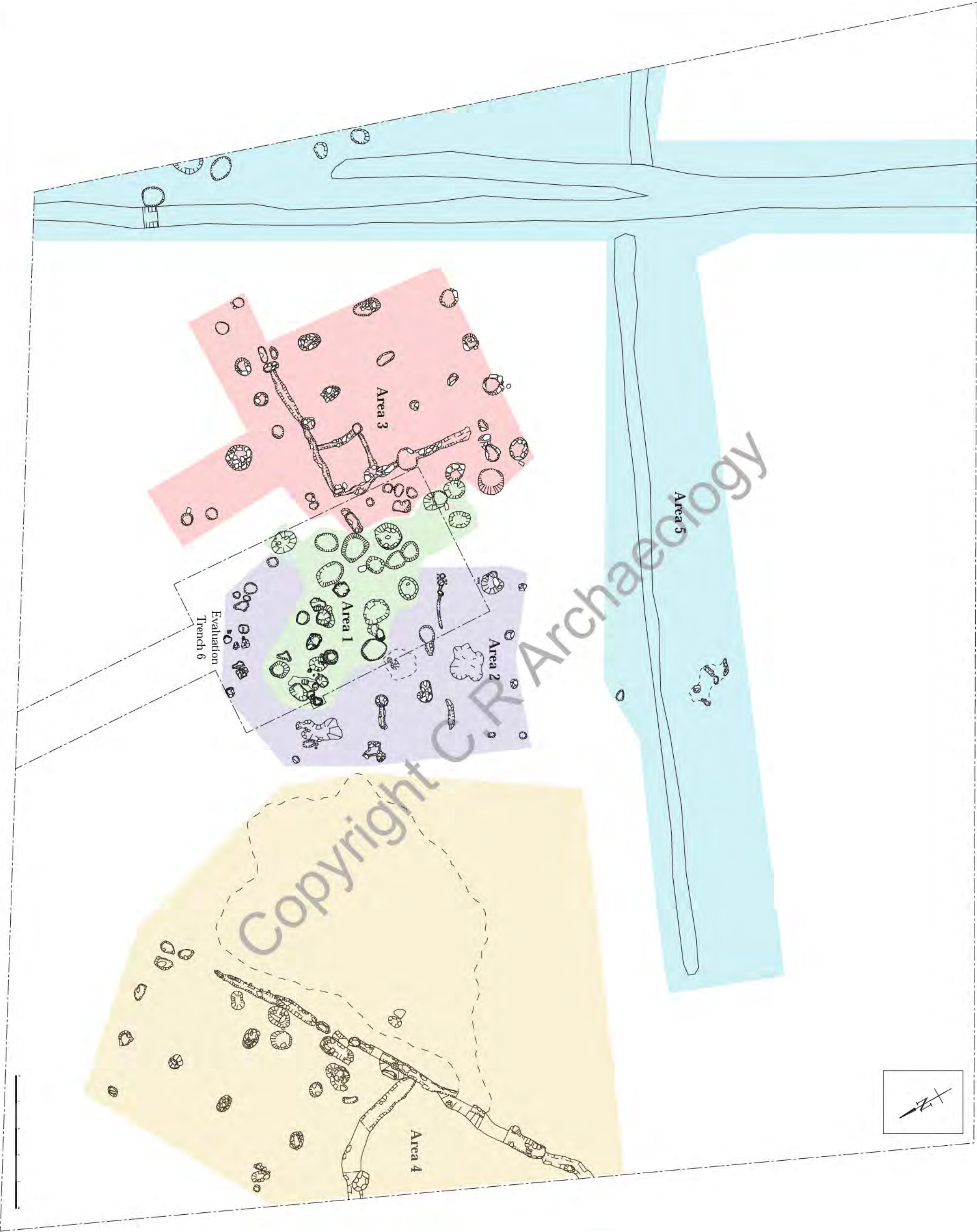
During the excavation of evaluation trench 6 a total 55 archaeological features were excavated, 53 of them fully with the other 2 features extending partially beyond the trench limits. Of the features excavated there were 4 hearth areas identified where in-situ burning was evident and 31 features which were interpreted as being of a structural nature - postholes, stakeholes or beamslots. Of the structural features 5 were stakeholes or small postholes associated with hearth [6077] rather than being elements of larger structures which it is believed is likely to be the case with the all but one of the remainder of this feature type. Pits made up the remaining the archaeological features on site and 19 were excavated, with a further undetermined dip recorded which was an in-filled stone hole rather than a deliberately cut feature.

These interpretations have been largely confirmed by the subsequent excavations although a single feature – [6034] has been reinterpreted as a posthole associated with an Early Neolithic structure rather than being a deep pit. In addition to the previously identified pit features two more pits ([6151] & [6282]) and one very deep stone lined posthole ([6290]) were uncovered which belong to the Mortlake phase of the site.

What has been possible following the full excavation of the area is to divide the features identified by broad period and a clear pattern emerges when one examines the incidence of different pottery types in relation to the types of feature in which it is found. The hearths and pits contained almost exclusively Mortlake style pottery whereas the postholes/structural features contained either no pottery or small pieces of Irish Sea Ware. The only exception to this was the structural arrangement of stakeholes or small postholes although as mentioned above these are clearly not related to any of the house structures but rather are part of a group also containing pits which are associated with hearth [6077]. The four hearths identified in the previous phase also appear to belong to the



Figure 3. Locations
Of Descriptive Areas
Used in Main Text



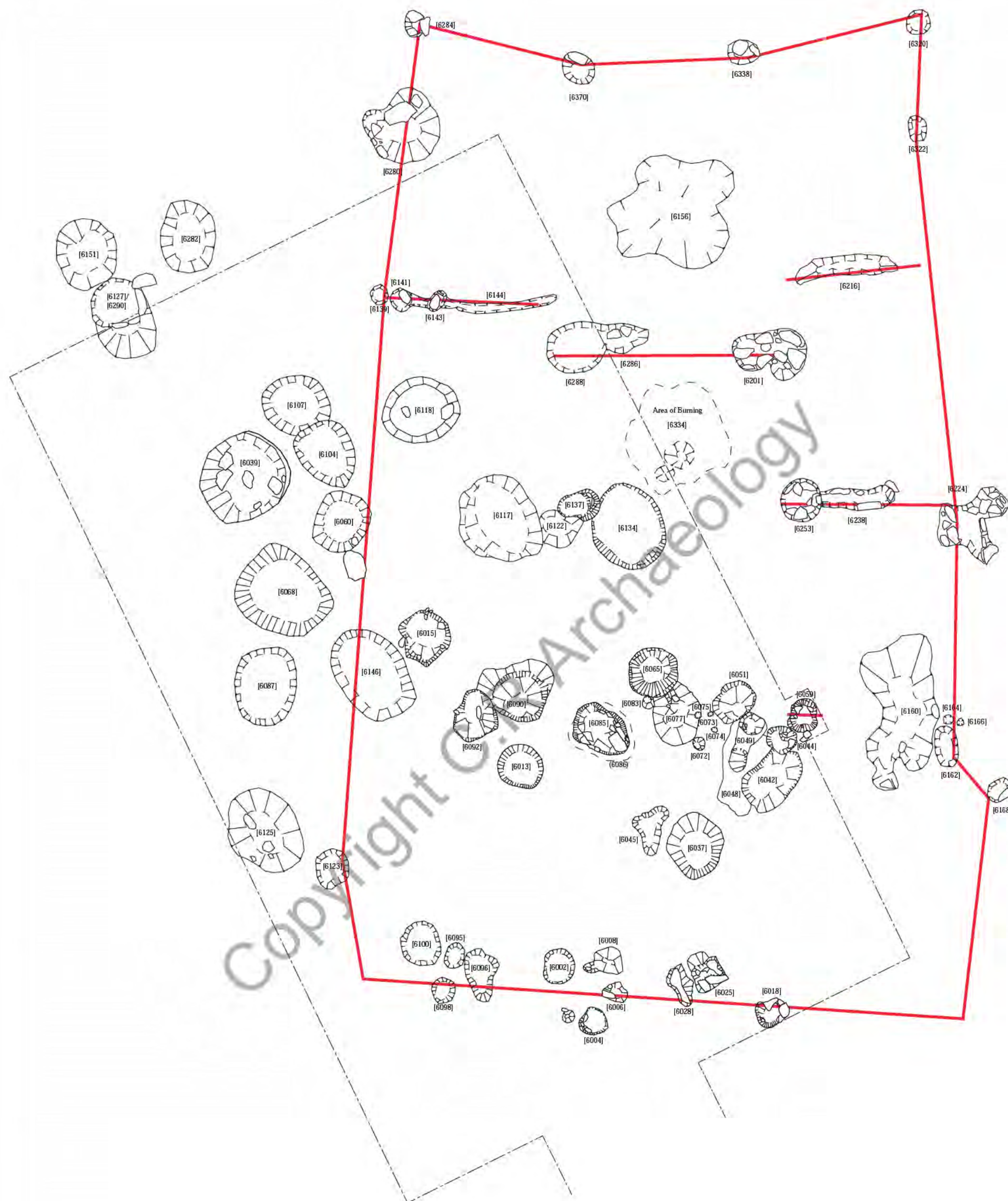


Figure 4. Relationship Between Middle Neolithic Pit Group (Area 1) and Early Neolithic House (Area 2 - Outline Drawn in Red)
Outline of Evaluation Trench 6 is Also Shown for Ease of Interpretation.
Features Excavated Within Trench 6 Which Relate to the Adjacent Structure (Also Believed to be of Early Neolithic Date) are not Shown



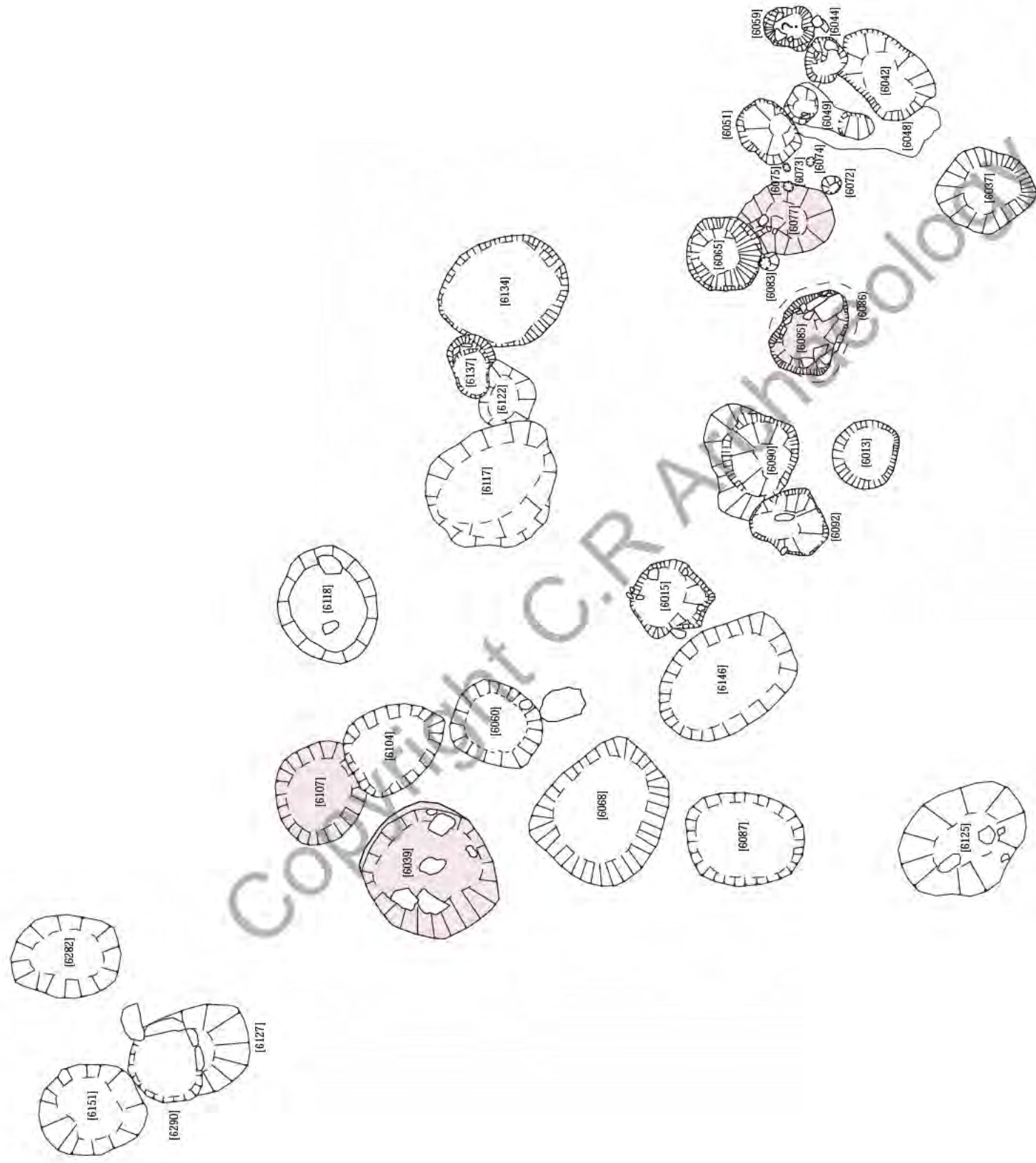


Figure 5. Plan of Area 1 - Pit Group Containing Mortlake Impressed Pottery (Feature [6045] is a Natural Stone Hole and Has Been Removed)



Mortlake phase of site use, although there was an additional hearth area uncovered which is related to the earlier activity.

The hearths and pits are discussed in the previous interim report (CR84-2014) but the description is summarised below.

The hearths and pits were broadly similar in terms of general size and shape with both groups being circular or sub-circular in plan with bowl shaped profiles. The dimensions were also very similar with diameters from c.0.60m – c.1.20m and depths of c.0.20m. The majority of features contained a single fill. The pits did tend to contain more artefactual material and two of the four hearths had been cut by later pit features. A closer examination of the distribution of different artefact types and any distinctions between the materials deposited in different feature groups will form a key element of the post-excavation works to follow full excavation.

Hearths [6039] and [6085] had stones remaining within the features and are likely to have been used as cooking pits with the stones being heated within this feature. Hearth [6077] was a part of a more complex group of features and had been cut by a later pit [6065]. There were a number of other small features surrounding this hearth and it is thought that the stakeholes may represent the remains of a small structure, either to allow items to be suspended over the fire or to be hung near it for cooking or drying purposes. The fourth hearth structure [6107] was found to cut pit [6104], and as this pit contained Mortlake pottery the hearth can be fitted into the later phase of activity at Llanfaethlu.

As mentioned above the pits were of a similar size and shape to the hearths but were distinguished by a lack of in-situ burning. They were also found to contain much larger artefact assemblages than the hearths or postholes, and in 3 instances (4 when the additional features were excavated) were found to have had pottery pieces placed around the sides of the pits. Also found within pit fills were worked stone - including local and imported flint, chert, struck local stone, fragments of at least 1 Graig Llywd axe and hazel nut shells.

Two additional pits ([6151] & [6282]), a pit that had previously been partially excavated during the previous phase ([6127]), and a stone lined pit/posthole ([6290]) which cut pit [6127] were excavated during the current phase of works and the material recovered from these features was similar to that recovered from elsewhere within the pit group. Of particular note however was an exceptionally large piece of Mortlake pottery which was found in feature [6151]. Plates 2 – 3 show feature [6282], plates 4 – 5 show feature [6290] and plates 6 – 8 show feature [6151].

Of particular note within this small group of features is [6290] and were it not for the presence of Mortlake pottery sherds within the fill of both this pit and the pit which is cut through by [6290] this context would have been grouped together with Area 3 (Neolithic House 2). The depth – 0.60m is considerably deeper than the other features within this group, and the steep near vertical sides and flat base are in sharp contrast with the shallow bowl shape pit profiles. What is of particular interest within this feature is the stone lining – flat stones have been purposefully selected and have been pressed deeply into the pit sides. This is very different to the vast majority of the stone linings in the postholes associated with the Early Neolithic structures which have a more haphazard range of random, angular stones which are wedged in around the posts to hold them in place. It is due to this difference that there is a reluctance to assign the label “posthole” to this feature and it is perhaps more helpful to think of this as stone storage container and the results of the environmental sample processing is eagerly awaited.



