Rhiwgoch Water Treatment Works:
Harlech, Gwynedd

Excavation report

GAT Project No. 2046
Report No. 980
June 2011
Revised January 2012

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Prepared for
Dŵr Cymru Welsh Water

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Front cover photo: excavation underway on site A

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SUMMARY
An excavation was carried out at Rhiwgoch Water Treatment Works, near Harlech by Gwynedd Archaeological Trust for Black and Veatch on behalf of Dŵr Cymru Welsh Water. This revealed the fragmentary remains of a large stone-built roundhouse, with some distinctive internal features and an associated enclosure. The roundhouse was built just prior to Roman penetration of the area and continued in use into the second century AD. The number of finds were few but included a Roman melon bead and a small number of Roman pot sherds, as well as hammerstones and two unfinished spindle whorls. A small oval structure had been built in the robbed out remains of the roundhouse, but the date of this was not determined. The site is located within an extensive relict landscape, one of the field boundaries of which was also investigated. No dating evidence was found, but it is argued that this wall may have been contemporary with or earlier than the roundhouse and continued in use into the medieval period.

1. INTRODUCTION

Gwynedd Archaeological Trust (GAT) carried out a programme of archaeological excavation work at Rhiwgoch, Harlech for Black and Veatch on behalf of Dŵr Cymru Welsh Water, in advance of the extension to the existing water treatment works. The work was monitored by the Snowdonia National Park Authority's (SNPA) Archaeologist. The site was located at NGR SH 5920 3037 between Llanfair and Harlech (figure 1).

The groundworks at the water treatment works were preceded by an archaeological assessment (Evans 2008b, GAT report 754). This was followed by evaluation, which included a detailed topographic survey of the area and the excavation of 11 trial trenches (figure 2). The trial trenching was undertaken over a period of eight days between 28th October and 7th November 2008. The report on the evaluation trenches is included in this document as appendix 4.

The evaluation led to the recommendation for full excavation at a site initially interpreted as a burnt mound (site A, PRN[1] 29854) and for another trench to be excavated across an ancient field boundary (site B, PRN 29252) (figure 2). These mitigatory measures were carried out between 22nd November 2008 and 13th March 2009 and are reported on in the current document.

The extension of the water treatment works was carried out in the context of a wider infrastructure programme including a new water link main between Harlech and Llanfair, the replacement of the raw water pipeline to the water treatment works and the building of a pumping station. Archaeological assessment and mitigation works were carried out for all these and have been reported in the following documents, which provide additional background information not necessarily included here.

Harlech to Llanfair Link Main: Evans 2008a, GAT report **753**; Evans 2009, GAT report **820**

Harlech Pumping Station: Kenney 2009b, GAT report **777**; Kenney 2009f, GAT report **809**; Kenney 2000f, g; GAT report **810**; Kenney 2009h, GAT report **817**; Cooke and Kenney 2009, GAT report **819**

Raw water pipeline, site compound and access track: Kenney 2009a, GAT report **775;** Kenney 2009c,d; GAT reports **800** and **803;** Kenney 2009e, GAT report **804**; Cooke et al 2010, GAT report **857.**

[1] Gwynedd Historic Environment Record Primary Record Number

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2. SPECIFICATION AND PROJECT DESIGN

2.1 Introduction

The aim of the works was to mitigate the impact of the development on known or potential archaeological remains. An Archaeological Project Design was written by Gwynedd Archaeological Trust and submitted to Dŵr Cymru Welsh Water and the SNPA archaeologist in November 2008. This also formed the basis of a method statement submitted for the work. The archaeological excavation and recording was undertaken in accordance with this Project Design.

On completion of the fieldwork the data collected was assessed for potential and a report produced (Davidson and Evans 2011, GAT report 887) along with an updated project design for the completion of the post-excavation programme. Post excavation analysis was carried out according to this design leading to the production of the current report and the long term archiving of finds and site records.

The management of this project has followed the procedures laid out in the standard professional guidance, *Management of Archaeological Projects* (English Heritage, 1991), *Management of Research Projects in the Historic Environment Project Manager's Guide* (English Heritage 2006) and in the Institute for Archaeologists Standards and Guidance: Excavation (IFA 1995 revised Oct 2008). Five stages are specified:

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

The current document reports on the phase 4 analysis and states the means to be used to disseminate the results.

2.2 Phases 4 and 5: analysis, report preparation and dissemination

The purpose of this phase is to carry out the analysis identified in phase 3 (the assessment of potential phase), to amalgamate the results of the specialist studies with the detailed site narrative and provide both specific and over all interpretations. The site is to be set in its landscape context so that its full character and importance can be understood. All the information is to be presented in a report that will be held by Gwynedd Historic Environment Record so that it can be accessible to the public and future researchers. The report will also be made available on the internet through the RCAHMW Coflein website. This report provides the detail necessary for any future reassessment of the site and to enable the site to be incorporated into future research. However for this to happen the archaeological community must be made aware of the site and the findings and this will be achieved by a published report, shorter and more concise than the archive version. It is intended to publish the report in Archaeologia Cambrensis, the main academic journal for Welsh archaeology, where it will be widely read.

This phase of work also includes archiving the finds and paper and digital records from the project. Once the project is complete the finds will be transferred to the Gwynedd Art Gallery and Museum, Bangor and acceptance of this report by the client is taken as agreement to this transfer of ownership. It is proposed to discard burnt stones and other stones with no signs of use prior to accession of the collection to the Museum. The charred plant remains will be retained by the Museum. The paper and digital archives are to be curated for the future by RCAHMW.

3. BACKGROUND (Figure 2)

An archaeological assessment of the area in advance of the construction of an extension to the Water Treatment Works at Rhiwgoch (Evans 2008a) identified two possible sites of archaeological significance close to the limits of the works; a possible burnt mound (PRN 29854) and a longhouse of probable medieval date (PRN 29846). An evaluation phase was recommended, of which the first part was a topographical survey of the site to accurately locate the areas of archaeological potential. This was undertaken in September 2008 (Berks and Davidson 2008). The survey recorded the visible remains of the two archaeological sites, and identified the presence of a field or enclosure boundary (PRN 29252), probably associated with the longhouse, and possible lynchetting (relict terraced field systems) to the south west of the development area. At this stage it was decided to fence off the long house from the development to avoid direct impact. However the associated ancient field boundary would still be impacted upon. Eleven evaluation trenches were excavated in the subsequent evaluation phase. These were designed to test for the presence of archaeological remains in areas identified as high potential in the previous phases. The evaluation trenching was undertaken over a period of eight days between 28th October and 7th November 2008.

Archaeological features were observed within trenches 1 and 11 and broadly confirmed the observations made following the assessment and topographic survey (Evans 2008b). The evaluation of the possible burnt mound in trench 1 could not fully interpret the site, but demonstrated sufficient archaeological potential to justify the recommendation of full excavation as the most appropriate mitigation (Site A). The relict field boundary in trench 11 was found to have been built on subsoil which overlay the glacial clay. No dating evidence was found, and it was recommended that another section be excavated across the boundary to confirm the sequence of soil formation, and to look for dateable material (Site B). The remaining trenches did not reveal any evidence for archaeological activity, and no further archaeological work or watching brief was recommended in the wider area.

Mitigation in the form of full excavation of the identified archaeological features was requested by the SNPA archaeologist. Archaeological excavation was carried out between 22nd November 2008 and 13th March 2009.

4. EXCAVATION METHODOLOGY

As a result of the evaluation, recommendations were made for archaeological mitigation in the form of excavation for two areas within the proposed development (Figure 2). The aim of the excavations was to fully excavate, record and interpret site A and to characterise site B in advance of their respective destruction and damage by the development.

- Site A: an area of excavation 20.0m by 20.0m encompassing the location of Trench 01 and the possible burnt mound identified during the evaluation stage was proposed in the initial specification. The area was subsequently extended to 464 square metres to investigate areas of archaeology that lay outside the original area.

- Site B: an excavation area was proposed which encompassed the location of Trench 11 and the relict field boundary identified during the evaluation stage. The purpose of the excavations was to examine and record the nature of the wall, and to retrieve any dating evidence. In order to achieve this, a 4m length of the wall was exposed, and a trench 1m wide, was fully excavated across the line of the wall onto the natural glacial subsoil.

The turf was stripped from both sites by a small mechanical excavator under constant archaeological supervision. All subsequent excavation was by hand, undertaken stratigrapically. Detailed plans were produced of all significant archaeological features, as well as section drawings as appropriate. All layers and features were recorded on context sheets, describing the nature of the deposit and its stratigraphical relationships. The majority of features were fully excavated, with only minor features or those of natural origin partially excavated.

A photographic record was produced using digital SLR cameras set to maximum size and resolution. All finds were collected, bagged and recorded as appropriate, and labelled according to their individual stratigraphical context. In the post-excavation phase the artefacts were cleaned, catalogued and bagged or boxed in a stable condition. Any that were not inherently stable were sent for conservation. Bulk soil samples generally of 20 litres were taken from all significant deposits, particularly those with prehistoric finds or charcoal. No waterlogged deposits were found, nor soil profiles suitable for micromorphological analysis. The bulk samples were processed by flotation, and the charred plant remains sent for assessment and if necessary further study. The coarse and fine residues were inspected for finds and non-floating ecological remains.

5. EXCAVATION RESULTS

5.1 Site A

Summary of findings (Figure 3, Plate 1)
(note: figures in brackets refer to the context number of the feature or layer. The site matrix is included as appendix 6)

This site was difficult to excavate and interpret. The boulder clay and natural soil deposits in this area contain large quantities of stone, and as the main archaeological features were constructed of stone with more stone dumped over the top, identification of genuine features proved very difficult. A further complication was former targeted stone robbing of specific features. The site also had a modern pipe trench cut through the middle of it.

When the site was initially identified it was thought to be a burnt mound as there were quantities of burnt stone over the area. On excavation a small oval stone structure was identified along with a variety of other features that were thought to be roughly contemporary. Post-excavation analysis of the archive led to the re-interpretation of some of these features and the identification of the remains of a substantial roundhouse. However the perception gained on-site of the oval structure as significant and contemporary with several of the other features remained until the radiocarbon dates were returned. These had been specifically selected to explore the proposed phasing of the site and demonstrated that there was no significant activity before or after the Roman period. This led to a final reinterpretation of almost all the features being contemporary with the roundhouse. The oval structure overlying the roundhouse was reinterpreted as a sheepfold or shelter, with no associated features.

The revised interpretation has identified a large stone-walled roundhouse with an internal capped drain, built just before Roman occupation of the area. The finds and radiocarbon dates suggest it continued in use into the second century AD. There was a small stone-walled enclosure attached to the western side of the roundhouse from which the main roundhouse entrance with a wooden porch opened. Within and possibly prior to the enclosure there had been considerable activity involving the use of hot stones; the origin of the considerable quantities of burnt stone on the site.

After the abandonment of the roundhouse some of the dumps of burnt stone were levelled into the ruined remains of the enclosure and the walls began to collapse. The roundhouse wall was almost entirely robbed away, leaving only a short section either side of the entrance. Very much later, either in the medieval period or even more recently, a small oval structure was built within the former roundhouse. There were no other features associated with this phase, and there was no definite evidence for roofing.

Following abandonment of the oval structure burnt stone, probably from previously undisturbed heaps nearby, was dumped over the site along with some large field clearance stones, presumably to clear the adjacent pasture.

The small quantity of pottery from the site indicates a $1^{st}/2^{nd}$ century AD date for the principal activity, and this is supported by a Roman melon bead from the inner drain of the roundhouse. The radiocarbon dates suggest a longer period of use within the Roman period but they do not support an Iron Age origin for the house nor do they indicate significant later activity. There are a few sherds of medieval pottery that had worked their way between the loose stones filling the outlet of the roundhouse drain,

but it is suggested that these resulted from rubbish disposal and that they were not directly related to activity on site.

Natural geology and peri-glacial features (Figure 3)
The site was constructed on an area of mid yellow-brown, stony boulder clay (2103) containing gravel and numerous large boulders. Some of the boulders were embedded within the boulder clay but projected well into archaeological deposits. Over the boulder clay had developed an orange-brown silty layer (2100). This layer may largely be based on wind-blown loess that is found in many areas of North Wales deposited over the boulder clay. This loess (fine silt) was blown across the surfaces exposed by the retreat of the glaciers at the end of the last ice age. However, on the present site this deposit was rarely more than 0.25m deep, and must have been extensively altered and possibly partially created by other soil forming processes. It is considered that this is the B horizon of the soil that developed on the glacial till.

The impact of frost action on the tills at the end of the ice age was seen in a complex of ice polygons, particularly visible in the northern corner of the site. One polygon ((2064), plate 2) was initially mistaken for a small structure as it defined a roughly sub-circular area, but excavation demonstrated its natural origin. The sides of this feature were steep but merged with and extended under natural deposits in ways that an anthropogenic cut could not have done. The fills were confused and inorganic, although one deposit did contain some oak charcoal. Boulders of some size had been sorted by the frost action to be concentrated in the ice polygon. At one location slabs of stone could be seen tipping into the crack caused by the frost, but these and the rest of the fill were largely sealed by the B horizon of the soil. Other frost features ran into (2064) (including (2066) and (2092)) and this whole complex was recorded as group context (2116). In the south-western part of the site a ditch-like feature (2168) seems to have been another ice wedge. This had a V-shaped profile and its stony fill was inorganic. The archaeological features tended to have more organic, darker fills, although the difference was not always easily defined.

Roundhouse (Figure 4)
The main elements of the roundhouse
Projecting south-west from a large boulder (2131) was a short section of wall, c.4.5m long and 2.4m wide (plate 3). This had faces ((2053), (2096)) composed of stones up to 1.5m in length, occasionally surviving to 3 courses high on the eastern side, with a closely packed core of smaller stones (2036) (Figure 5.1). After a gap of 3m there was another patch of similar walling. This had two substantial stones ((2012) and (2015)) set on edge as orthostats, which projected through the later deposits (plate 4). These seem to have been *in situ* facing stones, and a flat stone (2016) also seems to have been a facing stone, although it may have been slightly disturbed. Again the wall core was composed of densely packed stones ((2009), (2010)). This section of wall was 2.2m wide and both pieces of wall were similar in character and seemed to be part of the same structure but the form of that structure was not initially evident as most of it had been robbed out in antiquity. A single stone (2286) to the east of boulder (2131) was carefully positioned to be level and seems to have been an *in situ* facing stone of this structure. The inner faces of this structure as defined above can be joined by a circle 10.5m in diameter, and in such a reconstruction the outer face would be 14.5m in diameter. The reconstruction of these remains as a roundhouse is not proved by the wall fragments alone but is supported by features lying inside the area defined by them.

Running roughly concentric with the wall were two gullies interpreted as sections of a stone-capped drain. Gully (2161) was 0.4m wide and 0.25m deep, and its base was defined by iron pan. It started close to the northern arc of the wall as a broad, shallow stone-filled gully (2248) and became more clearly defined with partially surviving stone capping. A similar gully (2241) seemed to continue the line of (2161) to the south, but the two seem never to have joined. Instead (2161) ended in a large bowl-shaped pit (2219), measuring 1.1m by 0.8m, and 0.4m deep. It had traces of a clay lining along the base and one flat stone remaining from what may have been stone lining around the sides. When the pit had been partially infilled two stones had been inserted, apparently wedged against a capstone over the end of drain (2161) (figure 5.2, plate 5). These stones seemed to have been deliberately placed to block the drain. The stones initially caused some confusion because they were first interpreted as packing stones for a posthole and as they projected well above the drain were considered to indicate that the feature had been dug from a much higher level. However if these were a later insertion they may have been left projecting above the level from which the pit was cut. It seems most likely that pit

(2219) was part of the drainage system and that drain (2161) was designed to run into it rather than flowing out of the roundhouse. At some point the drain was no longer needed and it was blocked.

The gully, feature (2241), was up to 0.6m wide and 0.4m deep, with well-preserved capping stones (plate 6). At the south-eastern end of this another gully (2239), with some capping stones surviving, branched-off forming a segment 3.5m long and 0.23m deep. Both (2241) and (2239) seemed to join at the north-eastern end of a broader gully (2054); 0.3m deep and 0.83m wide. Feature (2054) ran downhill to the south-west before petering out. It had a loose fill of stones but no evidence of capping or lining. The junction of (2055), (2241) and (2239) was confused and some recutting of (2054) may have occurred but it seems probable that they functioned as part of the same system, with (2054) draining water from (2239) and (2241). These features resemble the Y-shaped drains often found in roundhouses in North Wales. These drains are more commonly associated with clay-walled roundhouses but drains are also found in stone-walled buildings. The association of a wall that probably curves with a Y-shaped capped drain strongly suggests that these are the remains of a roundhouse.

The gap between the two segments of wall which face almost due west are best interpreted as the entrance to the roundhouse. Within this gap were four large postholes forming a rectangle measuring 2.25m by 3.00m externally, but with a gap of about 1.5m between the posts. Postholes (2121) (plate 7), (2206) and (2232) had diameters of about 0.6m, while (2164) was about 1m across (figures 6.1-6.4). They were all between 0.4m and 0.5m deep with post-packing stones, which included large slabs up to 0.4m long. Many of the packing stones in posthole (2164) were *in situ* whilst the middle of the posthole had been deliberately filled in with long thin stones, inserted once the post has been removed (plate 8). In contrast the stones occupying the posthole in feature (2206) appeared to have been casually dumped rather than carefully placed. The other postholes also had some stones filling the former location of the post and it is suggested that the postholes were filled in deliberately after the posts were removed.

In the northern side of the entrance was an additional posthole (2205). This measured 0.4m in diameter and 0.24m deep. It contained undisturbed packing stones (figure 6.5), and just clipped the edge of posthole (2232). However the two postholes could have functioned together. It is possible that (2205) may have supported a door within the entrance porch, but posthole (2123) may be a better candidate, as discussed below.

There is a hint of an entrance in the eastern arc of the wall. This part of the wall had been entirely robbed out but a posthole lay exactly central to its proposed line. This posthole (2117) was larger than other postholes on the site except for the main entrance postholes. It measured 1.1m by 0.7m and was originally over 0.6m deep. It had large packing stones, some still set vertically in the cut (figure 6.6). If this posthole had a partner it lay just beyond the limit of excavation. As the possible significance of this feature was not realised until well into the post-excavation process the excavation was not extended to find further evidence of an entrance. If this was an entrance it was not quite opposite to the western entrance, but offset slightly to the north.

Internal features within the roundhouse

The initial interpretation of the site suggested two phases of occupation though it was often difficult to confidently assign features to one or other of the phases. However the results of the radiocarbon dating programme revealed a single principal phase of occupation associated with the roundhouse, to which nearly all the features could be assigned.

The roundhouse had a central hearth. The thin but complex stratigraphy of the site with considerable root disturbance made some of the critical relationships difficult to identify securely, and the eastern part of the hearth was initially assumed to belong to the proposed later phase of occupation. However it lay almost exactly centrally in the roundhouse and careful reconsideration of the recorded evidence suggested that it did extend under the wall of the later structure (Figure 5.3). The hearth cut was recorded in two parts (2107) (figure 5.4) and (2141) (figure 5.3)), but these were almost certainly part of the same feature. The hearth was situated within a shallow hollow over 2m long but the hearth itself seems to have been bordered by stones set on edge and to have measured about 1.7m by 1.25m. Only two of the edging stones survived *in situ*, but some of the other small slabs over the feature may have been dislodged edging stones. The fill ((2130) and (2108)) of the hearth was a soft black silt containing frequent charcoal flecks and fragments of burnt bone. The edging stones and some of the other stones over the feature had been subjected to heat.

There were numerous postholes inside the roundhouse. Running about east-north-east to west-south-west across the roundhouse, just north of the centre was a line of four postholes ((2061), (2135), (2149) and (2250)) with (2209) probably extending the line further west. Postholes (2135) and (2149) were quite small, no more than 0.4m in diameter and 0.22m and 0.13m deep respectively, but they had fairly well-defined post packing stones; in (2149) one of the packing stones was a reused hammerstone (figures 6.7 and 6.8, plate 10). Posthole (2250) measured 0.8m by 0.6m and (2061 had a diameter of 0.6m, but both were about 0.22m deep. These also had post-packing stones, with (2250 being largely filled with stones. Feature (2209) was only 0.03m deep when identified but lay on the same line at about the right distance from (2149) and was probably the truncated remains of a posthole not recognised at a higher level. This line was almost but not quite on the same alignment as the entrance and seems to have divided off the northern part of the house. If there was an eastern entrance it is possible that the larger postholes ((2061) and (2250)) were related to this but their function in this case is not clear.

There were occasional other postholes inside the roundhouse. Posthole (2269) was 0.26m in diameter and 0.3m deep, and cut the edge of the inner roundhouse drain (2239), so it may represent an addition during the life-time of the roundhouse. Post-hole (2165) lay about 1m to the south-east of the hearth. It had a diameter of 0.45m and a depth of 0.3m with packing stones at the sides of the cut. It also contained two post pads of grey schist (2179), approximately 0.23m by 0.2m and 0.05m thick which were placed in the base of the post hole. This cut an amorphous feature (2128), measuring about 2.2m by 0.3m, with a dark stony fill, containing some charcoal. It is most probable that this feature was the root hollow of a tree or shrub pre-dating the roundhouse, into which material from the use of the roundhouse has been introduced.

Post rows

The main group of postholes inside the roundhouse lay immediately to the east of the roundhouse entrance in two parallel rows of small postholes aligned nearly east-west. These defined a rectangular feature 3.5m long and c.2m wide. The gap between the post lines was about 1m. Six postholes ((2123), (2183), (2188), (2246), (2255) and (2279)) formed the southern line and four postholes ((2194), (2201), (2211) and (2223)) formed the northern line. However (2223) and (2188) seemed to have been replacements and not originally part of the design of the structure. There was a large gap in the northern line occupied by pit (2219), associated with the internal drain (2161).

Most of the postholes were sub-circular in shape, about 0.5m in diameter and between 0.25m and 0.35m deep (figures 6.9-6.12 and figure 7.1). They all contained packing stones, many of which were *in situ*. Posthole (2279) had vertical slabs forming a carefully constructed post setting (plate 11). This was initially interpreted as the terminal to the roundhouse drain (2241), but the drain had no side slabs elsewhere. Rather than cutting the drain this posthole seemed to have been included in its end and the drain proper started from adjacent to the post. Other postholes, especially (2194) (plate 12) and (2255), also had some vertical packing stones. Some of the posts seem to have been replaced. Posthole (2188) clearly cut (2183), suggesting that this row was designed to have five posts all quite regularly spaced. Postholes (2211) and (2223) were not contemporary but it was difficult to tell which was the latest, because their fills were very similar, however there is perhaps a suggestion that (2223) was forced in against one of the large packing stones in (2201) to replaced (2211).

Most of the postholes appear to have been paired; (2123) and (2194), (2211) and (2246), (2201) and (2183), with the two replacement posts (2223) and (2188). Even posthole (2279) seems to have been positioned neatly opposite pit (2219). It is possible that the pit replaced an earlier posthole that was part of the structure, but there is no evidence of this apart from the position of posthole (2279). The pairing scheme leaves out (2255), which might have been paired with a posthole not recognised under the wall of the later oval structure, but some trace of such a theoretical posthole should have been visible under the wall. Therefore some confusion remains in the neat paired layout at the eastern end of this structure.

Most of the southern line of postholes followed the alignment of the southern side of the entrance quite closely. The northern line, although less clear, was quite well aligned on the northern side of the entrance, although posthole (2194) was set slightly to the north of the line. However posthole (2123) was set out of line in a position where its post would have significantly blocked the entrance. This post would have reduced the entrance, at the point where it opened into the house, to a width of only about

0.75m. A modern domestic doorway is about the same width, so this would have been wide enough for access, and the post might have supported a door.

Small enclosure
The entrance of the roundhouse opened onto a fairly level area in the natural slope with a scarp in the hill slope running along the northern side of the access route. Just to the north of the entrance a loose linear scatter of stones (2284) ran west from the roundhouse wall, possibly curving south at its western end. The stones were fairly scattered but a few larger stones remained that could have been the remnants of facing stones, especially internal facing. At the eastern end a large stone (2287) was set level on the old ground surface and positioned perpendicular and adjacent to the roundhouse wall, apparently part of a wall face built against the roundhouse wall. Smaller stones on the northern side may have been traces of a wall core, but there was no northern face (plate 13, figure 7.2).

To the south of the roundhouse entrance a line of stones ran west from the wall. These stones (2050) seemed to form a revetment two courses high in places and composed of stones up to 0.5m in length (figure 7.3). The stones are aligned to form a northern face and a few smaller stones to the south appear to have been the remains of wall core. It is probable therefore that (2050) was originally a broad wall with two faces, but that the southern face and much of the wall core had been robbed away.

At the western end of (2050), after a small gap were the remains of a broad double-faced wall that probably preserved the original character of all these structures. This wall (2051) ran roughly north-south and was about 3m long and 1.6m wide (figure 7.4). The foundation of its eastern face was largely *in situ*, composed of stones up to 0.5m in length. Only one stone of the western face was certainly *in situ* and between these was a core of small rounded stones.

Structures (2050), (2051) and (2284) defined three sides of a small rectangular enclosure, the corners of which may have been rounded (plate 14). The ends of the enclosure walls seemed to abut the roundhouse wall but this relationship was not well-defined.

Within the enclosure and extending just under some of the wall stones was a thin, patchy layer of yellow and grey gravely clay with iron panning (2086/2147), no more than 0.03m thick. This lay directly on the relict soil and could be the result of soil forming processes influenced by the layers above; however, this layer also contained considerable quantities of burnt clay. A total of 463g of burnt clay was recovered from (2086) and this represented only a sample of the deposit. None of the clay was securely identified as being *in situ* but it did form patches within the layer. Many of the pieces of burnt clay had flat, hard, pale surfaces that could have been the surface of a wall, the inside of an oven or the surface of a floor. This deposit also contained fragments of burnt bone and some burnt stone.

Above the thin deposit was a stony layer (2084/2144) about 0.1m thick containing heat-cracked stones as well as fragments of burnt bone and pieces of burnt clay from the same source was (2086). The stony layer had built up against the inside of walls (2050) and (2051). A similar deposit (2097) lay to the west, outside (2051). In the section (figure 7.4) this deposit seems to underlie wall (2051), but this is due to the main outer facing stone not being fully exposed in this section. When excavated it was shown that this deposit had also built up against the wall. These deposits resemble the stony colluvium that often develops in this area but the presence of burnt stone, bone and clay suggests also some mixing of anthropogenic material into colluvial deposits.

Over the top of the stony layers inside the enclosure were patches of fairly flat stones. Over much of the area these were discontinuous and disturbed ((2081) and (2173)). Although there was a roughly coherent layer of stone it included many stones that were not flat and very few that could convincingly be argued as deliberately laid. In the roundhouse entrance and immediately inside the south-western arc of the roundhouse wall, where the layer was recorded as (2073), the layer was more continuous but hardly more regular (plate 15) (figure 3). The slabs in the entrance, recorded here as (2192), clearly sealed one of the entrance postholes (2206), and overlapped all the others. During excavation this layer was interpreted as a slab surface, but the most convincingly laid slabs all overlaid the inner drain (2241) and were probably capstones and the rest of the layer was irregular and discontinuous. This layer is probably best interpreted as collapse from the walls.

The image of a neat enclosure with a flagged floor is also disturbed by the presence of two large boulders found within the eastern part of the enclosure. One (2045) had a flat surface and could have

functioned as part of the floor, but the other (2282) projected significantly above the surface and would have posed an obstacle (plate 12). Both stones rested just on the old ground surface but had the material of layers (2084/2144) built up around and partially underneath as if they were deposited as part of this layer, possibly dislodged from the roundhouse wall.

A deposit of densely packed burnt stones (2095) with some burnt clay and burnt bone as well as quantities of charcoal was found to the north of the stone (2287) projecting from the roundhouse wall (plate 13, figure 7.1). This had many similarities to the layers described above, especially the type of burnt clay it contained, but the dense, rather organised nature of the stones in the deposit perhaps suggest that this had been less disturbed than (2084/2144), and it may represent a largely *in situ* heap of burnt stones.

Dug through the stony layer (2097) immediately adjacent to the outer face of (2051) was a posthole (2113) (figure 7.4). This measured 0.48m by 0.30m and was 0.28m deep and contained relatively undisturbed packing stones. About 3m to the north-east was another posthole (2111). This was about 0.5m in diameter and would have been at least 0.37m deep, although only recognised after some of the deposits that it cut through had been removed. It had one prominent packing stone set on end. A further 2.5m east of (2111) was the truncated base of another posthole (2245), originally at least 0.5m in diameter. This was located beneath the modern pipe trench but still survived to a depth of 0.23m and had two surviving packing stones.

Oval structure (figure 3)
The rough stone foundations of an oval structure were found on the east side of the site (plate 16). This structure measured 7.5m by 6m externally and enclosed an internal area measuring c4.5m by 3.5m. Its long axis was aligned roughly north-south, perpendicular to the slope. The structure was cut into two parts by a modern pipe trench, though the southern wall (2074) clearly belonged to the same structure as the northern wall (2082). The maximum width of the wall was 1.45m and maximum height was 0.3m. The wall was composed of densely packed medium and large stones, rarely over 0.5m in length. Occasionally larger stones appeared towards the outside of the wall but no obvious facing stones or other internal features were identifiable. There was no bonding matrix between the stones but the southern part of the wall had noticeably more charcoal in the interstices between the stones.

The entrance to the building seemed to lie on the south side, where a series of flat angular slabs (2119) appeared to form a threshold; the largest slab was 0.9m by 0.15m and 0.07m thick (plate 17). The slabs were covered by a burnt rubble material (2120), which probably formed part of the overlying burnt stone deposits.

The haphazard nature of the stones forming the wall of the oval structure suggests only a foundation layer of stone may have been laid down and the wall itself may have been built of a different material. The lack of clay between the stones argues against clay or cob walls, but turf is a possibility. Alternatively the wall may have been low and very poorly built. There is no secure evidence that this structure was ever roofed. No other activity seems to have been associated with this structure.

Other features
A small number of other features were present presumably associated with the roundhouse occupation but with no evidence to securely link them to this period. In the north-west corner of the site, amongst the peri-glacial features, were two small pits. One pit (2090), 0.6m in diameter, contained a few burnt stones but no evidence of *in situ* burning. Pit (2126) was approximately 0.36m in diameter. Both were only 0.08m deep and contained no charred plant remains or finds. Other slight hollows in this area were probably natural.

Beneath the activity inside the roundhouse were two narrow, roughly north-south aligned gullies ((2271) and (2273)). These were roughly parallel, up to 0.25m wide, but generally narrower, and up to 0.12m deep. Feature (2271) may have been continued in a very narrow straight gully on the same alignment further north (2265). Gully (2272) was cut by posthole (2255) and gully (2273) was cut by posthole (2246). Feature (2265) seemed to be cut by the inner drain (2161) and may even have continued under the roundhouse wall. These gullies may have been animal burrows; (2265) certainly gave that impression, although it was very straight. However it is possible that they were subsidiary drains for the roundhouse internal drain or possibly traces of pre-roundhouse ploughing.

In the north-eastern corner of the site feature (2237) was recorded. This measured 0.3m in diameter and only 0.12m deep, with no post packing. It was thought to possibly be related to posthole (2117), but it was very poorly defined and was probably just a root hollow or other natural disturbance.

A collection of fairly large stones (2182) to the north of the large natural boulder (2131) may represent the start of a field wall running uphill from the roundhouse, but the stones were disorganised and no trace of a face or deliberate structure could be determined.

The interpretation as a roundhouse is quite convincing but cannot be considered to be beyond doubt. The main problem with the interpretation is the presence of a linear band of stone that seemed to continue the line of the wall. This stone layer (2025) was within a shallow hollow extending for more than 6m. It was 1.1m wide and 0.44m deep. One of the larger stones within this feature appeared to be *in situ* and deliberately set, although most were fairly randomly distributed cobbles. This feature appeared to be the rough remains of an almost entirely robbed out stone wall (plate 9). However the feature was completely straight which may indicate that the structure was not just a simple roundhouse but a more complex feature.

Overburden and upper layers of the site
(note the context numbers in this section are not shown on fig 3)
The site when first identified was thought to be a burnt mound due to the extensive spreads of burnt stones lying immediately below the turf (plate 18). There were two main layers of burnt stone with a deposit of unburnt stone between. The upper layer (2001/2002) largely consisted of heat-cracked stone and covered the central and south-western parts of the trench. Under this were extensive patches and areas of unburnt, rounded and sub-rounded stones ((2007), (2011), and (2041)). In places lower burnt stone layers (2048/2049/2040/2046/2039/2038), containing charcoal, burnt bone fragments and some artefacts, extended under the unburnt stone. These lower layers were concentrated over the small enclosure and the area immediately west of the wall of the oval structure, although some patches extended into the northern side of the trench.

These higher deposits over the site had been disturbed by the trench for a modern water pipe which crossed the site. Over the top of the sequence of stone layers a few large boulders had been dumped (2004/2005). These were clearly clearance stones of relatively modern date and it is likely that the other deposits were also dumps of stones cleared from the field in different phases.

Much of the unburnt stone sandwiched between the burnt stone layers seemed to be tumble from the structures on the site, suggesting that the burnt stone was produced or spread over the area prior to the main collapse of the roundhouse and the small enclosure. The upper layers of burnt stone contained few artefacts and less charcoal, although charcoal was present. These layers overlay tumble from the walls. It is suggested, as discussed below, that the activity on site produced burnt stone, which was deposited in heaps. At various stages in the degeneration of the site stone from these heaps was spread about the site, the latest event probably due to an attempt to concentrate stones in one area and improve the field. The presence of the projecting roundhouse wall certainly attracted stone dumping as some large boulders lay just in or on the turf and must have been later additions. The area was further disturbed by a field track running from the gateway to the south-west through the middle of the site. This seems to have unknowingly used the hollow formed by the roundhouse entrance but must have resulted in some disturbance to the ends of the roundhouse wall on either side of the entrance.

5.2 Site B (Figures 8 and 9, Plates 19 and 20)

Site B was a relict field boundary, visible for much of its length as a raised stone bank protruding through the turf; though for part of its length it survived as an upstanding stone wall. The boundary could be traced for some 70m, and may have been part of a wider field system associated with a probable medieval longhouse (PRN 29846) (figure 2).

The excavations revealed a 1.5m wide wall constructed of medium to large rounded stones, with clearly evident facing stones, surviving to a height of 0.6m. It consisted of medium and large sub-angular cobbles and small boulders, with very large cobbles used as facing stones, with a core of smaller cobbles. It was butted by a less well-defined wall (2021), consisting of a rubble core of sub-rounded small cobbles, which was 1.2m wide and survived to a maximum height of 0.45m, although its

route in plan remains unclear. It was built upon a reddish brown relict soil (2023), and is considered to be later in date than wall (2019). The presence of some demolition cobbles (2022) beneath this wall suggests that it is later, and that some collapse had already taken place, although these relationships are somewhat tenuous. The wall had a core of smaller cobbles than those seen in (2019), perhaps suggesting that they are not contemporary. Context (2023), a soft silty sand, probably represents the ground surface on which the walls were constructed.

No dating evidence was recovered from the excavations and this boundary can only be dated by its relationship to other features in the area.

6. SPECIALIST REPORTS

6.1 Pottery

Dr J. Evans, Dr P. Mills, and S. Rátkai with a contribution by Dr G. Monteil

Introduction

Some 16 items were presented for study. Each item was inspected at x20 magnification, and assigned to the appropriate fabric, and where possible form type. The material consisted of small well-worn sherds, in a very poor and friable state. A catalogue of the pottery with detailed descriptions is included in appendix 1.1, the sherds are illustrated on figure 10.

Roman material included two sherds of Dorset Black Burnished Ware (BB1) (Tomber and Dore 1998 DOR BB); a jar rim (SF74, context (2009)) and a jar shoulder (SF30, context (2130)). There was also a small fragment of Central Gaulish samian (part of SF39, context (2006)). This would suggest a date range of the mid to late second century AD.

Medieval material was present in the form of a cooking pot jar rim (SF15) recovered from (2055) and probably an import from Flintshire/ North Wales, and the base of a further vessel in a similar fabric (SF8) from (2007). Also present was a tiny fragment of pottery from (2006) which it was not possible to assign any clear date.

Discussion

Although very few sherds are present from the site, they probably represent the three main periods of occupation. The minute fragment from (2006) is probably more likely prehistoric than Roman or mediaeval. The sherds of Roman pottery, as is usually the case on Welsh rural sites, are restricted to samian ware and BB1. These date to the second century AD, but the absence of Roman pottery of other dates does not preclude occupation of those dates, especially in so small a collection. The mediaeval material seems to have a 13^{th}-15^{th} century date range, but again in this small collection absence of evidence does not amount to evidence of absence.

6.2 Melon bead

Hilary Cool

A melon bead (SF 35, see plate 21) was recovered from a fill (2257) of the drainage gully (2248) of the roundhouse. The bead is described as frit now appearing brown with turquoise glaze remaining in the base of some gadroons. It has a cylindrical perforation and regular gadroons. Diameter 15mm, length 11.5mm, perforation diameter 6.5mm (figure 10).

Frit melon beads like this example are a common find from the time of the Roman conquest to the middle of the second century. They are especially common on military sites. In the excavations in the *vicus* at Caersws and within the fort at Caernarfon, for example, more than thirty were present (Allen 1993, 226 nos. 44-5; Owen and Arnold 1989). So they would have been in common use in Roman settlements and available in the west Wales during the earlier part of the date range indicated by the Roman pottery here.

This is the second example of a frit melon bead recovered from a native site in the region recently. The other was found unstratified at Parc Cybi, Holyhead (Jane Kenney pers. comm.). A fragment from one in translucent deep blue glass was also found at Dinorben (Gardner and Savory 1971, 187, fig. 31 no.

5). The question arises as to why melon beads were found desirable on native sites which otherwise seem to have shown little interest in acquiring Roman material culture in the second century. It could just be that they were brightly coloured curios and were just regarded as an alternative to the large native beads. There is some evidence that within the more Romanised parts of Britain, melon beads had an amuletic significance. At Wanborough, Surrey one was recovered from the dedicatory deposit made in c. AD 160/70 prior to building one of the temples there (O'Connell & Bird 1984, 129 no. 1). A large copper alloy bell with three melon beads had clearly formed a threshold deposit at Scole (Seeley 1995), while a similar combination of bell and bead was found in a make-up level for a large house at Culver St., Colchester (1992, 187 no. 1663). A similar impetus may have been at work here and it may be that the presence of the bead in the drain is not fortuitous but was the result of deliberate placing.

6.3 Spindle whorls
George Smith

Description
Two unfinished spindle whorls were recovered (SF 19 and SF 34, appendix 1.2). SF19 is a spindle whorl blank, with no perforation, a slightly irregular circular disc of shale, between 46-47mm diameter and 9-12mm thick. It is made from a natural or artificially split sheet of shale that has been chipped and then ground to shape. The faces have some coarse grinding striations, mainly parallel and in one direction. The rim has been ground but irregularly, not turned.

SF34 is a slightly irregular circular disc of 44-47mm in diameter and 13mm thick, with a central drilled hole of 'hour-glass' profile that only just perforates the disc (figure 11). There are some concentric incised grooves on both faces that seem to be accidental, not decorative. The whorl could have been turned on a small lathe but the grooves are perhaps more likely to be marks from the drilling process, suggesting hand-drilling with an irregular piece of flint with some intrusive projections. The disc has been chipped and hand ground to shape and both faces have multi-directional grinding striations, which have partially removed the concentric drilling grooves. The disc has been damaged, anciently, by chips on the edges, which may have caused it to be rejected because the central hole was never enlarged enough to make it useable as a whorl.

It was initially thought that the disc was made from some very fine ceramic material, perhaps amphora. However Peter Webster (formerly of Cardiff University) inspected the piece and concluded that it was not pottery. He felt that it was too dense, hard and heavy to be pottery and was probably a fine limestone or similar (Peter Webster pers. com.).

Discussion
The grinding of the whorl blanks could have been carried out using one or more of the utilised stones described below.

SF 19 was found in the relict soil inside the oval structure. SF 34 came from within the southern half of the oval structure wall, but the loose and reworked nature of the site makes it difficult to securely associate these finds with this structure.

Local shale or slate was a readily available and easily worked material for production of spindle whorls. Those from Iron Age and Roman period native sites in North Wales are sometimes plain discs, but sometimes were decorated by incised grooves and were clearly personal and individual, home-produced items . Sometimes beach pebbles of unusual stone were collected and drilled for use. Good assemblages come from Caer Seion hillfort (Iron Age) (Griffiths and Hogg 1956) and Braich-y-dinas hillfort (Iron Age and Roman period) (Crew 1982). The use of pottery as a material indicates Roman period or later. Excavations at the Roman fort at Segontium produced 11 spindle whorl discs made from a variety of types of pottery and of 35-50mm diameter (Casey and Davies 1993, 208-9). During the Roman period specialist-made lead spindle-whorls also came into use.
The presence of whorls indicates domestic activity and obviously the availability and use of wool but this was a fairly universal activity and does not imply any economic specialisation.

6.4 Utilised Stone and imported but unworked stone
George Smith

Description
Twenty two stone items were collected (excluding the spindle whorls described above). Of these 19 are imported beach pebbles, 2 are small natural pebbles, and one is a large quartz single crystal. One of the 2 natural pebbles is of white quartz (SF56), and one of red, possible jasper (SF7), and these were perhaps collected and brought to the site as curiosities. The quartz crystal (SF5) has been crushed at one end and may have used as a strike-a-light. See appendix 1.2 for photographs of all worked stone.

Of the 19 beach pebbles 10 have been utilised, while 6 are of similar size and material but have no signs of utilisation and 3 have no utilisation but been burnt, perhaps during specific use as pot boilers.

Summary of imported stone objects and their contexts

Description	***Unstratified and overburden***	***Upper burnt stone deposit***	***Lower burnt stone deposit***	***Tumble from roundhouse***	***Oval structure and its collapse***	***Roundhouse***
Utilised pebbles						
Light hammer stone	1			1	1	1
Hammer/polisher		1				1
Hammer/whetstone			1			
Rubber/polisher			1			
Possible polisher					1	
Palette					1	
Non-utilised beach pebbles		3				3
Imported burnt pebbles	2		1			
Other non-utilised pebbles	1					1
Quartz crystal						

The utilised pebbles have clearly been carefully selected for use. They are mainly ovoid and of dense, hard igneous rock. They mainly fall within the size 100-150mm long, of a size and weight suitable for use in the hand. Four have had more than one type of utilisation. Seven have evidence of use as light hammers, four as polishers and one as a whetstone. The hammering evidence is not massive end crushing but light pecking on the tips of the stones. In the most developed cases the pecking has developed into a facet, which is at an angle to the axis of the stone, showing that the stone was held at an angle in use (see figure 11 for typical hammerstone). The polishing evidence occurs on the flat faces of the pebbles and the one case of use as a whetstone on the sides of an elongated stone (SF09, see figure 11).

One stone (SF54) is not a pebble but a thin split plaque of fine shale or slate in a sub-rectangular shape. One face has slight dishing and smoothing from wear, probably from use as a palette (figure 11).

Discussion
The non-utilised stones are similar to the rest and so probably selected and imported for possible future use.
The distribution of all the stones is quite wide but several of the utilised pieces were associated with the oval structure. They were also found in the burnt stone layers but these may have been introduced from the other activity on the site. The palette and one of the spindle whorls were found within the wall of the oval structure. This wall was patchy in places and probably reused stone from the roundhouse so the origin of these items is uncertain.

The use-wear on all the stones was light and suggests domestic activities e.g. sharpening or food, clothing or leather preparation rather than industrial, such as metal working. The finds assemblage is rather distinctive and contrasts with the average assemblage from native Romano-British roundhouses in lacking any evidence of querns, rubbing stones or mortars.

6.5 Flint
George Smith

Raw Material and technology
Four pieces of worked flint were recovered and one flint pebble. The two pieces with surviving cortex were made from small fluvio-glacial pebbles like the one flint pebble found. The other pieces were small and probably similarly made. Such pebbles, with flint of varying quality and colours can be collected on local beaches.

Although made from pebbles the worked pieces were all proper flakes, not scalar pieces from bipolar split pebbles, so the raw material was not too limiting.

Description and discussion
There are two retouched pieces and these are both small convex scrapers, SF12 and SF81-1, both made on secondary flakes retaining some pebble cortex. One piece is the tip of a small, thin narrow blade, SF81-2, and the last piece is a small broad and thick tertiary flake, SF4 (figure 11). The latter has some micro-flaking on one sharp edge which could indicate casual use or just damage. The broken pebble, SF13, may have been collected and brought to the site for possible knapping raw material but as it is rather small for this purpose but could have been collected as a possible strike-a-light.

The convex scrapers are not really diagnostic of period, but a pre-2nd millennium BC date is likely. The broad flake could well be associated with these but the small blade could denote a Later Mesolithic element. The presence of some small flakes as well as retouched pieces shows that flint working did take place on site but the amount is very slight.

Two of the pieces, the scraper SF81-1 and the blade SF81-2 were unstratified. The small broad blade SF4 came from context (2017), part of the slab surface, and SF12 came from the lower burnt stone layer within the small enclosure.

The proximity of the finds suggests that they all belong to the same phase of activity, which is not contradicted by any differences in material or technique. The objects all probably derived from a scatter in the vicinity that was incorporated by chance during activity on the site. There seems nothing about the site location to suggest why it should have been chosen for flint working, although the hillside here commands extensive views over the slopes and valley below. Although flint raw material can be found on the beaches west of Harlech there are very few finds of worked flint in this area. A few pieces have been found during excavations at the Dyffryn Ardudwy Neolithic chambered tomb (Lynch 1969) and at a Bronze Age cairn below Moel Goedog (Lynch 1984). There are 19th century records of flints being found around Shell Island, Mochras and a 20th century record of a flint scatter in the uplands near Moel Goedog (F. Lynch, pers. com.), and recent work during the replacement of the raw water pipeline reading the water treatment works also produced a small number of scattered flints and a Bronze Age date on a patch of burning (Cooke *et al* 2010). Evidence of Neolithic activity, including worked flints has also been found near Rhiw Goch during excavations of the Iron Age settlement of Moel y Gerddi (Kelly 1988). The area was therefore certainly being used in earlier prehistory even though artefactual evidence is sparse.

6.6 Slag
A large lump of slag (SF 36), weighing 1536g, was recovered from context (2081, part of the rough layer of slabs within the small enclosure. There were also two smaller fragments (SF14 and SF42), weighing 14g and 36g respectively. These came from layers the lower burnt stone layers (2034) and (2006).

The large piece was assessed by Peter Crew, formerly Snowdonia National Park Authority Archaeologist. He described it as probably a cake of smithing slag, which forms just below the blowing hole in the hearth. It is not wholly typical, however, and could just be a so-called furnace bottom from smelting. This is suggested by the difference between the under surface and the rest of the lump, which is due to the slag cooling in the charcoal bed (though in this case the under surface seems to be rather corroded). However, such a small quantity of material would *a priori* be regarded as from smithing. Smelting would normally generate much larger quantities of material and it could only be interpreted as such if there was supporting evidence in the form of (roasted) ore fines, smaller runs of fluid slag or remains of a furnace.

The smaller fragments are of little informative value, although SF14 consists of slag stuck to burnt clay, most probably from a smithing hearth.

All the fine residues from the wet sieving were tested for magnetic metalworking waste as well as being visually inspected for none magnetic waste. None was found in any of the samples. This indicates that no smithing or other metal working took place on the site. It strongly suggests that the slag originates from elsewhere, dumped on the site like clearance stone, and that smithing was not an activity that took place on the site.

6.7 Burnt clay
A total of 915g of burnt clay was collected from 16 contexts, both by hand collection and recovered from wet sieving residues (see appendix 1.3 for table of burnt clay finds). This was generally fairly pale in colour, varying from red-brown, through pink to grey. It is fairly well-fired being quite hard to break and some broken pieces showed laminar structure internally. Most pieces are amorphous lumps with few flat surfaces, though most of the smaller pieces are much eroded, having been recovered from wet sieving. There are occasional pieces that may include impressions where they have been pressed against other objects such as sticks.

Tim Young of GeoArch inspected the pieces and could see few see clear wattle impressions on the material, making daub a less likely origin for the material. On the whole the clay is quite dense, with little organic temper and frequently some very poor mixing, also possibly arguing against daub.

Flat, hard, pale surfaces occur on material from deposits (2048), (2084), (2086), (2095) and (2099). That unifies the material and makes it clear that all burnt clay from those contexts has the same origin. The planar surface could be a wall face, but equally it could be the side of an oven, or even the surface of a floor. There is no trace of vitrification or any other evidence that the clay was related to a smithing hearth or furnace.

6.8 Metal Objects
Five metal objects were recovered, all iron. These were x-rayed, cleaned and stabilised by Phil Parkes of Cardiff Conservation Services. All the objects have been left in a stable condition for long term storage. See appendix 1.4 for a report on the conservation and for x-rays of the objects.

Two larger items were from late dumping or soil build-up layers and are probably of a recent date. These were a long metal bar (SF20) with a rectangular cross section, a tapering object and an object with a looped head (both SF38). Three nail heads and part shafts (SF 32, 52 and 53) were recovered from contexts (2220) and (2074). Context (2220) was the fill of posthole (2219) and (2074) was the wall of the oval structure.

6.9 Burnt stone
David Jenkins

Summary
Burnt stones from contexts across the site were examined to establish whether there is any significant petrological variation between the contexts. In the event, the stones proved to be homogenous in their petrology, and are composed exclusively of one rock type which corresponds to the local solid geology - the Lower Cambrian sandstones of the Harlech Dome. No other rock types were identified, and therefore no significant variations between contexts could be detected.

Notes on the stone fragments and their petrology
Where there were burnt stones present in the coarse fraction of the wet sieved bulk soil samples these were retained and account for most of the stones analysed. Three stones were collected as finds. These proved not to have been worked but were included in this analysis because they were burnt and potentially specially selected as ‘pot boilers’. 265 individual stones from 25 contexts were examined. Most of these came from the obvious burnt stone layers but a significant quantity were recovered from contexts relating to the roundhouse and some relating to the oval structure (see appendix 1.5 for a list of contexts from which burnt stones were recovered).

The stones examined ranged from 2-10cm in size (*i.e*. pebbles/cobbles). In some instances their shape is irregular, in others they are determined by one or more planar joint surface. In several cases they are derived by fragmentation of sub-rounded to rounded cobbles which show irregular incipient cracks characteristic of "fire-crazing" (*e.g.* samples (2001)/[85], (2041)[17] and (2240)/[89]). This is often coupled with a thin surface zone (1-2mm) of reddening of the grey/dark grey rock corresponding to shades of "red" on the Munsell system (*e.g.* 2.5YR5/6 – 10R5/6).

The rock itself is a sandstone with clasts ranging from 2mm up to 20mm in grain size (coarse-pebbly). The grains are dominantly of rounded quartz but also include angular material. They also commonly include pale buff lithic clasts which appear to be shale and/or weathered felspar, but this would need microscopic examination in thin section to confirm their composition: smaller black grains of, presumably, iron-ore minerals such as magnetite/ilmenite can also be common. In some of the finer sandstones there are small (<2mm) rounded black patches which could be manganiferous. The coarser grains often float in a finer grained matrix indicative of a turbidite origin, and the rocks are mostly massive but include samples with a low inter-grain porosity.

The small variations which were evident are of grain size (sandstone – pebbly sandstone) and also structure (massive - planar jointing (2240)/[89]). These rock types are characteristic of the rocks of the *Rhinog Grit Formation, Comley Series*, which comprise the local solid geology and glacial till of the site (Howells, 2004). Softer shales which can also occur in the vicinity were not seen but would not have been suitable as "pot-boilers", nor were more distant dolerites seen which are present some 10-15km to the east and which are suitable and appear to have been selectively used as "pot-boilers" at other sites.

6.10 Animal Bone

Dr Nóra Bermingham

Introduction

A small collection of animal bone, amounting to 18 individual finds from 15 contexts, was submitted for assessment (see appendix 1.6 for the catalogue of animal bone). This comprised examination of the material in terms of preservation and level of identifiability. All the material had been retrieved via sieving of soil samples.

Quantification

The assemblage comprised of approximately 88 burnt bone fragments, ranging in size between 2mm to 20mm in length and with a total weight of less than 10g. The material is poorly preserved. There are no intact bones or diagnostic bone fragments present which would allow provide positive identification to species.

Results

None of the material retrieved is identifiable to species. All bone fragments derive from mammals with post-cranial, in this case mainly limb bones, material and a small number of cranial fragments present. Small-medium, medium and large mammals, such as domesticates like dog, sheep/goat, pig and cattle, are represented though no species identifications are possible.

Conclusions

All the material is unidentifiable though a range of differently-sized mammals and body parts are represented. The assemblage represents waste or debris derived from an undetermined activity. This may be domestic consumption or cooking with waste dropped or thrown into fires.

6.11 Palaeoenvironmental Samples

Rosalind McKenna

Introduction

Eighty samples of charred plant remains were submitted for study. The samples came from a programme of soil sampling from sealed contexts implemented during the excavation. The aim of the sampling was to:

- assess the type of preservation and the potential of the biological remains

- provide C14 material for assistance in dating features
- identify if any human activities were undertaken on the site
- reconstruct the environment of the surrounding area

Methods
The material was recovered from floatation with the flot sieved to 0.5mm and air dried. The flot was examined under a low-power binocular microscope at magnifications between x12 and x40.

A four point semi quantative scale was used, from '1' – one or a few specimens (less than an estimated six per kg of raw sediment) to '4' – abundant remains (many specimens per kg or a major component of the matrix). Data were recorded on paper and subsequently on a personal computer using a Microsoft Access database.

The flot was then sieved into convenient fractions (4, 2, 1 and 0.3mm) for sorting and identification of charcoal fragments. Identifiable material was only present within the 4 and 2mm fractions. A random selection of ideally 100 fragments of charcoal of varying sizes was made, which were then identified. Where samples did not contain 100 identifiable fragments, all fragments were studied and recorded. This information is recorded with the results of the assessment in appendix 1.7. Identification was made using the wood identification guides of Scweingruber (1978) and Hather (2000). Taxa identified only to genus cannot be identified more closely due to a lack of defining characteristics in charcoal material.

Results
Table 1 in appendix 1.7 shows the components recorded from each of the samples.

Of the eighty samples submitted, charred plant macrofossils were present in forty seven of the samples but were generally poorly preserved, and were lacking in most identifying morphological characteristics. The results of this analysis can be seen in Table 2 (appendix 1.7). The samples produced small assemblages of plant remains both in volume and diversity. The most common and abundant remain was indeterminate cereal grains, which were present in thirty seven of the samples in small numbers. Forty two of the samples contained very small / individual numbers of charred cereal grains, many of which lacked identifying morphological characteristics, and are therefore recorded as 'indeterminate cereal'. Where it was possible to ascertain identifications, oat, wheat and barley were represented, although again mainly as single occurrences. Another, more indirect, indicator of cereals being used on site is the remains of arable weeds that were found in twelve of the samples. Among these weeds, some of which are characteristic of cereal fields and rarely found elsewhere, are dock (*Rumex*), and goosefoot/orache (*Chenopodium* sp./*Atriplex* sp.).

Charcoal remains were present in all eighty of the samples and scored between '1' and '4' on the abundance scale. There were identifiable remains in sixty one of the samples. The preservation of the charcoal fragments was relatively variable even within the samples. Some of the charcoal was firm and crisp and allowed for clean breaks to the material permitting clean surfaces where identifiable characteristics were visible. However, most of the fragments were very brittle, and the material tended to crumble or break in uneven patterns making the identifying characteristics harder to distinguish and interpret. Table 3 (appendix 1.7) shows the results of the charcoal assessment. Ten of the eighty samples that produced identifiable remains were dominated by hazel. Eighteen of the samples were dominated by oak. Three of the samples contained purely hazel and twenty contained purely oak. Ash was also present in five samples (being the dominant species in one), *salix*/poplar was present in thirteen samples (being dominant in three samples) and alder was present in three samples in small numbers.

The total range of taxa comprises oak (*Quercus*), ash (*Fraxinus*), *salix*/poplar (*Salix*/*Populus*), alder (*Alnus glutinosa*) and hazel (*Corylus*). These taxa belong to the groups of species represented in the native British flora. A local environment with a range of trees and shrub is indicated from the charcoal of the site. As seen in Table 3, oak is by far the most numerous of the identified charcoal fragments, and it is possible that this was the preferred fuel wood obtained from a local environment containing a broader choice of species. Oak is probably the first choice structural timber, and with a local abundance it may have been used instead of ash, thereby providing more by-product fire fuel.

Generally, there are various, largely unquantifiable, factors that effect the representation of species in charcoal samples including bias in contemporary collection, inclusive of social and economic factors, and various factors of taphonomy and conservation (Thery-Parisot 2002). On account of these considerations, the identified taxa are not considered to be proportionately representative of the availability of wood resources in the environment in a definitive sense, and are possibly reflective of particular choice of fire making fuel from these resources. Bark was also present on some of the charcoal fragments, and this indicates that the material is more likely to have been firewood, or the result of a natural fire.

Root / rootlet fragments were also present within all but one of the samples. This indicates disturbance of the archaeological features, and this may be due to the nature of some features being relatively close to the surface, as well as deep root action from vegetation that covered the site. The presence of modern insect fragments in sixteen of the samples and earthworm egg capsules in sixty nine of the samples further confirms this disturbance.

Conclusion
The samples produced little environmental material, with the exception of the charcoal and the plant macrofossils from the samples. The deposits from which the samples derive, probably represent the domestic waste associated with fires.

These charcoal remains showed the exploitation of several species native to Britain, with the prevalence of oak, and hazel being selected and used as fire wood. Oak has good burning properties and would have made a fire suitable for most purposes (Edlin 1949). Oak is a particularly useful fire fuel as well as being a commonly used structural/artefactual wood that may have had subsequent use as a fire fuel (Rossen and Olsen 1985).

The archaeobotanical evidence found in the samples shows hazelnut shell, wheat, oat and barley, were present, possibly indicating an exploitation of cereals. Due to the small numbers of cereal grains and associated weed seeds, there is limited interpretative information.

The hazelnut shell fragments show no marks typically associated with processed shells. Together with the high portion of hazel charcoal, this may indicate that they are merely representative of hazel wood trees being burnt, which could be either a natural or a man-made process. However, with the remains of several cereal grains throughout the samples it is more likely that the samples represent occupation build-up of domestic waste.

6.12 Radiocarbon Dating
Peter Marshall

Objectives
The main aims of the radiocarbon dating programme were to determine:

- The dates of the roundhouse and oval structure.
- If the two parts of the hearth are contemporary with each other.
- The chronology of the paired posts and if they are related to the roundhouse or oval structure
- The date of the line of postholes.

Sample selection
The first stage in sample selection was to identify material, which was demonstrably not residual in the context from which it was recovered. The taphonomic relationship between a sample and its context is the most hazardous link in this process, since the mechanisms by which a sample came to be in its context are a matter of interpretative decision rather than certain knowledge. All samples consisted of single entities (Ashmore 1999).

Radiocarbon analysis
Twelve samples were submitted for radiocarbon analysis to the Scottish Universities Environmental Research Centre, East Kilbride (SUERC). The samples were pretreated following the acid-base-acid protocol (Stenhouse and Baxter 1983), converted to carbon dioxide in pre-cleaned sealed quartz tubes

(Vandeputte *et al* 1996), graphitised as described by (Slota *et al* 1987), and by measured by Accelerator Mass Spectrometry (AMS) (Xu *et al* 2004).

The laboratory maintains a continual programme of quality assurance procedures, in addition to participation in international inter-comparisons (Scott 2003). These tests indicate no laboratory offsets and demonstrate the validity of the measurement quoted.

Radiocarbon results
The results are conventional radiocarbon ages (Stuiver and Polach 1977), and are quoted in accordance with the international standard known as the Trondheim convention (Stuiver and Kra 1986).

The radiocarbon dating certificate from SUERC is included as appendix 1.8, a summary table of the dated samples and the results is included as appendix 1.9.

Radiocarbon calibration
The calibrations of these results, which relate the radiocarbon measurements directly to the calendrical time scale, are given in appendix 1.9 and in outline in Figure RC1. All have been calculated using the datasets published by Reimer *et al* (2009) and the computer program OxCal v4.1 (Bronk Ramsey 1995; 1998; 2001; 2009). The calibrated date ranges cited are quoted in the form recommended by Mook (1986), with the end points rounded outward to 10 years for errors greater than 25 years. The ranges in appendix 1.9 have been calculated according to the maximum intercept method (Stuiver and Reimer 1986); the probabilities shown in Figures RC1-RC3 are derived from the probability method (Stuiver and Reimer 1993).

Methodological Approach
A Bayesian approach has been adopted for the interpretation of the chronology from the site (Buck *et al* 1996). Although the simple calibrated radiocarbon dates are accurate estimates of the dates of the samples, this is usually not what archaeologists really wish to know. It is the dates of the archaeological events, which are represented by those samples, which are of interest. In the case of the Rhiwgoch, it is the chronology of the structures that is under consideration, not the dates of the samples themselves. The dates of this activity can be estimated by not only using the scientific dating information from the radiocarbon dates on the samples, but also by using stratigraphic and archaeological information about the relationships between samples.

Fortunately, methodology is now available which allows the combination of these different types of information explicitly, to produce realistic estimates of the dates of interest. It should be emphasised that the *posterior density estimates* produced by this modelling are not absolute. They are interpretative *estimates*, which can and will change as further data become available and as other researchers choose to model the existing data from different perspectives.

The technique used is a form of Markov Chain Monte Carlo sampling, and has been applied using the program OxCal v4.1 (http://c14.arch.ox.ac.uk/). Details of the algorithms employed by this program are available from the on-line manual or in Bronk Ramsey (1995; 1998; 2001; 2009). The algorithm used in the models described below can be derived from the structures shown in Figures RC1 and RC3.

Samples and sequence
Four samples were submitted from two features from the roundhouse; two from the entrance posthole (2206) that was sealed below the stone slabs (2192) and two from the hearth that was recorded in two parts. The measurements (appendix 1.9) from both features are not statistically consistent:

Entrance posthole – context (2206); T'=6.2; ν=1; T'(5%)=3.8 (Ward and Wilson 1978).
Hearth – contexts (2216) and (2108); T'=9.2; ν=1; T'(5%)=3.8 (Ward and Wilson 1978).

Although the measurements from both features indicate the material within them is of different ages the results are such as to suggest they represent activity taking place over a relatively short period of time.

A small oval structure was built in the middle of the roundhouse, presumably from material robbed from its walls. The walls of the oval structure contained large quantities of charcoal and measurements on two samples from context (2074) just fail a chi-square test (T'=6.7; ν=1; T'(5%)=3.8 (Ward and

Wilson 1978). The results suggest that the charcoal within the walls is not of the same actual age but of different ages.

Posthole (2250), formed a line of four postholes that was sealed beneath the wall of the oval structure, so if the other postholes can be considered as part of the same feature, then this pre-dated the oval structure. The two measurements from the fill (2252) of posthole (2250) are statistically consistent (T'=1.0; ν=1; T'(5%)=3.8; Ward and Wilson 1978) and could therefore be of the same actual age.

Immediately to the east of the roundhouse entrance were two parallel lines of postholes aligned nearly east-west. Samples were submitted from two of the four postholes ((2194), (2201), (2211) and (2223)) that formed the northern line, and from feature (2219). The two measurements from the fill (2220) of feature (2219) are statistically consistent (T'=0.0; ν=1; T'(5%)=3.8; Ward and Wilson 1978) and could therefore be of the same actual age. The four measurements from the three postholes ((2194) and (2202)) are, however, not statistically consistent T'=13.7; ν=3; T'(5%)=7.8; Ward and Wilson 1978) and the material within them clearly represents material of different ages.

Models
Three models were constructed to reflect the different interpretations of the archaeological evidence.

Model 1
Model 1 (Fig. RC1) is the most 'conservative' in that it simply treats all the samples, apart from those from the oval structure, as being stratigraphically unrelated but merely as part of the activity associated with the use of the roundhouse. The two samples from the oval structure are treating as providing termini post quos given the uncertain taphonomy of the charcoal, i.e. it could be residual material from the roundhouse incorporated into the structures wall.

The model has good agreement between the radiocarbon dates and prior information outlined above (Amodel=100; Fig. RC1). It provides an estimate for the construction of the roundhouse of *85 cal BC-cal AD 60* (*95% probability*; *Boundary_start*; Fig. RC2) and probably *30 cal BC-cal AD 45* (*68% probability*). The roundhouse was in use for 40-240 years (*95% probability*; Fig. RC3) or 75-185 years (*68% probability*), going out of use in *cal AD 85-250* (*95% probability*; *Boundary_end*; Fig. RC3) and probably *cal AD 105-190* (*68% probability*).

Model 2
In Model 2 (Fig. RC4) the paired posts are interpreted as being later than the roundhouse, although possibly contemporary with the oval structure. Model 2 has poor agreement between the radiocarbon dates and stratigraphy (Amodel=12; Fig. RC4). An overall agreement index of 60% is recommended as the threshold for showing consistency between the prior information and the radiocarbon dates (Bayliss *et al* 2007; Bronk Ramsey 1995; 2009).