Plate 2. Half Section Through Pit [6282]



Plate 3. Post Excavation Shot Showing Pit [6282]



Plate 4. Post Excavation Shot Showing Deep Pit [6290] and Pit [6217]



Plate 5. Detailed Shot of Stone Lining (6291) in Pit [6290]



Plate 6 (Main Picture). Half Section Through Pit [6151] Showing Large Piece of Mortlake

Plate 7 (Top Right). Large Sherd In-Situ

Plate 8 (Below Right). Sherd Following Cleaning

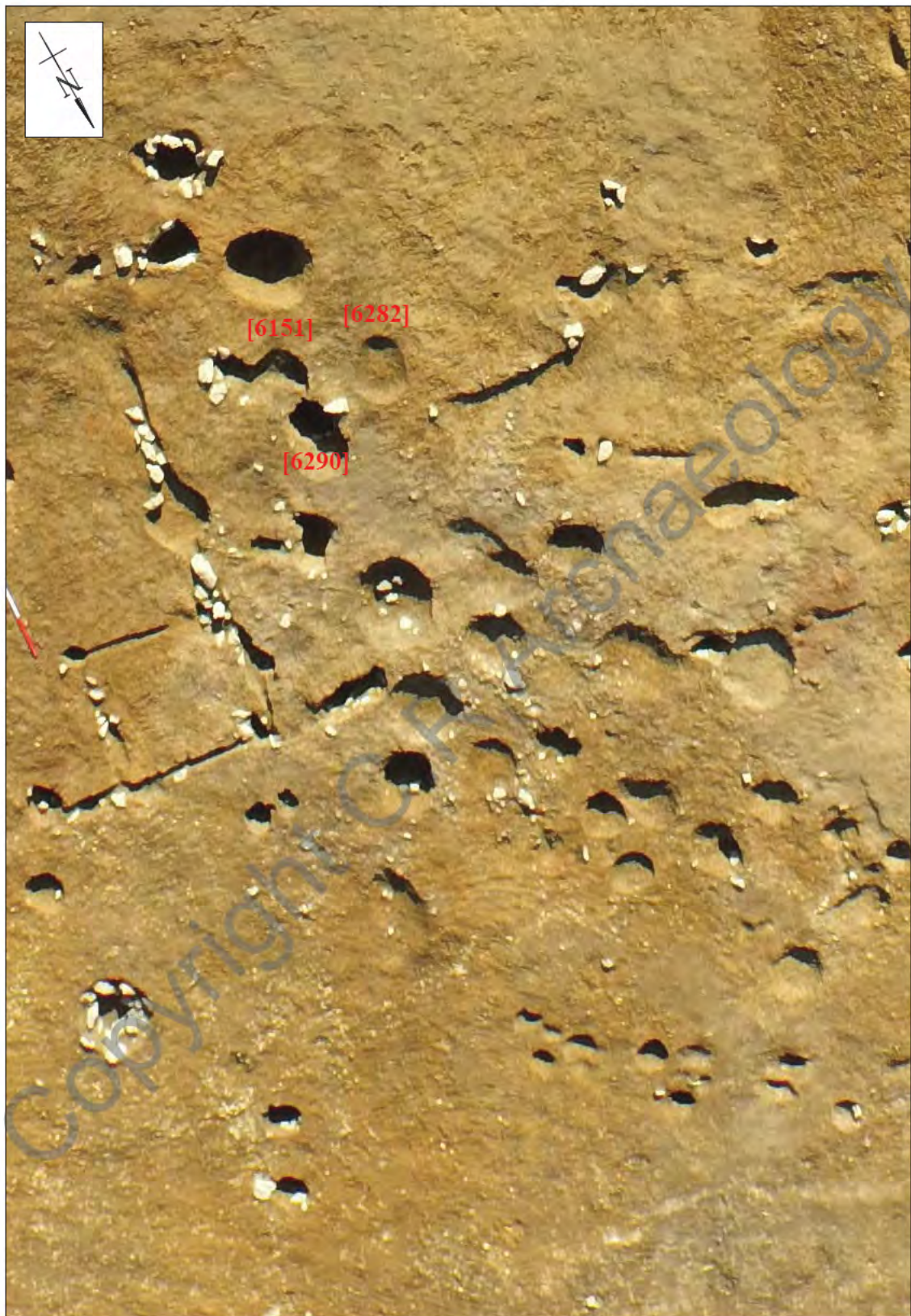


Plate 9. Aerial View of Area 1. The Three Additional Features are Labelled in Red

There was however one posthole ([6137]) identified within Area 1 which was shown to have been dug through two pits containing Mortlake pottery. There were large pieces of charcoal recorded by the excavator who noted that the charcoal could have possibly been part of a post pipe. It is very interesting to note that this feature is located in line with a row of features within Neolithic House 3 although without further work and definitive dating from features this link will remain unpursued at this stage.

Although radiocarbon dating is yet to be undertaken for the Llanfaethlu site the concentration of features within this pit group, together with the number of hearths and the presence of inter-cutting contexts is strongly indicative of repeated use of the same site over a period of time. This reinforces the strong sense of place that one can observe at Llanfaethlu and this spot appears to have been a focal point for Neolithic activity for centuries. This theme is discussed further in following sections.

Area 2 (Figure 4 & 6, Plates 10 – 24).

Area 2 partially overlaps with Area 1 and the distinction between the two areas is based on the different feature and pottery types which are present/absent within each group. The features within this group are a series of postholes, stakeholes and beam slots/hollows together with a hearth area and two shallow, somewhat amorphous features. Plate 10 shows an aerial view of this area of the site.

These features are arranged to form an external rectangular structure measuring approximately 6m minimum by 11.5m, the long axis of which is orientated roughly north-east – south-west. There are also internal features which are located within the south-western half of the structure but it must be noted that this distributional bias is likely to be the result of disturbance/concealment of earlier features in the north-eastern area by the Mortlake pit group (Area 1) rather than being of genuine significance.

Elements of this structure were excavated during the evaluation trenching phase of works and a row containing features [6123], [6100], [6095], [6098], [6096], [6002], [6008], [6006], [6004], [6010], [6025], [6028] and [6018] was identified. On further investigation this was found to be the north-eastern wall of a larger rectangular building now interpreted as Neolithic House 3. Also identified during the previous works was a parallel row of features ([6139], [6141], [6143] and [6144] approximately 7.5m to the south-west which can now be seen to be an internal division of the same structure. It is unclear as to whether a further group of postholes ([6019], [6034], [6021] and [6023]) orientated on a north-east – south-west axis are part of this structure, forming part of the south-eastern wall or whether they are part of Neolithic House 2 in Area 3. They have been attributed to Area 3 at this phase of works, with a narrower, rectangular floor plan favoured for the structure in Area 2 but this interpretation may be challenged following continued post-excavation works.

The exterior walls of this structure are formed from rows of stone lined post and stakeholes and the majority of these features were up to 0.30m in diameter and up to 0.40m in depth. The postholes were steep sided with a flat or slightly rounded base, and post packing was present in a number of examples. The postholes forming the external circuit of this structure are considerably less substantial than those utilised in neighbouring Area 3 (Neolithic House 2) but are not dissimilar to those used in the construction of the eastern wall of Neolithic House 1 (Area 4). Plates 11-12 show posthole [6370], which is representative of the postholes forming the south-western wall of the structure.

There were no beam slots found within the outer wall circuit and, aside from the cluster in the north-eastern wall, there were no stakehole rows found between the larger postholes. Presumably this structure would have had wattle and daub walls, and it is likely that the more ephemeral



Figure 6. Plan of Area 2 Showing Neolithic Structure 3





Plate 10. Aerial View of Area 2 Showing Neolithic House
Area of Burnt Clay Near Centre of Photograph is Hearth [6334]

stakeholes have simply not survived in their entirety. This hypothesis is supported the absence of the floor surface of the building which has not survived and it is believed that at least the top 10cm of the old ground service has been lost through later erosion and ploughing. Another difficulty in interpreting stakeholes in this area is the burrowing of small animals and the presence of one such burrow can be seen on the aerial photograph (plate 10) running up to posthole [6338]. A further shallow divot which was thought during excavation to be a stone hole is also visible on the aerial photograph in the position which would have been occupied by the northern corner of the structure and it is possible that this is all that remains of a very shallow post-setting.

The internal features uncovered have been distinguished from those of the Mortlake pottery pit group in Area 1 through the absence of Mortlake pottery and thus this is only the most basic of examinations. It is hoped that this will be refined following further post-excavation work. Features within this structure contained Irish Sea Ware pottery sherds, worked stone and flint along with a piece of polished Graig Llywd axe.

The features attributed to the building to date show that the interior was divided into clear zones, as in seen in other examples of buildings from this period including those at Llandegai, Bangor. There is an area of heavy burning approximately in the centre of the building ([6334]) and a clear compartment defined by beamslots/hollows at the south-western end of the building.

Within this compartment was what appeared on the surface to be a large circular feature with stone packing (see plate 13). However on cleaning no obvious function for the stone was found and the feature was revealed to be a shallow amorphous dip with no discernible cut (6156) into which burnt material and refuse had been placed/accumulated (see plate 14). This deposit contained pieces of worked stone, Irish Sea Ware pottery and struck flint along with hazelnut shells. This feature is likely to be the base of a larger feature which has been truncated by later activity. This feature is located opposite the hearth area in the gap between beamslots [6144] and [6216].

To the north-east of the beamslots, and positioned so as to narrow the entrance into the south-western compartment of the structure are what appear to be two sets of double postholes. These features were both stone lined and one posthole – [6288] is of particular note (plate 15). This feature contained a leaf shaped arrowhead (plate 16) and the only fragment of polished Graig Llywd recovered during this phase of works. Analysis by Dr. Ian Brooks has shown that the flint arrow head was burnt after manufacture, although there was no evidence of burning within this posthole. It is postulated that these “special items” were specifically chosen for deposition following the decommissioning of the house and the removal of the posts which one stood in the openings. The act of artefact burial would have effectively sealed off this opening once more.

The large area of in-situ burning mentioned above ([6334]) has been interpreted as a hearth and the location chosen is remarkably similar to that observed in other examples of Neolithic houses such as Ballyglass, Co Mayo (Lynch et al 2000: 50). Unlike the other hearths believed to belong to Area 1 this feature does not appear to have been cut into the ground although it is possible that the slight scoops within the feature have been man made, maybe to allow the rounded pots to stand in the fire. This area of heat affected natural clay is the result of a large fire having been repeatedly relit in the same spot and this location would have provided light into the main area of the house, and provided it was not screened off, also illuminated the rear compartment. The depth and area of the penetration of the firing of the underlying natural clay is greater than was observed in the other hearths. Plate 17 shows hearth [6334], and plate 10 gives a clear impression of the level of burning. The feature is cut by later pit [6134].



Plate 11 (Top Left). Half Section Through Posthole [6370]



Plate 12 (Top Right). Post-excavation Shot of Posthole [6370]



Plate 13 (Below Left). Pre-excavation Photograph of Feature [6156] Showing Stone In-situ



Plate 14 (Below Right). Half Section Through Feature [6156] Following Removal of Stone





Plate 15 (Top Left). Half Section Through Double Posthole [6288] & [6286] Showing In-situ Stone Lining



Plate 16 (Top Right). Burnt Leaf-Shaped Arrow Head Deposited in Posthole [6288]



Plate 17 (Below Left). Section Through Hearth Area [6334] Showing In-situ Burning of the Underlying Clay Natural



Plate 18 (Below Right). Half Section Through Posthole [6253]



Plate 19. Posthole [6253] Following Removal of Upper Postpacking.
Beamslot [6238] Visible to Right



Plate 20. Beamslot [6238]
Posthole [6253] Visible to Right



Plate 21. Feature Group Containing Postholes [6224] & [6227]



Plate 22. Feature Group Containing Postholes [6224] & [6227]

To the north-east of posthole [6201], and running parallel to [6216] is a further posthole [6253] and beamslot [6238] (see plates 18 – 20). Posthole [6253] was the most substantial posthole in this structure and survived to a depth of 0.37m. It is possible that these features are the remains of an additional internal division running parallel to that formed by [6144] and [6216].

To the north-west of [6238] is another slightly irregular feature which is also thought to be the remains of a double posthole and in this instance the features form part of the north-western wall of the larger structure. The postholes are stone lined and due to the similarities in the fills it was not possible to distinguish whether the features were inter-cut or contemporary. They are shown in plates 21 – 22.

The final group of features which have currently been related to house 3 are [6160], [6164], [6166], [6162] and [6168] (see plates 23 - 24). These were an interesting group of features and it was noted that the upper fill from irregular pit [6160] covered the three immediately adjacent post and stakeholes. Pit [6160] contained two distinct fills, an upper mid-brown silty clay fill (6158) and an underlying deposit of ash and charcoal rich silt (6159) which was judged from the presence of the hardened underlying natural to have been deposited whilst hot, but not burnt in-situ. Given that the post/stake holes are presumed to form part of the north-western wall of Neolithic House 3 this deposit/feature raises intriguing questions as to the decommissioning of the structure as the structural elements could not have been standing when this activity was undertaken. This scenario does not necessarily equate with other evidence at the site as it would seem that there was at least an earthwork associated with house 3 surviving when the Mortlake pit group was in use and it may be the case that pit [6160] belongs to this phase. It is also plausible that, should the pit be related to the partial destruction of the house, then this gap could have become in-filled as the house decayed around it and therefore would have been visible as a boundary within which the pit group activity could be contained.

Area 3 (Figure 7, Plates 25 – 50)

Area 3 contains a solidly constructed sub-square structure believed to be of Early Neolithic date. It is constructed of an external circuit of large posts set within substantial stone lined postholes with smaller internal posthole rows. There are also a series of regularly spaced postholes linked by stone packed hollows. The external area of the structure measures approximately 9m (north-south) by 11m (east-west). There are a number of outlying postholes to the north ([6255], [6267] & [6269]) and two postholes ([6236] & [6234]) in the north-eastern corner. The northern postholes had packing stones and posthole [6255] (plate 29) clearly once held a substantial timber post and is one of the largest postholes associated with the structure. It is tentatively offered that this opening could have once held a single large post, possibly carved or adorned which could have served as a marker or totem for the house.

The two much smaller postholes in the north-eastern corner are clearly part of the building itself, but do not entirely conform to the general gridded arrangement of the other structural elements. It is believed that these features are part of a “porch” like entrance which would create a shelter around the doorway to protect from the elements and prevent the interior of the structure being directly observed.



Plate 23. Half Section Through Pit [6160] Showing Heat Affected Natural And Ashy Deposit at Base. Features [6164], [6166] & [6162] Visible in Forefront



Plate 24. Post Excavation Shot of Pit [6160] Showing Heat Affected Natural Features [6164], [6166] & [6162] Visible in Forefront



Plate 25. Area 3 (Neolithic House 2) View from the East



Plate 26. Post Excavation Shot of Area 3 Showing Neolithic House 2
Taken from the East (Above)



Plate 27. Post Excavation Shot of Area 3 Showing Neolithic House 2
Taken from the West (Above)



Plate 28. Post Excavation Shot of Area 3 Showing Neolithic House 2
Taken from the North (Above)



Plate 29. Post Excavation Shot of Outlying Neolithic
Posthole [6255]



Plate 30. Post Excavation Shot of Stone Lined Postholes
[6183] & [[6178]. Pit/Posthole [6169] Visible in Background

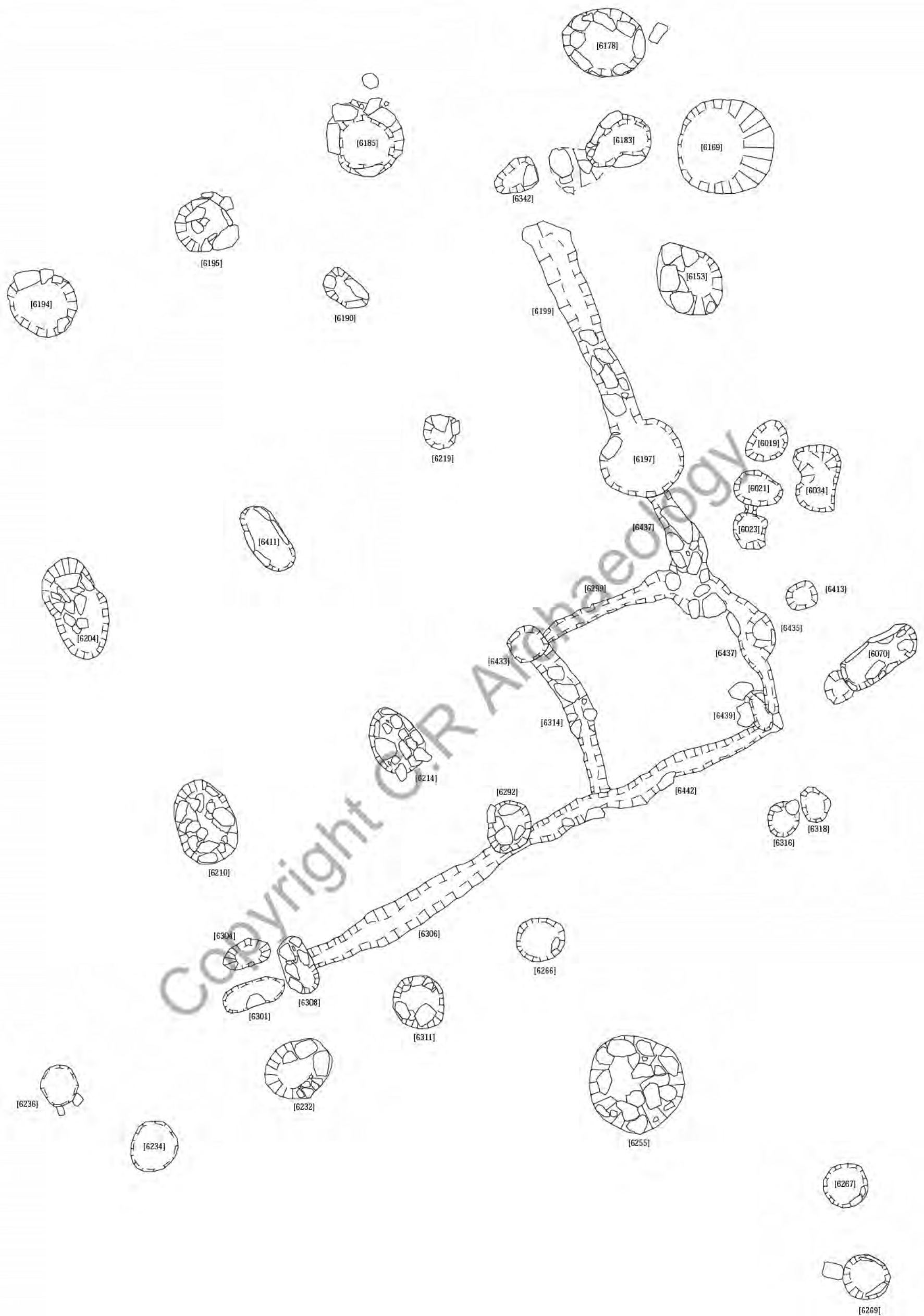


Figure 7. Plan of Area 3 Showing Neolithic House 2 and Associated Features



As mentioned above the exterior of the house was constructed of rows of sub-circular, large stone lined postholes (plates 30 – 34 show a representative sample of these features) which are between 0.60m and 0.80m in diameter and up to 0.50m in depth. Two of the postholes ([6204] & [6210]) are elongated and although the existence of a re-cut was evidenced only by the shape of the feature, it was felt that these postholes have been re-excavated and the posts within them replaced in antiquity. This hypothesis is particularly supported in the instance of pit [6204] where the posthole is exceptionally large for the size of post which is indicated by the surviving arrangement of the stone packing material (see plates 35 - 38).

Within Neolithic House 2 is a clearly gridded arrangement of stone lined postholes, some lined by hollows with some surviving packing stones. The interlinked group of features which are linked by a series of hollows have been given the group number [6299] (see plates 39 - 45). The somewhat haphazard arrangement of stone packing within these hollows has been taken as evidence that the rather than being beam slots these trenches are dug to support a wattle and daub structure with the stone packed around the hazel uprights. Pieces of burnt daub were recovered from the hollows during excavation and there was some evidence that this area had been subject to burning. There were signs of heat damage to the underlying natural of posthole [6197] – see plate 39. The fill of hollow [6428] was exceptionally charcoal rich (see plate 40) but the underlying clay was not heat affected.

This partition creates a clearly delineated square area with the main build which measures approximately 1.60m by 1.60m. There is no obvious entrance into this space and it is possible that either the division was continuous at ground level, with a higher opening through which one stepped to gain entry to the inner space. There is also an interesting idea proffered by Jessica Smyth (2014: 57) who states that the act of digging and filling are important acts in the construction of a Neolithic house and cites a number of examples of Irish houses where a continuous circuit is dug and then the areas which were not to house structural materials – i.e entrances were backfilled and it is perfectly plausible that this is the case at Llanfaethlu.

Although this internal structural element can be clearly seen in later photographs it must be noted that this was taken following the extensive cleaning and re-cleaning of the area and a period of heavy rain. Certain elements such as pits [6197] and [6292] were visible at an early date but many of the other elements such as linear [6314] were less easy to define. It is believed that hollow [6199] originally ran up to posthole [6342] but its southern end the hollow was very heavily disturbed by burrowing animals and it was not possible to be certain as to the exact edges of the feature.

Feature group [6299] is very clearly a multi-phase construction with two clear phases identified. On excavation it was found that the earliest elements of this structure are posthole [6308] and the hollows which link the other postholes. The only exception to this is hollow [6306] which is a re-cut of hollow [6442] – unfortunately the exact location of this re-cut could not be identified but it was definitely before the hollow reached posthole [6292]. As can be seen in plate 43 the re-cut runs through the top of the posthole and joins up with a later posthole [6301] which now forms the terminus for the feature. It is clear that the internal division has been replaced/renewed on the same orientation and in the same position as the original feature. What is of note is that in order for the postholes to have so clearly cut the hollows the hollows must have already been backfilled at this point and it is possible that the small square area does not remain a partitioned off area in the later phase of use although there is a hollow at least between postholes [6301] and [6292].

A further intriguing possibility with group [6299] is that it is not an internal division but rather it belongs to a different phase of house construction whereby the structure is renewed in the same location and on the same alignment but is made either slightly larger or slightly smaller depending on which is interpreted as the earlier incarnation. This would account for the slightly odd posthole



Plate 31. Half Section Through Stone Lined
Posthole [6311]



Plate 32. Post Excavation Shot of Stone Lined
Postholes [6185]



Plate 33. Post Excavation Shot of Stone Lined
Postholes [6232]



Plate 34. Post Excavation Shot of Stone Lined
Postholes [6195]



Plate 35. Half Section Through Stone Lined
Posthole [6204]



Plate 36. Post Excavation Shot of Stone Lined
Posthole [6204]



Plate 37. Half Section Through Stone Lined
Posthole [6210]



Plate 38. Post Excavation Shot of Stone Lined
Posthole [6210]



Plate 39. Section Through Hollow [6199] and Posthole [6197]
(Note Posthole Cutting Hollow)



Plate 40. Working Shot Showing Square Element of Group [6299]
Following Intensive Cleaning and Heavy Rain



Plate 41. Post Excavation Shot of Posthole [6292]
(Note Posthole Cutting Hollow [6442] Seen to the Right)



Plate 42. Section Through Hollow
[6306] and Posthole [6308]



Plate 43. Close-up of Section Through
Hollow [6306] and Posthole [6308]



Plate 44. Post Excavation Shot of Group [6299] (Taken from the East)



Plate 45. Post Excavation Shot of Group [6299] (Taken from the East Above)



Plate 46. Half Section Through Stone Lined
Posthole [6190]



Plate 47. Post Excavation Shot of Stone Lined
Posthole [6190]



Plate 48. Half Section Through
Posthole [6411]



Plate 49. Post Excavation Shot
Of Posthole [6411]



Plate 50. Post Excavation Shot of Stone Lined
Posthole [6214]

arrangement whereby there is a very small area between the outer and inner post lines. On balance this is felt to be an unlikely scenario although further post excavation works may require it to be re-examined in the future.

The existence of the small chamber detailed above, although very unusual, is not entirely unknown and there are other sites which exhibit similar internal divisions such as at Corbally 5, Kildare (Smyth 2014: 35) and Stretton-on-Fosse, Warwickshire (Darvill 1996: 87). It is unclear as to what this area, which had been very carefully delineated from the rest of the building was used for. It could have been something as mundane as a separate storage area or something much more mystical such as a shrine.

The internal postholes which are not part of group [6299] are generally slightly less substantial than their external counterparts and tend to cluster around 0.50m – 0.60m in length although posthole [6214] is slightly larger. The internal postholes tend to be oval rather than circular in plan. With the exception of feature [6411] they are generally of the same construction with packing stones pressed in around a circular post. Feature [6411] is an elongated pit with carefully selected flat stones lining the side and would seem likely to have held a split beam or double circular post. This method of construction is also seen in external post [6070]. Plates 46 – 50 show a sample of the internal postholes. The internal postholes are aligned on the same grid system as that used in group [6299].

Area 4 (Figure 8, Plates 51 - 81)

Area 4 housed the largest of the three Early Neolithic structures uncovered at Llanfaethlu and included a large but generally rather ephemeral spread of mid-brown silty clay material which was almost identical to the subsoil. This deposit (6150) was found on excavation to be a relict soil which had accumulated in a very slight natural hollow, and the vast majority of the deposit was less than 0.02m in depth. The deposit was identified when it was noted during machine watching that there was a higher than expected incidence of finds in this area and the soil was left high so that it could be hand excavated. The deposit covered an area measuring approximately 10m by 11.5m and was heavily disturbed by animal burrowing. On excavation it was found that the depth of the deposit increased to north-east and it was 0.10m – 0.15m in some places. Interestingly it was found that in the small area where it meets wall slot [6376] of Neolithic House 1 the house was found to cut through the deposit.

Deposit (6150) is notable for the wealth of artefactual material – predominantly lithics although it did contain occasional worn fragments of Irish Sea Ware, and it is noted by Dr. Ian Brooks that this deposit along with two other contexts accounted for over 40% of the total lithic assemblage collected at the site. It is also noted that the majority of the Late Mesolithic lithics were recovered from this context. This deposit is seen as representing an activity and possible refuse disposal area outside but clearly associated with House 1. The artefacts were randomly distributed and appeared to have been moved around by trample and animal activity. Concealed beneath deposit (6150) was a single small pit or posthole [6415] which did not contain any artefactual material.

The aforementioned Neolithic House 1 was not fully excavated during this phase of works as it lay partially outside the trench limits. It is therefore not possible to give a definitive length for the structure but it is known to be in excess of 16m by 7m in width and it is orientated on a north-east – south-west axis. A number of different construction methods had been utilised in the erection of outer walls of Neolithic House 1 and numerous internal stone lined postholes were recorded. As in the other structures these divisions create separate compartments within the house and generally formed lines at 90 degrees to the outer walls.

The north-eastern wall of the house was constructed using a similar method to that utilised in the erection of house 2, and was formed from a row of five stone lined postholes ([6190],[6223],



Plate 51. Plan View of Area 4 Showing Neolithic House 1

[6182], [6177] and [6172]. These postholes were sub-circular or oval in plan and ranged in size from a maximum of 0.40m by 0.60m to a minimum of 0.40m in diameter. With the exception of posthole [6223] they survived to a depth of between 0.20m and 0.25m. Feature [6223] was recorded as having been disturbed during machine excavation when a stone was removed and was likely to have originally been of a similar size. The features had flat bases and steep, near vertical sides. Plates 56 – 61 detail a representative sample of the postholes.

The south-eastern wall of the house was of a very different construction to the north-eastern, and there was also considerable variation in technique along the length of the wall. Rather than the series of postholes utilised in the north-eastern wall in this elevation a series of wall slots had been dug either side of an opening presumed to be an entrance into the house. Slot [6242] was approximately 5.2m in length and varied in width between 0.20m and 0.40m. It was shallower at its north-eastern end and had a maximum depth of 0.19m at the south-western extent. The slot linked postholes [6231] and [6390]. A series of 10 stakeholes (see plate 62 for a representative shot) were identified in the north-eastern half of the wall slot but due to the similarities between the fill of slot [6242] and the stakehole fill it was unclear as to the relationship between the features and whether the stakeholes were used to replace an earlier beam or vice-versa. Whatever the case it is evident that for at least part of the buildings history this wall section would have been of wattle and daub construction.

The wall slot is much deeper at its south-western end and in this area it could have certainly held split wooden beams. Plate 63 shows a section through this area of the feature to demonstrate the contrast between the two ends. It is noted by Dr. Ian Brooks that the fill of this feature is one of three contexts which contain a large quantity of lithic material.

Wall slot [6242] terminates at posthole [6390], which together with posthole [6387] defines what is thought to have been the building entrance. Lying between the two postholes is a shallow feature ([6362]) containing a large flat stone, a second flat stone was disturbed in this area during machining and also thought to have originated from within this feature and that together the stones created a flat step or threshold into the building. Directly behind pit [6362], and directly blocking the gap between the postholes is stone lined pit [6365]. This feature is heavily truncated but appears to be the remains of a further slot or pair of postholes which seals off the earlier entrance into the building. Plates 64 - 66 show this feature arrangement.

Wall slot [6376] runs from posthole [6387] up to the trench baulk. It is cut by a series of stone postholes, or has packing arranged so as to allow large upright posts to be inserted. The wall slot is very slightly truncated by a much later feature [6382], presumed to be a Post-medieval field boundary or land drain. This feature is shown on figure 3 but has been omitted from figure 8 as it is visually rather confusing in that it is on a similar alignment to the interior divisions within the house. It was found to cut and cover one Neolithic posthole and in an area where it is slightly deeper it appears to have removed a second feature.

Feature [6376] varies in width between 0.40m and 0.70m and in depth between around 0.30m to c.0.50m. It was found to have been cut by postholes [6378], [6374] and [6387]. Plates 67 – 69 show samples of the feature along its length. The south-eastern side of the feature has a well cut vertical edge with large stones added as supports whilst the north-western edge is more irregular and less steeply cut. It is noted by the excavator that it is so different from wall slot [6242] that it would seem that they were cut by different people or at different times. It is also noted that the two slots are also slightly misaligned and kink slightly at the entrance area.



Plate 52. Working Shot of Area 4 During Cleaning
View from the North-east (Above)



Plate 53. Working Shot of Area 4 During Cleaning
View from the North-west (Above)



Plate 54. Working Shot of Area 4 During Cleaning
View from the South-west (Above)



Plate 55. Plan View of Area 4 in Foreground
View from the North-west (Above)



**Plates 56 & 57. Half Section Through and Post-Excavation
Shot of Posthole [6177]**

Plate 58. Post-Excavation Shot of Posthole [6223]



Plate 59. Half Section Through Posthole [6182]



**Plates 60 & 61. Half Section Through and Post-Excavation
Shot of Posthole [6172]**

Plate 62. Row of Stakeholes
In Base of Wall Slot [6242]

Plate 63. Section Through Wall
Slot [6242] & Posthole [6260]

Plate 64. Post-Excavation Shot of
Posthole [6390]

Plate 65. Shallow Pits [6362] & [6365]
With Stone in Entrance to House 1





Plate 66. Post-Excavation Shot of Posthole [6387]

Plate 67. Sample Section Through Wall Slot [6376]

Plate 68. Section Through Posthole [6374] And Wall Slot [6376] Showing In-situ Burnt Post Tip. Later Truncating Feature [6282] Is Visible in Picture Foreground

Plate 69. Section Through South-Western End of Wall Slot [6376] Showing Charcoal Rich Fill Underlying Redeposited Natural. Note Also Stone Packing Material

The lower fill of wall slot [6376] (context (6375)) was a charcoal rich black silty clay deposit containing patches of burnt clay which contained a fragment of a burnt plank and the tip of a charred oak post (see plate 68). Interestingly the ground around the post is not heat affected and it would therefore seem unlikely that it could have been burnt in-situ and it is postulated that, as is presumed to be the case at the Llandegai house (Kenney 2007), the post base was charred before use in order to help prevent rot. The evidence of burning within the deposit itself is however very clear and given the later re-cutting of postholes into the wall slot it would seem possible that fire has formed some form of significant act during the closing down of one phase of the house before it is renewed in the same spot.

As can be seen from plate 69 at the south-west end of the wall slot before the point where it is drawn as much shallower on the plan in the area leading up to the trench edge there is an area of redeposited natural within the cut and the shallow undulating area is likely to be later re-cut or the result of slumping rather than [6376]. As this is complicated by the presence of trench edge it was felt that it would be more beneficial to explore what is happening in this area in a subsequent phase of works when this end of the house can be examined in its entirety so as to avoid the risk of losing any significant relationships.

Due to the positioning of the trench only approximately 8.4m of the north-western wall are exposed within the excavation area and despite extensive cleaning and re-cleaning of the area following on from the end of north-eastern line of postholes and the area between posthole [6348] and the trench edge no further features were uncovered. This therefore leaves us with a much less substantial rear wall to the house and, in addition to posthole [6172] in the northern corner of the building, the only structural evidence that we have for this wall is a group of three postholes near the trench edge (features [6351], [6353] and [6355] (see plate 70 – 71)). It is likely that, as is seen elsewhere in the structure, the three postholes do not necessarily all belong to the same building phase.

As in the other two Neolithic houses there are surviving internal features and the majority of these features are stone lined postholes arranged in roughly south-east to north-west aligned rows. The south-western most of the rows was formed by a single surviving posthole [6400] which was aligned with two postholes [6374] and [6378], both of which cut wall slot [6376]. Unfortunately the area between wall slot [6376] and posthole [6400] has been truncated by the digging of a much later ditch which was deepest to the south-east. The ditch had also cut the upper fill of posthole [6400] but the ditch was much shallower in this area of the trench and the damage was not extensive. Plates 72 – 73 detail the feature during and post excavation. Feature [6400] measured approximately 0.6m x 0.8m and was 0.4m in depth. This feature exhibited clear evidence of burning in-situ and the excavator noted that there was a charcoal rich, well defined postpipe within the posthole and there was evidence of the surrounding posthole fill having been heated and some of the faces of the stone packing also showed evidence of burning.

There was a row of two further stone lined postholes and a small pit to the north-east of posthole [6400]. These features ([6368], [6361] & [6356]) are aligned between the entrance and the three postholes of the north-eastern wall. It is noted that although the lower fills of these features are charcoal rich there was no evidence for in-situ burning. These features are shown in plates 74 – 77.