Two measurements have low individual index of agreements; SUERC-34045 (18%) and SUERC-34055 (1%). If the individual index of agreement for a sample falls below 60% (Bronk Ramsey, 1995; 2009) the radiocarbon result is regarded as inconsistent with the sample's calendar age, if the latter is consistent with the sample's age relative to the other dated samples. This can indicate that the radiocarbon date is a statistical outlier (more than 2 standard deviations from the sample's true radiocarbon age), but a very low index of agreement may be indicative of the sample that is residual or intrusive (i.e. that its calendar age is different to that implied by its stratigraphic position).

SUERC-34045, a single carbonised cereal grain from the fill of the entrance posthole (2216) appears to be too young for its context and therefore be intrusive. Given the amount of activity on the site following the abandonment of the roundhouse the inclusion of material, especially cereal grains, into older contexts is highly likely.

SUERC-34055 a piece of *Corylus avellana* from (2193) the fill of posthole (2194) one of the northern posts of the paired posthole structure is either residual or the posthole is actually associated with the roundhouse. Either way is likely that the charcoal was derived from activity associated with the roundhouse.

The model shown in Figure RC5 that excluded SUERC-34045 and SUERC-34055 has good overall agreement (Amodel=95). The model provides an estimate for the construction of the oval structure of

cal AD 60-125 (*95% probability*; *oval structure*; Fig. RC5) and probably *cal AD 75-110* (*68% probability*). Given the relative paucity of samples from the roundhouse it is unwise to estimate when it was constructed, however, the date of the oval structure provides a robust *terminus ante quem* for its abandonment.

The paired post-built structure would seem to be contemporary with the oval structure and the dated samples estimate activity ended in *cal AD 90-250 (95% probability*; *Boundary_end*; Fig. RC5) and probably *cal AD 130-200* (*68% probability*).

Model 3
In Model 3 the paired posts are interpreted as being from an 'independent phase' that could be earlier, later, or possibly contemporary with the roundhouse and oval structure. This model, that excludes SUERC-34045 as in model 1 but not SUERC-34055 as this sample is not constrained as having to be later than the roundhouse has good overall agreement between the radiocarbon dates and prior information (Amodel=90). The model provides an estimate for the construction of the oval structure of *cal AD 65-165* (*95% probability*; *oval structure*; Fig. RC6) and probably *cal AD 85-125* (*68% probability*).

Discussion
Given the difficulty in confidently assigning groups of features to stratigraphic phases, due to the nature of the deposits, and as a result of the uncertainty abut the taphonomy of the charcoal from the oval structure, Model 1 is our preferred model.

The estimated dates for the chronology of the roundhouse derived from Model 1; construction in *30 cal BC-cal AD 45* (*68% probability*) and abandonment in *cal AD 105-190* (*68% probability*), concord with the ceramic and artefactual evidence that suggests the roundhouse was in use in the first and second centuries AD. Following the end of use of the roundhouse an oval structure was constructed, although we have not been able to provide an estimate for this event.

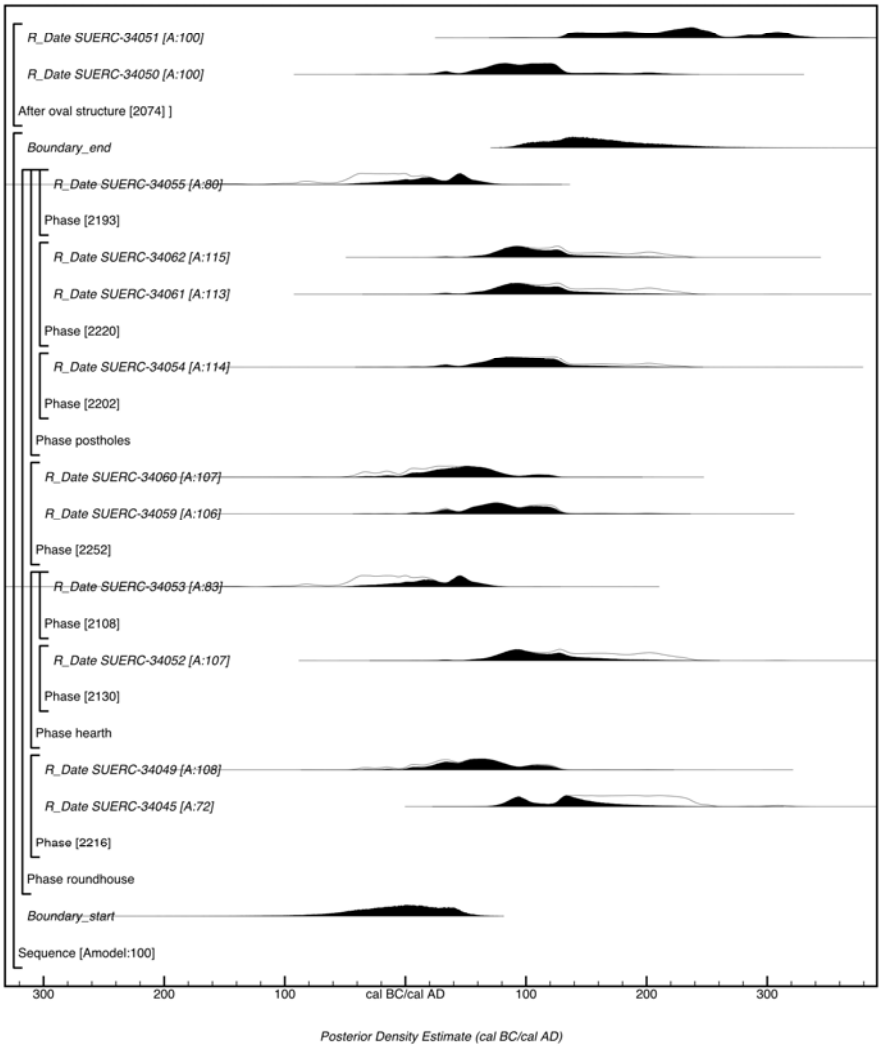

Figure RC1: Probability distributions of dates from Rhiwgoch [Model 1]: each distribution represents the relative probability that an event occurs at a particular time. For each of the radiocarbon dates two distributions have been plotted, one in outline, which is the result of simple calibration, and a solid one, which is based on the chronological model used. The other distributions correspond to aspects of the model. For example, the distribution '*Boundary_end* is the estimated date for the end of use of the roundhouse. The large square brackets down the left hand side along with the OxCal keywords define the model exactly.

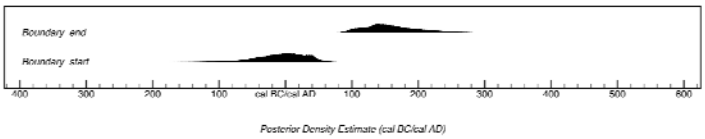

Figure RC2: Probability distributions for the beginning and end of activity associated with the roundhouse. The distributions are derived from the model shown in Figure RC1.

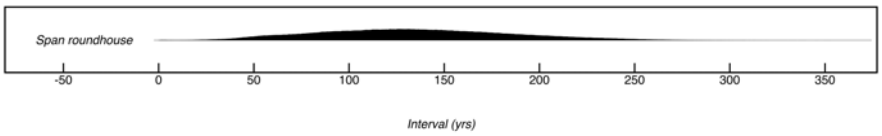

Figure RC3: Probability distribution for the span of use of the roundhouse. The distribution is derived from the model shown in Figure RC1.

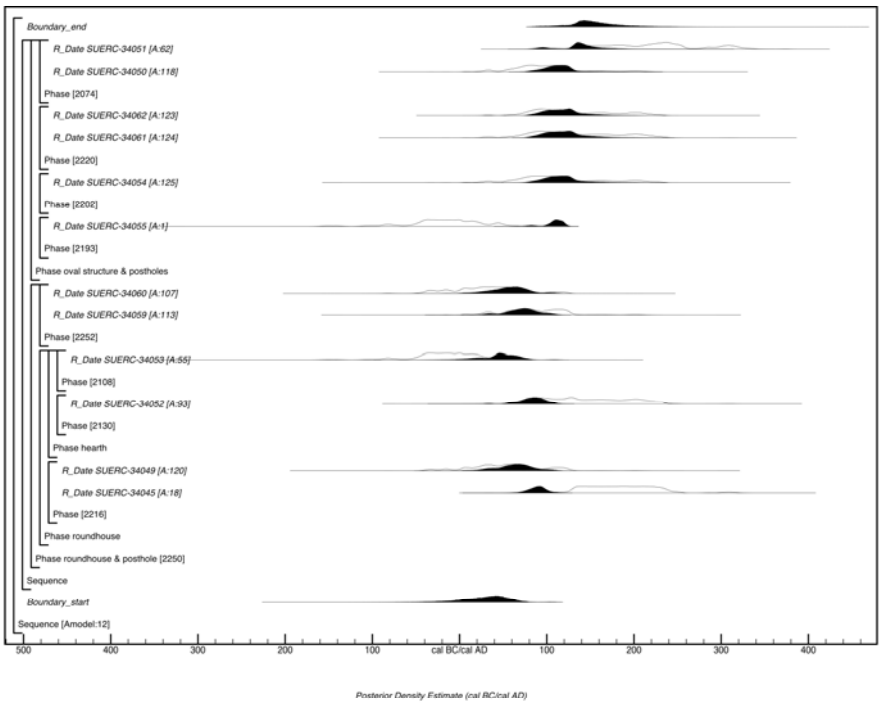

Figure RC4: Probability distributions of dates from Rhiwgoch [Model 2]: each distribution represents the relative probability that an event occurs at a particular time. For each of the radiocarbon dates two distributions have been plotted, one in outline, which is the result of simple calibration, and a solid one, which is based on the chronological model used. The other distributions correspond to aspects of the model. The large square brackets down the left hand side along with the OxCal keywords define the model exactly.

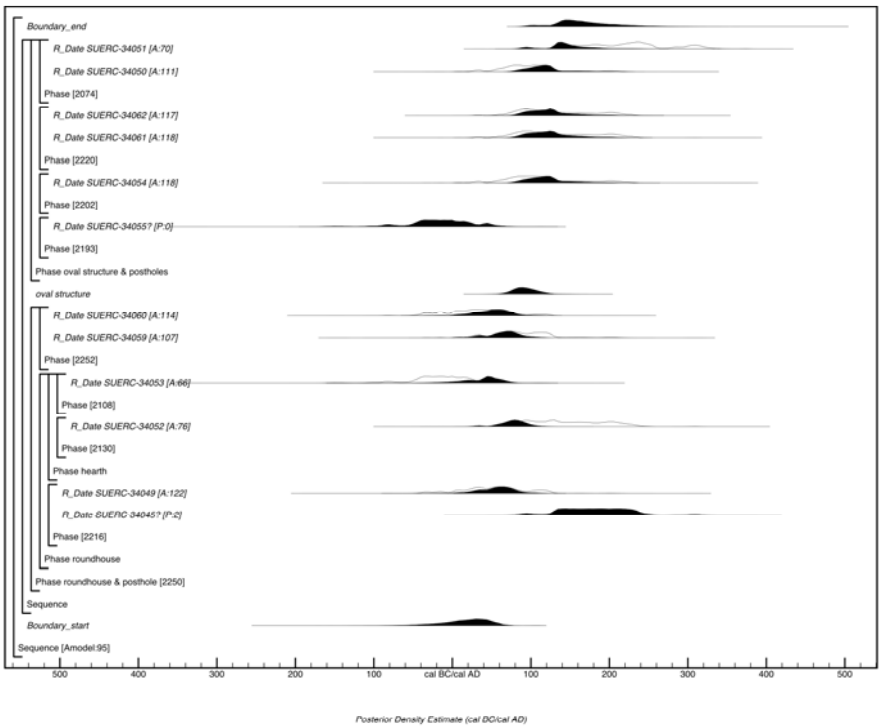

Figure RC5: Probability distributions of dates from Rhiwgoch [Model 2]: each distribution represents the relative probability that an event occurs at a particular time. For each of the radiocarbon dates two distributions have been plotted, one in outline, which is the result of simple calibration, and a solid one, which is based on the chronological model used. The other distributions correspond to aspects of the model. For example, the distribution '*oval structure'* is the estimated date for the construction of the oval structure inside the abandoned roundhouse. A question mark (*?*) indicates that the result has been excluded from the model. The large square brackets down the left hand side along with the OxCal keywords define the model exactly.

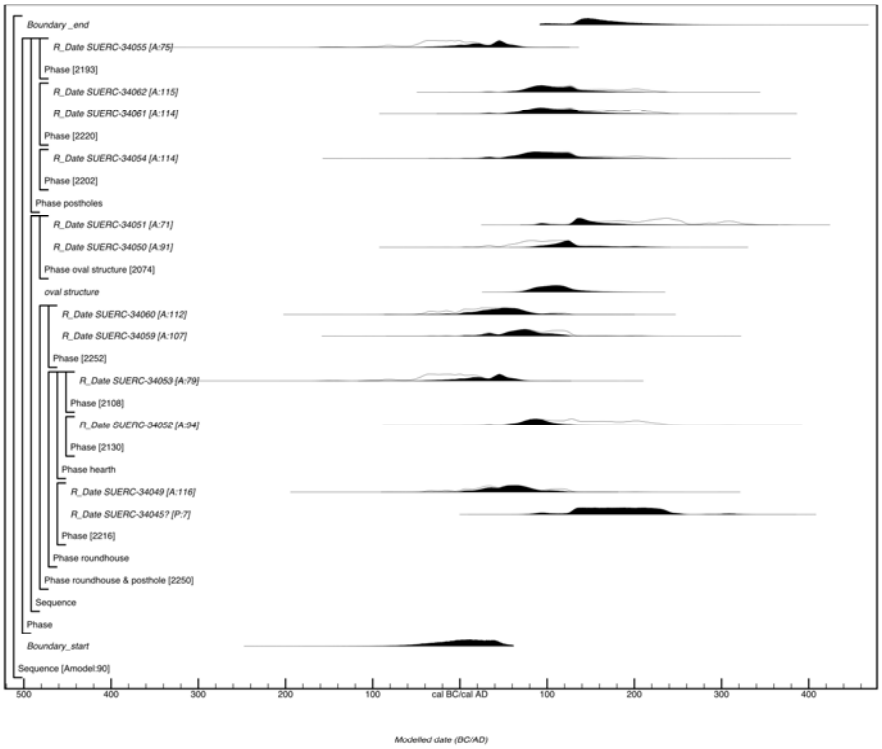

Figure RC6: Probability distributions of dates from Rhiwgoch [Model 3]: each distribution represents the relative probability that an event occurs at a particular time. For each of the radiocarbon dates two distributions have been plotted, one in outline, which is the result of simple calibration, and a solid one, which is based on the chronological model used. A question mark (*?*) indicates that the result has been excluded from the model. The large square brackets down the left hand side along with the OxCal keywords define the model exactly.

7. DISCUSSION

7.1 Site A

7.1.1 Finds

There were only a small number of finds from this site but they provide some dating evidence and some indication of activities carried out. The pottery assemblage is very small but gives a guide to the date of the site. One of the Black Burnished Ware sherds was recovered from the core of the roundhouse wall, the other from the central hearth of the roundhouse. These suggest that the roundhouse was in use into the Roman period, at least into the second century AD, a suggestion supported by the melon bead, dating to the first/second century AD, which was found in the inner drain of the roundhouse.

The association of the medieval pottery with the oval structure is not secure. An association is suggested by the location of the sherds around the structure. SF8, a sherd of a possible cooking vessel, was recovered from the collapse of the walls of the oval structure. SF15 came from the fill of feature (2054), interpreted as the outflow of the inner drains of the roundhouse. This does not necessarily invalidate the interpretation of the feature or the association of the sherd with the oval structure. The drain was backfilled with loose stone and material could easily have worked its way into the fill from activity above. However this loose, open nature of many of the stony deposits means that it is hard to prove that any of the finds are directly associated with the contexts in which they were found.

The pottery dates to the 13th-15th centuries AD but this cannot necessarily be used to date activity on the site. The lack of other evidence for domestic activity associated with this structure, which was probably not roofed, makes the use of pottery here difficult to explain. The presence of single sherds may indicate that this material was introduced to the site in rubbish deposits and was already fragmentary. A heap of stones prominent in the edge of a field may have attracted rubbish disposal as it attracted the dumping of field clearance material. As the site lies close to the road the rubbish might have come from any occupation site in the vicinity and gives little indication of activity actually taking place on the site.

The possible fragment of prehistoric pot from layer (2006) along with the four knapped flints were probably residual from prehistoric activity in the general area. The flints suggest possibly a pre-2nd millennium BC date for this activity. Two of the pieces are scrapers, which are indicative of settlement activity but there is nothing to indicate a prehistoric settlement within the area excavated.

The stone artefacts were quite evenly distributed. Although some of the rounded pebbles may have been deliberately collected similar pebbles can be found locally, presumably originating from the fluvio-glacial deposits rather than from the beaches. The unworked stones are therefore disregarded in considering the use of stone implements on the site. The utilised stones are equally divided between the overlying deposits and better stratified locations within the main features. There is no reason why the majority of these could not have originated from the roundhouse activity, although only 2 were securely within roundhouse features. The possible palette stone came from within the wall of the oval structure and may be directly associated with this. One of the spindle whorls was recorded as also coming from within this wall. The other was found inside the oval structure, but this was embedded within the relict soil and probably originated from the use of the roundhouse. The wall of the oval structure was very thin in places (see section figure 5.3) and the charcoal within it (see the discussion of the dates) suggests considerable mixing of residual material into the wall. The association of the spindle whorl with the oval structure can therefore not be demonstrated. The stone plaque may have been built into the wall as may stones from the roundhouse must have been. It is therefore impossible to suggest that any of the artefacts found were directly associated with activity taking place in the oval structure.

The utilised stone objects are mainly light hammer stones and polishers, and probably represent activity taking place during the use of the roundhouse. They were discarded on site and some were clearly incorporated into later layers. It is most probable that the spindle whorls indicate that spinning was one of the activities taking place in the roundhouse.

The burnt clay is of considerable importance in understanding the use of the site, although its interpretation is far from clear. The majority (659g, 72%) came from contexts (2086) and (2099). These

all seem to have been part of one surface covering the area inside the small enclosure and extending under its walls. This surface was not found beyond the enclosure, but some of the clay, particularly (2099) extended under wall (2051). It is unclear whether this was due to the clay having been laid down and burnt before the walls were built or whether later disturbance, such as burrowing, introduced it under the wall.

The nature of the burnt clay suggests a flat surface exposed to heat. There is no indication that the small enclosure was roofed or that any structure here burnt down. The clay does not therefore seem to be a burnt clay floor. If the clay was not from a floor it may have been from flat hearths. None were found *in situ*, but as some clay from the same source was mixed into the layers above it shows that this area was much disturbed. There may have been one or more hearths just outside the entrance of the roundhouse where some of the cooking and other activities took place. The presence of burnt bone from these same deposits supports this. The amount of bone recovered was tiny (less than 10g in total) and none was identifiable, but it is the sort of material that might be expected from cooking hearths.

Burnt bone and burnt clay from these hearths appear to have been mixed into the layers above. These layers also contained quantities of burnt stone. It is probable that the activities at the hearths also generated the burnt stone. There was no trough of the sort usual in a burnt mound but burnt stone on settlement sites is commonly found without associated troughs. It is possible that organic containers, such as baskets lined with clay or leather, were used for cooking with hot stones. The quantity of burnt stone produced was quite large and the stones might have been heaped outside the enclosure. Some of the burnt stone found in the north-western part of the site could have been the remains of such stone heaps, but most seem to have been spread out to level the interior of the enclosure. The presence of burnt bone and clay as well as burnt stone within these levelling deposits does suggest that they originated from activity related to the hearths. However one fragment of a burnt stone pile (2095) did survive behind a large stone (2287). This was built up against the partially robbed out eastern end of the northern wall of the enclosure. Deposit (2095) has probably been disturbed to some extent by the robbing of the wall but it appeared to be less disturbed than the other burnt stone deposits and was probably the surviving fragment of the presumably extensive burnt stone heaps that seem to have been deposited along the northern side of the enclosure. There was little burnt stone to the south of the enclosure, although some burnt clay had been incorporated into soil layers here, so it seems unlikely that burnt stone was discarded in this area.

The initial activity with the hearths was almost certainly contemporary with the roundhouse. The mixing and redistribution of the material means that charred plant remains within it were not in secure contexts and radiocarbon dating was rejected as being unlikely to give a reliable result. However the presence of charred cereal grains within deposit (2095) does provide a suggestion of date. As will be discussed below charred cereal grain was restricted largely to features related to the roundhouse. The few grains found elsewhere were eroded and unidentifiable and probably residual from the Romano-British activity. The only other deposit to have significant quantities of not only charred grain but grains identifiable to species was (2095).This had 40 grains of wheat, 17 of barley and one possible oat grain. This strongly suggests that this deposit was generated at the same time as the other charred grains on the site were produced, i.e. during the occupation of the roundhouse. The lack of any later activity detected by the radiocarbon dating programme and the symmetrical layout of the small enclosure in relation to the roundhouse entrance all suggest that the enclosure was contemporary with the roundhouse.

The burnt stones were not only dumped into the enclosure but remaining heaps spread around during the later history of the site. Some were dumped over the site before much wall collapse had occurred but others were probably spread over the site during much later clearance activity. The latest burnt stone layers may have originated from heaps that had survived nearby, just outside the present excavation trench, which were moved in recent times in order to concentrate all the stone in one area and so improve the field.

All the burnt stones seem to be of local origin with a bias against friable shaley stones but no specific attempt to collect particularly heat resistant rocks from further afield. While much of the burnt stone studied came from the main burnt stone layers a significant quantity was recovered from contexts related to the roundhouse, especially from the drainage gullies. There was also a deposit of burnt stones over the threshold to the oval structure, although this may have been part of the upper layer of burnt stones generally found across the site. The lack of shales within the burnt stone samples shows that

these were deliberately collected and not just the result of general burning over the pre-existing stones on the site.

The presence of the large lump of slag from the stone surface (2081) could be taken to suggest metal working within the enclosure, but the lack of hammerscale and other small waste suggests that the slag lump came from elsewhere. There was a small number of iron objects on the site. SF20, an iron bar came from a stone deposit (2034) just below the topsoil and this is probably an agricultural item of fairly recent origin. Two objects (SF38) appeared to be of a similar nature. They came from part of the lower burnt stone spread (2049), but were probably intrusive. The only securely sealed iron objects were nails. Two nails (SF32 and SF52) came from pit (2219) and a nail (SF53) was also recovered from within the wall (2074) of the oval structure. The latter could be intrusive but the two nails from the pit may suggest that the roundhouse or some elements within it, such as the door, had nails in its construction.

The charred plant remains from different features were compared in detail in an attempt to detect different activities across the site. As discussed above a large proportion of the charred cereal grains came from features directly related to the roundhouse, including especially fill around the wall stones and the inner drain, although many of the postholes also produced a small number of grains. Most of the grains were unidentifiable but some wheat, barley, a small amount of possible oats and two indeterminate glume bases were identified. The group of paired postholes produced a small assemblage with some identifiable grains, suggesting that this structure was constructed when the roundhouse was in use. A small number of charred grains had been incorporated into the ground surface on which the roundhouse was built, but very few grains came from the deposits within the small enclosure. Fifteen unidentifiable grains were recovered from the charred material within the wall of the oval structure. The lack of identifiable grains within this assemblage suggests that there were residual from the roundhouse activity. The distribution of identifiable cereal grains is supported by that of charred seeds of arable weeds (goosefoot/orache, dock and seeds of the cabbage family), which were concentrated in the same deposits related to the roundhouse and were not found in the wall of the oval structure. These seeds would be unlikely to survive in deposits that had been extensively disturbed.

The deposit with most charred cereal grains, many identifiable, and 3 seeds of the cabbage family was deposit (2095 with an adjacent and probably related deposit (2199). As described above this is interpreted as a dump of burnt stone resulting from activity to the west of the roundhouse in the small enclosure. This contained many indeterminate grains but also wheat and barley and a single grain of oats. The scarcity of cereal grains from deposits within the enclosure might be explained by the very disturbed nature of these deposits with few charred seeds surviving the disturbance.

Charred hazelnut shells were quite widely distributed across the site, but again with most concentrated in deposits related to the roundhouse; deposit (2095) contained no hazelnut shells. However even in these deposits the numbers were very low (35 fragments within the area of the roundhouse) considering that the consumption of hazelnuts is likely to produce large quantities of shells as waste. It is probable that these nuts shells represent the use of hazel as a fuel, but it may indicate the occupation of the site in the autumn. Six fragments of hazelnut shells were recovered from charred material within the wall of the oval structure, but again these are likely to originate from the roundhouse activity.

Most of the identifiable charcoal from the site was oak and much of this was probably used as fuel; the roundhouse hearth contained oak as well as hazel charcoal. Some oak charcoal was found in relic soil layers and even in peri-glacial features but this must have been introduced from the activity above.

Hazel was the next most common identifiable charcoal, again probably present as fuel. Ash, willow/poplar and a small amount of alder were also present. Although there was a large amount of charcoal recovered from the oval structure wall only a small quantity of this was identifiable, mainly as hazel. The low level of identification is probably due to it being disturbed and reworked.

7.1.2 Dating

The creation of more precise chronologies for the Iron Age by the use of more extensive radiocarbon dating in this period has been advocated by Cunliffe (2005) and Haselgrove *et al*. (2001), but Ghey et al (2007) found that of the 189 excavated sites with roundhouses in Wales only 39 were radiocarbon dated and the majority of the dated houses were represented by only one date per house. Dating

roundhouses is therefore of considerable importance, especially as it is often the only way to detect pre and post-Roman activity (Gwilt 2003, 106; Evans 2003, 128).

For the current site problems with interpretation and the thin and confused stratigraphy meant that identifying different phases of activity was problematic. The radiocarbon dating programme was specifically designed to test provisional phasing. In this it was very successful and the suite of closely grouped dates strongly suggests that there was no activity on site significantly prior to or after the Roman period. The dates were critical in a reassessment of the evidence and the assignment of most of the postholes to the roundhouse. Only by acquiring enough dates from across the site was it possible to be confident about this interpretation.

The three models presented above (see section 6.12) have been used to test the results analytically. These models are largely based on different interpretations for the two rows of paired postholes. Model 2, which constrains this structure as being later than the roundhouse, potentially associated with the oval structure, shows a poor agreement with the results. This poor agreement focuses on only two samples that might be explained as intrusive or residual, but the need to make specific arguments for this model makes it the least favoured interpretation. Model 3 treats the post rows as independent features, possibly but not necessarily related to the roundhouse, and this shows good agreement, but is not particularly useful for interpretation. A problem with this model is found in the dates from the oval structure. The only significant stratigraphic relationship is that this post-dates the roundhouse, yet the construction date for this structure obtained from both models 2 and 3 is during the suggested use of the roundhouse as established by the other dates. The two samples from the wall of the oval structure are of different dates, suggesting they resulted from different events and indicating that this deposit has probably received charcoal from mixed sources. An interpretation of these results is that the charcoal from the wall originated from activity related to the roundhouse and the results obtained do not date the construction of the oval building. The spread of burnt stone across the site and over the oval structure strongly supports this as the only likely source for this stone is also the roundhouse activity.

Model 1 does not attempt to date the oval structure but uses the dates from this as a *terminus post quem* for the activity on the site. It assumes that all the other features are related to the roundhouse. Marshall calls this a conservative model but it actually provides a well-defined interpretation of the site. The radiocarbon results show a good agreement with this model and this has been used to inform the interpretation of the site. According to this preferred model the roundhouse was constructed between *85 cal BC and cal AD 60* (*95% probability)* and probably between *30 cal BC-cal AD 45* (*68% probability*), at the very end of the Iron Age, just before Roman penetration of the area. The roundhouse was in use for 40-240 years (*95% probability*), probably 75-185 years (*68% probability*), going out of use in *cal AD 85-250* (*95% probability*) and probably *cal AD 105-190* (*68% probability*). This shows that is was almost certainly occupied throughout the first century AD and probably well into the second century. The few pot sherds recovered date from the second century AD so activity in this century can be considered certain also. Neither pottery nor dates suggest occupation into the third century. Considering the element of doubt normally attributed to the dating of roundhouses in North Wales this gives a very high level of confidence for the use of the roundhouse in the first and second centuries AD, with the possibility of construction towards the end of the last century BC, and no activity either earlier or later than this.

7.1.3 General interpretation

The radiocarbon dates clarified many of the doubts about the phasing and interpretation of the site but some doubts still remain, however the following interpretation is suggested.

A substantial stone-built roundhouse was constructed on a site that may have seen very sporadic activity in the Bronze Age or earlier. The roundhouse had a broad stone wall, a central hearth, Y-shaped capped drains exiting under the wall to the south and an entrance on the western side. It probably had an external diameter of 14.5m and was 10.5m internally. The entrance had a porch composed of four large posts, with the possible location for a door post. There may also have been an eastern entrance, perhaps with a simple door rather than a porch. The northern part of the house was divided off from the rest, including the hearth, by a line of posts.

Inside the house, continuing the line of the porch there seems to have been some kind of passage or entrance structure. This included a post that probably supported a door. The passageway led to within 0.75m of the hearth, which would have restricted access to the main part of the house. The extra post

on the southern side of the passage may have made access round the south side of the hearth difficult and directed movement round the north side; although movement was further restricted here by the line of posts. It is possible that these supported a partial upper floor of crogloft style and there was access between them at ground floor level.

The drains inside the roundhouse seem to respect the passageway. Drain (2241) ran from immediately adjacent to posthole (2279), in fact the post seems to have been set in a stone setting wedged into the end of the drain cut. There was no evidence of the drains crossing the passage and pit (2219), into which (2161) seems to have drained appears to have been deliberately placed to be on the line of the north side of the passage. If the posts forming the passage were joined by wattle or other material to form an enclosed passage it might be imagined that there was a gap at this point allowing access to pit (2219). It is possible that pit (2219), and drain (2161), post-dated the passage and cut away one of the passage postholes, but there is no firm evidence to prove either way. If so it was certainly a later phase of the roundhouse use, not part any later activity.

In front of the roundhouse it is possible that there were several flat clay hearths on which domestic tasks took place. Cooking is suggested by the presence of burnt bone and cereals were also used and possibly processed on site, despite the absence of grinding stones or querns, as a small number of glume bases were found. The cooking or other domestic tasks involved the heating of water with hot stones. It seems probable that this activity took place within a walled enclosure, although there was some evidence that burning extended under the wall of the enclosure. Some of the hearths may have pre-dated the enclosure, but it is possible that the disturbed burnt clay was introduced under the wall by later burrowing.

It is proposed that the burnt stones from the cooking activity were dumped in heaps to the north of the enclosure. Some of these were either deliberately dumped into the enclosure at some period during its use or eroded into it after abandonment to form layers (2084/2144). This process may have been helped by disturbance caused by dismantling the roundhouse porch, the posts of which seem to have been deliberately removed. The later robbing of the roundhouse wall must also have caused significant disturbance. Boulders (2045) and (2282) may have originated from the wall and were moved as part of the robbing activity. In this interpretation the slab layer ((2073), (2081), (2173), (2192)) represents the initial collapse of the walls of the small enclosure and some collapse from the remains of the roundhouse wall. The more irregular stone deposits above this level are clearly from such collapse and the settling of stones on the fairly level deposits below would have resulted in some stones lying horizontally and appearing to form a rough layer.

When the roundhouse was abandoned its wall was largely robbed out. It is possible that the timbers of the porch were also removed. As discussed above it is argued that the dates from the wall of the small oval structure were on material originating from the roundhouse occupation and mixed into the wall material either during construction or during the dumping of the burnt stone deposits. This structure could therefore have been built inside the remains of the roundhouse at any period. It is unclear whether this was entirely stone built or had a stone foundation with turf or similar material; the slight nature of the stone in the walls suggests the latter interpretation. However there is no firm evidence that the structure was ever roofed. If it had turf walls a roof may have been possible but if it was stone the remains suggest a very poorly-built wall unlikely to be strong enough to support a roof. The possible use of turf from the local area might provide another mechanism for charcoal from the roundhouse occupation to be included within the oval structure wall.

Although most of the roundhouse had gone by this time the walls on either side of the entrance still stood and it is possible that the small enclosure still survived and was reused in this phase. This may explain the levelling of burnt stone material over the interior of the enclosure, but there is no evidence to securely associate this with the oval structure or to prove that this was deliberate and not the results of erosion.

The prominent heap of stones left after much of the site had been robbed out seems to have attracted field clearance material, including probably burnt stone material from just beyond the excavation limits or from mounds that had survived in the north-western corner of the excavation that were flattened over the area.