The final two rows at the north-east end of the house roughly follow the familiar gridded pattern and are of similar size and construction to those detailed above. All contain charcoal rich fills but no evidence of in-situ burning.



Plate 70. Group of Postholes Forming North-Western Wall Of Neolithic House 1 - Half Section



Plate 71. Group of Postholes Forming North-Western Wall Of Neolithic House 1 - Post Excavation



Plate 72. Posthole [6400] Showing In-situ Stone Post-Packing Feature was Cut and Covered by Ditch [6382]



Plate 73. Posthole [6400] Following Removal of Stone Post-Packing. Feature was Cut and Covered by Ditch [6382]



Plate 74. Post Excavation Shot of
Internal Stone Lined Posthole [6368]



Plate 75. Post Excavation Shot of Pit [6361]



Plate 76. Half Section Through Posthole [6356]



Plate 77. Post-Excavation Shot of Posthole [6356]



Plate 78. Stone Packing in Posthole [6276]



Plate 79. Outer Packing in [6276] Showing Polishing Stone



Plate 80. Cremated Material at Base of [6276]



Plate 81. Stone Packing in [6276]

One feature is however of particular significance, and it was recognised during excavation that this posthole had been singled out for special attention by its creators. Posthole [6276] appears at first glance to be somewhat unremarkable and with a steep sided, flat based profile and sub-oval shape in plan which conforms to the general style used in the other postholes of the building. The dimensions – 0.73m x 0.65m with a depth of 0.50m also conform to the normal range for this structure, but it is how this feature has been filled and used that provides a fascinating insight into the Neolithic mind. Following the digging of this pit the cremated remains of ovine or possibly cervid leg joint was placed at its base. This is evidenced by the survival of an intact astragalus bone. The cremation must either have taken place in-situ or the material placed in the hole whilst it was still very hot as there is reddening of the surrounding clay. A heavily burnt saddle quern had been placed on top of the cremation and it is unclear as to whether the quern was burnt as part of the same episode.

The saddle quern formed a base or post pad for a stone lined posthole and protected/sealed the cremated material. The final act of structured deposition associated with this feature was the “closing” of the opening following the end of the life of the posthole (and possibly the house). In feature [6276] the post was removed from its slot and the hole backfilled with stone, closing the earth back over the buried items. It is interesting to think of one feature representing the whole sequence of establishing and then decommissioning the house and further work is needed to see if there can be a timeframe established over which this activity took place. The stone backfilling contained a beautifully polished rubbing stone, which although on closer examination by our lithics specialist did not prove to be of Graig Llywd material, it nonetheless very much had that appearance. It was a carefully selected item which had been pressed into the side of the feature. Plates 78 – 81 show feature [6276] at various phases of excavation.

Area 5 (Figure 9, Plates 82 - 86)

Area 5 incorporates the outlying features which can not be easily associated with any of the other groups due to their more peripheral locations.

The dominant outlying features which were located with the excavation area are three large Post-Medieval linear features. Feature [6426] is a large forked linear structure running north-east – south-west through the excavation area. The feature varies in width from c. 1.5m to 0.80m although it was found to be less than 0.10m in depth. This feature was identified during the previous phase of works as being a relict field boundary which was shown on an 1801 Estate Map.

This feature is met at a 90 degree angle by a narrower segmented ditch [6422] and [6224]. These features are 0.50m – 0.80m in width and 0.10m – 0.05m in depth. The slight stepping of these two linears where they should meet would indicate that they stopped to join with boundary [6426] and were therefore contemporary field systems that were no longer in use when the cartographic sources consulted during the desk-based research element of this work were created. There are still however considered to be of Post-Medieval date.

An inset within figure 9 shows the small outlying group of features which were positioned either side of Post-Medieval field boundary/land drain [6422]. Feature [6324] was a small posthole containing packing stone, and was not dissimilar to those which form the south-western wall of Neolithic House 3, although it was not possible to directly relate this feature to that group (plate 82). The same must be said for the features on the south of linear [6322], which are a small collection of postholes (plate 83) within an area of in-situ burning. This area is quite possibly an outlying area of Neolithic activity centred around a hearth but unfortunately no artefactual material was recovered and this area has been heavily truncated by animal burrowing.

Figure 9. Area 5 -
Outlying Features

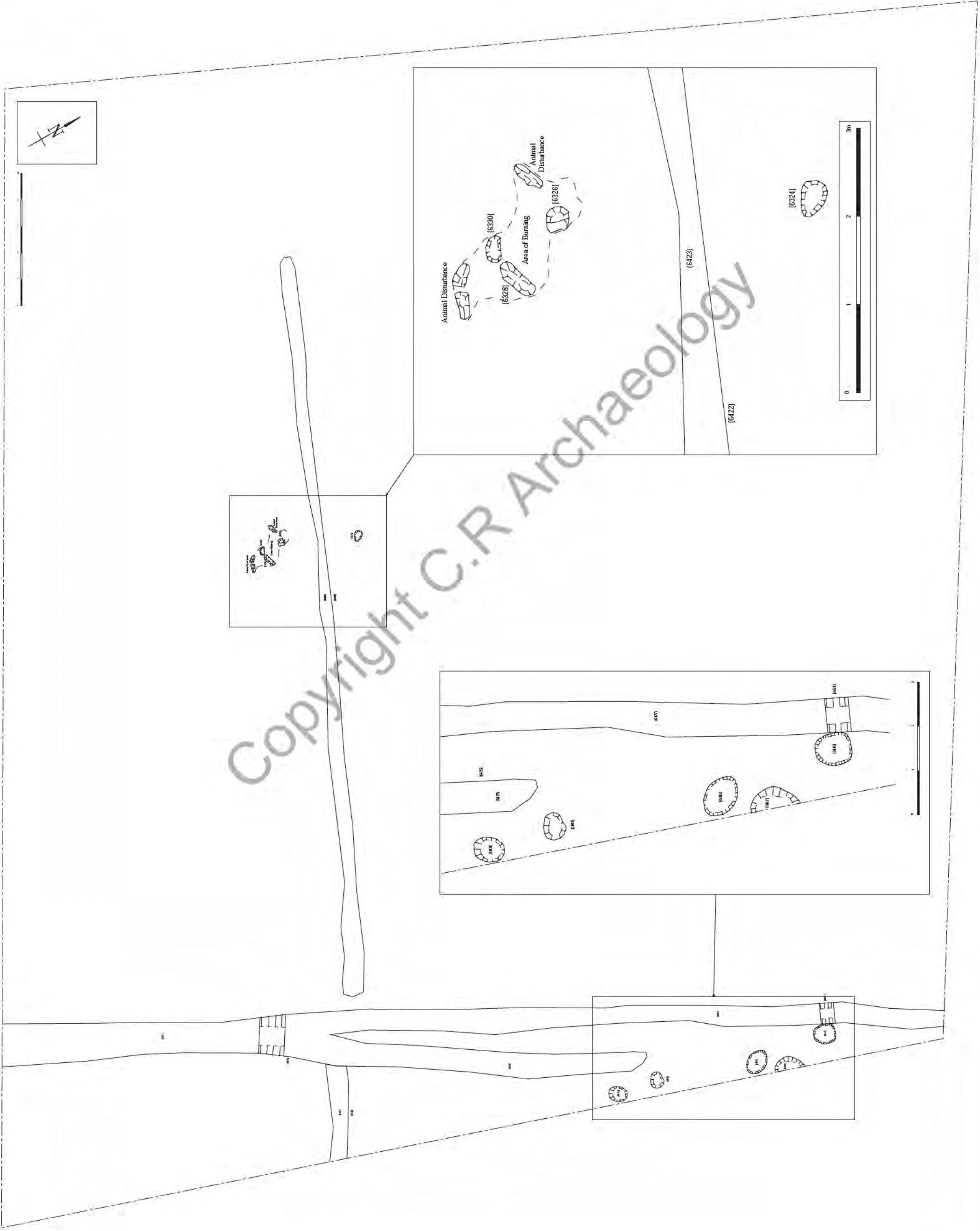




Plate 82. Post-Excavation Shot of Feature [6324]



Plate 83. Features [6328], [6330] & [6326]
Note In-situ Burning and Animal Disturbance



Plate 84. Section Through
Field Boundary [6426]



Plate 85. General Shot of Pits
Near South-Eastern Trench Edge



Plate 86. Half Section Through [6405] Showing Packing Stones

The most perplexing of the outlying features are a group of five pits near the eastern corner of the site (plates 85 - 86). These pits are circular or subcircular features ranging in size from 0.60m – 1.20m in diameter, only one of the features is greater than 0.20m in depth. Apart from pit [6405] all have a shallow bowl shaped profile. Pit [6405] is a steep sided post hole with large stone packing and a flat base. There were no finds in any of these features and it would be equally plausible that they are Post-Medieval features associated with field boundary [6426] or that they could be a further Neolithic structure - pit [6405] could very easily be a stone lined posthole and it bears a resemblance to those used to build Neolithic House 2 in Area 3 although it did not contain the frequent charcoal flecks within the fill or any artefactual material which was noted in the stone lined features in other areas. The excavation area would have to be extended to determine with any certainty which era these features are most likely to belong to.

Artefact Analysis – Initial Findings (By Frances Lynch & Dr. Ian Brooks)

An initial assessment of the artefactual material was made by Frances Lynch who examined the pottery and Dr. Ian Brooks who examined the lithic assemblage. The assemblage collected from the previous phase of works was considerable and contained almost 500 sherds of pottery and 83 lithics. In this phase of works an additional c.400 sherds of pottery and 568 lithics. A full and more detailed assessment will be made when the full excavation of the site is complete.

Assessment by Frances Lynch - Notes on the Pottery from Llanfaethlu April 2015

“The expectations aroused by the first session of excavation at this site in December 2014 were fulfilled during further work in the spring of 2015 on an expanded area around the original Trench 6. The lines of postholes found earlier resolved themselves into two structures almost exclusively associated with sherds of Irish Sea Ware, which had previously been found in only very small quantities. The preponderance of Mortlake ware in the pits, which lay between the two buildings, was confirmed. (Note by C. Rees – there are now believed to be three rather than two Early Neolithic buildings at Llanfaethlu, and the structures referred to by Frances are Houses 1 & 2).

Early Neolithic Occupation

*The wooden structures conform to the scale and design of other wooden buildings in Ireland, where more than 90 have been found, and in Britain, where they are rarer. In North Wales a very fine example has been found at Parc Cybi near Holyhead, two have been found near Bangor, at Llandygai and one within the later hillfort at Moel y Gaer, Rhosesmor, Flintshire. These buildings belong to a phase of the Early Neolithic which is surprisingly short (c 3,900 – 3,600 cal BC) and are consistently associated with the earliest styles of pottery – in this area -- the undecorated vesicular **Irish Sea Ware**, elegant round bottomed bowls with a simple everted rim and often with a defined shoulder at mid-depth. At Parc Gybi the long building stood just behind the early megalithic tomb of Trefignath, linking the two most significant cultural elements of the first farmers on the island. The role of these big buildings is not entirely obvious, but it is usually believed that they are houses, accommodating perhaps several generations of the same family and possibly also providing roofed storage. In Europe, in France, Germany and the Netherlands, they often occur in close packed villages but in Britain and Ireland they are usually isolated, like modern farmhouses in our landscapes of dispersed settlement. This is the case at Parc Gybi and at the two Llandygai sites, so the discovery of two buildings at Llanfaethlu is particularly interesting and several samples should be taken for dating to confirm whether or not they are contemporary.*

These long rectangular houses are often tripartite in plan, containing, it is suggested, floored storage, a central hall with hearth and a smaller sleeping compartment. The western house at Llanfaethlu seems to conform to this plan, though there is no internal hearth. The eastern building is a single squarish room. Parallels for such a structure can be found in Ireland where the range of evidence is much greater. The finds from these houses are not especially rich since the living floors seldom survive. The sherds are normally found in the tops of the postholes, perhaps finding their

way there as floors were swept. Not surprisingly, therefore, they are small, abraded and come from several different pots, none of which is represented by many sherds. The collection of Irish Sea Ware from Llanfaethlu is no exception: the majority comes from postholes, there is a section of a small pot from an external hearth, some 50 small abraded sherds from an occupation layer containing flint and stone flakes and tools, and a few small pieces have found their way into the fill of later pits.

It will be interesting to see if there is any distinction between the pottery from the western and eastern houses. First impressions suggest that there is not. The rim forms are clearly defined, curled or rolled, but only two sherds from shoulders have been recognised and these are not sharp. These characteristics suggest that this collection may belong closer to 3,600 than to 3,900 cal BC.

Middle Neolithic Occupation

The vast majority of the pottery belongs to the **Mortlake style** of Middle Neolithic Impressed Wares. Over 14 different bowls are present but none is represented by a large number of sherds. The elaborately decorated rims are most easily recognised; nearly all are squared, thick and heavy, overhanging a short curved neck which is relatively thin. The diameters and the scale of these rims indicate that there are some very large bowls present, some of medium size and others relatively small. These latter sizes can be found amongst other North Welsh Impressed Ware assemblages but the large-scale pots are unusual in my experience. The squared rims seem to be particularly characteristic of north Wales. The body sherds are densely decorated.

Some of the pots are so similar that they may be the product of the same potter. The tools with which the impressions were made are unusual and an effort will have to be made to identify them. There seems to be rather less use of twisted cord and fingernail marks than I would expect. Both these aspects of the study have the potential to provide interesting insights into the life of the makers and into the detailed sequencing of the pits from which they come. As at so many Middle Neolithic sites, it is not possible to identify buildings which might have been the houses of the farmers of that period (c. 3,300 – 3,000 cal BC).

Two pits (6009 and 6014) contained what is most probably **Grooved Ware** together with some small abraded pieces of Mortlake pottery. These pits are about 2m apart but are not separated from the general run of Mortlake pits. This is unusual since Grooved Ware is a later style of pottery than Mortlake and a close association is rare. For instance, at Parc Bryn Cegin, Llandygai, both styles were present on this large site and both were found in pits, but never in the same pit and usually at some distance from each other. 6014 was part of an upright neck; 6009 contained a few sherds of a large cordoned jar with incised decoration, similar to one from Hindwell, Walton.

The pits lie between the two houses of the earlier period, they scarcely impinge upon them. How much was known of the earlier settlement by those who came later and what attracted people to this particular spot? The evidence of the preliminary evaluation suggests that the Neolithic occupation was not widespread. The chosen area was close to a stream (now diverted) and may have been a relatively sheltered hollow in a landscape swept by sea winds”.

Assessment by I.P. Brooks - Ysgol y Llannau, Llanfaethlu, Lithic Artefacts Assessment 2

"A total of 568 lithic artefacts were recovered from the second phase of excavation undertaken by C.R Archaeology. These are in addition to the 83 artefacts previously reported on from the first phase of excavation (Brooks 2015). A total of 568 lithic items were recovered during the course of the excavation from 77 contexts including unstratified artefacts. Of particular note are Contexts 6150, 6377 and 6241 which account for 228 (40.1%) of the artefacts (note by C. Rees – these contexts are all located in Area 4 and are: (6150) – a relict soil surviving within a natural hollow, (6377) – the fill of a posthole within wall slot [6376], (6241) – the fill of wall slot [6242]). There are a mixture of knapped artefacts, on both flint and a series of cherts, and modified pebbles within the assemblage which also includes some worked quartz. Unlike the previous collection only two fragments of Graig Llwyd type rock were found. This assessment is based impressions gained whilst constructing a basic catalogue of the artefacts, no detailed analysis was carried out, this being part of the final report on the whole of the assemblage from the site.

Within the knapped assemblage the flakes were divided into four groups: primary flakes with completely cortical dorsal surfaces, secondary with partly cortical dorsal surfaces, tertiary with uncorticated dorsal surfaces and broken flakes. Similarly the blades (flakes with a length/width ratio of greater than 2.5) were divided into primary, secondary and tertiary blades on identical criteria.

For ease of discussion the assemblage has been divided into three groups: Knapped Artefacts, Modified Pebbles and Other Artefacts.

Knapped Artefacts

The knapped, flint and chert, assemblage is summarised in Table 1. A total of 504 knapped flint and cherts artefacts were recovered from 67 contexts. The flint artefacts were universally made on small pebbles, probably from a beach gravel, the result of the erosion from the Irish Sea Till deposits of which can be found, in small deposits, throughout North Wales including Anglesey (Mackintosh, 1879).

A range of cherts were represented in the collection. Three main macroscopic groups were recognised together with a few representatives of other chert types. The main chert groups were; a very dark, almost black chert with a relatively fine texture, a grey relatively coarse textured chert and a banded chert. Both pebble and primary sources of chert appear to have been exploited. The pebble sources are likely to be similar to those from which the flint was extracted, however the primary sources are likely to be from the Carboniferous Limestones of Anglesey. The Red Wharf Bay Limestone Formation can be regarded as an extension of the Pentre Chert Formation which outcrops between Prestatyn and Halkyn Mountain where the chert is sometimes known as "Gronant chert" (<http://www.bgs.ac.uk/lexicon/lexicon.cfm?pub=PECH>). These deposits contain several bands of chert including all of the forms represented in the assemblage. Various blocks of unworked chert were also recovered during the excavation including two fragments of tabular chert of the banded chert type which were presumably imported to the site.

There is a difference in the knapping strategy adopted between flint and chert assemblages. In general the flint artefacts tend to be smaller with a higher degree of care taken in their final form, whilst a more rugged approach is taken with the chert artefacts. This can be seen in the distribution of blades or blade fragments; 28 (18.8% of the flint assemblages) were made on flint, 21 (6.1% of the chert assemblage) on the cherts and there was a single blade on quartz. The chert artefacts tend to be larger flakes and have pronounced hard hammer technology. There is also a notable quantity of roughly worked lumps of chert with 90% of the informal worked lumps being on cherts. Whilst only two, chert core fragments were recorded there are also four rejuvenation flakes suggesting a level of formal knapping strategy.

A total of 74 flint and chert artefacts show signs of having been affected by heat. The majority of this was not sufficient to cause major cracking, but caused colour changes and minor structural changes. 48 of these artefacts are of flint and only 26 of chert. This appears to suggest a different approach to the two raw material types as 32% of the flint assemblage had been heated compared with only 7.5% of the chert artefacts. One possibility is that the deliberate heat of flint was used to improve the knapping quality, particularly of the flint from the Mesolithic component. This does not explain all of the heating, however, as the heat damage to the leaf shaped arrowhead is clearly a secondary event.

The majority of the assemblage consist of knapping debris with only 17 formal tools having been recovered. These consist of six burins, seven scrapers, a leaf shaped arrowhead, an obliquely blunted point microliths, the distal fragment of a bifacially worked tool and a local pebble with a concaved edge along one side. The arrowhead is a Green type 3A leaf shaped arrowhead (Green 1984, 21) which although it appears to have no impact damage has been heated such that there is damage to both surfaces of the tool.

In addition there were also thirteen knapped artefacts of a white quartz. The majority were irregular blocks from which the occasional flake had been removed, however, five of these were clear flakes, one of which was a well-formed blade.

Whilst it is assumed that the majority of the assemblage is Neolithic in date, there is a Late Mesolithic component within the assemblage. The clearest evidence, for this, is the obliquely blunted point found in Context 6150, however five cores or core fragments, eleven broken blades and ten complete blades are of sizes which would suggest that they are Late Mesolithic in date. These Mesolithic artefacts are on both flint and cherts with 15 flint artefacts and twelve chert artefacts represented.

Modified Pebbles

25 pebble or pebble fragments were recovered during the course of the excavation, the majority of which show signs of further modification. They appear to fall into two main groups based on size. The less numerous group consist of two large cobbles with pitted surfaces suggesting they had been used to crush a relatively hard material. The other group of modified pebbles have polished facets, some of which are highly developed into flat surfaces. Three of these artefacts have red staining associated with the polished surfaces possibly suggesting the grinding of pigments. Some of the smaller pebbles also have pitting suggesting they were also used for crushing. These pebbles are in a variety of lithologies including quartz, limestone and shale.

One artefacts of specific note is a lenticular, water worn pebble which has bifacial working on both sides forming shallow notches suggesting it may have been hafted. This artefact also has pitting on both the distal and proximal ends and some red staining in places.

Three apparently unmodified pebbles were also collected during the course of the excavation.

Other Artefacts

Unlike the previous assemblage inspected only two artefacts of Graig Llwyd type material were found. One of these is a flake with polishing on the dorsal surface, suggesting it was the result of damage to a polished tool. The other, however, is an irregular core which appears to be made on a block of material which had been quarried and not a reworked artefact.

A single fragment of a spilt, limestone, pebble has marked pitting caused by heat damage forming a shallow hollow over most of the face. More detailed examination of this artefact is required, however one possibility is that this may be a lamp.

Three artefacts have scratch marks on their surfaces which superficially look like the sort of marks caused by a plough. At least one of these artefacts, however, was used as the packing within a post-hole (Context 6347) suggesting the scratch marks are at least Neolithic in date. All of the artefacts are on rounded limestone pebbles or boulders and it is possible that they are deliberate artefacts.

Context 6278 contained at least ten fragments of a shelly sandstone which appears to be parts of a single artefacts, probably a grindstone. It is likely that this artefacts was also heated/burnt thereby accounting for the fragmentary nature of the remains

A single ironstone nodule was also collected.

Discussion and Recommendations

This is clearly an important assemblage from an important site. It is noticeable that this assemblage contains characteristic which are different from the assemblage previously inspected (Brooks 2015). The previous assemblage was largely collected from the pits on the site whilst the current assemblage is largely from the post built structures and associated deposits. This would suggest a level of patterning within the complete assemblage with differential disposal of materials in different contexts. There also appears to be patterning within the selection of raw materials for specific tool types and within the size of the artefacts.

Only a limited range of knapped tool types were found during the course of the excavation with only a range of burins and scrapers. It is noticeable that there are no core tools nor clear cutting tools within the assemblage suggesting that a limited range of activities were being carried out on the site.

There is clearly a Late Mesolithic component to the assemblage which tends to concentrate in layer 6150, although other artefacts were found in other contexts, presumably as residual artefacts. One aspect of the Late Mesolithic assemblage is the possible use of deliberate heat treatment as part of the knapping process. The deliberate heat treatment of siliceous materials has been demonstrated in a number of cross cultural ethnographic and archaeological studies (Olausson and Larsson 1982). The two main reasons for the use of heat on siliceous materials are the initial fracturing of intractable materials and the improvement of the knapping quality of other materials.

Ethnographically heat pre-treatment of siliceous materials (Hester 1972, Inizan et al 1976-1977) has been demonstrated from North America, Europe, the Near East, Peru, Australia, the Andaman Islands, South Rhodesia and India. The majority of these contexts appear to use heat pre-treatment to improve the knapping quality of the siliceous materials, although in Bengal (Olausson and Larsson 1982) the heat treatment would appear to be designed to introduce a thermal shock into the material to be worked to introduce initial splitting of cores. Experimentation on flint from South Mims, Hertfordshire (Griffiths et al. 1987) suggest that optimum temperature of about 250° C is required to improve the knapping quality. Not all of the heating within the assemblage is associated with deliberate heat treatment. The arrowhead, in particular suggest a possible pattern of heating associated with the deposition of specific artefacts.

The function of the modified pebbles within the assemblage is uncertain. At least two major groups have been identified; a small group of larger cobbles which were only used for crushing something relatively hard and a larger group of smaller pebbles with both polished facets and pitted areas. Some of these pebbles have red staining on their surfaces and it is possible that at least some of the pebbles were used for the preparation of pigments.

It is recommended that:

1. *A full analysis of the existing assemblages is carried out with a full typological analysis*
2. *The distribution of both tool types and raw material use across the site be investigated.*
3. *The possible raw material sources for the assemblages should be investigated to indicate possible links to other areas.*
4. *Specialised geological advice may be require to suggest possible sources for some of the raw materials being used.*
5. *Key artefacts should be photographed and drawn.*
6. *The assumption of the use of Graig Llwyd type rock is based on macroscopic analysis, a more detailed analysis by a suitable specialist should be considered.*
7. *A more detailed examination of the modified pebbles may give further hints as to their role within the tasks undertaken within the site.*
8. *The artefacts with scratched marks be further investigated as to the origins of the scratching.*
9. *If further excavation or watching brief is to take place on the site the lithic artefacts should be incorporated into the current assemblage and a full analysis undertaken”.*

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Discussion of the Excavation Results

The excavation at Llanfaethlu has yielded significant results which have far exceeded the original expectations of the excavators. What was previously thought to possibly be a single structure related to a Middle Neolithic pit group has been found to be a small settlement of at least three Early Neolithic houses which was later reused as a focus for Mortlake era activity.

The interpretation of the site is still very much in its initial stages but there are some very interesting trends appearing through preliminary work. To date Llanfaethlu is the first multi-house settlement of Early Neolithic date in north-west Wales, and whilst it has some striking resemblances to both the houses at Llandegai and that at Parc Cybi it is exceptional in terms of the artefactual assemblage recovered and the level of site preservation. The recognition of the potential significance of the site led to the immediate adoption of an intensive environmental sampling policy and it is hoped that this will result in a secure set of radiocarbon dates which can be correlated with pottery types and an insight into the species exploited by Anglesey's earliest farmers.

In his seminal paper on Neolithic buildings in England, Wales and the Isle of Man Timothy Darvill summarises the general trends of buildings not within an enclosure as *“most are single and set on gravel terraces beside rivers, on hillslopes, or occasionally hilltops. Most are within sight of a watercourse, or directly overlook one. Excavations generally find little sign of associated features around these structures. Where it is possible to understand the plan, Early Neolithic and Middle Neolithic buildings appear to be mainly rectangular, although some have an almost square footprint”* (Darvill 1996: 85). There are definite elements within this generalised discussion which ring very true to the Llanfaethlu site – the location near a river, the position on a hillslope and the shape of the floor plans are all observed but what is of great interest is the emphasis on singular structures.

Other multiple house sites had been identified in the United Kingdom, and we are extremely grateful to Dr Ian Brooks for drawing our attention to Daryl Garton's excavations at Lismore Fields, Buxton where a pair of Early Neolithic buildings, one square and one rectangular were uncovered during the 1980's (Garton 1991: 3 - 14). It must however be noted that the buildings in this example are approximately 60m apart rather than in very close proximity as at Llanfaethlu.

Despite a small number of multiple house sites in mainland Britain, it is to Ireland one must turn in order to find the closest Neolithic sites for comparison – a fact that is unsurprising given the strong cultural links between the western area of Wales and the Irish coast during this period. In Ireland it has been noted that there is a recurring pattern of two or three buildings clustered together, usually one or two of similar size side-by-side with a third, smaller building located a short distance away (Smyth 2014: 25). This is the case at Llanfaethlu and ideas as to any possible differing functions between houses will be followed up on when sample and artefact analysis is completed. This may well be the case as it is noted that there was no hearth in houses 1 or 2 but one was identified in house 3 (although there may be a hearth for house 1 in the unexcavated portion of the structure). It is also as yet uncertain as to whether all three structures are a contemporary or if one or more may have been occupied at different times.

The question as to the life cycles of the houses and the instances of the burning of houses on abandonment is a very interesting one at Llanfaethlu as there does not seem to be a single clear answer. House 1 showed some clear signs of elements within the house having been burnt, of which the cremation deposit within one of the postholes is a fascinating example. The presence of burnt material within the wall slots which had later posts cut in was also interesting and there are definite indications that house elements are renewed over time in houses 1 and 2.

House 2 showed evidence that the internal wall slot may have been burnt before it was replaced with new posts, but there was no evidence for burning in any of the external postholes. House three had an ashy deposit over some of the external postholes although this may have been the results of activity associated with the Mortlake phase of use.

Different construction methods are used in different parts of the houses, best illustrated in house 1 where the contrast between the deep beamslots and stakehole group is so striking. There are again strong parallels for this practise found in Ireland perhaps best illustrated at Corbally where house 4 had stakeholes in its north and south wall slots, interpreted as the remains of post-and-wattle construction but charred in-situ timbers from a plank built wall in the eastern elevation. As ethnographic studies of houses have become more widely utilised the interpretations for such structures has become less functional and we are encouraged to consider building as a process, an evolution and as a living entity. The choice of material need not necessarily be a manifestation of a scarcity of raw material but rather an expression of social conventions. As Smyth describes, post and wattle walls may have been intended as one element, a stop-gap, in the achieving of the ideal of an oaken house with different structures being at different points in achieving this (Smyth 2014: 36). This would be a particularly interesting consideration in the case of house 2 should the internal wattle and daub element have preceded the substantial wooden structure which surrounds it. There also remains the possibility that the amount of oak utilised in a building is an expression of how the building is perceived by a community – whether it is a meeting house, family dwelling or repository for ancestral relics (ibid). Again this is particularly relevant when considering house 2 as the size and number of postholes does seem somewhat excessive for the scale of the building.

A further interesting point is raised by Smyth which also resonates when evaluating the results of the Llanfaethlu excavation. She notes that the choice of structural material may be related to the differentiation between and demarcating of different spaces within the house although there is by no means a universal plan implied. She comments “*There are no fixed associations between oak plank walling and specific parts of the Irish Neolithic house. Neither do Early Neolithic houses seem to be constructed using set structural techniques, which vary from house to house. At some sites excavators report that substantial internal posts supported the weight of the roof, while at others internal features are slight, with sections of planking and posts along the wall slots serving as the main load-bearing elements*” (Smyth 2014: 36).

It is also clear that different parts of the different houses were treated differently on abandonment. In house 1 the posthole containing a cremated deposit relating to the post erection was also singled out for special treatment when the feature was decommissioned. The wooden post was carefully removed and the hole was backfilled with stone. This included the placing of a special polished stone against the side of the feature. In house 3 one of the postholes had also been removed and a beautifully made leaf-shaped arrowhead and a fragment of polished Graig Llywd axe were placed in the hole when it was backfilled. It was noted by Dr Brooks that the arrowhead was unused and had been heated, although the burning had not taken place within the posthole.

House 2 does not seem to have been dismantled, and the siting of the Mortlake pit group is strongly indicative of the rotting down insitu of both houses 2 and 3. The pit group runs up to the western wall of the square house (house 2) but does not cut it, and such a close association would seem unlikely to be a coincidence. This location has been chosen as a focal point to return to – potentially over a period of several centuries, and in order to position the pit group where it is it would seem that house 2 was visible above ground – either as an abandoned, decaying structure or as an earthwork. It is also likely that house 3 also survived as an earthwork and looking at where the pits have been concentrated it would seem that the south-western, north-western and north-eastern walls enclosing Area 1 were used to offer a sheltered area within which to occupy. It is hoped that when radiocarbon dates are obtained we will be able to determine the dates of the different site elements and divide the temporal phases more easily.

The sheer number of artefacts found at Llanfaethlu is exceptional and in total (including the evaluation trenching and larger area excavation) approximately 900 sherds of pottery (count includes fragments) and 651 lithic pieces have been recovered to date. Initial assessments have been conducted which hint at some very interesting trends and further works will concentrate on locating raw material source as it would seem that there is a mixture of local and exotic lithic material found on the site. Works will also be conducted to establish what material is being worked on the site – and of particular interest is an irregular core of Graig Llwyd stone which appears to be made on a block of material which had been quarried and was not a reworked artefact. This could be evidence that raw material is being transported and traded, rather than just finished artefacts or rough-outs.

7.0 Suggestions for Further Archaeological Mitigation

Due to the discovery of a Neolithic site which is clearly of national importance it is recommended that further archaeological mitigation is required at the Llanfaethlu site. It is recommended that further excavation be undertaken around the previous excavation site (the 40m x 40m stripped area) to fully expose and excavate the portion of Neolithic House 1 which lay outside the trench limits and to re-expose the unexcavated house area left at the end of this phase of works. Preservation by record is felt to be the most appropriate mitigation strategy in this instance as it is felt that given the significance of the house, and the wealth of information already gained about the structure, there would be a significant risk of piecemeal damage to the remaining archaeology through later intrusive works (such as service provision or other small scale activity), particularly any works which may not necessarily be undertaken as part of the planning process. It may also be a worthwhile exercise to establish through excavation whether the outlying pit group is associated with Post-Medieval or Neolithic activity.

The Isle of Anglesey County Council have made provision to meet the continuing post-excavation costs and the processing of samples for environmental, artefactual and dating material, the further analysis and illustration of artefactual material and for the writing of a detailed report on the findings is currently under way. All material is to be examined in relation to relevant sections of the “*Research Framework for the Archaeology of Wales – Neolithic & Earlier Bronze Age*” as laid out in Section 2 (Aims & Objectives). Provision for post-excavation costs will need to be increased in the event of further discoveries to allow for the incorporation of new material into the scheme of works.

In addition to the significant finds in evaluation trench 6 and surrounding open area excavation it has also been demonstrated that although many of the features identified on the geophysical survey were of natural origin, there were some features of potential antiquity identified in a number of trenches. Stray finds of Neolithic date were recovered from two trenches other than trench 6. It is therefore recommended that, in addition to the aforementioned additional excavation, a two fold approach be undertaken to the groundworks at the site. As it appears that the proposed school buildings will be erected relatively near the Neolithic activity area it may be considered prudent that

a programme of strip, map and record be undertaken on the building footprint – and given the soil depths identified in this area during evaluation trenching it is not felt that this will significantly increase the amount of material to be stripped from the site. It could however be argued that excavation and trial trenching has defined the southern limits of the Neolithic area and that a watching brief condition would therefore be suitable for this area. It is also recommended that given the potential for more remains to be uncovered during further works, an archaeological watching brief be conducted on any further ground works at the site, with the potential to further extend areas of significance for excavation should they be identified.

8.0 Conclusion

The excavation at Llanfaethlu has yielded significant results which have far exceeded the original expectations of the excavators. What was previously thought to possibly be a single structure related to a Middle Neolithic pit group has been found to be a small settlement of at least three Early Neolithic houses which was later reused as a focus for Mortlake era activity. It has been confirmed beyond any doubt that this is a site of national importance.