The occupants of the roundhouse had some, possibly distant, contact with the Roman world. They acquired a small number of Roman pots as well as a Roman melon bead. The latter may have arrived on site as a single object rather than as part of a necklace or other jewellery and may have been treated a as a charm, to ultimately be placed in the inner drain under the floor. If the interpretation that most of the finds on site originated from the roundhouse activity it shows that a variety of hammerstones were used for different activities. Spinning, or at least the production of spindle whorls, may have been an activity undertaken on the site. The fact that both spindle whorls are unfinished may suggest that these items were being produced here rather than used.

The palette seems to have been used for mixing or gently grinding some material, although it cannot be proved that this was any form of paint. Its association with the roundhouse is uncertain and it is possible that some items were used in the oval structure, although this is considered to be unlikely. There is no firm evidence relating the medieval pottery to this structure and the pottery may indicate rubbish disposal on the site rather than any in situ activity.

7.2 Site B

The excavation across the north-south field boundary (PRN 29252) approximately 25m south of the suspected medieval longhouse (PRN 29846) revealed a fairly wide (1.5m) wall constructed of medium to large rounded stones, with clearly evident facing stones. It was butted by a more ephemeral wall running north-south. No dating evidence was found but the dating of the north-south wall might be possible by comparison to other features in the landscape.

The north-south wall had been eroded and lost at its southern end by disturbance related to the original building of the water treatment works. It is probable that it continued south towards the roundhouse. There is no evidence in the site A excavation of it joining the small enclosure but it could possibly be represented by the stones (2182) scattered to the north of the earth-fast boulder (2131) (figure 4). South of the road from site A is another tumbled, relict field wall running south-west to north-east towards the roundhouse (figure 2). Any trace of this joining the roundhouse has been lost but it is possible that this wall and PRN 29252 were originally part of the same boundary with the roundhouse lying directly on and within it.

This combined boundary runs roughly parallel to some the boundaries that radiate out from the Muriau Gweddelod settlement (figure 12); the bend in the section south of the road even reflecting a similar bend in a boundary to the west. The possible association with the roundhouse and its coherence within the Iron Age/ Roman period field system makes a roughly contemporary date for this wall likely. The poor preservation of the wall as it approached the roundhouse makes its accurate relationship to the house, and therefore more precise dating, impossible to determine.

It is possible that the irregular line of boulders recorded by the survey that marks the limits of an area cleared of stone was also a field related to the roundhouse (figure 2). However the boulders seem never to have been built into a wall and the boundary of the cleared area was even more irregular than the more gently sinuous lines of the field walls. This clearance activity may therefore be of a much later date than most of the field walls and the roundhouse.

The fact that the longhouse (PRN 29854) is apparently aligned on the boundary (PRN 29252) presumably suggests that this boundary was still in use in the medieval period. Most of the medieval longhouses known or suspected in the area seem to be set within pre-existing fields. Several walls forming part of the Iron Age/Roman field system are still in use today so continuity in field boundaries would appear to be the norm in this area.

8. GENERAL DISCUSSION

Comparisons with other sites

Stone-built roundhouses are quite common in North Wales, although they are usually recorded as upstanding remains in the uplands, sometimes surveyed but rarely excavated. While several important sites of this type have been excavated they are mainly on lowland locations. Compared with other excavated roundhouses in north-west Wales that at Rhiwgoch would have been one of the largest, as

currently reconstructed with an internal diameter of 10.5m (appendix 5, table 1). Roundhouses B and A from Parc Cybi, Holyhead would have been similar in size (Kenney *et al* 2011). These were both stone-walled, but a clay-walled roundhouse at Melin y Plas, (Cuttler *et al* 2011) may have been slightly larger internally. The wall at Rhiwgoch seems to have been particularly thick, but both roundhouses A and B at Parc Cybi had their walls enhanced to give a total thickness greater than at Rhiwgoch.

The Parc Cybi houses were part of a small settlement with many ancillary structures with the possibility of house size representing status (Kenney *et al* 2011). However Rhiwgoch seems to have been a single, unenclosed building. Gresham (Bowen and Gresham 1967, 185-186) lists unenclosed roundhouse settlements and isolated houses in Merioneth (appendix 5, table 2). These vary widely in size, although most are small, and the Rhiwgoch example is one of the largest of these, but it is one of 8 buildings with internal diameters of about 8m and over. As these are unexcavated it must be assumed that the dimensions are very approximate and excavation might reveal larger internal diameters. It must also be remembered that the dimensions for Rhiwgoch are estimates due to its fragmentary state and the internal diameter might have been less.

Most of the sites listed by Gresham are described as being built of small stones even when the walls are described as massive. The slight nature of the unenclosed and single roundhouses is attributed by Gresham (1967, 178-182) and Kelly (1982, 141) to their being temporary or only seasonally occupied dwellings as most are found at high altitudes. The substantial character of the Rhiwgoch roundhouse suggests that despite being a single, unenclosed building it does not compare closely to structures of this type. However Kelly (1982, 146-148) adds several more single 'hut-circles' and several of these are large, substantial and in some cases constructed with orthostats. Many of these are at a similar or lower altitude to Rhiwgoch and one (PRN 1158) forms part of the densely populated landscape to the south of Rhiwgoch. Gresham claims two roundhouses with massive walls (PRN 1050, Gresham's No 288) just south of Rhiwgoch, but Kelly (1982, 142) considered the structures to be rectangular and probably medieval. It appears that while small, slight single roundhouses occurred in the uplands larger single buildings were part of the densely occupied field system on the slopes above the coastal plain.

Roundhouses in enclosed settlements were generally built with large stones, including orthostats, and as such have similarities to the Rhiwgoch house. The reconstructed diameter of the Rhiwgoch house is larger than most of the enclosed roundhouses, although there are many 8m in internal diameter or over (appendix 5, table 3). Roundhouses within circular enclosures seem not to survive very well but some are recorded by Gresham (appendix 5, table 4). These are generally of a large size and so can be compared to Rhiwgoch but their construction is rarely clearly visible. The only excavations on roundhouses in the area have been on Moel y Gerddi and Erw-wen (Kelly 1988) east of Harlech and Crawcwellt (Crew 1998) near Trawsfynydd. The latter site has small stone-built roundhouses, overlying stake-walled structures and associated with metal-working, and so is not directly comparable with the present site. Moel y Gerddi and Erw-wen were both circular enclosures, with stone houses preceded by timber ones. The interior diameters of the stone versions were quite large at 8.8m for Erw-wen and 9.4m for Moel y Gerddi. Both had external facing stones to the walls with slighter traces of internal facing but the stones were generally smaller than those used in Rhiwgoch with no orthostats.

Most entrances in excavated roundhouses were found to be orientated to the east or south-east with western entrances being rare (appendix 5, table 1). The stone version of Erw-wen had a western entrance but this was probably influenced by the opposed east and west entrances of the timber version. Entrances were difficult to define at Parc Bryn Cegin, Llandygai (Kenney 2008) but some north-western entrances were suggested. At Parc Cybi there was a clear north-west alignment but many of the houses with this alignment also had east or south-east entrances as well. It is possible that the western entrance at Rhiwgoch suggests that it also had a more easterly entrance. The presence of the large posthole (2117) does suggest a possible north-east facing entrance, but, like the Parc Cybi buildings, the western entrance was of more importance with its substantial porch. The direction of the entrance may also have been influenced by other sites in the area. If it had faced east the building would have faced away from the main focus of roundhouse settlement represented by Muriau Gwyddelod and Y Ffordd Wyddelig.

Capped drains are perhaps more commonly found within clay-walled roundhouses, such as Melin y Plas, Parc Bryn Cegin and roundhouse A at Bryn Eryr, Llansadwrn (Longley 1998). Short sections of drain were found in some of the large stone roundhouses at Parc Cybi but they did not have the typical question-mark or Y shaped drains. However the stone-built Roundhouse C at Bryn Eryr (Longley *et al*

1998), and roundhouse T1 at Ty Mawr, Southstack (Smith 1986), did possess such drains. Erw-wen had a drain, probably originally capped, running out of its entrance. This ran from a feature (feature 21) interpreted as a posthole and considered to be unrelated to the drain, but it resembles feature (2219 at Rhiwgoch.

The presence of post rings to support the roofs of stone-built roundhouses seem to be rare. Moel y Gerddi seems to have had a post ring in the stone as well as the timber phase, but no such ring was suggested for Erw-wen, and none of the stone-built houses at Parc Cybi or Cefn Graeanog II, Clynnog (Mason and Fasham 1998) had roof supports. The thick wall at Rhiwgoch probably meant that the roof could be supported entirely on the wall. The Parc Cybi roundhouses had similarly thick walls.

Porches supported by substantial timbers are common in roundhouses of all types. In clay-walled and stone-walled houses the porch posts are often within the thickness of the wall (Bryn Eryr A, Parc Cybi A, Mellteyrn Uchaf B (Ward and Smith 2001)) rather than projecting outwards as in timber houses. The line of posts dividing off the northern arc of the roundhouse can be compared to other divisions of internal space, especially on the northern side seen in roundhouses B and E at Parc Cybi, although posts are not used to form the division in these examples. No other excavated houses show such a clear use of posts to create an internal division.

The most difficult structure to find parallels for is the double row of posts just inside the entrance. This has some similarities in shape and size to the square post-built granaries found at Ty Mawr, Southstack and at Parc Cybi. However for this structure to be a granary it would have to post- or pre- date the roundhouse. Both the radiocarbon dates and the layout of the features suggest that the structure is contemporary with and integral to the roundhouse. If so it must be seen as an extension to the porch leading into the interior. The postholes at Little Woodbury, Wiltshire (Bersu 1940) extended the porch into the interior, although the pattern is not the same as Rhiwgoch and this was a timber roundhouse. The author has so far failed to find any close parallels for this structure on other excavations.

The finds from the Rhiwgoch house were few but generally very comparable with other excavated roundhouses. The number of pot sherds was very low for a site occupied almost entirely in the Roman period. This may be an indication of its status, but as no other nearby Roman period roundhouse settlement has been excavated it is impossible to know whether the whole area was less rich in Roman pottery than settlements to the north, closer to Roman forts. The hammerstones, whetstones and spindle whorls are typical finds for these sites, although the ‘palette’ cannot be directly paralleled.

Cool (section 6.2) has raised the possibility that the location of the melon bead in the drain may not be due to accidental loss, as might be considered most likely. No other objects were associated with the bead and no other evidence can be used to demonstrate ritual deposition, however it remains an intriguing possibility. At Parc Bryn Cegin, Llandygai (Kenney 2008) a Roman seal box was found in the internal drain of roundhouse A that contained few other Roman finds (only occasional pot sherds). Similarly at Rhiwgoch the most impressive Roman was found in the drain. While a single bead would have few uses it could act as a talisman or charm, as could a tiny ornate seal box. Such a charm could have been secreted under the floor of the house to bring good luck and placing these objects in a drain would have been the easiest way of inserting them under the floor. Such motivation is very difficult to demonstrate. However the possibility should be considered that objects clearly associated with these powerful foreigners may have had a significance for native people that extended beyond status and fashion. The presence of two brightly coloured Roman objects in drains on sites where otherwise there is a paucity of Roman objects may just be a coincidence but if this is found on a third site it might indicate a pattern (Cool pers. comm.).

Landscape context
Note: The sites discussed below can be found at http://www.archwilio.org.uk/ by searching the Gwynedd Trust Area for the Primary Record Number (PRN).

The Ardudwy Uplands east of Harlech is an area of outstanding archaeological richness and the marginal nature of recent agriculture here has enabled monuments to survive as upstanding structures. Even in the more improved pastures ancient field walls and settlements can be seen representing extensive areas of surviving ancient landscape dating from the Iron Age or Roman periods through the medieval period into recent times. This landscape has been studied in some detail by Bowen and Gresham (1967), Kelly (1982), and more recently in advance of pipeline works associated with the

water treatment works (Cooke *et al* 2010). A survey of the settlement of Muriau Gwyddelod has recently been undertaken along with a trench through a nearby boundary (Smith *et al* 2011). To the south near Dyffryn Ardudwy survey has also been carried out as part of the Ardudwy Early Landscapes Project (Johnston and Roberts 2004), at Egryn Abbey (Muckle Partnership 2003), and in a small area near Tal y Bont (Berks and Evans 2009). The Rhiwgoch pipeline works included some minor excavations of ancient field boundaries, and the Ardudwy Early Landscapes Project involved the investigation of a possible hut circle settlement and a small embanked enclosure or possible hut circle (Johnston and Roberts 2004). Investigations at Tal y Bont in advance of the construction of a water treatment works revealed no early archaeology (Jones and Evans 2010). The only large scale excavations done on Iron Age or Romano-British sites in the area were those carried out on the Iron Age settlements of Erw-wen (PRN 1036) and Moel y Gerddi (PRN 1003) by Kelly (1988).

There are Iron Age and Romano-British sites all along the hill slopes above the coastal plain with concentrations extending up valleys at Egryn and Dyffryn Ardudwy. The site of Muriau Gwyddelod, with its two well-preserved courtyard houses (PRN 1055) (Bowen and Gresham 1967, 198-200), forms the focus for the field system to the east of Harlech but enclosed roundhouse settlements and fragments of fields continue to the north, around the slopes of Moel Goedog, with its hilltop enclosure (PRN 1000), and to the south to the defended enclosure of Clogwyn Arllef (PRN 1061) and beyond. Roundhouses and field boundaries extend well into the uplands with complex enclosed sites up to a height of at least 300m OD, e.g. PRNs 1001 and 1002. The similarities between the sites of Moel y Gerddi at 310m OD, Erw-wen at 255m OD and lower-lying circular enclosures such as Tyddyn Du (PRN 1064) at 170m OD show that higher sites in sheltered valley locations were not necessarily temporary hafodau-type sites. In comparison the Rhiwgoch house was situated at about 210m OD and Muriau Gwyddelod itself is at 190m OD, and much of the most densely settled area is above 140m OD.

The ancient field system around Muriau Gwyddelod is well-preserved but some of the walls that clearly form part of this system are still in use as modern boundaries. This highlights the possibilities of very long continuity and it is suggested that walls elsewhere that wander in their line may also be preserved and reused ancient boundaries.

Many of the early boundaries radiate out from Muriau Gwyddelod (figure 12) and seem to form a fairly coherent system, suggesting they are contemporary with the settlement and therefore probably Iron Age. However Muriau Gwyddelod has not been excavated and its date and development is not known with certainty.

The nature of the Bronze Age landscape is very poorly understood in this area. There are funerary monuments on the uplands and Gresham (Bowen and Gresham 1967, 57-61) has suggested a Bronze Age trackway running over the hills, a section of which, running up the ridge known as Y Fonllech Hir, is marked by 7 standing stones and three ring cairns. There is no evidence for Bronze Age enclosure in the area and little to indicate settlement locations but it is not impossible that the Bronze Age landscape influenced the development of the Iron Age landscape and that traces might survive under the later settlements.

The Rhiwgoch roundhouse appears to have been part of the Iron Age landscape. Lacking an enclosure it was more directly incorporated into the fields than some of the large enclosed settlements. Even if the area cleared of stones on the edge of which the house sits (figure 2) is the result of later activity it is likely that the roundhouse was located on a field boundary. As discussed above (section 7.2) a wall may have run up to the roundhouse from the north and south and the probability is that the roundhouse was inserted on the edge of a pre-existing field.

Recognising the chronological development of the Iron Age field system is almost impossible due to the scarcity of excavation. The excavated sites of Moel y Gerddi and Erw-wen were dated to the mid first millennium BC but the Rhiwgoch house was not built until the end of the first century BC or start of the first century AD. It is likely that the Rhiwgoch house was in use for a duration of 75-185 years (68% probability), occupied for perhaps three generations. The evidence from Erw-wen suggested a long-lived settlement, while that from Moel y Gerddi showed a shorter period of use (Kelly 1988). Chambers and Price (1988, 100) postulated that Moel y Gerddi represented expansion into the uplands from a longer lived settlement like Erw-wen lower down. Settlements must have been inserted into the field system at different times, some potentially continuing in use for long periods but others less long-lived.

Without chronological controls it impossible to interpret the social and economic relationships represented by the Iron Age and Roman period landscape. Some of the substantial enclosed settlements seem to have been added to the field system, for example PRN 1056, to the west of Muriau Gwyddelod, probably built on an existing boundary like the Rhiwgoch house. Was this, and other similar settlements, constructed at a similar time to Rhiwgoch representing a major change in the use of the landscape? Was Muriau Gwyddelod always a focus of the landscape or were all the larger settlements of equivalent status, and what were the social implications? Considering the level of preservation of this landscape it seems certain that the evidence necessary to at least partially answer these and many for questions survives awaiting excavation and interpretation.

Similarly, more work could greatly increase the understanding of the agriculture of the area. The well-defined fields demonstrate a well-managed landscape probably related to a mixed farming regime as walls are required to separate livestock from crops. However they might be explained entirely by livestock management and function of the fields and importance of arable requires much further exploration. The discovery of wheat, oats and barley in the Rhiwgoch house supports the suggestion that some of the fields were used for arable farming. The presence of a few pieces of chaff in the form of glume bases and some weed seeds may indicate cereal processing on the site, but the numbers are very few. However it is unlikely that the grain would have been transported far and it was probably locally grown.

Arable agriculture is suggested by groups of narrow ridges or lazy beds seen on aerial photographs (and in good light on the ground) to the north-east of Rhiwgoch (PRN 30440) that could be of an early date, and indicative probably of spade agriculture, as has been suggested for similar ridges around some roundhouse settlements in the area (Crew and Musson 1996). The excavation of a section across a boundary at Fronhill near Muriau Gwyddelod revealed a fairly deep relict soil preserved under the bank, which had eroded away elsewhere. Although no evidence of cultivation of this soil was recovered it shows that there would have been much deeper richer soil in the past (Smith *et al* 2011).

Pollen analysis carried out by Chambers and Price (1988) near Moel y Gerddi indicated a decline in woodland in the phase spanning the Roman period. While this may indicate the spread of peat and moorland vegetation on the uplands it was probably also associated with a period of extensive farming in lower areas. The presence of oak and hazel charcoal on the Rhiwgoch site does show that firewood was available nearby and there was no requirement to rely on peat as fuel. Some woodland must have been present, if only on the steeper slopes.

The artefacts from Rhiwgoch also give some indication of the broader links of the area. The scarcity of Roman items does indicate that, despite the size of the roundhouse and therefore presumably a fairly high status, it seems to have been on the limit of the Roman economy. However some objects did reach the people here, so people who may rarely have seen a Roman soldier had a tenuous link to the Roman empire. Without further excavation it is not known how typical this was of settlements in the area. Larger sites may have had more regular contact with the Roman world, and although there was no Roman road along the coast it was only about 15km over the hills to the fort at Tomen y Mur (PRN 5080).

The oval structure built inside the remains of the roundhouse has not been well dated. It is possible that it may have been a medieval sheep shelter, but could have been later in date. If medieval it may have been related to the probable medieval longhouse (PRN 29846) to the north-west. Medieval buildings seem to have been inserted into the fields, which remained in much the same layout.

9. CONCLUSIONS

The excavation of this site led to discoveries unanticipated from the initial evaluation, although the number of roundhouses in the area makes the discovery of another unsurprising. This discovery implies that other heaps of stones in the area might hide fragmentary roundhouses of a similar sort, which would fill out further an already densely occupied Iron Age and Roman period landscape. With the exception of Erw-wen and Moel y Gerddi none of the many settlements of different types have been reliably dated and the precise dating of this roundhouse in fairly close proximity to the settlement of

Muriau Gwyddelod gives some indication of the probable date of at least some of the neighbouring sites.

Despite the fragmentary character of the site evidence was recovered indicating activities on the site, particularly the extensive use of hot stones, probably for cooking. It was possible to provide a date for the activity and obtain some indication of farming practices and wider contacts. The range of data retrieved from this site highlights the potential of this landscape. Targeted research could obtain answers some of the questions posed above, and provide a firm basis for understanding the Iron Age in North Wales. This project has provided hard evidence to start this process and especially to start fixing this landscape chronologically.

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APPENDIX 1: FINDS CATALOGUES AND TABLES

1.1 The Pottery Catalogue

SF 8, context 2007
An iron poor clay, consistent with origin in the Coal Measures (Ewole, Buckley). Possibly from Flintshire, N Wales. Less sand than SF15.
A handmade base – Mediaeval. No = 1; Wt=1g; BD=90mm; BE = 9%
Body sherds. No=5; Wt=5g

SF15, context 2055
An iron poor clay, consistent with origin in the Coal Measures (Ewole, Buckley). Possibly from Flintshire, N Wales. Cooking pot jar rim and neck 13th-14th or possibly 15th century. Draw No = 6; Wt = 36; MNR = 1, RD =250mm; RE = 4%.

SF30, context 2130
A Black-Burnished ware 1 jar shoulder sherd. Burnished, probably burnt, *c*. AD 120-350. WT = 1g.

SF39, context 2006
a)A reduced handmade sherd, possible granitic inclusions, white mica. not very sandy. Prehistoric? - Mediaeval. No= 1; Wt = 1g
b) Fired clay. No =1; Wt= 1g
c) A single and very small fragment of samian ware was recovered. The sherd was examined, after taking a small fresh break, under a x 20 binocular microscope in order to identify the fabric. No slip remains and the fragment is extremely abraded. The fabric is possibly Central Gaulish in origin and therefore dated to AD 120 to 200. The form is not identifiable. No= 1; Wt = <1g.

SF74, context 2009
A BB1 jar rim, mid to late 2nd century AD. Possibly externally sooted. No=1; Wt = 9g; MNR=1; RD= 150mm; RE = 10%.

1.2 Photographic record of worked stones

SF05

Quartz crystal with crushed ends

SF06

Hammerstone

SF09

Hammerstone/whetstone

SF10

Hammerstone

SF11

Hammerstone/polishing stone

SF19

spindle whorl blank

SF22

Hammerstone

SF23

Hammerstone

SF24

Hammerstone/polishing stone

SF34

unfinished spindle whorl

SF54

'pallette'

SF82

polishing stone

SF83

polishing stone

Appendix 1.2. Photographs of used stone objects

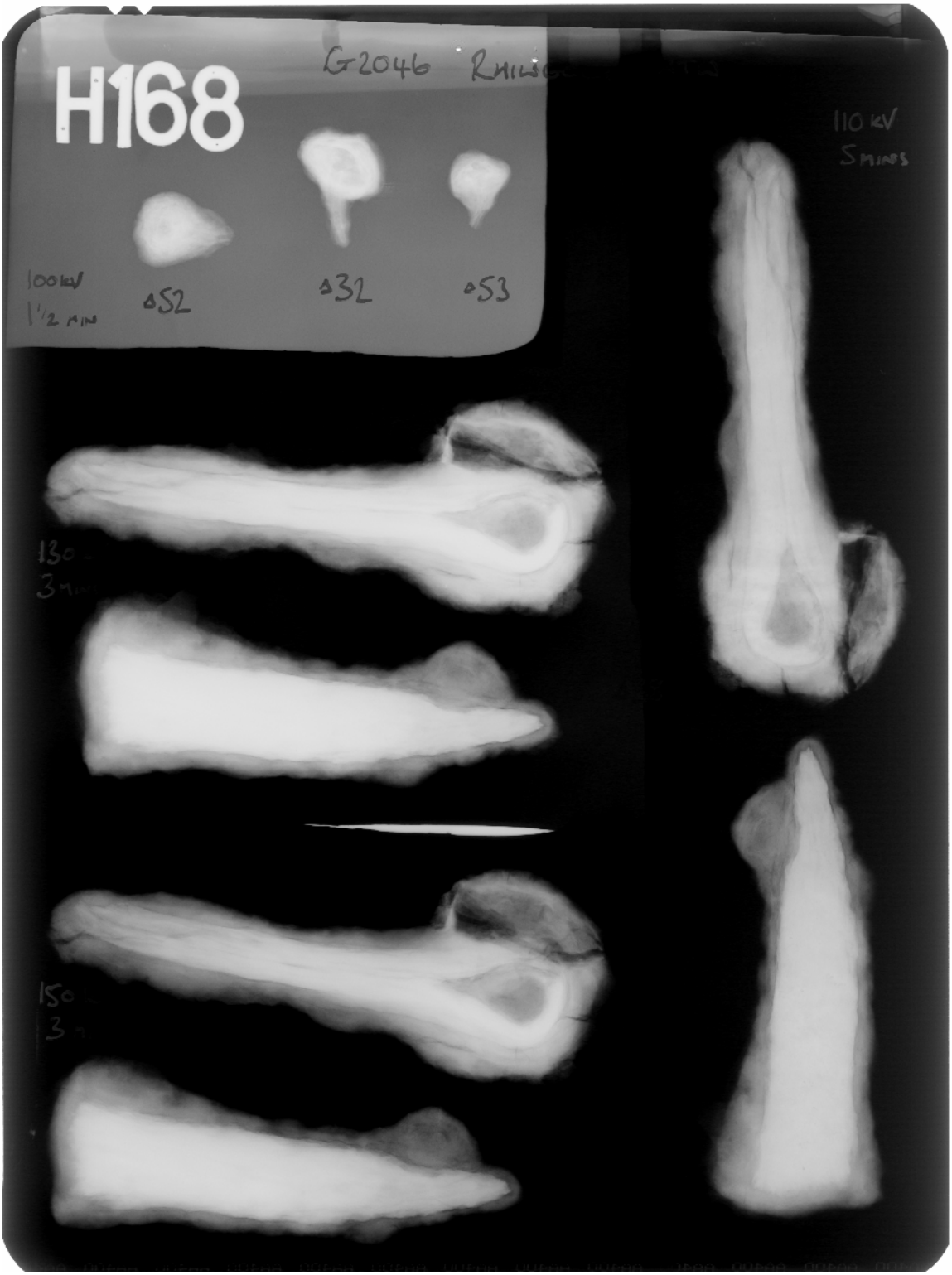
1.3 Table of burnt clay finds

Find No	Context No	Material	Weight (g)	Feature type	Quadrant
59	2048	burnt clay	2	occupation deposit	SW
71	2048	burnt clay	66	occupation deposit	SW
70	2048	burnt clay	115	occupation deposit	SW
67	2048	burnt clay	7	occupation deposit	SW
61	2055	burnt clay	1	gully	SE
63	2084	burnt clay	19	leveling/floor	SW
60	2084	burnt clay	21	leveling/floor	SW
58	2086	burnt clay	241	Surface?	SW
64	2086	burnt clay	178	Surface?	SW
72	2086	burnt clay	44	Surface?	SW
25	2095	burnt clay	7	tumble	NW
29	2095	burnt clay	1	tumble	NW
28	2284	burnt clay	5	wall?	NW
37	2099	burnt clay	196	Surface?	SW
84	2108	burnt clay	8	hearth	NE
62	2148	burnt clay	4	Surface?	SW

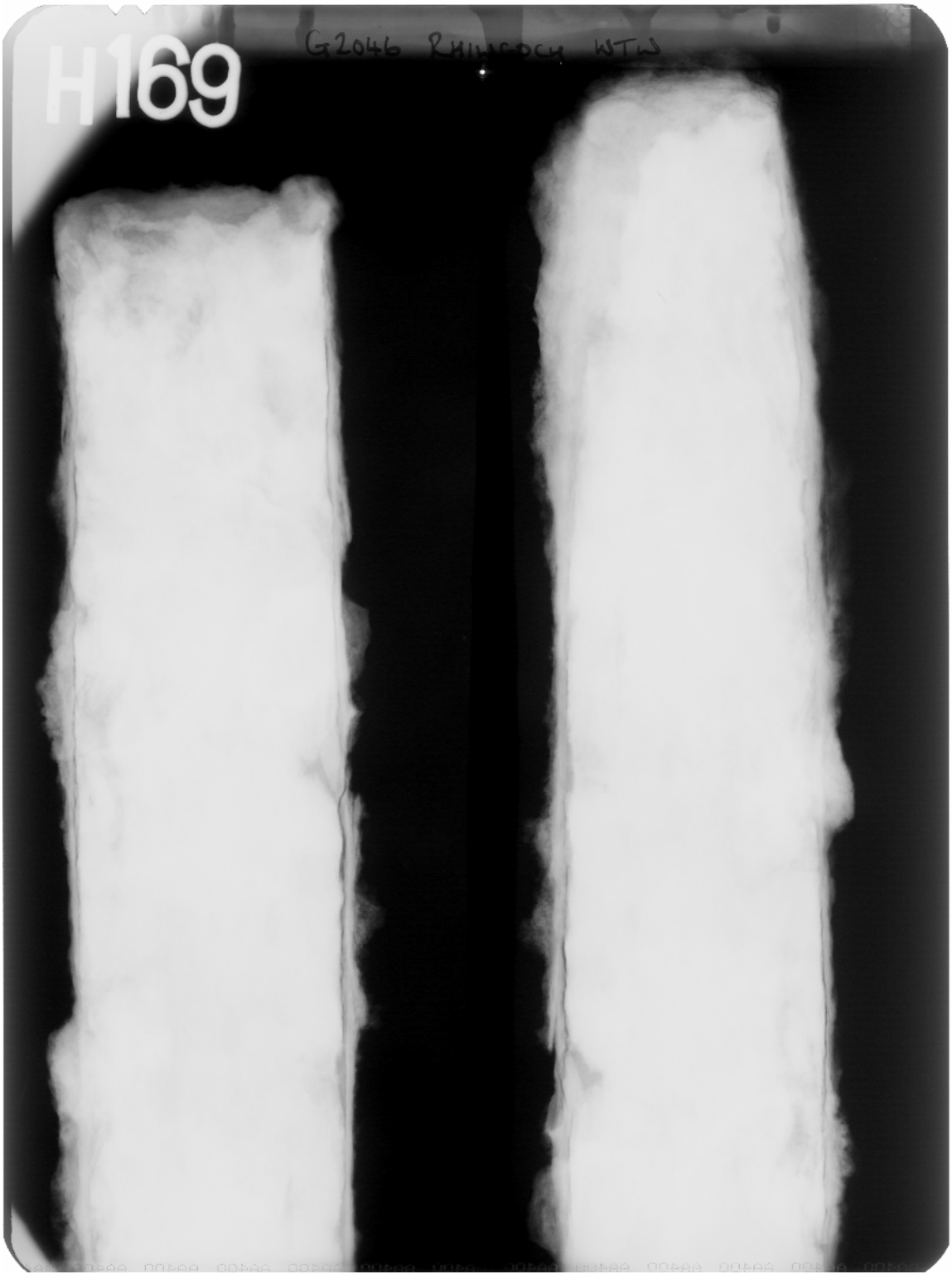
1.4 Report on conservation of iron objects
Phil Parkes, Cardiff Conservation Services (Report No. Dev 514/1)

Iron objects from excavations at Rhiwgoch were received for x-raying and assessment. The finds are showing signs of post-excavation corrosion, with the larger objects having cracks and splits. Finds were x-rayed using a Faxitron 43805 cabinet system. X-ray films were digitised using an Array Corporation 2905 Laser Film Digitiser. Below are comments on information provided by the x-rays.