The interpretation of the site is still very much in its initial stages but there are some very interesting trends appearing through preliminary work. To date Llanfaethlu is the first multi-house settlement of Early Neolithic date in north-west Wales, and whilst it has some striking resemblances to both the houses at Llandegai and that at Parc Cybi it is exceptional in terms of the artefactual assemblage recovered and the level of site preservation. The recognition of the potential significance of the site led to the immediate adoption of an intensive environmental sampling policy and it is hoped that this will result in a secure set of radiocarbon dates which can be correlated with pottery types and an insight into the species exploited by Anglesey's earliest farmers.

In addition to the Neolithic features a series of shallow ditches were excavated which were the remains of much later, Post Medieval field boundaries. These and similar features were also identified during the previous phases of works. No artefacts or features belonging to any period between (and including) the beginning of the Bronze Age and the end of the Medieval period were uncovered during this phase of works.

Following the machine stripping of the excavation area down to the archaeological horizon it was evident that, although the full extent of the pit group and the Neolithic structures identified during the previous stage of works had been uncovered, the extent of the Neolithic activity at the site continues beyond the excavation limits. It is therefore recommended that further excavation be undertaken around the previous excavation site (the 40m x 40m stripped area) to fully expose and excavate the portion of Neolithic House 1 which lay outside the trench limits and to re-expose the unexcavated house area left at the end of this phase of works. Preservation by record is felt to be the most appropriate mitigation strategy in this instance as it is felt that given the significance of the house, and the wealth of information already gained about the structure, there would be a significant risk of piecemeal damage to the remaining archaeology through later intrusive works (such as service provision or other small scale activity), particularly any works which may not necessarily be undertaken as part of the planning process. It may also be a worthwhile exercise to establish through excavation whether the outlying pit group is associated with Post-Medieval or Neolithic activity.

In addition to the significant finds in evaluation trench 6 and surrounding open area excavation it has also been demonstrated that although many of the features identified on the geophysical survey were of natural origin, there were some features of potential antiquity identified in a number of trenches. Stray finds of Neolithic date were recovered from two trenches other than trench 6. It is therefore recommended that, in addition to the aforementioned additional excavation, a two fold approach be undertaken to the groundworks at the site. As it appears that the proposed school

buildings will be erected relatively near the Neolithic activity area it may be considered prudent that a programme of strip, map and record be undertaken on the building footprint – and given the soil depths identified in this area during evaluation trenching it is not felt that this will significantly increase the amount of material to be stripped from the site. It could however be argued that excavation and trial trenching has defined the southern limits of the Neolithic area and that a watching brief condition would therefore be suitable for this area. It is also recommended that given the potential for more remains to be uncovered during further works, an archaeological watching brief be conducted on any further ground works at the site, with the potential to further extend areas of significance for excavation should they be identified.

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Appendix A.

Specification for Archaeological Works CR87-2015

Copyright C.R Archaeology

**Specification for Targeted Archaeological Excavation of
Area of Neolithic Activity at**

**Proposed Site for Ysgol y Llannau,
Llanfaethlu**

NGR SH 31389 87108

Report Number CR87-2015



C.R Archaeology

Compiled by C. Rees & M. Jones

on Behalf of Isle of Anglesey County Council

**Specification for Targeted Archaeological Excavation at:
Proposed Site for Ysgol y Llannau, Llanfaethlu**

Planning Application Number:

Pre-planning

National Grid Reference:

NGR SH 31389 87108

Client:

Isle of Anglesey County Council

Report Authors:

C. Rees

Report Number:

CR87-2015

Date:

21-01-2015

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Figure 2. Proposed Excavation Area

1.0 Introduction

C.R Archaeology have been instructed by Isle of Anglesey County Council to conduct further archaeological works at the proposed site of a new primary school - Ysgol y Llannau, Llanfaethlu, Anglesey.

The site is located to the rear of St. Maethlu's Church, along the A5025 in the north of the village of Llanfaethlu, on the Isle of Anglesey. The site is currently in use as grazing within an enclosed field boundary system which includes a rock outcrop. The site lies within the Anglesey Area of Outstanding Natural Beauty (AONB). The south-eastern site boundary is located adjacent to the limits of the Carreglwyd Historic Park & Gardens (ID 690). The site limits are within 500m of an area of restored ancient woodland and 650m of the Garreg-Lwyd Site of Special Scientific Interest.

Within the vicinity of the proposed development area there are known sites of archaeological interest, and in addition to the aforementioned St. Maethlu's Church (which has Medieval origins) and Carreglwyd Estate there are known to be Medieval cist cemeteries and Roman remains both at parish level and within 500m of the proposed site.

This specification has been written as a methodology for further works and is the third stage in a programme of archaeological works at the site, with the first stage being an archaeological desk based assessment and geophysical survey (Document CR82-2014) which was followed by a programme of evaluation trenching (Document CR84-2014). Previous phases of archaeological works yielded positive results and the geophysical survey/desk-based assessment concluded that the site was of high archaeological potential, and that the remains uncovered on site could be highly significant. Further evaluation of the site was therefore deemed necessary and twenty 20m x 2m evaluation trenches were excavated. The trenches were specifically targeted to evaluate features of interest shown on the geophysical survey.

The results of the evaluation trenching revealed that although the majority of features identified through geophysical survey were of geological origin, 7 out of the 20 evaluation trenches were found to contain archaeological features. The remains in 6 of the 7 trenches were undated as no artefactual material was recovered, but it is thought that most are likely to be of Post-Medieval date and are of agricultural origin. A field boundary drawn on an 1801 estate map was identified in 3 trenches.

In one trench – trench 6 a significant archaeological discovery was made. In an area measuring 6m x 10m a total of 62 features were identified, of which 55 were excavated and found to be of Neolithic date. Hearths, structural evidence (including postholes with stone packing) and pits were identified and a considerable assemblage of artefactual material including over 500 pottery sherds (predominately of Mortlake design, although Irish Sea Ware and Grooved Ware vessels were present) and over 80 pieces of worked/modified stone and flint (including imported flint from in excess of 200 miles away and Griag Llywd axe fragments) was recovered.

The remains uncovered to date in trench 6 are considered to be of national importance and it was therefore recommended that further archaeological works specifically targeting this area of the site were necessary. This document details the methodology for the excavation of an area of 40m x 40m around the features uncovered in trench 6 which is to be fully exposed to the archaeological horizon and fully excavated. This strategy has been adopted as preservation by record was deemed to be the most appropriate mitigation strategy for this area of the site.

This site offers a rare opportunity for the intensive study of a Neolithic settlement site the “*Research Framework for the Archaeology of Wales – Neolithic and Earlier Bronze Age*” document has been instrumental in defining the aims and objectives for this project.

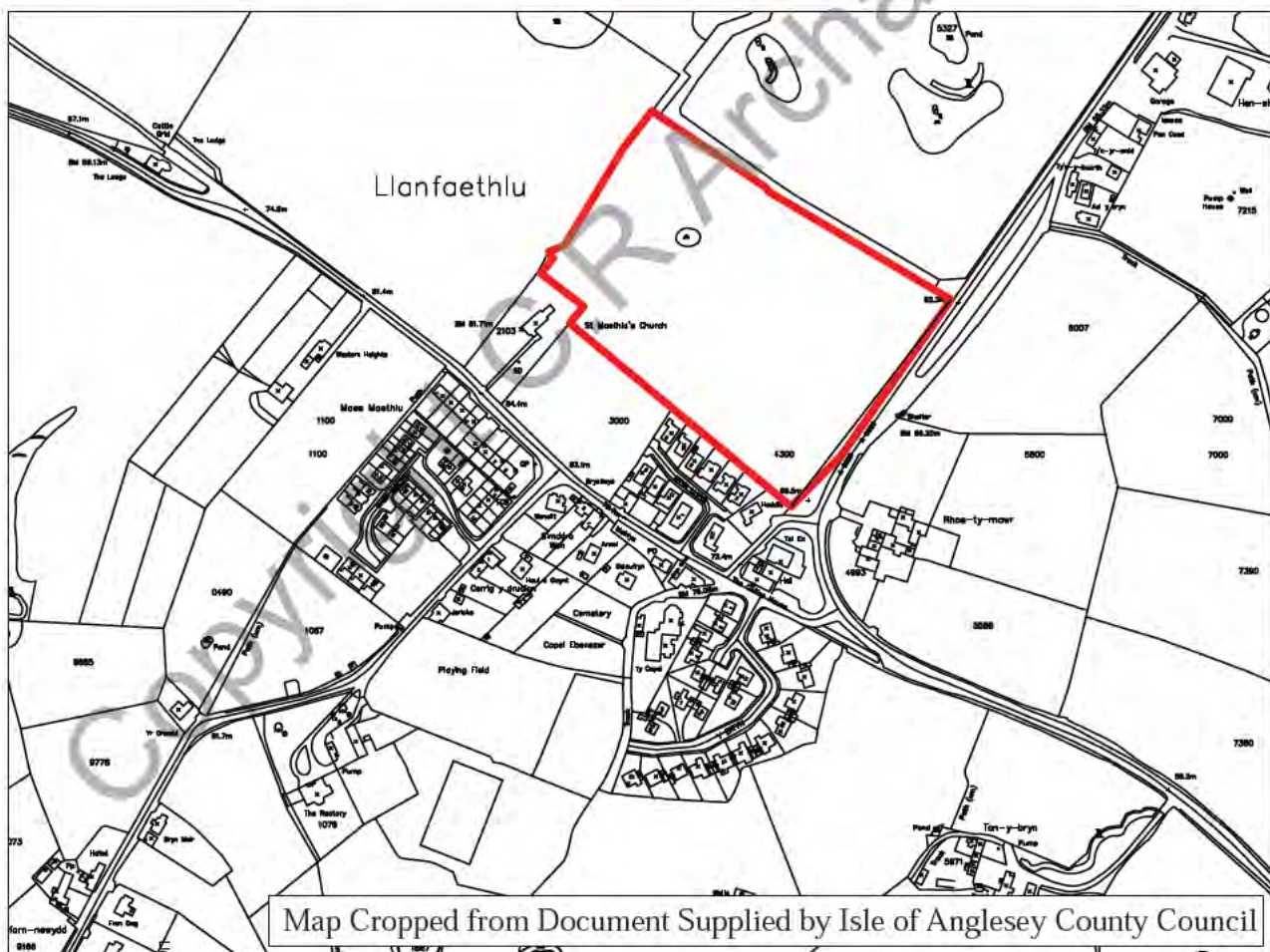
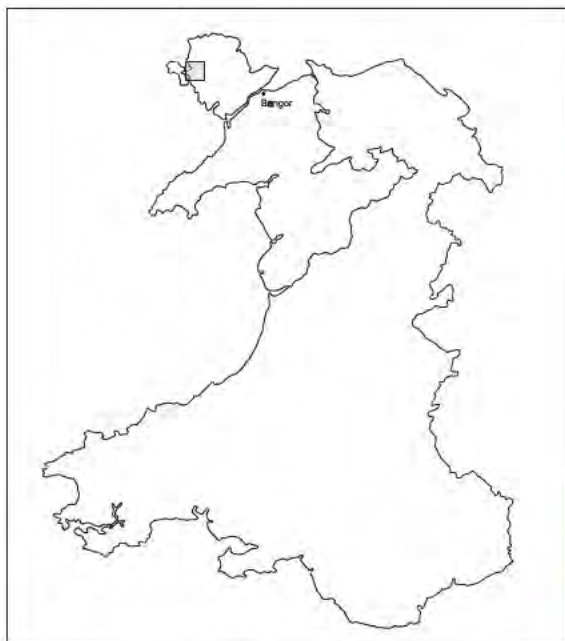


Figure 1. Site Location Map

(Source: OS Open Data Mapping Contains Ordnance Survey data
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2.0 Project Aims & Objectives

This phase of works for the development site aims to undertake a targeted archaeological excavation. It aims to examine the archaeological resource identified within this area of the site and to fully excavate features identified. It aims to retrieve artefactual and environmental data which will enhance the corpus of available material for the Neolithic period both locally and nationally.

This scheme of works aims to strip an area of 40m x 40m down to the archaeological horizon/natural in order to assess the survival, character and date of any archaeological remains and to excavate/record all archaeological remains uncovered. It aims to expose the full extent of the concentration of Neolithic features identified during the evaluation trenching and to determine whether this is the remains of a house or large structure.

The “*Research Framework for the Archaeology of Wales – Neolithic & Earlier Bronze Age*” details the key themes and priorities for enhancing our understanding of this period and it is aimed that all works will be conducted with reference to this document and the specific paper produced for North-West Wales. This will be discussed in detail in the methodology section of this specification.

This project aims to fulfil the criteria for undertaking an Archaeological Excavation as specified in the IfA Standard and Guidance documents (2014).

It is intended that this document be utilised to inform further archaeological planning decisions and conditions at the site.

The objectives of this programme of works are:

- To excavate/record all archaeological remains uncovered
- To maximise the information gained through excavation with a comprehensive environmental sampling strategy
- To enhance the existing archaeological record through the examination of the results of the fieldwork in relation to the “*Research Framework for the Archaeology of Wales – Neolithic & Earlier Bronze Age*”
- To maximise the information gained through comprehensive artefactual analysis (specifically related to the Research Framework and advice from pottery and lithic specialists)
- To help inform future decision making, design solutions, further evaluation & mitigation strategies

3.0 Historical Background

A full history of the site and the surrounding area was produced as an element of the Desk-Based Assessment section of report CR82-2014. It was therefore not deemed necessary to reproduce this section in full in this document and the following text is a summary only.

A search of the Gwynedd Historic Environment Record database recorded 15 known sites of archaeological/historical interest within a 1000m search radius of the site. Of these results the majority of entries relate to sites of post-medieval or modern date, although there are earlier sites of significance very near the site boundaries.

Prehistoric

There is a single site of Prehistoric date (in this instance Bronze Age) recorded within 1000m of the proposed development site. There is also a further site which could possibly be of Neolithic/Early Bronze Age date within the vicinity of the proposed development area.

Maen Hir, (also known as Llanfaethlu or Soar Standing Stone PRN 2021, NPRN 302298) is a schist standing stone located approximately 2/3 of a mile to the south-east of the proposed school site. The second site, PRN 2035, is an underground passage at Bryn Maethlu Farm. Although on the Gwynedd HER this site has been interpreted as an artificial fox earth by Frances Lynch there does remain the possibility that this site may be of prehistoric origin as was believed by its excavators in 1894 (Griffith 1895: 232).

The RCAHMW Inventory for Anglesey (RCAHMW 1937: 68-69) records a further significant site within the parish – Castell, a promontory fort on the coast near Trefadog which is located approximately 1.2 miles to the south-west of the site). The site is recorded as PRN 1.

Roman

Llanfaethlu is known to be an area associated with Roman activity. Lewis records that *“It is supposed to have been known at a very early period to the Romans, who are thought to have had a smelting place here, for the ore of the Parys mountain. This supposition is confirmed in some degree by the discovery of a cake of copper-ore, weighing fifty-four lb., and stamped with a mark resembling the Roman letter L, about the year 1757, and by the quantities of charcoal and scoria of copper which are frequently turned up by the plough in tilling the land upon the higher grounds* (Lewis 1833: 115). It is recorded in the HER as PRN 2030. The HER also records a Roman coin hoard (PRN 2046) within the 1000m search radius of the site. This hoard contained 39 coins, some 20 of which were of Republican issue.

Early Medieval/ Medieval

Two Early Medieval cist cemeteries have been discovered within 1000m of the proposed development site. The first (PRN 2028) was uncovered in 1860 when the remains of five skeletons were found whilst building a road to Carreglwyd. The second site (PRN 2029) was excavated in 1894 following the discovery of a number of graves following the removal of a fence.

There are two entries of Medieval date recorded in the HER. The first is St. Maethlu's Church (PRN's 2022 & 6983), the graveyard of which borders the proposed development site. The exact date of the foundation of this church is not clear but it is possible that part of the current building dates from 13th century, although the building was extensively restored in the 19th century. St Maethlu's Church is a Grade II* Listed Building.

The second Medieval era site from within the 1000m search radius is the possible site of a mill – Melin Carreglwyd. The existence of this feature has not been possible to verify and it is not recorded on historic maps. The classification for Melin Carreglwyd is given as “Folklore” and therefore little further can be said of this feature.

Post-Medieval/ Modern

The remaining sites within the 1000m search radius are of Post-Medieval/modern date. By far the most significant of these sites are Carreglwyd House and grounds (PRN 2044 & 17281). The limits of the essential setting for the Carreglwyd park boundary is the north-western boundary of the proposed development site. We have been informed by the current estate owner that the proposed development site has been part of the Carreglwyd Estate since at least 1634, possibly earlier. The current Carreglwyd House is a Grade II* Georgian manor house set in wooded grounds.

Cartographic Evidence

Archive research identified a number of historic maps which show the proposed development site. These range in date from 1800 – 1949 and show that although the plot has remained unchanged since at least 1887 there are earlier interior divisions within the plot. An estate map of 1801 shows the plot divided into four plots, and by the production of the 1839 tithe map this has been reduced to

two and the remaining interior boundary is removed by the production of the 1887 Ordnance Survey map and the field layout is as is seen today. This boundary was identified during evaluation trenching at the site.

3.1 Topography

The site is located along the A5025 as it passes through the village of Llanfaethlu. The site is currently in use as grazing within an enclosed field boundary system. It is positioned to the rear of St. Maethlu's Church. The site lies just outside within the Anglesey Area of Outstanding Natural Beauty (AONB). The south-eastern site boundary is located adjacent to the limits of the Carreglwyd Historic Park & Gardens (ID 690). The site limits are within 500m of an area of restored ancient woodland and 650m of the Llŷn Garreg-Lwyd Site of Special Scientific Interest

3.2 Geology

The bedrock geology at the site is recorded as *“Gwna Group - Schist. Metamorphic Bedrock formed approximately 508 to 635 million years ago in the Cambrian and Ediacaran Periods. Originally sedimentary rocks formed in deep seas by chaotic deposition from underwater gravity slide. Later altered by low-grade metamorphism. Formed in deep seas by chaotic deposition from underwater gravity slide. These rocks were first formed in the deep sea by chaotic deposition from underwater gravity slides, and then later metamorphosed, though there is evidence of their sedimentary origin”* (www.bgs.ac.uk).

Also recorded in the immediate vicinity of the site are *“Gwna Group – Metabasaltic-rock. Metamorphic Bedrock formed approximately 508 to 635 million years ago in the Cambrian and Ediacaran Periods. Originally igneous rocks formed by eruptions of silica-poor magma. Later altered by low-grade metamorphism. Originally igneous rocks formed by eruptions of silica-poor magma. These rocks were first formed by volcanic eruptions of silica-poor magma, and then later metamorphosed, though there is evidence of their igneous origin”*. A rocky outcrop is visible within the site boundaries (www.bgs.ac.uk).

The superficial geology of the site is not recorded. During the excavation of evaluation trenches it was found to be variable and of a mixture of clay, sand and gravel bands with limestone outcrops either at or just below the surface.

4.0 Scheme of Works - Methodology

The following section outlines the methodologies to be employed for desk based research, site excavation, on site sampling, sample processing and post excavation including artefactual analysis and specialist services to be procured.

4.1 Desk Based Research

As part of the previous phase of works complete and coherent history of the site was compiled utilising material sourced from Anglesey Archives and the Bangor University Archives. A full map progression of the area was undertaken and where appropriate the archive information was supplemented with information from local libraries and specialist interest websites & journals.

In order to identify the character of archaeological remains in the vicinity of the site a search of the Gwynedd HER was conducted examining an area within a 1000m radius of the proposed works (the grid reference for the search is taken as the centre point of the development area). The RCAHMW database and aerial photographs of the site were also examined. The information gathered will not be reproduced in the following report but rather the reader will be referred to document CR82-2014.

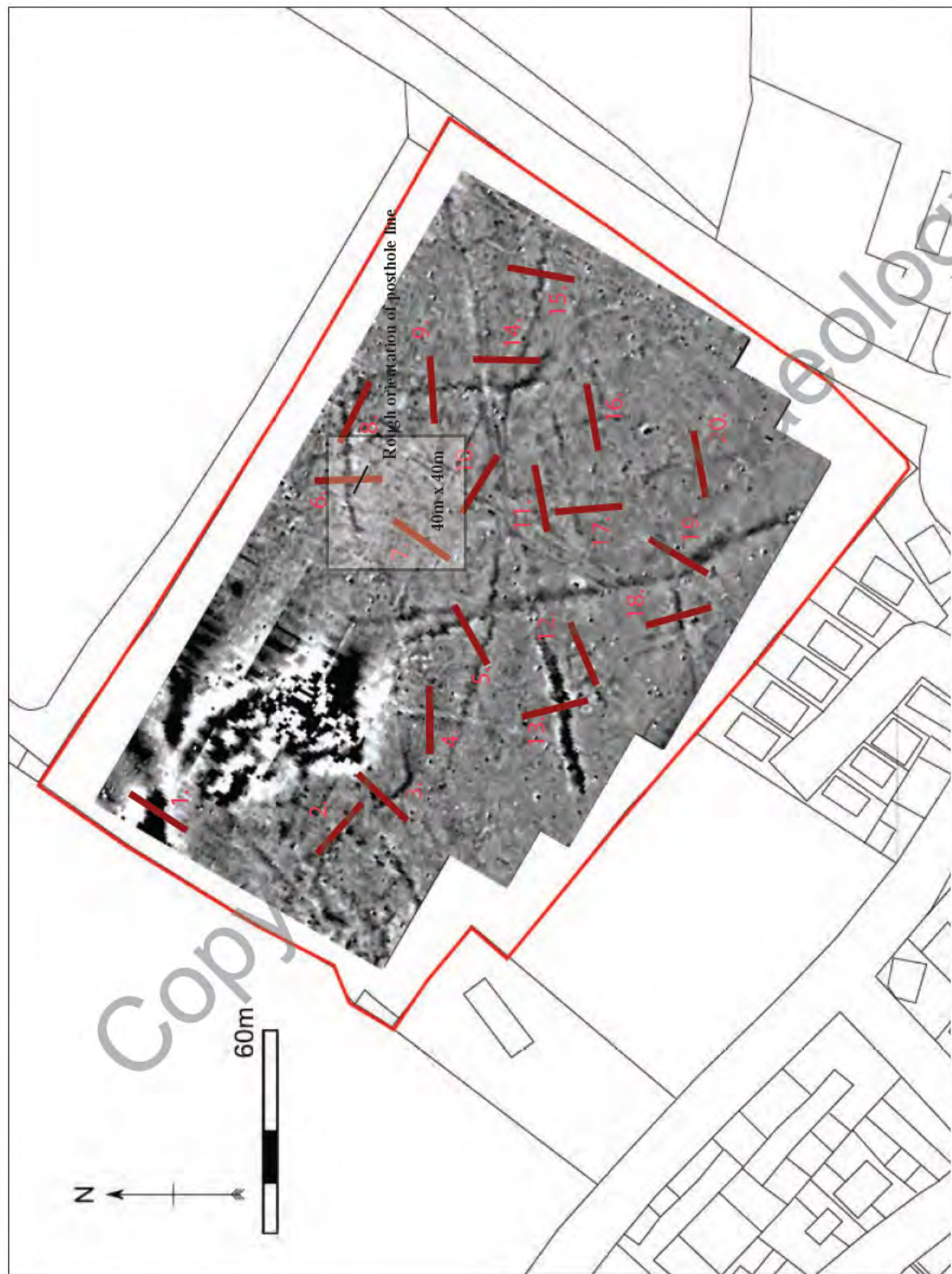


Figure 2. Proposed Excavation Area Around Trench 6 to Investigate Neolithic Features

Further desk-based research will be conducted as an important element of this phase of works with existing sources examined to place the archaeological remains uncovered within their chronological, regional and national context. Due to the initial works carried out at the site a broad chronological period has been identified with the majority of finds belonging to the earlier Neolithic. Therefore research will be undertaken with specific reference to the “*Research Framework for the Archaeology of Wales – Neolithic and Earlier Bronze Age*” (www.archaeoleg.org.uk)

Given the results of the fieldworks to date it is believed that a number of the points in the framework can be addressed. The salient points discussed below have been identified based on the results to date. The framework will also be re-examined in light of the excavation results to ensure that all questions which may be even partially answered in relation to our findings are given due consideration.

“*Later Mesolithic – Earlier Neolithic transitions*” - This area of study has been considered a research priority “*The nature of the Mesolithic/Neolithic transition - There is a need to study sea level change and the origin of sedentism. There should be a particular focus on those locations with mixed date assemblages (eg cave sites) including subsurface investigation linked with comprehensive dating and palaeoenvironmental sampling*”. The identification of material at this stage is tentative but a small number of Mesolithic artefacts have been discovered at the site and although the most likely explanation for their appearance is that, as on many other Neolithic sites, they are simply residual it is possible that further excavation may produce unexpected results. This is particularly true of samples which are to be sent for radio-carbon dating and any Mesolithic material will be studied with an awareness of the potential to provide information as to interactions at this vital archaeological juncture.

“*Settlement*” - Given the distinctly domestic character of the material and features uncovered during the previous phase of works all questions raised within this section of the agenda will be considered although it may not prove possible to provide answers in all instances. The points raised are:

“*Why do we have so few house sites from the Neolithic – in contrast with Ireland and the continent? Was settlement in the earlier Neolithic landscape characterised by its mobility? Was there a change to more permanent settlement during the later Neolithic/earlier Bronze Age?*”

There are also the following points which have been identified as research priorities:

“*Settlements throughout the Neolithic and Early Bronze Age are poorly represented in Wales and in particular for the early Neolithic. Where did the monument builders live? On the basis of present evidence, it has also been observed that there is very little continuity of settlement from the early Neolithic to BA and beyond*”.

The artefactual assemblage is known to contain imported and axe-factory material and it is therefore considered pertinent that it is examined in relation to the following points - “*Industrial processes and access to resources and trade connections*” and “*The distribution and context of material culture deposition*”. The specific points of relevance in relation to industrial process and access to resources and trade connections are:

“*What stone was being employed for implements and where was it procured? What were the mechanisms for dispersal? Were the raw materials or finished products formally traded by a merchant class or passed hand to hand by neighbours? Was there a seaborne trade? What was the nature of the contact with the lands to the east and west?*”

The relevant questions within the distribution and context of material culture deposition are:

“What can we understand about the nature and use of material culture through its depositional context?”

What was the nature of Neolithic stone-axe and Bronze Age metalwork deposition?”

Given that an area which is believed to be considerably larger than the extent of the Neolithic settlement site is to be stripped it is also conceivable that material from other periods will be encountered. Should such material be uncovered then further research to place it within its chronological, regional and national context.

The works will be carried out accordance with the IfA Standards and Guidance for historic environment desk-based assessment (IfA 1994 (Revised 2009)).

4.2 Excavation

It is proposed that an area measuring 40m x 40m will be excavated within the proposed development area using a mechanical excavator with a toothless bucket. This area is shown on figure 2 and has been located so as to allow for a wide an area as possible around the features of Neolithic date in trench 6 to be exposed to ensure that the site limits are reached.

All machine excavation will be supervised by an archaeologist from C.R Archaeology. The area will be excavated until an archaeological horizon or the bedrock/natural is reached. Due to the known presence of a large concentration of features containing a wealth of artefactual material extreme caution will be exercised and the spoil heaps will be examined closely for any stray finds given that we know the area has been ploughed in the past.

Any archaeological features, structures or remains identified will be trowel cleaned by hand. Due to the national significance of this site an intensive approach will be continued during the excavation and for all features associated with the Neolithic settlement identified in the previous phase of works 100% excavation will be undertaken.

For features which may be encountered in the remainder of the stripped area investigation of such features, structures or deposits will be sufficient to determine their character, date, significance and quality. In these instances excavation will generally involve the removal of 50% of pits/posthole fills and 25% of the fills of ditches/large linear features. Should it be deemed necessary to understand the archaeological remains uncovered the area may be extended. This will be subject to prior agreed with GAPS and the client.

As has been identified above the features forming part of the Neolithic area are considered to be of national importance and an intensive sampling policy will be continued. To allow for complete retrieval of artefacts, charcoal and charred plant remains and for a meaningful analysis to be conducted on the site assemblage as a whole there will be as close to 100% retention of the fills of all features as possible. This material is to be wet sieved off site. The sample strategy and methodology will be discussed in detail below.

For features which may be encountered in the remainder of the stripped area should 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 a sample of up to 40 litres will be taken. This material will be processed according to the wet sieving methodology for bulk samples as set out in section 4.2.4.

In the event of a further significant discovery GAPS will be informed of the discovery and a mitigation strategy agreed before works will progress.

The works will be carried out in accordance with the IfA Standard and Guidance documents for Archaeological Excavation (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. A temporary benchmark (TBM) will be established on the site and 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 of the excavation process and significant finds/insitu artefactual material.

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 further significant archaeological discovery being made during the excavation C.R Archaeology will immediately inform both the client and the development control archaeologists 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 in the vicinity of the find. 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 (IfA 2008)* 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 (IfA 2008).

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. 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.

Frances Lynch has been engaged as the ceramic specialist and Dr. Ian Brooks as the lithics experts and have produced initial assessments of the material recovered to date. This information is presented in report CR84-2015. Both specialists have made recommendations for further works to be carried out on the artefact assemblages and these are reproduced below.

Frances Lynch Recommendations for Further Works

In addition to the detailed study and illustration of the complete assemblage from the existing and forthcoming excavations the following areas have been highlighted for attention in the full report:

1. The context and distribution of this pottery needs to be plotted – in particular the relationships between the contexts containing Irish Sea Ware, Grooved Ware and Impressed Ware are to be investigated
2. The association within the pits of pottery and lithics should be checked
3. Advice should be sought from Dr David Jenkins about the identification and possible origin of the stone artefacts – in particular a possible axe fragment as the product of the northern Irish ‘factory’ at Tievebullagh

Dr. Ian Brooks Recommendations for Further Works

The following recommendations were made by Dr. Ian Brooks:

1. A full analysis of the existing assemblage is carried out with a full typological analysis
2. The possible raw material sources for the assemblages should be investigated to indicate possible links to other areas.
3. Key artefacts should be photographed and drawn.
4. The assumption of the use of Graig Lwyd type rock is based on macroscopic analysis, a more detailed analysis by a suitable specialist should be considered.
5. A more detail of the modified pebbles may give further hints as to their role within the tasks undertaken within the site.

If further excavation is to take place on the site the lithic artefacts should be incorporated into the current assemblage and a full analysis undertaken.

Following analysis all archaeological material recovered will 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 Institute for Archaeologists: *Standard and Guidance for Archaeological Excavation* (2014).

4.2.4 Environmental Sampling & Processing Strategy

This section has been compiled following advice from environmental specialist Elizabeth Chambers (BA, MA). Reference has also been made to the sampling strategy adopted by Gwynedd Archaeological Trust during their excavation of a similar site type at Llandegai, Bangor (GAT 2007) and the English Heritage publication “*Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition)*” (2011).

Although labour and resource intensive a sampling strategy whereby all uncontaminated fills of features associated with the Neolithic settlement area are to be sampled and retained is to be adopted. This material will be collected to be floated and wet sieved off-site. The aim of this undertaking is the retrieval of carbonised macroscopic plant remains and the recovery of any small artefacts which may not have been identified during excavation – particularly flint/stone knapping debris.

The adoption of a 100% soil processing strategy has been informed by a number of factors. The first is the scarcity of this site type in the archaeological record and the limited number of opportunities to undertake this work that are therefore likely to be presented in the future. The second is the importance placed upon such information in the Research Framework for the Archaeology of Wales – Neolithic and Earlier Bronze Age. The final influence was a case study presented in the English Heritage 2011 publication (English Heritage 2011: 29). This example was the species analysis of plant remains from a Neolithic pit group in Yorkshire. The research showed that when only a proportion of the samples from a site were analysed the results were biased and very different from the picture which emerged when the complete assemblage was studied – this included the processing of a pit fill which was found to contain over a thousand barley seeds which were not visible during excavation. It is therefore felt that in order that any plant remains assemblage can be meaning fully studied it must be done so in its entirety.

The bulk samples collected are to be processed utilising a floatation tank. The volume of each sample will be measured and large stones removed prior to being placed into the tank. Material floated over the sluice will be collected using a 0.1mm mesh and the heavy fraction will be retained using a 1mm mesh. The heavy fraction will be separated using a 1cm sieve and the stone removed. Following this initial processing the flot, the 1cm residue and the 1mm residue will be dried before being further analysed. Following the drying of the residue fractions it is to be hand sorted to check for small artefacts and following this work they will be discarded.

It was noted in the GAT report (2007) that the flotation failed to separate all the charred remains from the 1mm residue and this problem was resolved by bucket floating. This strategy will be adopted should C.R Archaeology encounter a similar issue during works.

The flots will be weighed and catalogued prior to being sent to Wessex Archaeology Geoarchaeology & Environmental Archaeology Department for palaeoenvironmental assessment/analysis.

To date there have been no deposits identified which would be considered to be suitable for pollen sampling to be undertaken. The site has been found to be very well drained and no waterlogged, colluvial or organic deposits have been encountered. Given the lack of animal bone on site the soil is presumed to be acidic and pollen survival is considered unlikely. However should such deposits

be encountered then soil columns will be taken. The location of the columns will be marked on a 1:10 section drawing and the sample sent to Wessex Archaeology for analysis. As was the case at Llandegai if no suitable deposits for column samples are identified then if possible a sample will be taken from a pit fill should any be encountered which are of a suitable depth. It is recognised that whilst this is unlikely to yield a positive result the scarcity of sites on which to attempt retrieval would make this a worthwhile exercise.