Finds No	Context	X-ray number	Notes
20	2034 Stone tumble	H169	Long metal bar with a rectangular cross section slightly tapered at one end, while the other end has been worked, being slightly flattened out with curved edges. This end was cleaned using an air-abrasive machine with aluminium oxide powder to aid interpretation and reveal the shaped nature of the object. I would suggest that the raised circular shape on one side appears to be a corrosion blister rather than a 'feature' of the object.
32	2220, fill of pit 2219	H168	Nail head and part shaft
38	2049 Burnt stone layer	H168	One object has a rectangular cross section and tapers from a wider end to a point. The second object has a looped head and tapers to a rounded end. The second object had split into two pieces due to post-excavation corrosion. The pieces were readhered using Araldite epoxy resin and cracks consolidated using a 20% solution of Paraloid B72 in acetone applied by brush.
52	2220, fill of pit 2219	H168	Nail head and part shaft
53	2074, wall of oval structure	H168	Nail head and part shaft



X-ray of small finds 32, 38, 52 and 53



X-ray of small find 20

1.5 List of contexts containing burnt stone

Context No	Feature type	Period	Weight (kg)	Notes
2086	surface	2086/2148	0.57	
2148	surface?	2086/2148	3.13	
2095	stone heap?	2095	2.96	
2220	Posthole	2219	0.47	
2038	burnt stone spread	Burnt stone (1)	1.16	
2006	burnt stone spread	Burnt stone (1)	3.35	
2046	stone layer	Burnt stone (1)	0.44	
2013	burnt stone spread	Burnt stone (2)	1.04	
2001	burnt stone spread	Burnt stone (2)	0.18	SF85 broken burnt rounded pebble
2055	drainage gully	Iron Age/RB	1.72	
2109	Hearth	Iron Age/RB	0.46	
2162	Posthole	Iron Age/RB	0.54	
2257	drainage gully	Iron Age/RB	0.15	
2240	drainage gully	Iron Age/RB	0.23	
2199	wall	Iron Age/RB	0.78	
2137	charcoal lens	Iron Age/RB?	1.87	
2120	burnt stone layer	medieval?	1.52	
2024	occupation layer	medieval?	2.22	
2112	Posthole	Other pits/postholes	0.4	
2224	Posthole	Paired posts	0.62	
2260	Ice wedge	peri-glacial	0.59	
2018	topsoil	Post medieval?	0.41	SF84 complete burnt rounded pebble
2041	tumble	post medieval?	0.24	SF17 broken burnt rounded pebble
2084	occupation deposit?	small enclosure	0.36	
2048	occupation deposit	small enclosure	0.17	
2084	occupation deposit?	small enclosure	0.14	
2084	occupation deposit?	small enclosure	0.37	

1.6 Animal bone catalogue

Context No	Feature type	Period	Find No	No of items	Weight (g)	Description
1000	Unstrat	Unstrat	66	3	<1	Burnt bone. Unidentifiable. Post-cranial. Small-medium mammal
2006	burnt stone spread	medieval?	50	7	<1	Burnt bone. Unidentifiable. Post-cranial. Medium mammal.
2006	burnt stone spread	medieval?	40	4	<1	Burnt bone. Unidentifiable. Post-cranial. Medium mammal
2038	burnt stone spread	medieval?	44	1	<1	Burnt bone. Unidentifiable. Post-cranial, mammal.
2040	burnt stone spread	medieval?	16	1	<1	Burnt bone. Unidentifiable. Post cranial. Large mammal
2048	occupation deposit	medieval?	65	2	<1	Burnt bone. Unidentifiable. Post-cranial & cranial. Medium-large mammal
2048	occupation deposit	medieval?	86	4	<1	Burnt bone. Unidentifiable. Post-cranial medium mammal.
2074	Wall	medieval?	49	2	<1	Burnt bone. Unidentifiable. Post-cranial. Medium mammal.
2083	Wall	medieval?	51	1	<1	Burnt bone. Unidentifiable. Post-cranial. Medium mammal.
2084	occupation deposit?	medieval?	46	18	1	Burnt bone. Unidentifiable. Post-cranial medium-large mammal. 1 Tibia frag. Poss. Sh/gt.
2095	stone heap?	2095	87	32	1	Burnt bone. Unidentifiable. Post-cranial medium mammal.
2095	stone heap?	2095	27	10	1	Burnt bone. Unidentifiable. Post-cranial medium mammal
2095	stone heap?	2095	43	34	2	Burnt bone. Unidentifiable. Post-cranial & cranial medium mammal.
2099	surface?	pre-enclosure	73	1	<1	Burnt bone. Unidentifiable. Post-cranial. Large mammal
2130	Hearth	Iron Age/RB	31	1	<1	Burnt bone. Unidentifiable. Post cranial. Medium to large mammal
2148	surface?	pre-enclosure	45	2	<1	Burnt bone. Unidentifiable. Post-cranial, mammal.
2240	drainage gully	Iron Age/RB	48	2	<1	Burnt bone. Unidentifiable. Post-cranial. Medium mammal.
2262	Wall	medieval?	75	1	<1	Burnt bone. Unidentifiable. Post-cranial. Small-medium mammal.
2277	drainage gully	Iron Age/RB	47	1	<1	Burnt bone. Unidentifiable. Post-cranial. Medium mammal.

1.7 Tables of plant macro fossils

Table 1. Components of the subsamples from deposits recovered at Rhiwgoch, Harlech (G2046) Semi quantitative score of the components of the samples is based on a four point scale, from '1' – one or a few remains (less than an estimated six per kg of raw sediment) to '4' – abundant remains (many per kg or a major component of the matrix).

Sample No.	1	2	3	4	5	6	7	9	10	11	13	15	16	17	18	19	20	21
Context No.	2013	2024	2006	2009	2042	2048	2038	2086	2084	2055	2093	2089	2065	2063	2069	2125	2139	2152
Feature No.																		
Charcoal fgts.	4	3	3	2	4	2	4	4	3	1	3	2	1	2	3	2	2	1
Earthworm egg capsules	1	2	2	2	1	1	2	2	1	1	1	1		1	1	1		1
Insect fgts.		1	2	1	1		1	1					1				1	
Plant macrofossils (ch.)	1			1	1	1	1	1	1		1				1			
Plant macrofossils (m/c)								3										
Root/rootlet fgts.	3	4	4	4	2	4	3	2	4	4	4	4	3	3	2	4	4	4
Sand	1	3	3		3	4	2	3				4	4	4	4	4	4	3
Snails		1																

Sample No.	22	23	24	25	26	27	28	29	30	31	32	34	35	36	37	38	39	40
Context No.	2151	2270	2129	2167	2162	2130	2187	2191	2189	2184	2122	2137	2120	2112	2055	2193	2084	2215
Feature No.																		
Charcoal fgts.	2	3	2	3	3	3	3	3	4	4	4	4	4	1	3	4	4	2
Earthworm egg capsules		2		1	1	1	2	1		1	1	1	1		1	1	2	
Insect fgts.	1	1	1						1								1	
Plant macrofossils (ch.)	1	1	1	1	1	1	1	1	1	1	1	1	1			1		1
Plant macrofossils (m/c)																		
Root/rootlet fgts.	4	3	4	2	3	3	3	2	3	2	2	3	2	4	4	3	2	4
Sand	3	4	2	4	4	4	4	4	3		2	3	2	3	2	3	3	3
Snails				1														

Sample No.	41	42	43	44	46	47	48	49	50	51	52	53	55	56	57	58	59	60
Context No.	2160	2208	2216	2220	2211	2202	2222	2210	2207	2233	2236	2263	2244	2108	2109	2256	2253	2252
Feature No.																		
Charcoal fgts.	3	4	3	4	3	4	2	4	2	4	2	2	1	4	4	4	4	2
Earthworm egg capsules	2	1	1	1	1	2	1	2	1	2	2	1	1	1	1	1	1	1
Insect fgts.		1																1
Plant macrofossils (ch.)		1	1	1	1	1	1			1	1			1	1	1	1	
Plant macrofossils (m/c)																		
Root/rootlet fgts.	4	2	2	3	4	3		2	4	3	4	3	2	2	3	2	2	3
Sand	3	3	4			3	4	3	3	3	2	4	4		4	3	2	4
Snails							1				1							

Sample No.	62	63	64	65	66	67	68	69	71	72	74	75	76	77	78	79	80	81
Context No.	2262	2086	2148	2169	2257	2172	2261	2260	2224	2275	2074	2278	2277	2240	2188	2065	2199	2091
Feature No.																		
Charcoal fgts.	4	2	2	1	4	1	1	1	4	4	1	2	4	3	4	1	3	2
Earthworm egg capsules	1	1	2	2	1		1	2	1	1		1		1	1	2	1	1
Insect fgts.				2														
Plant macrofossils (ch.)		1	1		1				1	1				1			2	
Plant macrofossils (m/c)																		
Root/rootlet fgts.	3	4	3	4	3	4	3	4	3	3	4	3	2	3	3	4	3	3
Sand	3	4	4	2	2	3	4	3	3	3	3	4	2	4	2	4	4	4
Snails									1									

Sample No.	82	84	85	86	88	89	90	91
Context No.	2074	2230	2217	2074	2074	2240	2095	2234
Feature No.								
Charcoal fgts.	3	2	2	4	3	4	4	3
Earthworm egg capsules	1	1		2	2	1	2	1

Insect fgts.								
Plant macrofossils (ch.)	1			1	1		1	
Plant macrofossils (m/c)								
Root/rootlet fgts.	4	4	3	3	4	2	3	3
Sand	3	3	4	2	4	2	3	4
Snails	1							1

Table 2: Complete list of taxa recovered from deposits recovered Rhiwgoch, Harlech (G2046). Taxonomy and Nomenclature follow Stace (1997).

Sample Number **Context Number** **Feature Number** **Sample volume (ml)**	**1** **2013**	**4** **2009**	**5** **2042**	**6** **2048**	**7** **2038**	**9** **2086**	**10** **2084**	**13** **2093**	**18** **2069**	**22** **2151**	**23** **2270**	**24** **2129**	
LATIN BINOMIAL													**COMMON NAME**
Corylus avellana (fgts.)	3			1	6		1			2			Hazelnut shell fgts.
Chenopodium spp / *Atriplex* spp.													Goosefoot/Orache
Rumex spp.										1			Dock
BRASSICACEAE							1						Cabbage Family
POACEAE					1								Grass Family
Avena cf. *sativa*		1											Oat (possible cultivated)
Hordeum spp.			1							1			Barley
Triticum spelta			3										Spelt wheat
Triticum spp.		3	2		2						1	1	Wheat
Indeterminate cereal		4	6		1	1	3	60	1	1	1		
Indeterminate glume base													
Unidentified						1							

Sample Number **Context Number** **Feature Number** **Sample volume (ml)**	**25** **2167**	**26** **2162**	**27** **2130**	**28** **2187**	**29** **2191**	**30** **2189**	**31** **2184**	**32** **2122**	**34** **2137**	**35** **2120**	**38** **2193**	**40** **2215**	

LATIN BINOMIAL													**COMMON NAME**
Corylus avellana (fgts.)			2	2			2	5	4	5			Hazelnut shell fgts.
Chenopodium spp / *Atriplex* spp.						3					3		Goosefoot/Orache
Rumex spp.													Dock
BRASSICACEAE													Cabbage Family
POACEAE	1												Grass Family
Avena cf. *sativa*													Oat (possible cultivated)
Hordeum spp.				1	1						3		Barley
Triticum spelta													Spelt wheat
Triticum spp.						1						1	Wheat
Indeterminate cereal	2	4	5	2				4	3	1	5		Indeterminate cereal
Indeterminate glume base											1	1	Indeterminate glume base
Unidentified					2								Unidentified

Sample Number **Context Number** **Feature Number** **Sample volume (ml)**	**42** **2208**	**43** **2116**	**44** **2220**	**46** **2211**	**47** **2202**	**48** **2222**	**51** **2233**	**52** **2236**	**56** **2108**	**57** **2109**	**58** **2256**	**59** **2253**	
LATIN BINOMIAL													**COMMON NAME**
Corylus avellana (fgts.)	1				1	1			3	2		2	Hazelnut shell fgts.
Chenopodium spp / *Atriplex* spp.	2									2			Goosefoot/Orache
Rumex spp.										1			Dock
BRASSICACEAE													Cabbage Family
POACEAE				1									Grass Family
Avena cf. *sativa*												1	Oat (possible cultivated)
Hordeum spp.	3			3									Barley
Triticum spelta													Spelt wheat
Triticum spp.		5								1			Wheat

Indeterminate cereal	10	2	1		6	1	2	3	5	2	1	3	Indeterminate cereal
Indeterminate glume base													Indeterminate glume base
Unidentified					1							1	Unidentified

Sample Number **Context Number** **Feature Number** **Sample volume (ml)**	**63** **2086**	**64** **2148**	**66** **2257**	**71** **2224**	**72** **2275**	**77** **2240**	**80** **2199**	**82** **2074**	**86** **2074**	**88** **2074**	**90** **2095**	
LATIN BINOMIAL												**COMMON NAME**
Corylus avellana (fgts.)								3	2	1		Hazelnut shell fgts.
Chenopodium spp / *Atriplex* spp.												Goosefoot/Orache
Rumex spp.												Dock
BRASSICACEAE			2				3					Cabbage Family
Carex spp.			1					1				
POACEAE												Grass Family
Avena cf. *sativa*			2			3	2				1	Oat (possible cultivated)
Hordeum spp.			9				5				17	Barley
Triticum spelta												Spelt wheat
Triticum spp.			8				14				40	Wheat
Indeterminate cereal		1	58	3	2	5	50	7	8		154	Indeterminate cereal
Indeterminate glume base						1						Indeterminate glume base
Unidentified	1											Unidentified

Table 3. Complete list of taxa recovered from deposits at deposits recovered at Rhiwgoch, Harlech (G2046). Taxonomy and nomenclature follow Schweingruber (1978). Numbers are identified charcoal fragment for each sample.

Name	**Vernacular**	**Sample 1** **(2013)** 100+ fgts. max. size-10mm	**Sample 2** **(2024)** 100+ fgts. max. size-14mm	**Sample 3** **(2006)** 500+ fgts. max. size-11mm	**Sample 4** **(2009)** 100+ fgts. max. size-11mm	**Sample 5** **(2042)** 200+ fgts. max. size-13mm	**Sample 6** **(2048)** 50+ fgts. max. size-18mm
Alnus glutinosa	Alder						5

Alnus / Corylus	Alder / Hazel		31	16			
Corylus avellana	Hazel	32				27	7
Salix / Populus	Salix / Poplar				16		
Fraxinus excelsior	Ash				11		
Quercus	Oak	26		72	28	73	16
	Indet.	42	69	12	45		22

Name	**Vernacular**	**Sample 7 (2038)** 100+ fgts. max. size-14mm	**Sample 9 (2086)** 100+ fgts. max. size-11mm	**Sample 10 (2084)** 50+ fgts. max. size-17mm	**Sample 17 (2063)** 35 fgts. max. size-10mm	**Sample 18 (2069)** 100+ fgts. max. size-15mm	**Sample 22 (2151)** 50 fgts. max. size-8mm
Corylus avellana	Hazel	22		22			
Salix / Populus	Salix / Poplar			4			
Fraxinus excelsior	Ash						
Quercus	Oak	64	78	9	21	37	50
	Indet.	14	22	15	14	63	

Name	**Vernacular**	**Sample 23 (2270)** 100+ fgts. max. size-14mm	**Sample 24 (2149)** 50+ fgts. max. size-9mm	**Sample 25 (2167)** 100+ fgts. max. size-12mm	**Sample 26 (2162)** 100+ fgts. max. size-26mm	**Sample 27 (2130)** 100+ fgts. max. size-19mm	**Sample 28 (2187)** 100+ fgts. max. size-17mm
Corylus avellana	Hazel	87		35	26	100	
Fraxinus excelsior	Ash	13					
Quercus	Oak		50		51		100
	Indet.			65	23		

Name	**Vernacular**	**Sample 29 (2191)** 100 + fgts. max. size-13mm	**Sample 30 (2189)** 100+ fgts. max. size-12mm	**Sample 31 (2184)** 100 + fgts. max. size-17mm	**Sample 32 (2122)** 500 + fgts. max. size-21mm	**Sample 34 (2137)** 500 + fgts. max. size-20mm	**Sample 35 (2208)** 100 + fgts. max. size-16mm
Corylus avellana	Hazel				36	21	18

Salix / Populus	Salix / Poplar				11		
Quercus	Oak	100	100	100	19	45	71
	Indet.				34	34	11

Name	**Vernacular**	**Sample 37 (2055)** 100+ fgts. max. size-10mm	**Sample 38 (2193)** 100+ fgts. max. size-19mm	**Sample 39 (2084)** 100+ fgts. max. size-13mm	**Sample 40 (2215)** 50 fgts. max. size-9mm	**Sample 41 (2160)** 100+ fgts. max. size-13mm	**Sample 42 (2208)** 100+ fgts. max. size-15mm
Corylus avellana	Hazel	65	9		38	13	23
Quercus	Oak	35	91	100	12	87	45
	Indet.						32

Name	**Vernacular**	**Sample 43 (2216)** 50 fgts. max. size-8mm	**Sample 44 (2220)** 100+ fgts. max. size-15mm	**Sample 46 (2211)** 100+ fgts. max. size-17mm	**Sample 47 (2202)** 500+ fgts. max. size-22mm	**Sample 49 (2210)** 100+ fgts. max. size-12mm	**Sample 51 (2233)** 100+ fgts. max. size-9mm
Corylus avellana	Hazel	27	60		36		
Salix / Populus	Salix / Poplar			15			
Quercus	Oak	23	11	44	39	15	29
	Indet.		29	41	25	85	71

Name	**Vernacular**	**Sample 53 (2263)** 23 fgts. max. size-7mm	**Sample 56 (2108)** 500+ fgts. max. size-20mm	**Sample 57 (2109)** 100+ fgts. max. size-9mm	**Sample 58 (2256)** 500+ fgts. max. size-26mm	**Sample 59 (2253)** 500+ fgts. max. size-28mm	**Sample 60 (2252)** 50 fgts. max. size-8mm
Corylus avellana	Hazel	4			78		14
Salix / Populus	Salix / Poplar		39			41	
Quercus	Oak		29	100	22	28	36
	Indet.	19	32			31	

Name	**Vernacular**	**Sample 62 (2282)**	**Sample 66 (2257)**	**Sample 71 (2224)**	**Sample 72 (2275)**	**Sample 74 (2074)**	**Sample 75 (2278)**

		100+ fgts. max. siz-9mm	500+ fgts. max. size-9mm	200+ fgts. max. size-22mm	100+ fgts. max. size-18mm	17 fgts. max. size-10mm	50+ fgts. max. size-11mm
Alnus glutinosa	Alder	17			10		
Corylus avellana	Hazel	21	8		23	4	
Salix / Populus	Salix / Poplar	25	5	14	5		
Fraxinus excelsior	Ash		53	5			
Quercus	Oak		15	38	29		50
	Indet.	37	19	43	33	13	

Name	**Vernacular**	**Sample 76** **(2277)** 200+ fgts. max. size-9mm	**Sample 77** **(2240)** 100+ fgts. max. size-14mm	**Sample 78** **(2188)** 100+ fgts. max. size-12mm	**Sample 80** **(2199)** 100 + fgts. max. size-29mm	**Sample 82** **(2074)** 200+ fgts max. size-13mm	**Sample 83** **(2083)** 50+ fgts. max. size-8mm
Corylus avellana	Hazel		18	100	17		
Salix / Populus	Salix / Poplar		9				
Quercus	Oak	100	33		65	75	50
	Indet.		40		18	25	

Name	**Vernacular**	**Sample 84** **(2230)** 50 fgts. max. size-17mm	**Sample 85** **(2217)** 32 fgts. max. size-10mm	**Sample 86** **(2074)** 500+ fgts. max. size-29mm	**Sample 88** **(2074)** 500+ fgts. max. size-13mm	**Sample 89** **(2240)** 200+ fgts. max. size-13mm	**Sample 90** **(2095)** 500+ fgts. max. size-20mm
Corylus avellana	Hazel			16	38		
Salix / Populus	Salix / Poplar			6			
Quercus	Oak	50	32	56	14	100	100
	Indet.			22	48		

Name	**Vernacular**	**Sample 91** **(2234)** 100+ fgts. max. size-12mm

Corylus avellana	Hazel	11
Salix / Populus	Salix / Poplar	15
Fraxinus excelsior	Ash	10
Quercus	Oak	28
	Indet.	36

1.8 Radiocarbon dating certificate

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RADIOCARBON DATING CERTIFICATE

21 April 2011

Laboratory Code	SUERC-34045 (GU-23782)
Submitter	Jane Kenney Gwynedd Archaeological Trust Craig Beuno Garth Road, Bangor Gwynedd LL57 2RT
Site Reference	Rhiwgoch, Harlech
Context Reference	2216
Sample Reference	43a
Material	Charcoal : Triticum spp.
$\delta^{13}C$ relative to VPDB	-20.7 ‰
Radiocarbon Age BP	1830 ± 30

N.B.

1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

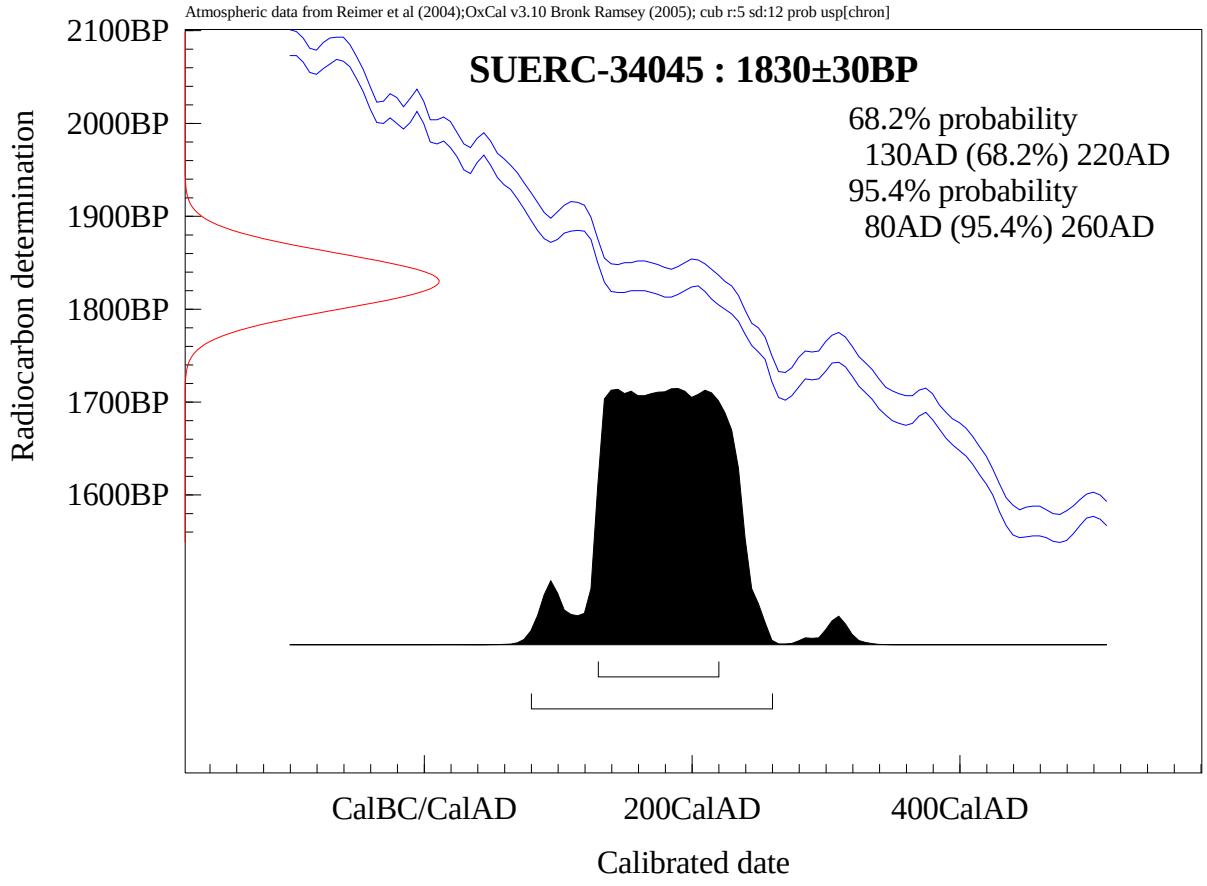
2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot



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RADIOCARBON DATING CERTIFICATE

21 April 2011

Laboratory Code	SUERC-34049 (GU-23783)
Submitter	Jane Kenney Gwynedd Archaeological Trust Craig Beuno Garth Road, Bangor Gwynedd LL57 2RT
Site Reference	Rhiwgoch, Harlech
Context Reference	2216
Sample Reference	43b
Material	Charcoal : Corylus avellana
$\delta^{13}C$ relative to VPDB	-25.1 ‰
Radiocarbon Age BP	1945 ± 35

N.B. 1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

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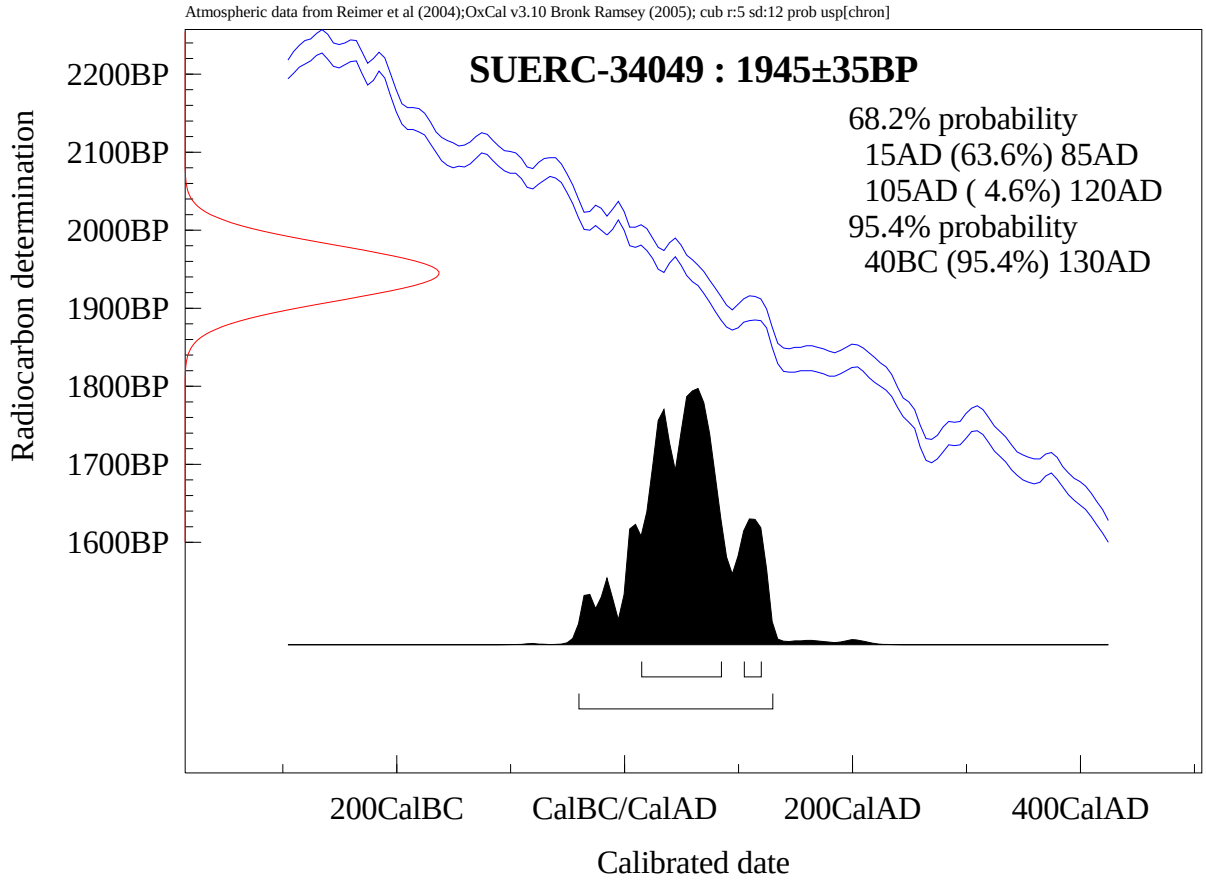
Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot



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RADIOCARBON DATING CERTIFICATE

21 April 2011

Laboratory Code	SUERC-34050 (GU-23784)
Submitter	Jane Kenney Gwynedd Archaeological Trust Craig Beuno Garth Road, Bangor Gwynedd LL57 2RT
Site Reference	Rhiwgoch, Harlech
Context Reference	2074
Sample Reference	86
Material	Charcoal : Corylus avellana
$\delta^{13}C$ relative to VPDB	-28.1 ‰
Radiocarbon Age BP	1905 ± 30

N.B. 1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

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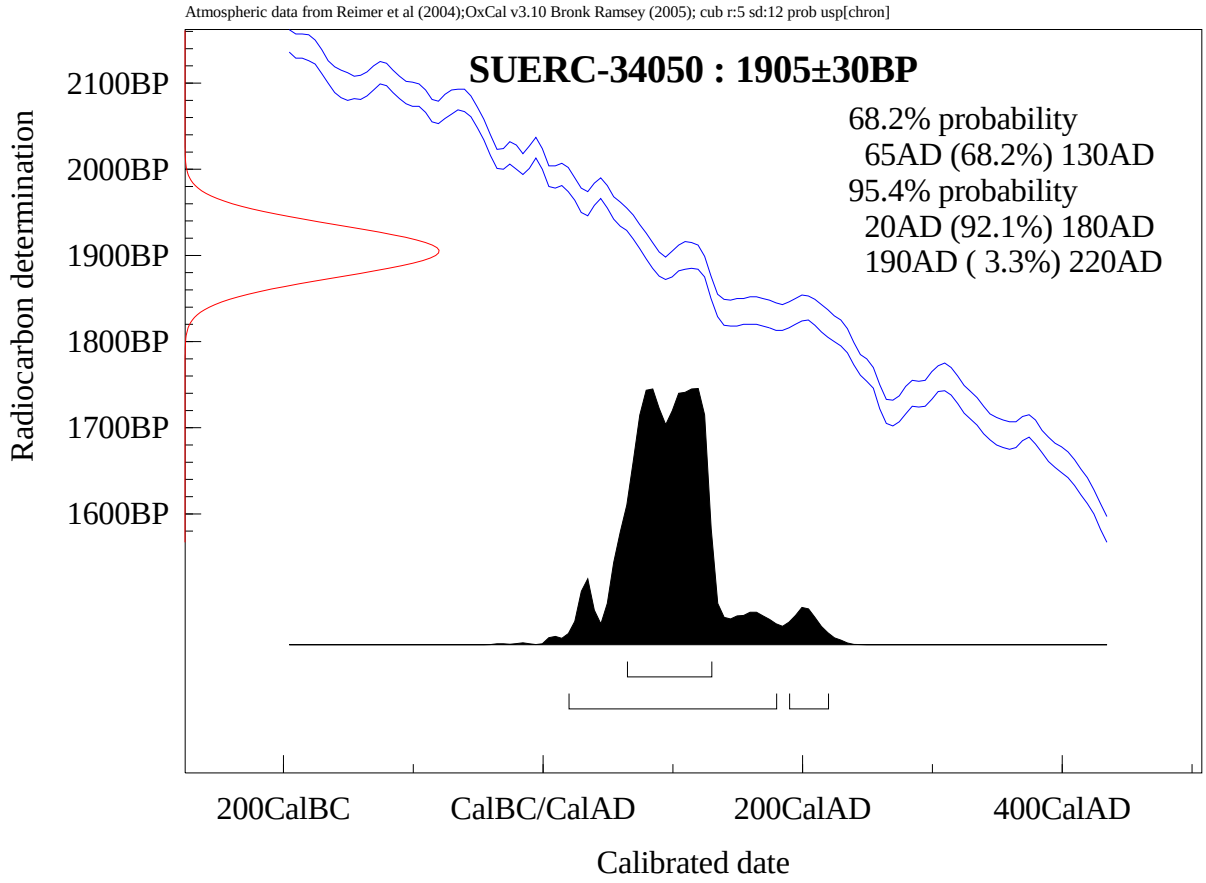
Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot



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RADIOCARBON DATING CERTIFICATE

21 April 2011

Laboratory Code	SUERC-34051 (GU-23785)
Submitter	Jane Kenney Gwynedd Archaeological Trust Craig Beuno Garth Road, Bangor Gwynedd LL57 2RT
Site Reference	Rhiwgoch, Harlech
Context Reference	2074
Sample Reference	88
Material	Charcoal : Corylus avellana
$\delta^{13}C$ relative to VPDB	-25.9 ‰
Radiocarbon Age BP	1795 ± 30

N.B. 1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

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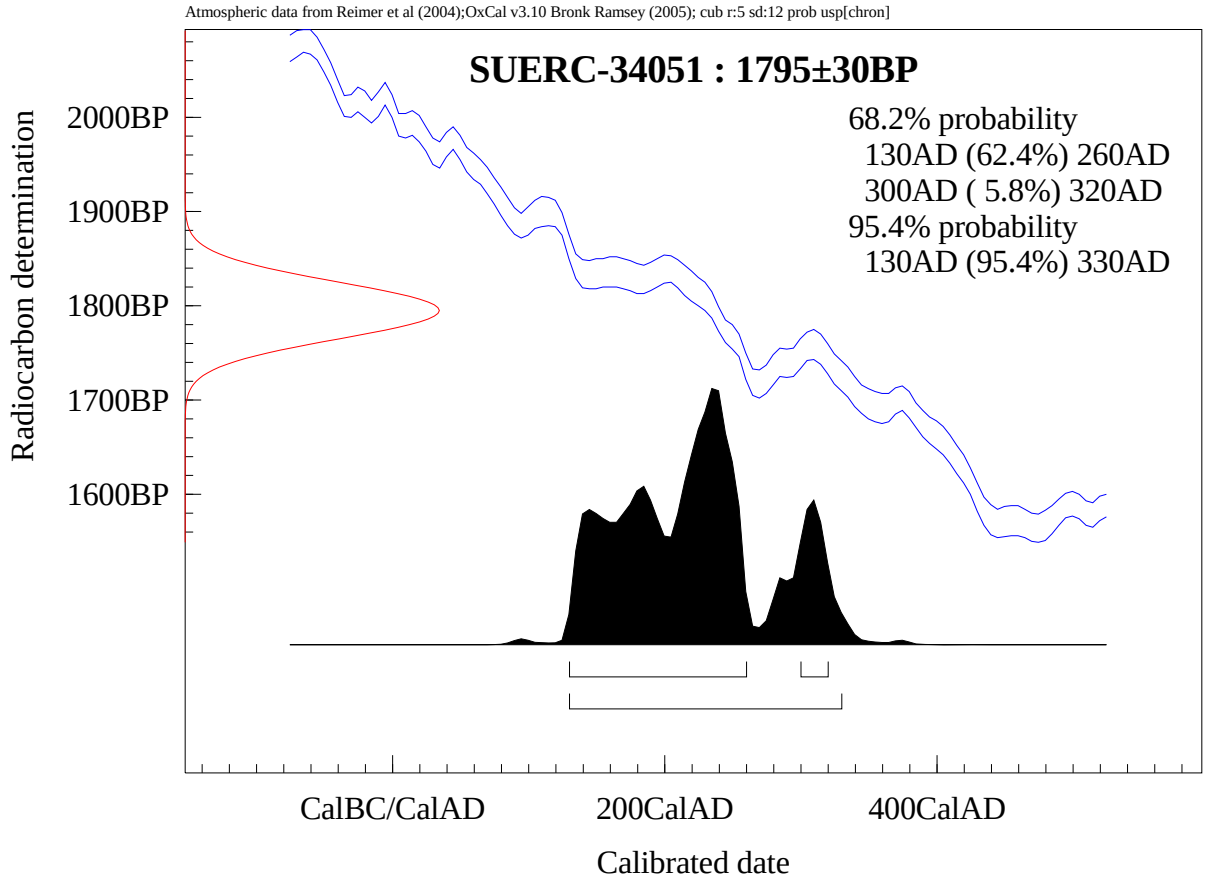
Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot



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RADIOCARBON DATING CERTIFICATE

21 April 2011

Laboratory Code	SUERC-34052 (GU-23786)
Submitter	Jane Kenney Gwynedd Archaeological Trust Craig Beuno Garth Road, Bangor Gwynedd LL57 2RT
Site Reference	Rhiwgoch, Harlech
Context Reference	2130
Sample Reference	27
Material	Charcoal : Corylus avellana
$\delta^{13}C$ relative to VPDB	-26.9 ‰
Radiocarbon Age BP	1870 ± 35

N.B. 1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

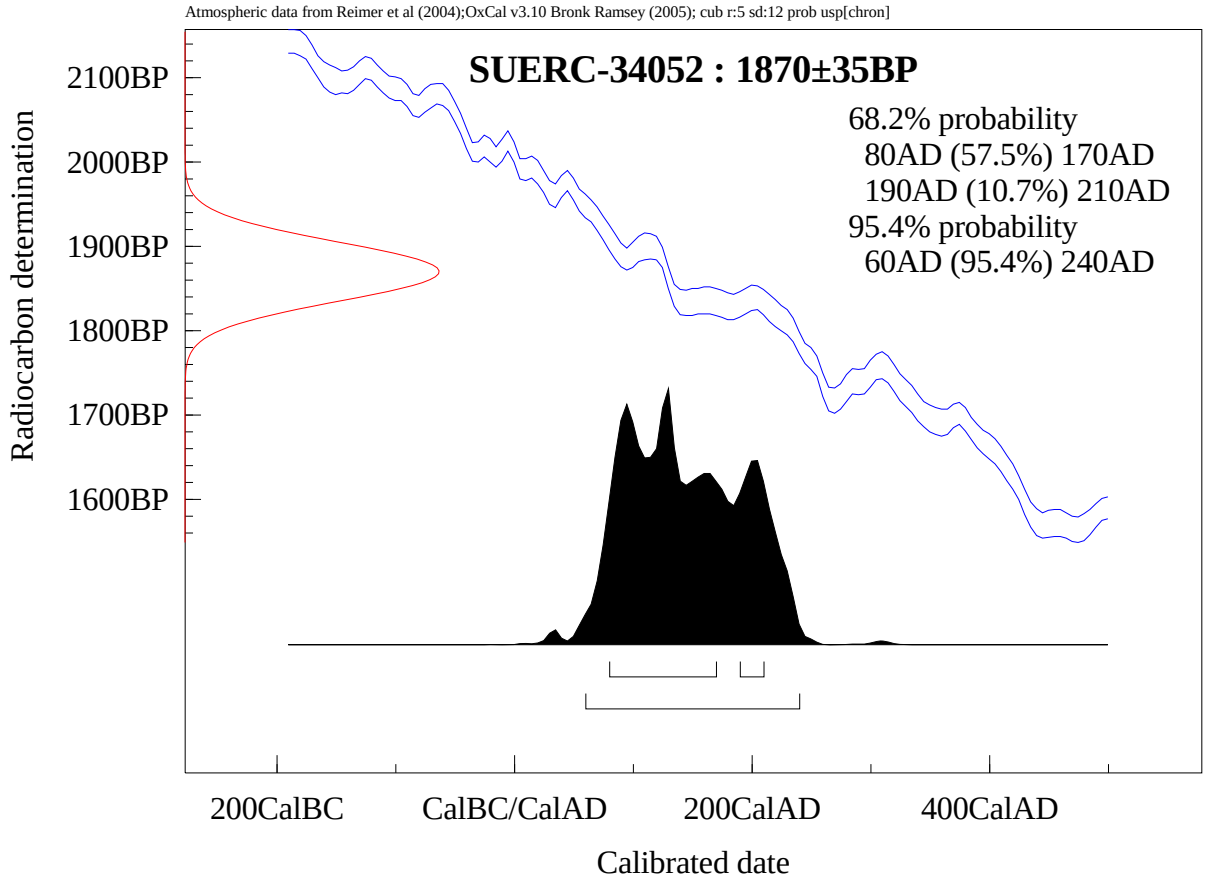
2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot



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RADIOCARBON DATING CERTIFICATE

21 April 2011

Laboratory Code	SUERC-34053 (GU-23787)
Submitter	Jane Kenney Gwynedd Archaeological Trust Craig Beuno Garth Road, Bangor Gwynedd LL57 2RT
Site Reference	Rhiwgoch, Harlech
Context Reference	2108
Sample Reference	56
Material	Charcoal : Salix/Populus
$\delta^{13}C$ relative to VPDB	-25.2 ‰
Radiocarbon Age BP	2010 ± 30

N.B. 1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

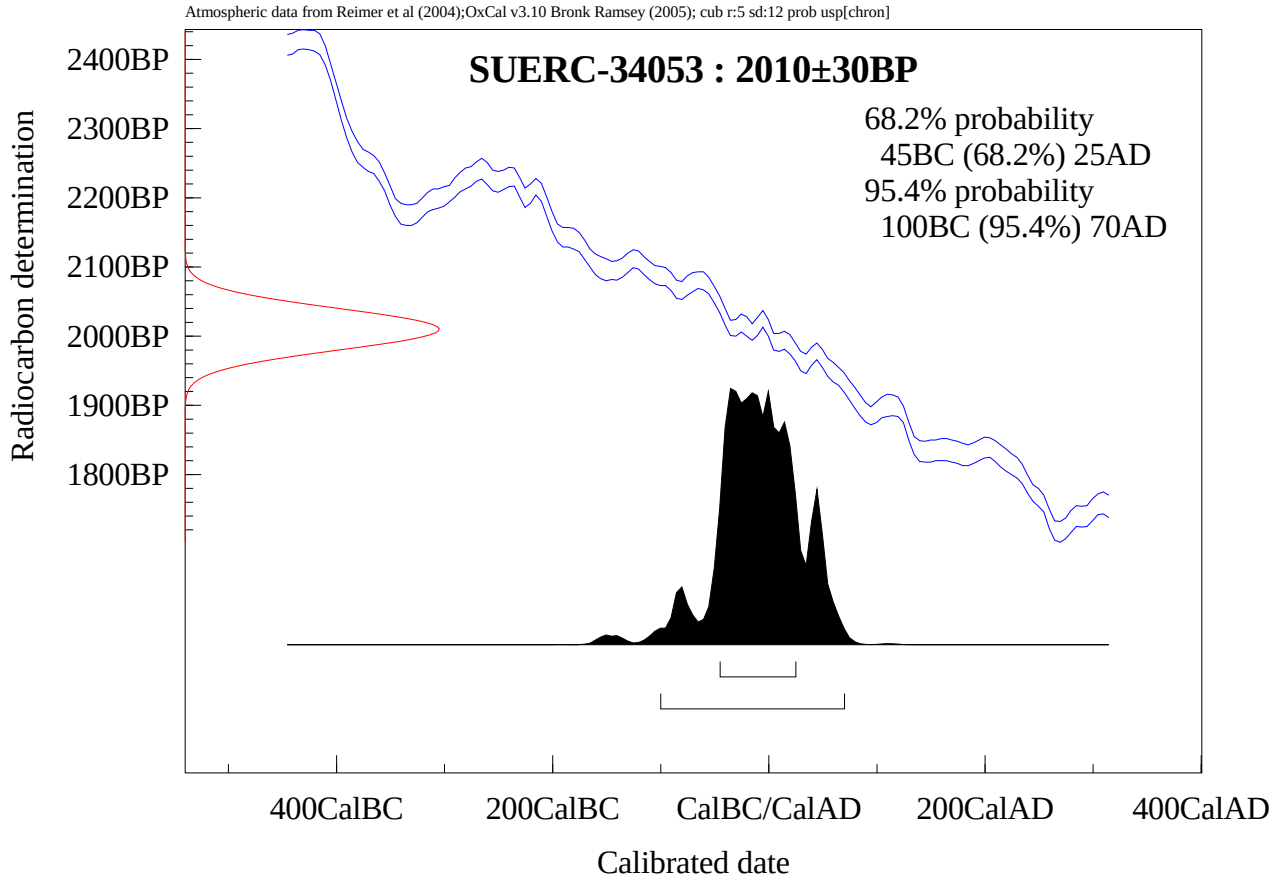
2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot



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RADIOCARBON DATING CERTIFICATE

21 April 2011

Laboratory Code	SUERC-34054 (GU-23788)
Submitter	Jane Kenney Gwynedd Archaeological Trust Craig Beuno Garth Road, Bangor Gwynedd LL57 2RT
Site Reference	Rhiwgoch, Harlech
Context Reference	2202
Sample Reference	47
Material	Charcoal : Corylus avellana
$\delta^{13}C$ relative to VPDB	-27.0 ‰
Radiocarbon Age BP	1895 ± 35

N.B. 1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

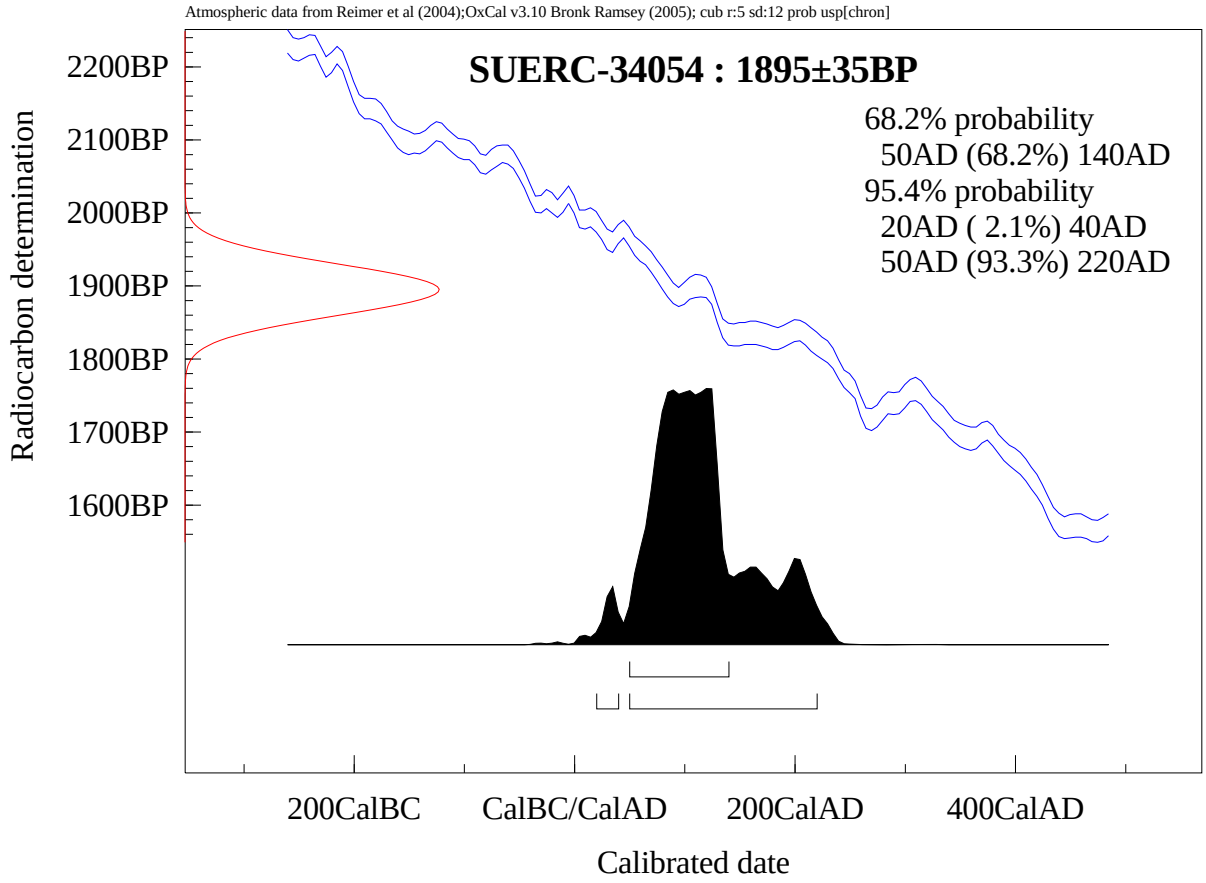
2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot



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RADIOCARBON DATING CERTIFICATE

21 April 2011

Laboratory Code	SUERC-34055 (GU-23789)
Submitter	Jane Kenney Gwynedd Archaeological Trust Craig Beuno Garth Road, Bangor Gwynedd LL57 2RT
Site Reference	Rhiwgoch, Harlech
Context Reference	2193
Sample Reference	38
Material	Charcoal : Corylus avellana
$\delta^{13}C$ relative to VPDB	-27.7 ‰
Radiocarbon Age BP	2015 ± 30

N.B. 1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

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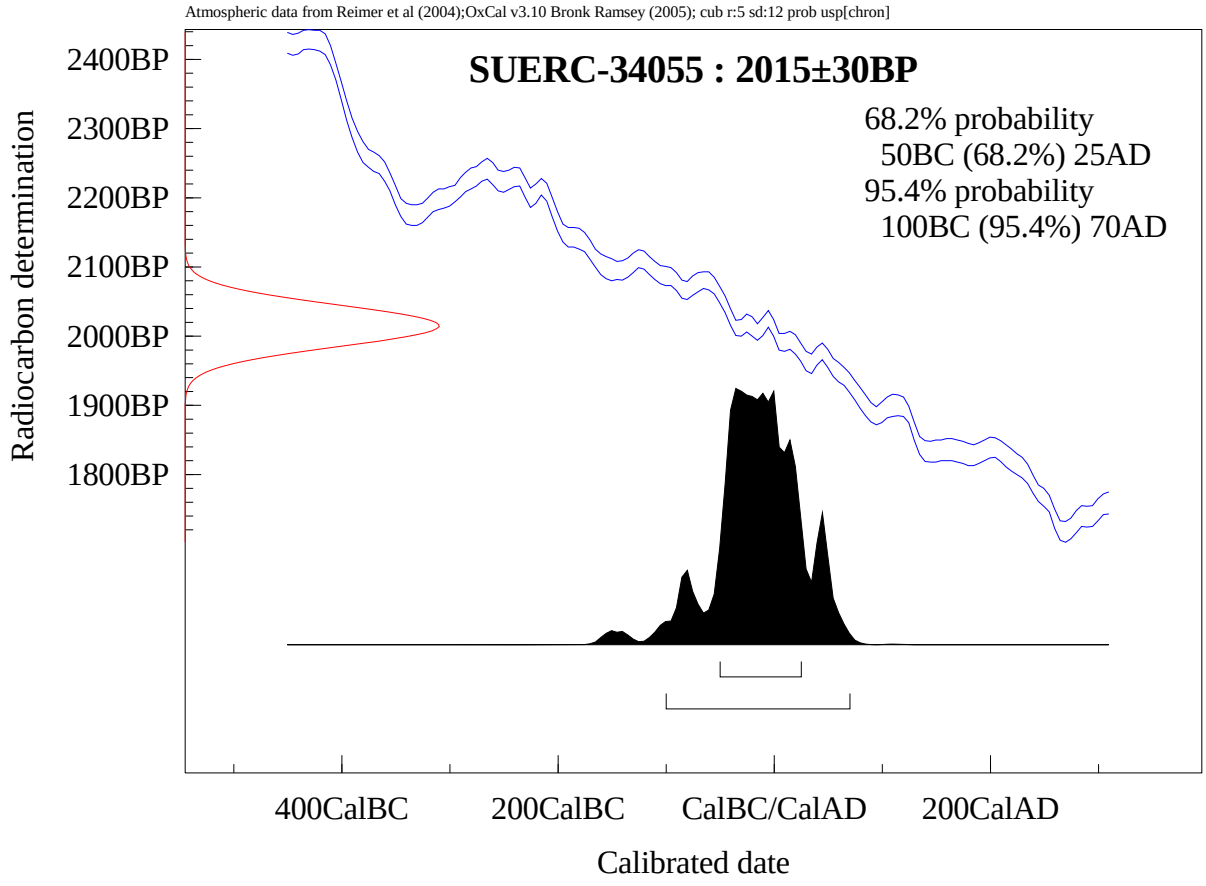
Calibration Plot



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RADIOCARBON DATING CERTIFICATE

21 April 2011

Laboratory Code	SUERC-34059 (GU-23790)
Submitter	Jane Kenney Gwynedd Archaeological Trust Craig Beuno Garth Road, Bangor Gwynedd LL57 2RT
Site Reference	Rhiwgoch, Harlech
Context Reference	2252
Sample Reference	60a
Material	Charcoal : Corylus avellana
$\delta^{13}C$ relative to VPDB	-28.1 ‰
Radiocarbon Age BP	1920 ± 30

N.B. 1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

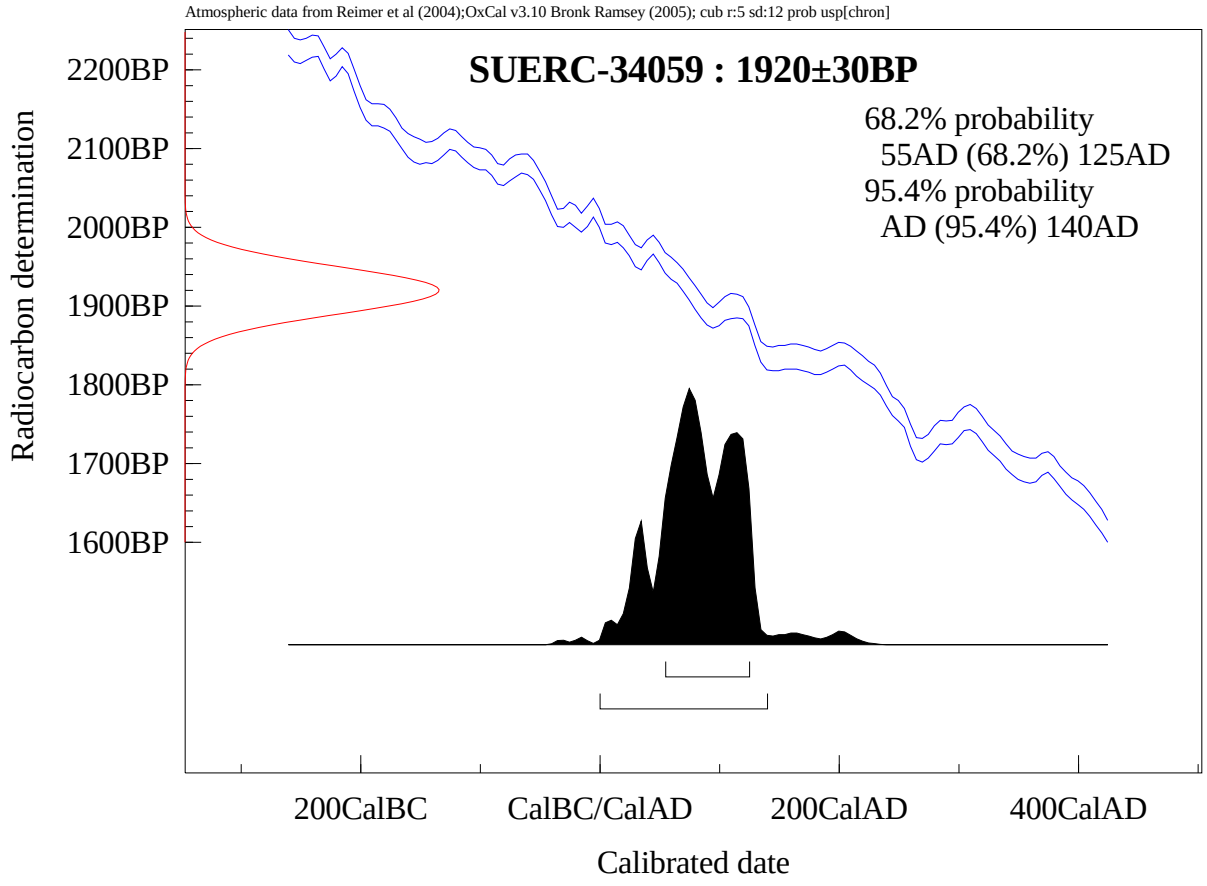
2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot



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RADIOCARBON DATING CERTIFICATE

21 April 2011

Laboratory Code	SUERC-34060 (GU-23791)
Submitter	Jane Kenney Gwynedd Archaeological Trust Craig Beuno Garth Road, Bangor Gwynedd LL57 2RT
Site Reference	Rhiwgoch, Harlech
Context Reference	2252
Sample Reference	60b
Material	Charcoal : Corylus avellana
$\delta^{13}C$ relative to VPDB	-26.2 ‰
Radiocarbon Age BP	1965 ± 35

N.B. 1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

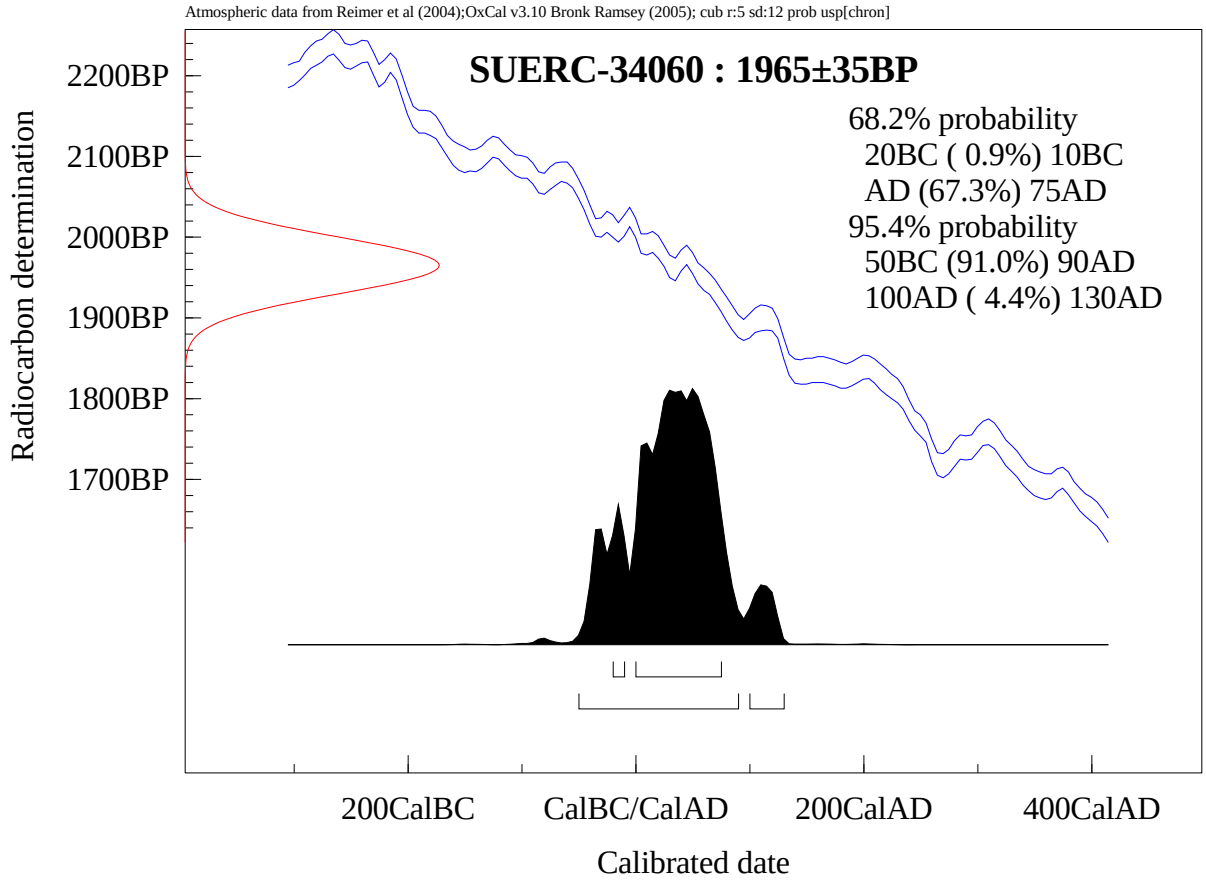
2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot



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RADIOCARBON DATING CERTIFICATE

21 April 2011

Laboratory Code	SUERC-34061 (GU-23792)
Submitter	Jane Kenney Gwynedd Archaeological Trust Craig Beuno Garth Road, Bangor Gwynedd LL57 2RT
Site Reference	Rhiwgoch, Harlech
Context Reference	2220
Sample Reference	44a
Material	Charcoal : Corylus avellana
$\delta^{13}C$ relative to VPDB	-26.0 ‰
Radiocarbon Age BP	1880 ± 35

N.B. 1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

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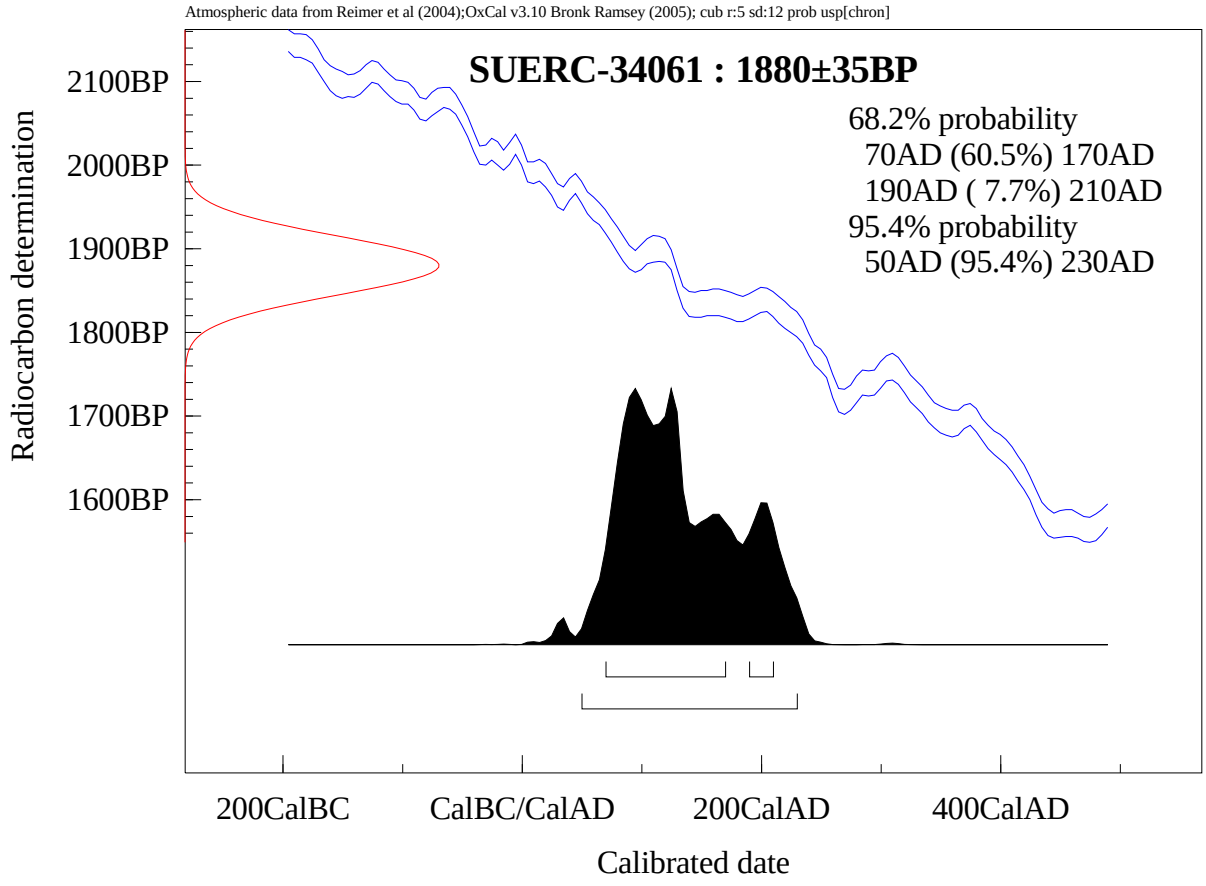
Calibration Plot



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RADIOCARBON DATING CERTIFICATE

21 April 2011

Laboratory Code	SUERC-34062 (GU-23793)
Submitter	Jane Kenney Gwynedd Archaeological Trust Craig Beuno Garth Road, Bangor Gwynedd LL57 2RT
Site Reference	Rhiwgoch, Harlech
Context Reference	2220
Sample Reference	44b
Material	Charcoal : Corylus avellana
$\delta^{13}C$ relative to VPDB	-26.0 ‰
Radiocarbon Age BP	1880 ± 30

N.B. 1. The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

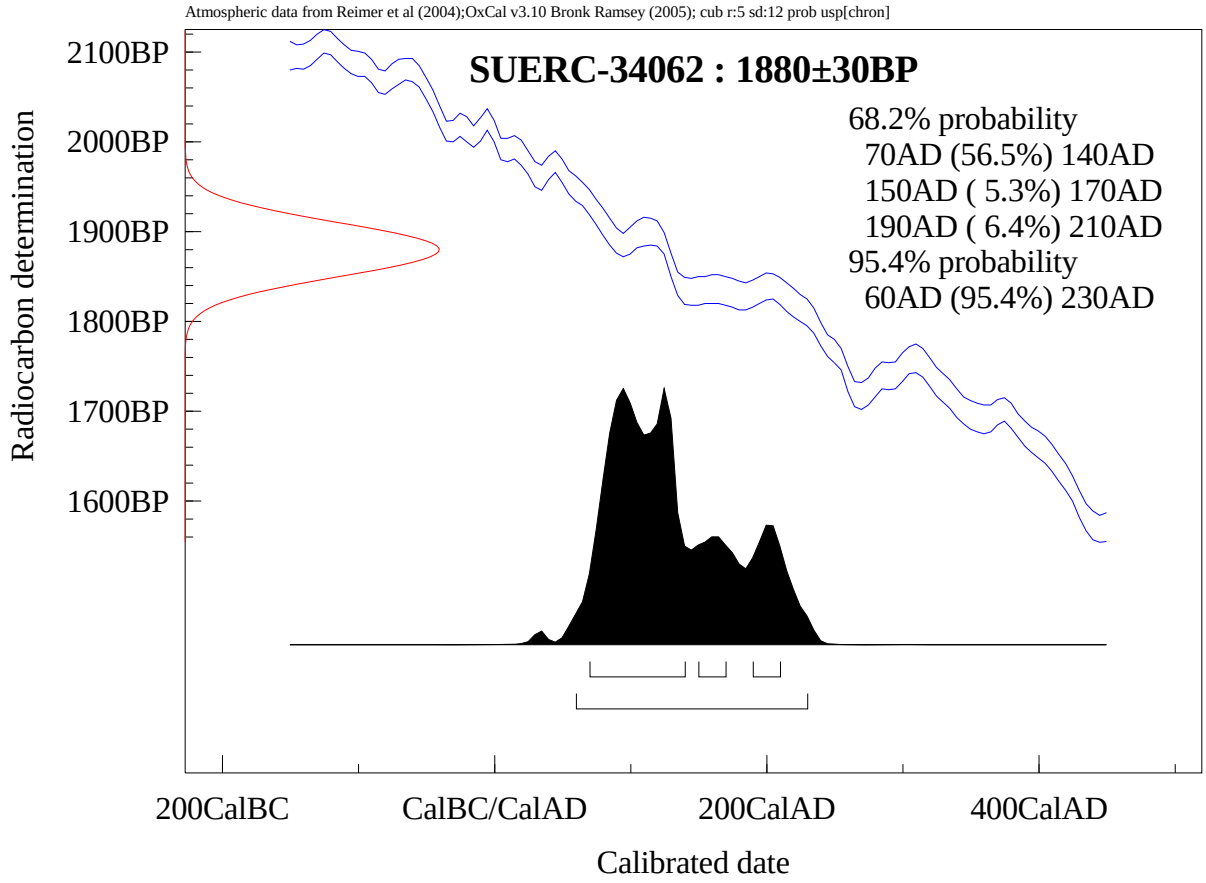
2. The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