Works to date have recovered hazelnut shells and large charcoal fragments which will be suitable for radiocarbon dating. Following the sample processing on completion of the site works the material which may yield positive dating results will be identified and analysed against specific dating criteria such as chronological or artefactual associations. Material will be sent to Beta Analytic Radiocarbon Dating for dating. It is envisaged that a similar number of dates to those obtained for the Neolithic House at Llandegai will be obtained (16 samples). There will also remain the possibility of further dating being undertaken as the remaining charcoal/charred remains will be deposited in Llangefní museum and will be available to future researchers.

Should floor surfaces be encountered, if possible (i.e. if the area is large enough), the area will be divided in 1/2m² grids with each square sampled separately for phosphate analysis. The separate samples will not initially be wet sieved and will first be examined by a specialist from Wessex Archaeology to determine what potential information is best gleaned from the deposit and advice will be sought as to the most appropriate treatment of the gathered material.

Given the size of the ceramic assemblage recovered to date, samples are to be collected for lipid analysis. As this is a destructive process smaller pieces are to be selected and if possible at least one example of Irish Sea Ware and one sample of grooved ware will be included with mortlake pieces. This may not however be possible as these pieces make up a very small proportion of the current assemblage. It is aimed that around 10 sherds be collected as this is a very small percentage of the material to sacrifice in the hope of recovering additional information.

It is proposed that the methodology for the collection of pottery for lipid analysis as set out by Bradford University be followed on site – pottery to be analysed will not be handled, the excavator lifting the sample will wear neoprene gloves and use tweezers or the point of a trowel and place the sherd directly into aluminium foil in which it will be wrapped before being placed in a labelled ziploc bag. A working photograph of the sherd will be taken before wrapping for use in consultation with the ceramic specialist. Prior to any sample being sent for analysis it will be discussed with ceramic specialist Frances Lynch to ascertain whether it is considered an acceptable loss. C.R. Archaeology are currently in discussion with individuals at Bradford and Bristol Universities as to whether either institution will be able to conduct the work. Should neither prove viable options then GAPS will be informed prior to an alternative source being selected.

4.2.5 Archive Compilation

All records created during the fieldwork will be checked for consistency and accuracy and will form part of the *Primary Site Archive (PI)* (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. Any archive/artefactual material created/discovered during this archaeological project will be deposited at Llangefni Museum. Archive material will be deposited in accordance with the museum's terms and conditions for archive deposition.

4.3 Timetable for Proposed Works

It is envisaged that the excavation will be undertaken as soon as possible with a provisional start date of Monday 2nd February and the field work will take place over an estimated time frame of 20 days. Further time has been allotted for post-excavation works including sample processing, archive research, specialist analysis, report compilation and site archiving.

4.4 Staffing

The project will be managed by Catherine Rees (BA (Archaeology), MA (Archaeology) Postgraduate Diploma (Historic Environment Conservation) & Matthew Jones (BA (Archaeology), MA (Archaeology)). The fieldwork will be conducted by Matthew Jones and/or Catherine Rees with additional suitably qualified field staff brought in as necessary. Initially there will be three staff on site.

All staff will have a skill set equivalent to the IfA AIfA/MIFA level. C.Vs for all staff employed on the project can be provided on request. All projects are carried out in accordance with IfA *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:

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

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. This will include illustrations of any cartographic/pictorial sources. The report will contain a site plan showing the locations of any photographs taken.

The final report will include:

- A copy of the agreed specification
- A location plan
- A plan showing the locations of the excavation area within the development site
- 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

It is intended that a report detailing the results of this phase of works will inform decisions as to the necessity and/or nature of any further archaeological mitigation strategies which may be required. It will therefore more than likely be necessary that an interim document is produced following the completion of fieldwork which records the excavation site results but which will omit the results of the specialist post-excavation analysis. Due to the intensive sampling regime and the extensive artefactual assemblage this work is likely to take place over a period of several months and waiting for the results could potentially cause long delays to the building project. As interpretation is best made when in possession of all available information much of the comparative site work will also be included in the final document rather than the interim report.

A copy of the report in Adobe PDF format will be sent to the appropriate monitoring archaeologist for approval before formal submission. A bound paper copy and 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.

Given that the results of works to date have yielded significant information articles are proposed for relevant journals. An initial article will be submitted to the Archaeology in Wales Journal, with local (Transactions of the Anglesey Antiquarian Society) and wider publications (Archaeologica Cambrensis, Current Archaeology and Proceedings of the Prehistoric Society) have also been approached and have expressed an interest in the site. There is also the aim that a BAR Report (either recording the results of this site taking a whole volume or as part of a collection of the results of excavations on Neolithic sites in Wales) be produced.

As there is an awareness that specialist publication will not provide access to information for many local inhabitants, C.R Archaeology has a commitment to involving neighbouring communities in our archaeological sites. An open day for local schools is planned to follow-up on visits for children who would attend the new school which were made during the previous phase. Interest has also been expressed in an exhibition in the local village hall and this is to be followed up. Talks have been agreed with local historical societies.

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.

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- www.archaeologists.net/sites/default/files/node-files/DBA2010working%20draft.pdf
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- www.bgs.ac.uk/geologyofbritain/home.html
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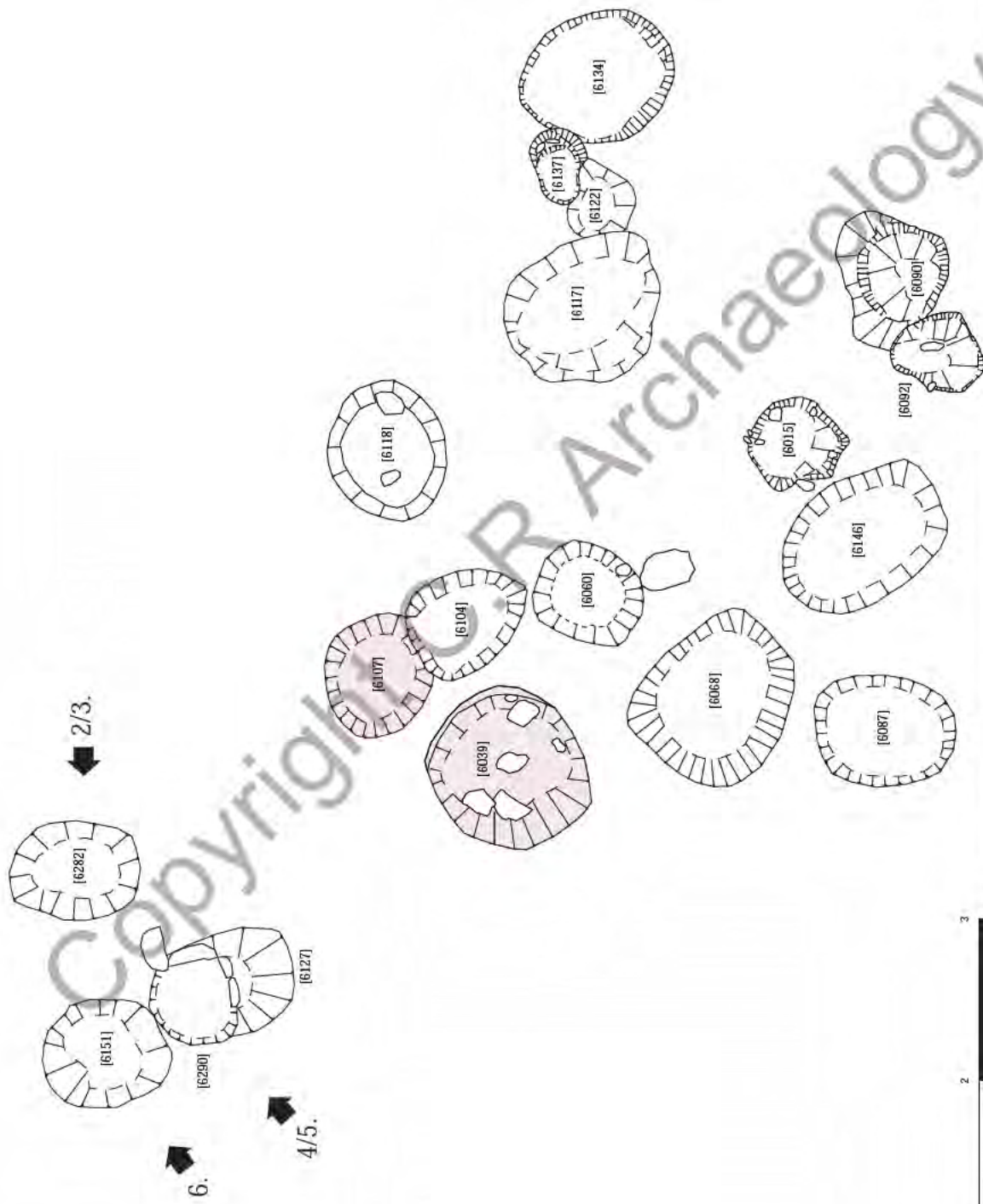
analysis/sampling-protocol/
www.britishlistedbuildings.co.uk/
www.data.gov.uk/data/map-preview
www.ordnancesurvey.co.uk

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Appendix B.

Location and Direction of Photographic Plates

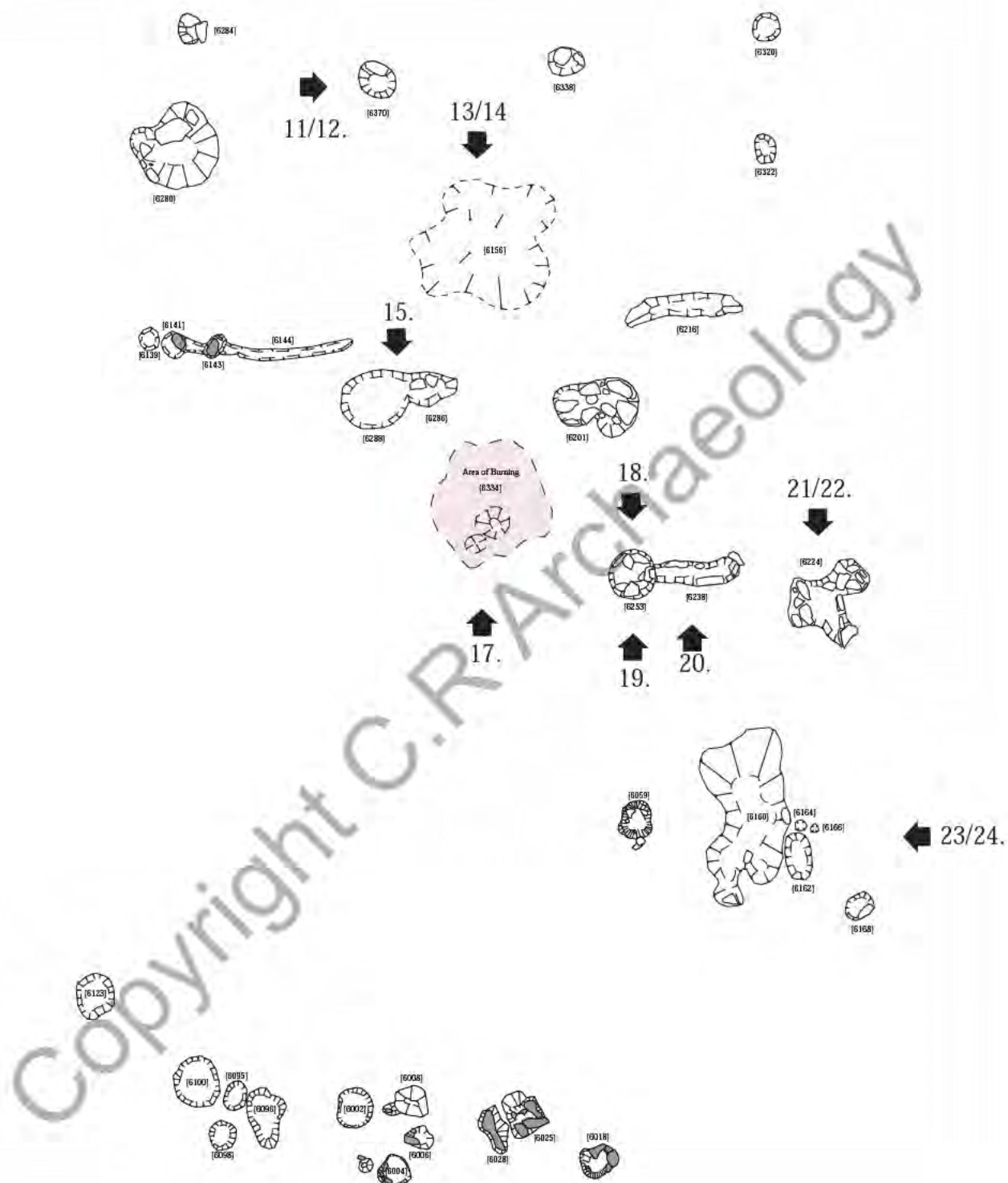
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Appendix B. Plan of Area 1 Showing Location & Direction of Photographic Plates

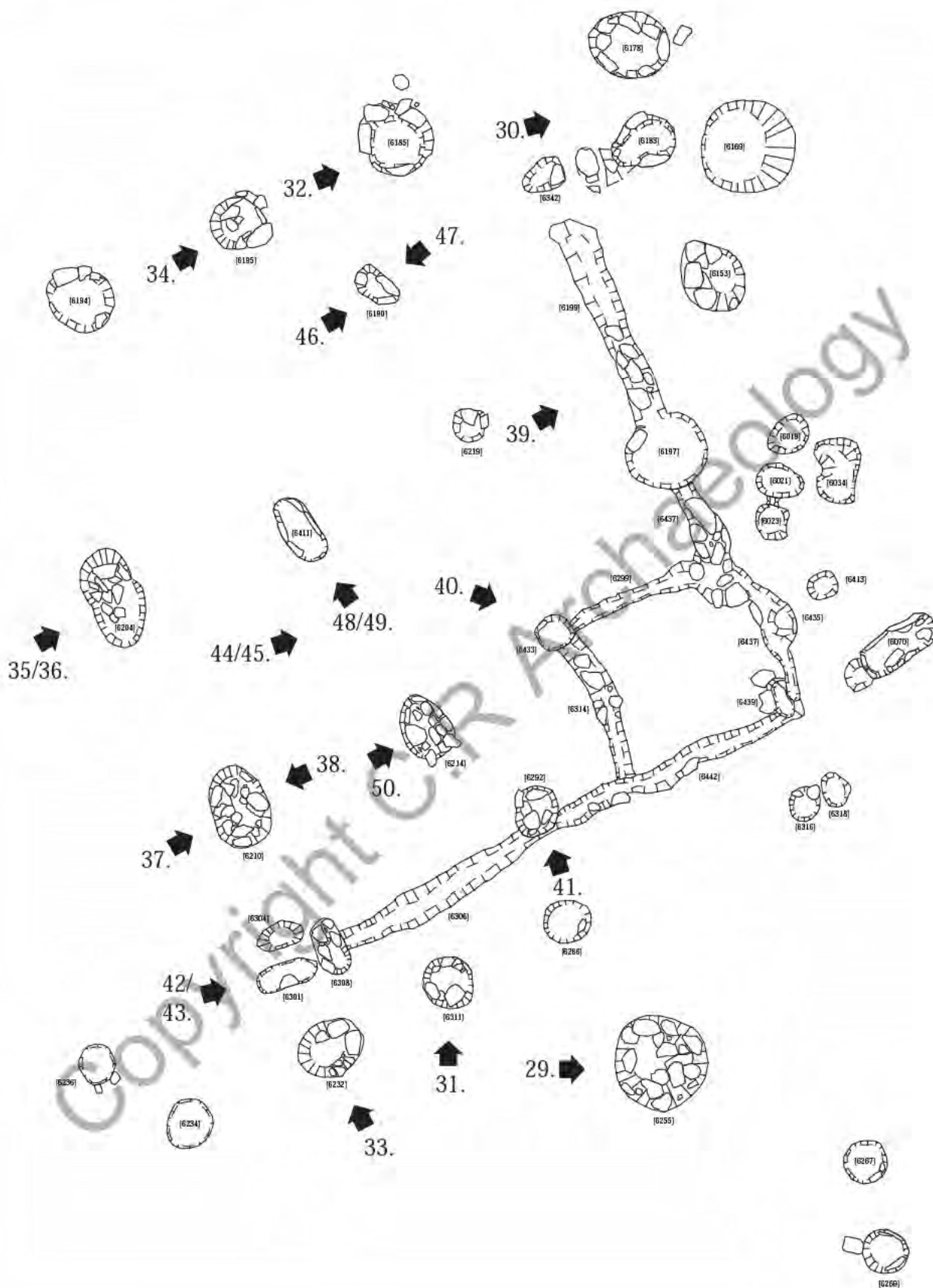


0 1 2 3 4 5m



Appendix B. Plan of Area 2 Showing Location & Direction of Photographic Plates





Appendix B. Plan of Area 3 Showing Location & Direction of Photographic Plates



Appendix B.
Plan of Area 5
Showing Location
& Direction of
Photographic Plates