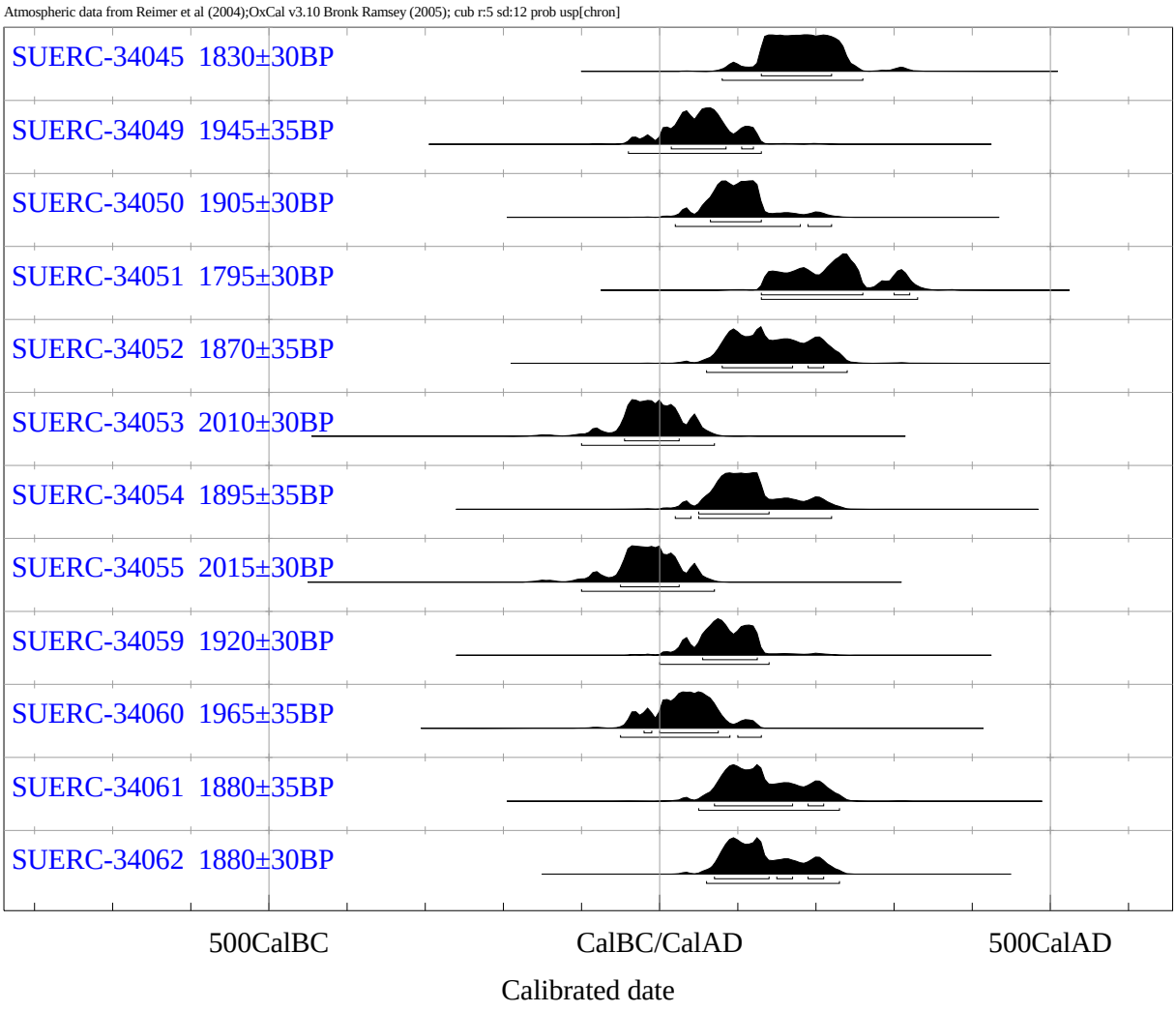
3. Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Conventional age and calibration age ranges calculated by :- Date :-

Checked and signed off by :- Date :-

Calibration Plot




Atmospheric data from Reimer et al (2004);OxCal v3.10 Bronk Ramsey (2005); cub r:5 sd:12 prob usp[chron]
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SUERC-34049 1945±35BP
SUERC-34050 1905±30BP
SUERC-34051 1795±30BP
SUERC-34052 1870±35BP
SUERC-34053 2010±30BP
SUERC-34054 1895±35BP
SUERC-34055 2015±30BP
SUERC-34059 1920±30BP
SUERC-34060 1965±35BP
SUERC-34061 1880±35BP
SUERC-34062 1880±30BP
500CalBC
CalBC/CalAD
500CalAD
Calibrated date

1.9 Table of radiocarbon results and posterior density estimates

Laboratory Code	**Sample ID**	**Material & context**	**$\delta^{13}C$ (‰)**	**Radiocarbon age (BP)**	**Calibrated date (95% confidence)**	***Posterior Density Estimate (95% probability)***
SUERC-34045	Context (2216), sample 43a	Carbonised, *Triticum* spp. grain from (2216) the fill of the roundhouse entrance posthole (2206)	-20.7	1830±30	cal AD 80-260	*cal AD 75-205*
SUERC-34049	Context (2216), sample 43b	Charcoal, *Corylus avellana* from (2216) the fill of the roundhouse entrance posthole (2206)	-25.1	1945±35	40 cal BC-cal AD 130	*cal AD 1-130*
SUERC-34050	Context (2074), sample 86	Charcoal, *Corylus avellana* from (2074) the wall of the oval structure	-28.1	1905±30	cal AD 20-210	*cal AD 25-215*
SUERC-34051	Context (2074), sample 88	Charcoal, *Corylus avellana* from (2074) the wall of the oval structure	-25.9	1795±30	cal AD 130-330	*cal AD 130-330*
SUERC-34052	Context (2130), sample 27	Charcoal, *Corylus avellana* from (2130) part of the central hearth of the roundhouse	-26.9	1870±35	cal AD 60-240	*cal AD 55-200*
SUERC-34053	Context (2108), sample 56	Charcoal, *Salix/Populus* from (2108) part of the central hearth of the roundhouse	-25.2	2010±30	90 cal BC-cal AD 70	*35 cal BC-cal AD 75*
SUERC-34054	Context (2202), sample 47	Charcoal, *Corylus avellana* from (2202) the fill of (2201) one of the northern posts of the paired posthole structure	-27.0	1895±35	cal AD 20-230	*cal AD 25-170*

Laboratory Code	**Sample ID**	**Material & context**	**$\delta^{13}C$ (‰)**	**Radiocarbon age (BP)**	**Calibrated date (95% confidence)**	***Posterior Density Estimate (95% probability)***
SUERC-34055	Context (2193), sample 38	Charcoal, *Corylus avellana* from (2193) the fill of (2194) one of the northern posts of the paired posthole structure	-27.7	2015±30	100 cal BC-cal AD 60	*40 cal BC-cal AD 75*
SUERC-34059	Context (2252), sample 60a	Charcoal, *Corylus avellana* from (2252) the fill of posthole (2250)	-28.1	1920±30	cal AD 20-140	*cal AD 20-135*
SUERC-34060	Context (2252), sample 60b	Charcoal, *Corylus avellana* from (2252) the fill of posthole (2250)	-26.2	1965±35	50 cal BC-cal AD 130	*20 cal BC-cal AD 125*
SUERC-34061	Context (2220), sample 44a	Charcoal, *Corylus avellana* from (2220) the fill of drainage pit (2219)	-26.0	1880±35	cal AD 50-240	*cal AD 50-190*
SUERC-34062	Context (2220), sample 44b	Charcoal, *Corylus avellana* from (2220) the fill of drainage pit (2219)	-26.0	1880±30	cal AD 60-230	*cal AD 50-185*

APPENDIX 2: QUANTIFICATION OF PAPER AND FINDS ARCHIVE

Site records

Context sheets	314
Plan and section drawings	103 drawings on 58 sheets
Digital photographs	555 shots
TST digital site plans	2

Environmental samples

Bulk samples	91
Hand collected charcoal samples (incorporated with relevant flots)	6

Finds

Animal bone or indistinguishable bone		19 bags none containing more than 2g of bone
Burnt clay		17 bags totalling 915g
Ceramics		
	Prehistoric pottery	1 sherd?
	Romano-British pottery	2 sherds
	Medieval pottery	14 sherds
	Post-medieval pottery	0
Knapped flints		4
Unworked flints		1
Crystal quartz		1
Iron objects		6
Melon Bead		1
Metalworking		0
Slag		3 bags totalling 1586g
Other worked stone objects		12
Unworked stone		8

APPENDIX 3: List of contexts

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
1000		Unstratified	Unstratified	Number for unstratified finds from area A			
1111	0	0		Number for working shot photos			
2001	Layer	Burnt stone spread	Originally 1st to 2nd century AD, but redeposited?	Concentration of burnt stones	Last phase of dumping associated with rectangular structure		
2002	Layer	Burnt stone spread	Originally 1st to 2nd century AD, but redeposited?	Concentration of burnt stones (same as 2001)			
2003	Layer	Overburden	Originally 1st to 2nd century AD, but redeposited?	Mixture of burnt and glacial stones	Possibly recent overburden not removed during de-turfing		
2004	Group	Clearance stones	Post medieval	Group number for large stones under (2001)	Probably clearance dump of large orthostats		
2005	Stones	Clearance stones	Post medieval	Very large stones	Very recently cleared boulders		
2006	Layer	Burnt stone spread	Originally 1st to 2nd century AD, but redeposited?	Area of burnt stone	Initially recorded as possibly same as (2001), but there is no clear unburnt stone layer under 2006, so it is probably not the same as the lastest burnt stone deposit.		
2007	Layer	Stone deposit	Post medieval?	Moderate sized stones	Stone deposit overlying structure A The relationship between 2007 and 2001 was not investigated but the plans indicate that there must have been a relationship and as 2001 was the first layer identified it is assumed that this overlay 2007 where they met.		
2008	Layer	Stone deposit	Post medieval?	Small to medium rounded cobbles and angular stones	Widespread deposit of unburnt stones in SW quad, possible dumping phase		
2009	Structure	Wall	1st to 2nd century AD	Large rounded stones	Upper part of core of roundhouse wall. This deposit is strictly between facing stones 2012 and 2015 in slot B and is not found elsewhere. Sections using this context for other layers are incorrect.		

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
2010	Structure	Wall	1st to 2nd century AD	Large sub-rounded stones	Probable tumble or clearance		
2011	Layer	Tumble	1st to 2nd century AD	Mixed stone in light brown matrix	Tumble of possible wall/revetment		
2012	Stone	Wall	1st to 2nd century AD	Large upright stone	In situ orthostat, part of face of roundhouse wall		
2013	Layer	Burnt stone spread	Originally 1st to 2nd century AD, but redeposited?	Very dark grey silty clay with burnt stone inclusions	Possibly part of revetment feature		
2014	Stone	Wall	1st to 2nd century AD	Large upright stone	Just a slightly larger stone in 2010		
2015	Stone	Wall	1st to 2nd century AD	Large upright stone	In situ orthostat, part of face of roundhouse wall		
2016	Stone	Wall	1st to 2nd century AD	Large flat stone of local material	Probably part of roundhouse wall face, seems to have been disturbed but probably hasn't moved far.		
2017	Layer	Surface	1st to 2nd century AD	Flat stones within dark greyish brown matrix	Possible paving		
2018	Layer	Topsoil	Post medieval?	General mixed stony soily deposit	Loose stone and base of topsoil. Recorded as same as 2011, but 2011 is specifically tumble from the roundhouse wall and 2018 is more general.		
2019	Structure	Wall	Prehistoric/Medieval?	Dark brown clay silt with medium and large rounded and sub-angular cobbles	East-west wall 15m S of suspected medieval longhouse		
2021	Structure		Prehistoric/Medieval?	Mid brown clay silt with approx 70% medium cobbles as facing stones and 70% small cobbles in core	North south wall		
2022	Layer		Prehistoric/Medieval?	Mid brown clayey silt with approx 40% medium and large cobbles	Demolition layer		
2023	Layer		Early Holocene	Mid orangey brown silt/sand beneath wall (2019)	Buried soil		
2024	Layer	Occupation layer	Originally 1st to 2nd century AD, but redeposited?	Dark greyish brown, very organic with some small burnt stones	Patch of organic material with a sherd of modern glass and some burnt stones. Part of the burnt stone spread.		

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
2025	Fill	Wall?	Pre-roundhouse?	Darkish brown silty clay with numerous medium sized stones	Stony fill of linear feature 2043		2043
2026	Layer	Relict soil	Early Holocene	Mid orangey brown silty clay with sand	Relict field soil predating all archaeology noted		
2027	Stone	Wall	1st to 2nd century AD	Line of stones	Possible wall facing or kerbing stones Lower part of roundhouse wall core with one possible facing stone. There is a rough line of three stones on same alignment as 2050 but no evidence that these are directly related.		
2028	Layer	Topsoil	Modern	Topsoil overburden			
2029	Stone	Natural boulder	Glacial	Very large sub-rounded boulder	Natural glacial deposit		
2032	Layer	Demolition layer?	Post medieval?	Dark brown clay silt with approx 40% small to medium sub-angular cobbles	Amorphous spread of demolition material		
2033	Layer		Post medieval?	Mid orangey brown clay silt with medium sub-rounded cobbles	Demolition layer		
2034	Layer	Tumble	Post medieval?	Light/Mid brown clay silt	Soil build-up below topsoil		
2035	Layer	Burnt stone spread	Originally 1st to 2nd century AD, but redeposited?	Patch of burnt stone	Patch of burnt stone separated from the main b/s deposit (2002)		
2036	Structure	Wall	1st to 2nd century AD	Medium to large stone deposit	Core of roundhouse wall. This number was also used for tumble to SE, but this has been renumbered 2283.		
2037	Layer	Stones	Glacial	Large Stones	Group of large stones		
2038	Layer	Burnt stone spread	Originally 1st to 2nd century AD, but redeposited?	Dark greyish brown silty loam with burnt stone and charcoal	Dumping material between walls (2050) and (2051)		
2039	Layer	Burnt stone spread	Originally 1st to 2nd century AD, but redeposited?	Mid greyish brown clayey silt	Initially thought to be within a shallow cut, possible result of attempts to dig out stone, but just more root disturbed part of 2049 and 2038		
2040	Layer	Burnt stone spread	Originally 1st to 2nd century AD, but redeposited?	Same as (2049)			
2041	Layer	Tumble	Post medieval?	General number for stone material under	General tumble deposit. 2011 is part of this.		

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
				burnt stones (2001) and (2002)			
2042	Layer	Relict soil	Early Holocene	Grey orange brown silty clay with large stone	Possible relict soil built up to create a mound with wall built upon it		
2043	Cut	Wall?	Pre-roundhouse?	Broad, fairly shallow straight linear hollow	Possible remains of a wall		
2044	Layer	Relict soil	Early Holocene	Orangey brown clayey silt	Relict soil above features in NW quad		
2045	Stone	Boulder	Glacial	Large flat stone	Large boulder embedded in 2145		
2046	Layer	Stone layer	Originally 1st to 2nd century AD, but redeposited?	Light greyish yellow gravelly/silty sand	Part of 2049, not the fill of a cut (JK)		
2047	Structure	Stone line	Medieval?	Mixed stone 0.15m-0.3m	Possible low division wall or part of wall collapse In photos (160) compared to section 2036,sh29 2047 seems to rest on 2049		
2048	Layer	Occupation deposit	1st to 2nd century AD	Mid orangey brown clayey silt with burnt stone	Contained along outer edge of wall (2050)		
2049	Layer	Burnt stone spread	Originally 1st to 2nd century AD, but redeposited?	Same as (2038)	General stony layer, containing burnt stone		
2050	Structure	Wall	1st to 2nd century AD	Stone with silty loam infill	Fairly slight line of stones, likely to be associated with (2051). Seems to form a revetment to 2144, possible field boundary. Junction with roundhouse wall was in the baulk and not investigated. 2050 seems to have run up to the wall and could be contemporary.		
2051	Structure	Wall	1st to 2nd century AD	N-S wall	Western wall to small enclosure.		
2052	Layer	Relict soil	Early Holocene	Firm orangey brown silty clay	Same as (2026) Photo shows this extending under wall stone 2015		
2053	Structure	Wall	1st to 2nd century AD	Medium to large rounded and sub-angular stones	Inner face of roundhouse wall		
2054	Cut	Drainage gully	1st to 2nd century AD	Ditch cut	Shallow ditch cut running north south Seems to be related to the internal drains 2241 and 2239 and probably the outlet for these.	2055	
2055	Fill	Drainage gully	1st to 2nd century AD	Fill of (2054)	Stony fill containing pot sherds		2054

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
2056	Layer	Relict soil	Early Holocene	Mid greyish brown clayey sand silt	Stony deposit overlying natural		
2057	Cut	Wall	Medieval?	Sharp cut with moderate slope	Shallow cut of possible wall Same as 2083	2058	
2058	Fill	Wall	Medieval?	Dark greyish brown sand and silt	Part of wall 2082 Same as 2082		2057
2059	Layer	Stone deposit	Post medieval?	Same as (2007)			
2060	Fill	Posthole	1st to 2nd century AD	Mid orangey brown clayey silt	Fill of post-hole (2061)		2061
2061	Cut	Posthole	1st to 2nd century AD	Circular cut with sharp break of slope	Post hole	2060	
2062	Stone	Wall	Medieval?	Large stone lying on relict soil	Possibly forms part of wall 2050		
2063	Fill	Ice wedge	Peri-glacial	Dark brown clayey silt	Fill of ice wedge		2064
2064	Cut	Ice wedge	Peri-glacial	Curvilinear feature, slightly concave sides	Reinterpreted as an ice wedge	2063	
2065	Fill	Ice wedge	Peri-glacial	Dark grey silty sand	Fill of (2066)		2066
2066	Cut	Ice wedge	Peri-glacial	Linear cut	Reinterpreted as an ice wedge		2064
2067	VOID	0		VOID			
2068	VOID	0		VOID			
2069	Fill	Ice wedge	Peri-glacial	Dark brown clayey silt with charcoal	Fill of ice wedge		2070
2070	Cut	Ice wedge	Peri-glacial	Circular cut with sharp vertical sides	Large posthole reinterpreted as an ice wedge	2069	
2071	Fill	Hollow	Unknown	Light brown sandy clay	Fill of shallow hollow		2072
2072	Cut	Hollow	Unknown	Small circular hollow	Probably natural	2071	
2073	Layer	Surface	1st to 2nd century AD	Compact spread of large and medium flattish sub-angular slabs	Paved area. Although difficult to tell 2073 from 2242 the former was removed to reveal coherent capstones, so 2073 seems to definitely overlie 2242. 2192 as part of 2073 definitely seals posthole 2206 and some slabs in this layer overlap significantly other postholes, although the post packing stones are often visible at about the same level, however the stones of 2073 are generally up higher than the packing stones. It is concluded that 2073 is later than most of the larger postholes.		
2074	Structure	Wall	Medieval?	Very dark grey clay silt 80% medium to large sub-angular cobbles	Southern half of oval house wall SUERC-34050 (GU-23784): 20 AD-220 AD SUERC-34051 (GU-23785): 130 AD-330 AD		

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
2076	Cut	Non-feature	Peri-glacial	Sub circular shallow cut	Probably not a real feature, just disturbance around the boulder		
2077	Cut	Disturbance hollow	Unknown	Sub circular cut	Probably not a real feature, just disturbance around the boulder		
2078	Fill	Posthole	1st to 2nd century AD	Same as (2136)	Fill of posthole		2080
2079	Fill	Posthole	1st to 2nd century AD	Same as (2136)	stone lining of posthole		2080
2080	Cut	Posthole	1st to 2nd century AD	Same as (2135)	posthole	2079, 2078	
2081	Layer	Surface	Medieval?	Firm orangey brown with large flat stones (60%)	Possible rough surface or wall collapse		
2082	Fill	Oval house wall	Medieval?	Densely packed small and medium stones	Wall of oval structure		2083
2083	Cut?	Wall	Medieval?	Shallow cut only visible in places	Cut for wall of oval structure. Uncertain if this was a real cut or just variation in the deposits near the stones. It was only marked on plan in a short arc long the NE side of the oval structure and where recorded in section it is not very convincing.	2082	
2084	Layer	Occupation deposit?	1st to 2nd century AD	Firm mid grey/orangey brown clay silt with fire cracked stones	Section 2029 is rather deceptive and suggests that wall 2051 lay on this layer, however photographs with 2084 removed show that the stones of 2051 rested on natural not on 2084. There are also photos of sections not drawn that clearly show 2084 built up against 2051. This therefore seems to be a dumped or accumulated layer largely restricted to the small enclosure.		
2085	Fill	Ice wedge	Peri-glacial	Six large stones	Stones moved into ice wedge through frost action		2070
2086	Layer	Surface	1st to 2nd century AD	Yellow and grey silt, gravel and clay. Iron pan	In some ways this appears to be natural alteration at surface of subsoil, but it contained large quantities of burnt clay. None of this was identified as being definitely in situ but it did seem to be present in patches and this may be the remains of a clay floor or large hearth. The flat surfaces of the clay suggest a floor or prepared hearth surface.		
2087	VOID	0		VOID			
2088	Deposit	Charcoal	Unknown	Charcoal spread	Possible patch of burnt vegetation clearance		

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
		patch					
2089	Fill	Pit	1st to 2nd century AD?	Brown and very dark grey silt with burnt stone inclusions	Fill of pit 2090, with burnt stone		2090
2090	Cut	Pit	1st to 2nd century AD?	Pit	Pit with a large stone on edge next to it but the stone seems to be in the natural. This feature was recorded as a hearth but there is no in situ burning or extensive charcoal layers or anything to indicate that it was a hearth (JK 10/12/2010)	2089	
2091	Fill	Ice wedge	Peri-glacial	Dark brown clayey silt	Fill of probable ice wedge		2092
2092	Cut	Ice wedge	Peri-glacial	Curvilinear feature	Probable ice wedge	2091	
2093	wall	Relict soil	1st to 2nd century AD	Firm mid brown clayey silt	Described as deposit lying around and between stones of 2053, i.e. it overlies 2053 Soil in fill of 2053		
2094	Fill	Ice wedge	Peri-glacial	Firm orange silty sand	Fill of ice wedge		2064
2095	Layer	Stone heap?	1st to 2nd century AD	Friable mid brown silty clay with numerous densely packed stones, some burnt.	Described on context sheet as tumble from wall/revetment (2284), but charcoal burnt bone and burnt clay suggests something else. The section was unclear and critical information had not been added, as if part of the section was obscured, despite the section itself having been cut back fully as shown on the photographs. The photographs of the section show 2095 as a dense heap of stones revetted by 2287 on the S side and fading away on the north side. The stones seem to have been heaped against the large stone in 2287 but other flat stones also seem to have been carefully placed as part of a possible wall core. This deposit is not the same as occasional tumbled stones to the S side of 2287. It is possible that this is an in situ remnant of a burnt stone heap related to activity W of the roundhouse entrance. Cereal grains in the deposit suggest a date contemporary with the roundhouse.		
2096	Structure	Wall	1st to 2nd century AD	Tightly packed large boulders	Outer face of roundhouse wall There was some confusion in recording this feature. It was initially interpreted as running NE-SW and then turning at SW end towards W. However these are two very different features merged together. The NE-SW section is the outer face of the roundhouse. The E-W section is very much slighter and probably part of the later small enclosure. The latter has been renumbered 2284 but some records for 2096 will refer to this. In particular it is likely that all samples and probably most finds come from 2284 not from 2096.		

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
2097	Layer	Occupation deposit?	1st to 2nd century AD	Firm mid orangey brown clay silt with numerous stones many of which were heat fractured.	This was described as being similar to 2084 and although it is similar to the natural stony colluvium that forms in this area it does seem to have post-dated wall 2051. The section is unclear on this and it was originally thought that 2051 was cut into 2097, but removal of 2097 in plan (see photo 233, 421-423) exposed more of the in situ remains of 2051 and showed 2097 to have been built up against the one remaining W facing stone of this wall. This puts it in the same stratigraphic position as 2084 and suggests that it was anthropogenic.		
2098	Cut	Non-feature?		Concave ditch (seen only in section)	Possible cut into relic soil, possible foundation trench for wall 2051. Actually probably not a real feature. See 2099.	2099	
2099	Fill	Surface?	1st to 2nd century AD?	Firm mixed grey orange gravel/sand clay	Fill of possible foundation trench (2098) After 2086 was removed in plan the interface with 2100 was seen to slope down under 2051. It seems that 2099 was part of 2086 and is not the fill of a separate cut.		2098
2100	Layer	Relict soil	Early Holocene	Light brownish orange clayey silt	Relic soil, general spread across most of SW area		
2101	Layer	Tumble	Post medieval?	Mixed size of tumble stones	Tumble from wall 2051		
2102	Layer	Relict soil	Early Holocene	Same as (2100)			
2103	Layer	Boulder clay	Glacial	Firm mid yellowish brown clay and gravel	Natural glacial subsoil		
2104	Cut	Gully	Pre-roundhouse	Narrow gully with gently sloping sides	Small gully under wall close to hearth, shown in both sides of pipe trench cut	2106, 2105	
2105	Fill	Gully	Pre-roundhouse	Loose mid orangey brown sandy silt	Upper fill of gully (2104)		2104
2106	Fill	Gully	Pre-roundhouse	Loose light orangey brown silty clay	Basal fill of gully (2104)		2104
2107	Cut	Hearth	1st to 2nd century AD	Sub circular pit with moderate break of slope	Cut of probable hearth	2108, 2249, 2109	
2108	Fill	Hearth	1st to 2nd century AD	Dark greyish brown sandy silt	Basal fill of hearth (2107) SUERC-34053 (GU-23787): 100 BC-70 AD		2107
2109	Fill	Hearth	1st to 2nd century AD	Dark greyish brown sandy silt	Upper fill of hearth (2107)		2107
2110	Structure	Wall	1st to 2nd century AD	Dark orangey brown clay silt with 50% large sub-rounded stones	Wall core?		
2111	Cut	Posthole	1st to 2nd century AD?	Irregular shallow posthole	Posthole with packing stones	2112	

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
2112	Fill	Posthole	1st to 2nd century AD?	Light orangey brown silty clay with one large upright packing stone	Post hole		2111
2113	Cut	Posthole	1st to 2nd century AD	Sub circular cut with sharp break of slope with concave sides	Post hole	2114, 2115	
2114	Fill	Posthole	1st to 2nd century AD	Medium flat angular and sub-angular stones up to 0.3m high	Packing stones within posthole		2113
2115	Fill	Posthole	1st to 2nd century AD	Mid greyish brown clayey silt	Fill of post hole (2113)		2113
2116	group	Ice polygons	Peri-glacial	General number for oval shaped house in NW quadrant	Group number for ice polygons in NW quad of the site		
2117	Cut	Posthole	1st to 2nd century AD	Sub oval posthole with several large stones	Posthole	2235, 2236, 2259	
2118	Cut	Linear hollow	Unknown	Linear hollow running NW-SE	Vague, poorly defined hollow, probably natural	2267	
2119	Structure	Doorway slabs	Medieval?	Flat, angular slabs, largest 0.9m by 0.15m by 0.07m	Stone slabs forming oval house doorway		
2120	Layer	Burnt stone layer	Medieval?	Greyish brown fine loamy silt with burnt stone	Burnt rubble overlying doorway		
2121	Cut	Posthole	1st to 2nd century AD	Circular posthole with steep and fairly regular sides	Circular posthole with large packing stones	2180, 2178, 2156, 2122	
2122	Fill	Posthole	1st to 2nd century AD	Dark greyish brown loamy silt with large packing stones	Fill of (2121) Sealed by stones of 2073		2121
2123	Cut	Posthole	1st to 2nd century AD	Oval posthole with steep sides	Cut of posthole	2124, 2176, 2175, 2174, 2177	
2124	Fill	Posthole	1st to 2nd century AD	Dark grey brown clay silt	Fill of (2123) Probably sealed by 2073		2123
2125	Fill	Pit	1st to 2nd century AD?	Dark brown silty sand	Fill of pit (2126)		2126
2126	Cut	Pit	1st to 2nd century AD?	Circular pit	Pit in NW corner of site	2125	

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
2127	VOID	0		VOID			
2128	Cut	Irregular feature	Unknown	Irregular uneven cut	Possibly natural feature	2129	
2129	Fill	Irregular feature	Unknown	Dark brown silty clay	Fill of 2128		2128
2130	Fill	Hearth	1st to 2nd century AD	Soft black silt with frequent charcoal flecks and burnt bone	Fill of (2141), remains of hearth deposit This hearth could relate to the roundhouse but very hard to determine relationship with wall 2082. Roman pot suggests it belongs to the earlier building but the strat may suggest it belongs to the later one. Relationships in this area were very uncertain because the deposits were thin and root disturbed. The hearth is provisionally shown on the matrix as being below wall 2082 but the relationships as recorded on site are listed here. The radiocarbon dates may help clarify this. SUERC-34052 (GU-23786): 60 AD-240 AD		2141
2131	Stone	Boulder	Glacial	Large rock			
2134	Layer	Layer	Early Holocene	Bright orange clay	Relict soil		
2135	Cut	Posthole	1st to 2nd century AD	Circular cut with smooth sides and concave base	Posthole	2136, 2139	
2136	Fill	Posthole	1st to 2nd century AD	Cobble stones up to 0.39m in diameter	Stone packing fill of posthole (2135)		2135
2137	Layer	Charcoal lens	1st to 2nd century AD	Lens of charcoal rich material	Described as a "slight drag spread from the wall" and interpreted as not being a real feature, but packed with charcoal. Within 2138		
2138	Layer	Charcoal patch	1st to 2nd century AD	Dark soil containing lens rich in charcoal (2137).	Dark soil spread, not properly investigated and voided as not a real feature. However it was drawn in section and it seems likely that it was related to hearth 2107. It was probably under wall 2082 but this cannot now be proved. Little of the wall survived at this point so the relationship is very uncertain. The presence of hazel charcoal and some cereal grains in 2137 supports the association with the hearth.		
2139	Fill	Posthole	1st to 2nd century AD	Mid orangey brown clayey silt	Fill of posthole (2135)		2135
2140	Layer	Layer	Early Holocene	Yellowish green sandy clay	Lens of redeposited natural under wall structure		

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
2141	Cut	Hearth	1st to 2nd century AD	Polygonal cut with varied break of slope	Cut for hearth structure	2142, 2130	
2142	Structure	Hearth	1st to 2nd century AD	Dark brown silty clay with 80% angular cobbles (up to 0.45m across)	Structure of hearth in cut (2141)		2141
2143	Fill	Hearth	1st to 2nd century AD	Small to medium burnt stone (90%) in dark brown clay silt	Burnt stone layer within hearth structure		2141
2144	Layer	Layer	1st to 2nd century AD	Mid orange brown clay silt with sand and frequent stone (75%)	Burnt material contained within walls (2050) and (2051). Probably the same as 2084, and like that probably built up against the revetment 2050.		
2145	Layer	Relict soil	Early Holocene	Mottled orangey brown and light yellowish clayey silt	Mixed deposit under large stone (2045)		
2146	Cut	Disturbance hollow	Unknown	Same as (2077)			
2147	Layer	Layer	1st to 2nd century AD	Light orangey yellow clayey sand and silt	Thin layer of re-deposited natural containing iron pan		
2148	Layer	OGS?	Early Holocene	Dark orangey/grey brown silty clay	Deposit running under wall 2050, contains some domestic rubbish mixed in but probably basically the OGS. However has some similarities to 2086 and although thicker in places and extending beyond 2050. Probably material dumped beyond the wall that has been incorporated into the soil surface.		
2149	Cut	Posthole	1st to 2nd century AD	Sub-circular cut with sharp break of slope and flat base	Internal post hole within roundhouse	2150, 2151	
2150	Fill	Posthole	1st to 2nd century AD	Three schist cobble stones	Post packing for posthole		2149
2151	Fill	Posthole	1st to 2nd century AD	Light beige brown clay silt with occasional charcoal flecks	Fill of posthole (2149)		2149
2152	Fill	Non feature	Peri-glacial	Dark brown silty sand	Fill of non feature		2153
2153	Cut	Non-feature	Peri-glacial	Small pit	Entirely unconvincing. Variation in 2044 between two large boulders.	2152	
2154	Fill	Natural hollow	Peri-glacial	Mid reddish brown silty clay	Fill of (2155)		2155
2155	Cut?	Natural	Peri-glacial	Irregular hollow		2154	

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
		hollow					
2156	Fill	Posthole	1st to 2nd century AD	Sub rectangular stones	Post packing of posthole (2121)		2121
2157	Fill	Pit	1st to 2nd century AD?	Brown silty sand	Fill of pit/natural hollow (2158) Seems to under lie stones related to 2284.		2158
2158	Cut	Pit	1st to 2nd century AD?	Probably sub-circular cut, but not fully exposed. With sharp break of slope and rounded base	Small pit or natural hollow cut into (2044)	2157	
2159	Fill	Drain/gully	1st to 2nd century AD	Capstones	Covering for drain (2161)		2161
2160	Fill	Drainage gully	1st to 2nd century AD	Dark brown silty sand and clay	Tertiary fill of gully, probably silting up		2161
2161	Cut	Drain/gully	1st to 2nd century AD	Curvilinear gully with sharp break of slope and moderately steep sides	Cut of ditch filled with three shallow deposits Part of capped inner roundhouse drain	2214, 2215, 2160, 2159, 2219, 2225	
2162	Fill	Posthole	1st to 2nd century AD	Dark brown clayey silt	Fill of post hole (2164)		2164
2163	Fill	Posthole	1st to 2nd century AD	Stones	Stone lining of posthole (2164)		2164
2164	Cut	Posthole	1st to 2nd century AD	Circular cut with sharp break of slope and somewhat concave sides	Large post hole	2187, 2163, 2162	
2165	Cut	Posthole	1st to 2nd century AD	Circular cut with sudden break of slope	Posthole near roundhouse hearth	2179, 2166, 2167	
2166	Fill	Posthole	1st to 2nd century AD	Cobble stones (up to 0.3m by 0.06m by 0.03m))	Post-packing within posthole (2165)		2165
2167	Fill	Posthole	1st to 2nd century AD	Very dark brown clayey silt with charcoal inclusions	Fill within posthole (2165)		2165
2168	Cut	Ice wedge	Peri-glacial	Linear trench with sharp break of slope and 45 degree angle sides	Reinterpreted as an ice wedge. Probably contemporary with the development of 2100 rather than cutting it.	2260, 2172, 2261	
2169	Fill	Hollow	Unknown	Dark yellowish grey clay silt	Reinterpreted as fill of hollow caused by root disturbance		2281

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
					around boulder 2170		
2170	Stone	Boulder	Glacial	Large boulder	Natural deposit		
2171	Layer	Hollow	Unknown	Light orange/mixed brown gravelly clay	Probably re-deposited natural within area of disturbance		2281
2172	Fill	Ice wedge	Peri-glacial	Bright yellow gravelly clay	Fill of ice wedge (2168)		2168
2173	Layer	Layer	Medieval?	Dark orangey brown clay silt with medium to large flat stones <60%	Area of flat stones. Same as (2081)		
2174	Fill	Posthole	1st to 2nd century AD	Flat oval schist stone	Post pad within posthole (2123)		2123
2175	Fill	Posthole	1st to 2nd century AD	Large sub rounded upright stones	Stone packing within posthole (2123)		2123
2176	Fill	Posthole	1st to 2nd century AD	Oval flat stone filling central void between packing stones (2175)	Possible upper post pad in (2123)???		2123
2177	Fill	Posthole	1st to 2nd century AD	Firm orangey brown sandy silt	Basal fill of (2123)		2123
2178	Fill	Posthole	1st to 2nd century AD	Orangey brown sandy clay	Fill of posthole (2121)		2121
2179	Fill	Posthole	1st to 2nd century AD	Schist cobbles	Post pad material within posthole (2165)		2165
2180	Fill	Posthole	1st to 2nd century AD	Sub rounded stones	Packing stones within posthole (21212)		2121
2181	Cut	Wall?	1st to 2nd century AD	Linear cut	Possible wall trench	2182	
2182	Structure	Wall	1st to 2nd century AD	Boulders	Forms revetment walling to northern end of excavation Possible wall running from roundhouse wall but may just be stone dumping.		2181
2183	Cut	Posthole	1st to 2nd century AD	Cut with sharp break of slope	Cut for posthole	2184, 2185	
2184	Fill	Posthole	1st to 2nd century AD	Stones	Post packing for posthole (2183)		2183
2185	Fill	Posthole	1st to 2nd century	Mid greyish brown clayey silt	Fill of posthole (2183)		2183

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
			AD				
2186	Layer	Tumble	Medieval?	Stony spread	Stony spread below topsoil (2028)		
2187	Fill	Posthole	1st to 2nd century AD	Mid greyish silty clay	Primary fill of posthole (2164)		2164
2188	Cut	Posthole	1st to 2nd century AD	Cut with sharp break of slope	Cut for posthole	2189	
2189	Fill	Posthole	1st to 2nd century AD	Greyish brown clay silt	Fill of posthole (2188)		2188
2190	Cut	Stake/posthole	1st to 2nd century AD	Circular cut with steep sides	Stakehole or small posthole	2191	
2191	Fill	Stake/posthole	1st to 2nd century AD	Dark grey silty clay with charcoal	Fill of (2190)		2190
2192	Layer	Flat stones	1st to 2nd century AD	Sandy silt with medium to large rounded boulders and flat slabs	Relict remains of structure or continuation of flat stone layer 2073. Definitely seals posthole 2206. Probably same as 2073, layer 2017 joins them.		
2193	Fill	Posthole	1st to 2nd century AD	Mid greyish brown sandy clay	Fill of small posthole (2194) SUERC-34055 (GU-23789): 100 BC-70 AD		2194
2194	Cut	Posthole	1st to 2nd century AD	Oval cut with sharp break of slope	Cut of small posthole	2193, 2204	
2195	Fill	Linear hollow	Early Holocene	Mid brown silty sand with frequent stone inclusions	Stony fill of linear feature		2196
2196	Cut	Linear hollow	Early Holocene	Linear hollow	Seems to be above 2044 and probably due to colluvium collecting in natural linear hollow	2195	
2197	Fill	Ice polygon	Peri-glacial	Mid brown silty sand	gully fill		2198
2198	Cut	Ice polygon	Peri-glacial	Linear cut	Probable ice wedge or patterned ground	2197	
2199	Fill	Wall	1st to 2nd century AD	Mid brown silty sand	Fill of possible trench for wall 2096. Built up against 2096. Possibly more likely to be part of 2095. The presence of cereal grains supports this.		2200
2200	Cut	Wall	1st to 2nd century AD	Linear cut	Possible trench/terrace cut for wall 2096	2199, 2096	
2201	Cut	Posthole	1st to 2nd century	Circular cut with steep break of slope	Large round posthole lined with upright packing stones	2203, 2202	

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
			AD				
2202	Fill	Posthole	1st to 2nd century AD	Mid orangey brown clayish silt	Upper fill of posthole (2201)] SUERC-34054 (GU-23788): 20 AD-220 AD		2201
2203	Fill	Posthole	1st to 2nd century AD	Large flat slab stones	Post packing stones within (2201)		2201
2204	Fill	Posthole	1st to 2nd century AD	Three flat upright slabs	Post packing stones within (2194)		2194
2205	Cut	Posthole	1st to 2nd century AD	Sub-rectangular cut with rounded sides	Medium posthole containing packing stones	2229, 2228, 2207	
2206	Cut	Posthole	1st to 2nd century AD	Sub circular cut with sharp break of slope and smooth sides	Posthole. One of the 4 large entrance postholes to the roundhouse.	2208,2216	
2207	Fill	Posthole	1st to 2nd century AD	Dark greyish brown sandy silt	Upper fill of posthole (2205) May be earlier then 2192 but very difficult to be sure.		2205
2208	Fill	Posthole	1st to 2nd century AD	Mid greyish brown silty clay	Upper fill of posthole (2206)		2206
2209	Cut	Posthole	1st to 2nd century AD	Sub circular cut with sharp break of slope	Possible posthole cut under wall of roundhouse	2210	
2210	Fill	Posthole	1st to 2nd century AD	Dark brown fine silt	Charcoal rich fill of (2209)		2209
2211	Cut	Posthole	1st to 2nd century AD	Steep and rounded cut	Posthole cut west of (2201) and Adjoining (2223)	2212,2213	
2212	Fill	Posthole	1st to 2nd century AD	Stones	Packing stones in posthole (2211)		2211
2213	Fill	Posthole	1st to 2nd century AD	Mid orangey brown clayey silt	Posthole fill (2211)		2211
2214	Fill	Drain/gully	1st to 2nd century AD	Mid brownish orange sandy clay	Primary fill of curving gully (2161) Layer of iron-panning		2161
2215	Fill	Drain/gully	1st to 2nd century AD	Mid brown sandy silty clay	Secondary fill of gully (2161)		2161

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
2216	Fill	Posthole	1st to 2nd century AD	Light orangey brown sandy silt	Basal fill of posthole (2206) with possible post packing. SUERC-34045 (GU-23782): 80 AD-260 AD SUERC-34049 (GU-23783): 40 BC-130 AD		2206
2217	Fill	Linear hollow	Peri-glacial	Mid brown silty sand fill of (2218)	Fill of linear hollow (2218)		2218
2218	Cut	Curvilinear hollow	Peri-glacial	Concave linear cut	Probable peri-glacial feature	2217	
2219	Cut	Pit	1st to 2nd century AD	Bowl-shaped sub-oval cut with sharp top break of slope	Bowl-shaped pit with traces of stone lining. Other stones may have been inserted during or at the end of its use. Two large stone seem to be wedged against the end of the drain 2161 as if deliberately blocking this. These were at one point thought to be packing stones and that 2219 was a large posthole. In this interpretation 2219 must have cut the drain as the stones projected well above the level of the cap stones. However if these stones were inserted to block the drain they may have been left projecting well above the level from which the pit was dug. It seems probable that this was a stone-lined pit constructed and used with the drain.	2225, 2226, 2227, 2220, 2234	
2220	Fill	Pit	1st to 2nd century AD	Dark greyish brown sandy clay	Tertiary fill of pit (2219) SUERC-34061 (GU-23792): 50 AD-230 AD SUERC-34062 (GU-23793): 60 AD-230 AD		2219
2222	Fill	Posthole	1st to 2nd century AD	Dark orangey brown silty clay	Basal fill of posthole (2201)		2201
2223	Cut	Posthole	1st to 2nd century AD	Sub oval cut with sharp break of slope	Cut for posthole, truncated by water pipe trench	2224	
2224	Fill	Posthole	1st to 2nd century AD	Mid greyish brown silty clay	Fill of posthole (2223)		2223
2225	Fill	Pit	1st to 2nd century AD	Dark reddish brown sandy clay with one flat stone embedded in the S side of the pit.	Thin layer lining pit (2219). Includes a single stone that seems to be the in situ remnant of a stone lining.		2219
2226	Fill	Pit	1st to 2nd century AD	Mid brownish grey sandy clay	Secondary fill of pit (2219)		2219
2227	Fill	Pit	1st to 2nd century AD	2 stones up to 0.35m long set on edge within the partly infilled pit	Stone post packing of posthole/pit (2219)		2219
2228	Fill	Posthole	1st to 2nd century AD	Stones	Stone post packing of posthole (2205)		2205

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
2229	Fill	Posthole	1st to 2nd century AD	Mid orangey brown silty clay	Backfill for post packing in posthole (2205)		2205
2232	Cut	Posthole	1st to 2nd century AD	Sub-rectangular cut with rounded corners and sharp break of slope	Posthole	2233	
2233	Fill	Posthole	1st to 2nd century AD	Mid orangey brown silty clay	Fill of posthole (2233) This is definitely covered by slabs in 2192 but it is unclear whether 2205 is sealed by these.		2232
2234	Fill	Pit	1st to 2nd century AD	Dark greyish brown sandy clay	Deposit around the stones inserted in pit (2219). Same as 2220.		2219
2235	Fill	Posthole	1st to 2nd century AD	Orangey brown silty clay	Secondary fill of posthole (2217)		2117
2236	Fill	Posthole	1st to 2nd century AD	Pinky brown clayey silt	Primary fill of posthole (2217)		2117
2237	Cut	Probable glacial feature	Peri-glacial	Sub-rectangular patch with gradual break of slope and imperceptible clarity of interface	Glacial feature	2238	
2238	Fill	Probable glacial feature	Peri-glacial	Mid brown silty clay	Glacial fill		2237
2239	Cut	Drainage gully	1st to 2nd century AD	Curving cut with sharp break of slope	Roundhouse gully running beneath roundhouse wall (2074) to the south of the house	2263,2240	
2240	Fill	Drainage gully	1st to 2nd century AD	Mid brown clay silt with occasional charcoal	gully silting up		2239
2241	Cut	Drainage gully	1st to 2nd century AD	Curving cut with rounded corners and sharp break of slope	Cut of roundhouse drainage gully	2242, 2277, 2278	
2242	Structure	Drainage gully	1st to 2nd century AD	Same as (2239)	Capstones of drainage gully		2241
2243	Fill	Posthole	1st to 2nd century AD	Stone	Post packing within posthole (2117)		2117
2244	Fill	Posthole	1st to 2nd century AD?	Light yellowish brown silty clay	Fill of posthole (2245)		2245
2245	Cut	Posthole	1st to 2nd century	Oval cut with rounded corners and sharp break of slope	Posthole Under pipe trench so presumably very truncated. Seemed to be quite convincing, not just a hole caused by a	2244	

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
			AD?		stone in the trench fill. Particularly the packing stone remaining upright suggests the lower part of the feature is undisturbed.		
2246	Cut	Posthole	1st to 2nd century AD		Post hole	2276,2275	
2247	Cut	Gully	Pre-roundhouse?	Linear cut with sharp break of slope	North-south probable gully	2256	
2248	Cut	Drain/gully	1st to 2nd century AD	Sinuous cut with moderate break of slope	Gully, inner drain of roundhouse. Probably the same as (2161)	2257	
2249	Fill	Hearth	1st to 2nd century AD	Stones	Probable side slab in hearth (2107)		2107
2250	Cut	Posthole	1st to 2nd century AD	Sub-circular cut with sharp break of slope	Posthole beneath oval house wall	2251,2252	
2251	Fill	Posthole	1st to 2nd century AD	Schist sub angular cobbles	Post packing within Posthole (2250)		2250
2252	Fill	Posthole	1st to 2nd century AD	Dark brown clayey silt	Fill of posthole (2250) SUERC-34059 (GU-23790): AD-140 AD SUERC-34060 (GU-23791): 50 BC-130 AD		2250
2253	Fill	Posthole	1st to 2nd century AD	Dark greyish brown sandy clay with occasional charcoal flecks	Fill of posthole (2255)		2255
2254	Fill	Posthole	1st to 2nd century AD	Stones	Post packing for posthole (2255)		2255
2255	Cut	Posthole	1st to 2nd century AD	Sub oval cut with sharp break of slope	Posthole	2253,2254	
2256	Fill	Gully	Pre-roundhouse?	Mid orangey brown sandy silt and clay	Fill of gully (2247)		2247
2257	Fill	Drainage gully	1st to 2nd century AD	Dark orangey brown silty clay	Fill of gully (2248) Contained the melon bead		2248
2258	Structure	Wall	Post medieval?	Medium to large rounded and sub-angular stones, several large flat slabs	A small number of large stones overlying the edge of the wall 2082. Some of these seem to be quite carefully placed but they may have come from the nearby section of roundhouse wall and essentially be part of 2283. They do not seem to directly cover 2257.		
2259	Layer	Posthole	1st to 2nd century AD	Dark brown silty clay with charcoal	Lens of darker material within posthole (2117)		2117

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
2260	Fill	Ice wedge	Peri-glacial	Dark brownish grey clayey silt	Fill of ice wedge (2168)		2168
2261	Fill	Ice wedge	Peri-glacial	Dark orangey brown clayey silt	Fill of ice wedge (2168)		2168
2262	Layer	Wall	1st to 2nd century AD	Dark greyish brown silty loam with occasional burnt stone	Material within wall (2050). Does seem to have built up over and around the wall		
2263	Structure	Gully	1st to 2nd century AD	Medium to large flat angular slabs	Capstones of gully (2239)		2239
2265	Cut	Gully	Pre-roundhouse?	Very shallow linear cut	Small drainage gully, running from boulder (2131) towards gully (2248)	2266	
2266	Fill	Gully	Pre-roundhouse?	Dark orangey brown silty clay	Fill of very shallow drainage gully (2265)		2265
2267	Fill	Linear hollow	Unknown	Mid reddish brown silty clay	Probable fill of a natural hollow		2118
2268	Fill	Posthole	1st to 2nd century AD	Stones set vertically against the sides of posthole 2279	Packing stones in posthole. It was considered that these were part of a lining of drain 2241, but this has no side stones elsewhere and normally has sloping sides, not near vertical as here, so it is probable that 2279 is a genuine posthole cutting 2241.		2279
2269	Cut	Posthole	1st to 2nd century AD	Circular cut with sharp break of slope	Posthole, adjacent to ditch (2239)	2270	
2270	Fill	Posthole	1st to 2nd century AD	Mid orangey brown silty clay	Fill of posthole (2269)		2269
2271	Cut	Gully	Pre-roundhouse?	Linear cut with sharp break of slope	Gully, same as (2247)	2272	
2272	Fill	Gully	Pre-roundhouse?	Mid orangey brown sandy clay and silt	Silted Fill of gully (2271)		2271
2273	Cut	Gully	Pre-roundhouse?	Cut with sharp break of slope	Shallow narrow gully	2274	
2274	Fill	Gully	Pre-roundhouse?	Light greyish brown clayey silt	Fill of (2273)		2273
2275	Fill	Posthole	1st to 2nd century AD	Mid brown silty clay	Fill of (2246) Probably sealed by 2073		2246
2276	Fill	Posthole	1st to 2nd century AD	Stones	Fill of posthole (2246)		2246
2277	Fill	Drainage gully	1st to 2nd century AD	Dark greyish brown sandy silt	Upper silting of gully (2241)		2241
2278	Fill	Gully	1st to 2nd century	Greenish grey sandy silt	Primary fill of gully (2241)		2242

Context No	Context type	Feature type	Period	Description	Interpretation	Filled by	Fills
			AD				
2279	Cut	Posthole	1st to 2nd century AD	Sub-oval cut with sharp break of slope	Posthole	2268,2280	
2280	Fill	Posthole	1st to 2nd century AD	Mid greyish brown silty clay	Fill of posthole (2279)		2279
2281	Cut	Hollow	Unknown	Roughly circular hollow	This feature has been reinterpreted as an area of root disturbance around the boulder 2170. But is probably located at the corner of the small enclosure and might be related to that.	2171, 2169	
2282	stone	Stone	Peri-glacial	Stone	Large stone resting on relict soil rather than embedded in natural Seems to have been dumped with 2144		
2283	Layer	Tumble	Medieval?	Medium sized stones along SE side of wall 2053 and heaped up against the natural boulder 2131.	Probably largely tumble from wall 2053 but some may also be field clearance. These stones were originally included with 2036 but they seem to be stratigraphically and functionally different.		
2284	Structure	Wall	1st to 2nd century AD	Rather loose and haphazard linear spread of stone with occasional larger pieces up to 1m in length but mainly composed of small sub-angular stones. Runs W from roundhouse wall for about 8m with hints at W end that it curved S down the hill slope. Areas largely free of stones to N and S.	Very disturbed and denuded remains of a wall or revetment. Possibly continues as 2051 S of the pipe trench where it is much better preserved.		
2285	Structure	Wall?	Medieval?	Slight line of stones no more than 0.5m long. There is a clear stone-free gap between these and 2284.	Possible kerb to the flagged surface inside the small enclosure, or part of collapsed deposits		
2286	Structure	Wall	1st to 2nd century AD	Single stone laid flat under general dump/collapse of stones (2265).	Almost certainly one of the few in situ facing stones of the roundhouse wall surviving E of boulder 2131.		
2287	Structure	Wall?	1st to 2nd century AD	Large stone set horizontally on the OGS and perpendicular to the roundhouse wall, projecting to the W. One stone high up in the layers may also have rested on this.	Stone that seems so securely set that it looks structural. The position in relation to the roundhouse wall also suggests that it is related to this. May be the start of a wall, possibly an early version of the small enclosure, or in fact part of this and suggesting that the enclosure is IA. Deposit 2095 was built up against the stone on the N side and some other stones on this side seem to be the remains of a wall core related to this stone.		

APPENDIX 4: Report on evaluation trenches

Summary
An evaluation excavation was carried out at the Rhiwgoch Water Treatment Works, Harlech. This was required because an archaeological assessment and subsequent topographic survey had identified two probable archaeological sites, a possible medieval longhouse and associated paddock and a mound of burnt stones that may be a prehistoric cooking place. Eleven trenches were excavated; the archaeology identified as a result of a previous topographic survey was confirmed, but no new archaeological sites were identified.

Introduction
An evaluation excavation was carried out at the Rhiwgoch Water Treatment Works, Harlech (NGR SH 5920 3037). The work was undertaken over a period of eight days between 28th October and 7th November 2008 for Black and Veatch on behalf of Dwr Cymru Welsh Water. The evaluation formed part of a staged programme of archaeological assessment, which included desk-based study, field visit and topographic survey. The assessment is being undertaken prior to the submission of a planning application in advance of a proposed extension to, and redevelopment of, the water treatment works. The work is being monitored on behalf of the Local Planning Authority by the Snowdonia National Park Authority (SNPA) archaeologist. The location of the works and proposed expansion is shown on drawing 161124 dated 04/08/08 by Black and Veitch.

An archaeological assessment of the area (Evans 2008) identified two possible sites of archaeological significance, a burnt mound (PRN 29854) and a longhouse of possible medieval date (PRN 29846). The assessment recommended a topographic survey followed by evaluation trenching. The topographic survey (Berks and Davidson 2008) confirmed the presence of the two archaeological sites, and identified the presence of a field or enclosure boundary, probably associated with the longhouse, and possible lynchetting (relict terraced field systems) to the south west of the development area. The assessment and topographic survey carried out on the area informed the location of the evaluation trenches.

Methodology
Eleven trenches were excavated, two (Trenches 1 and 11) 10m by 5m, the remainder 20m by 2m. Nine of the trenches were excavated with a 9 tonne 360 degree excavator down to the subsoil level where any potential archaeology might be identified and were cleaned by hand excavation, recorded and photographed. Each identified archaeological context was given a unique reference number, referred to in brackets within the text. A photographic record was maintained, and archaeological features were planned at a scale of 1:20. Sections showing the relationship between contexts were drawn at a scale of 1:10. The location of the trenches was plotted onto the basesline map data using a Total Station Theodolite.

Trench 1
This trench was placed across the suggested burnt mound feature (PRN 29846) identified on the topographic survey. The feature consisted of a mound approximately 9.5m long, 4m wide and 0.5m high. Two earth-fast upright boulders and two sunken boulders were visible at the west end of the mound. A trench 0.5m wide was cut across the mound positioned to include one of the upright boulders. The trench was designed to test the relationship between the mound of burnt stones and the boulders which protruded through the mound (Fig. 1), and to examine the nature of the mound.

A friable mid orangy-brown clayey silt topsoil (1001) overlay a deposit containing both burnt and unburnt stone (80%) within dark brown clayey silt (1004). An environmental sample [01] was taken from this deposit. The stones were built up against the boulder (1003), but it was found the boulder rests on the original glacial clay, with no archaeological material under it. Another boulder (1002) also lay on the same glacial clay.

East of the boulders the burnt stone continued (context 1006), though the size of the stones was slightly larger (up to 30cm long) and there was less evidence of burning. These lay within a matrix of dark brown and light grey clay silt which lay directly on the glacial clay.

During excavation it was noticed that burnt stone was also visible to the west of the mound, and that the two areas of burnt stone were divided by a gap of some 2m, which had been used for vehicular

access. Interpretation of the site remains uncertain, though the two areas of burnt mound could certainly form two sides of a burnt mound, which in its classic shape is in the form of a horseshoe, with a trough in the centre. However, the lack of a water supply is problematic, as burnt mounds rely upon water to work. Burnt stones are also found on settlement sites, and the stones might therefore suggest the presence of a prehistoric roundhouse which is yet to be identified.

Trench 2
A mid greyish brown silty clay topsoil 0.42m deep (1023) overlay a mid orangy brown silty clay and sand natural subsoil (1024). This contained a significant number of glacially deposited stones within it. No archaeological features were identified.

Trench 3
This trench overlay a ridge running east-west across the site that was thought to be a possible relict field boundary. A mid greyish brown sandy and clayey silt topsoil, 0.2m thick (1016) with occasional stones overlay a very stony mid brownish orange silty clay subsoil (1017). The stones were up to 1m across and some bedrock was observed. This overlay natural mid orangy brown stony glacial gravel (1018). No archaeological evidence was noted and the possible field boundary is best interpreted as a glacial ridge.

Trench 4
At the north eastern end of the trench a mid brownish grey layer of re-deposited silty clay was observed. This is similar in character to (1025) and must represent material re-deposited at the time of the construction of phase 1 of the water treatment works. This overlay a dark orangy brown topsoil 0.25m deep (1028) of sandy clayey silt overlay a subsoil of mid brownish orange silty clay 0.25m deep with frequent stone inclusions (1029). This included a very large boulder, more than 2m across that must be a glacial erratic. This deposit overlay a light yellow and brownish orange sandy clay and gravel (1031) which is the natural glacial deposit. No pre-modern archaeological features were identified.

Trench 5
A re-deposited layer of soil (1025) of mid brownish grey silty clay, and containing a significant proportion of shale chippings (20%) was deposited to a depth of 0.55m above the old topsoil (1026) at the north eastern end of the trench. This was probably associated with the phase 1 construction of the water treatment works. A stripped area was observed on the 1970s Ordnance Survey aerial photograph, upon which this dumped material was probably placed. It overlay 0.3m of mid reddish brown silty clay buried topsoil (1026). It was very level and had clearly been truncated at the time of the phase 1 machine stripping. This overlay a mid orangy brown silty clay natural subsoil with patches of yellowish brown sand (1027). No pre-modern archaeological features were identified.

Trench 6
A dark orangy brown silty clay topsoil (1007), 0.32m deep containing small to large rounded and subangular boulders. This overlay a mid orangy brown silty clay (1008) and sand with medium and large rounded and subangular stones (Fig. 3). This appears to be a glacial deposit with the significant quantities of boulders deposited glacially. No pre-modern archaeological features were identified.

Trench 7
A mid greyish brown silty and sandy clay loam, 0.3m deep (1021) overlay a silty clay subsoil (1022). This consisted of a mid orangy brown silty clay with small to large rounded and subangular stones. Some of these stones were quite large, up to 0.6m by 0.45m. There was evidence for a possible ancient river channel within the trench, and much glacial clay with boulders. No pre-modern archaeological features were identified.

Trench 8
This trench was located on a slope that had been identified as a possible lynchet during the topographic survey. A mid greyish brown sandy silt loam (1013), 0.28m deep overlay a mid greyish brown silty clay subsoil (1014) with small to large (up to 0.5m by 0.3m) rounded stones, which was up to 0.13m thick. This overlay a natural subsoil of mid orangy brown sandy clay and gravel (1015), within which outcropping of shale was encountered. This was clearly a glacial subsoil and no archaeological features were noted, suggesting that the terracing identified during the topographic survey was a glacial rather than archaeological feature. No pre-modern archaeological features were identified.

Trench 9
A mid greyish brown sandy silt topsoil, 0.35m deep, with small to medium rounded stones (1019) overlay a mid yellowish brown clay sand with gravel glacial subsoil of mixed consistency (1020). This contained large boulders up to 1.2m across. No archaeological deposits were noted.

Trench 10
This trench was placed over a loose stone mound which can be seen to be recent as it is within the stripped area on the 1970s aerial photograph and is not present. On investigation it was found to contain modern brick and painted concrete (1032). Large voids within the mound also suggest that the mound is a modern feature.

Trench 11
This trench examined the relict field boundary, thought to be associated with the rectangular foundations nearby (fig 2). The top soil, which partly covered the wall, consisted of a mid orangy brown clay silt topsoil, about 0.1m thick with small stones and the occasional large boulder. The dry-stone wall (1010) consisted of rounded stones about 0.18m by 0.12m within a dark orangy brown clay silt. The spread of tumble suggested the wall had collapsed to the east. The wall overlay a mottled mid orangy brown silty clay subsoil (1012), which in turn overlay the glacial clay.

Conclusion
Archaeological features were observed within trenches 1 and 11 and broadly confirmed the observations made following the assessment and topographic survey. The evaluation of the possible burnt mound in trench 1 did not allow full interpretation, but has certainly identified it as a feature of archaeological significance, for which full excavation is recommended as the most appropriate mitigation. The relict field boundary in trench 11 was found to have been built on subsoil which overlay the glacial clay. No dating evidence was found, and it is recommended another section is excavated across the boundary to confirm the sequence of soil formation, and to look for dateable material. The remaining trenches did not reveal any evidence for archaeological activity, and no further work was recommended on these.

Bibliography
Berks, T. and Davidson, A. 2008 Topographic Survey at Rhiwgoch Water Treatment Works, Harlech
Evans, R. 2008 Rhiwgoch Water Treatment Works, Harlech (Unpublished GAT Report No. 754)

Fig. 1 Trench 1 showing possible burnt mound and glacial boulder

Fig. 2 Trench 11 showing relict boundary wall

Fig. 3 Trench 6 showing glacial boulders and clay and gravel

APPENDIX 5: Table of roundhouse dimensions

Table 1. Excavated roundhouses

Roundhouse	Period	Type of house	Internal diameter	External diameter	Wall width	Door position	References
Ty Mawr T3	Early medieval?	Stone	4m	c.8m	1.2m	South-east	Smith 1986, 1988
Mellteyrn Uchaf A	Middle Bronze Age	Clay-walled	4.2m	9m	2.5m	East	Ward and Smith 2001
Bryn Eryr C	Romano-British	Stone	4.8m	7m	1.1m	East?	Longley et al 1998
Crawcwellt West, structure J1	Late Iron Age	Stone	5m x 4.5m	c. 7.5m	1.5m	North-east	Crew 1998
Cefn Graeanog II, hut J	Late Iron Age	Stone	5.2m	7.6m?	1.2m	North?	Mason and Fasham 1998
Ty Mawr T1	Iron Age?	Stone	5.3m	c.8.0m	c.1.2m	South-east	Smith 1986, 1988
Bush Farm A	Romano-British	Stone	5.4m	8.5m	1.2m	East	Longley et al 1998
Mellteyrn Uchaf B	Middle Bronze Age	Clay-walled	5.5m	10m	2.5m	South-east	Ward and Smith 2001
Cefn Cwmwd, S5		Clay-walled (stone footings)	5.6m		1.4m	?	Roberts et al forthcoming
Cefn Cwmwd, S8		Clay-walled	6m	13m		?	Roberts et al forthcoming
Cefn Graeanog II, hut C	Romano-British	Stone	6.2m	9m?	1.5-2.0m	South-west	Mason and Fasham 1998
Cefn Graeanog II, hut D	Romano-British	Stone	6.3m	10m?	1.75m	East	Mason and Fasham 1998
Crawcwellt West, structure J2	Late Iron Age	Stone	c. 6.5m	c. 10m	1.5m	North-east?	Crew 1998
Mellteyrn Uchaf C	Middle Bronze Age	Clay-walled	6.5m	9m	1.5m	South-east	Ward and Smith 2001
Cefn Cwmwd, S4		Clay-walled	6.5m	8.6m		South-east?	Roberts et al forthcoming
Melin y Plas, house 5		Clay-walled	6.5m?	12.5m	1.5m	South-east	Smith forthcoming

Roundhouse	Period	Type of house	Internal diameter	External diameter	Wall width	Door position	References
Melin y Plas, house 1		Clay-walled	6.8m	12.3m	2-2.5m	?	Smith forthcoming
Cefn Graeanog II, hut A	Romano-British	Stone	7m	10m?	1.5-2.0m	North-west?	Mason and Fasham 1998
Cefn Graeanog II, hut G	Romano-British	Stone	7m	10.6m?	1.8m	?	Mason and Fasham 1998
Parc Bryn Cegin H	Iron Age/Romano-British	Clay-walled	7m	9.4m	1.3m	East?	Kenney 2008
Bryn Eryr B	Iron Age	Clay-walled	7m	9m	1.25m	South-east	Longley 1998
Ty Mawr S	Iron Age?	Stone	7m	c.11.5m	1-2m	East	Smith 1986, 1988
Pant A	Iron Age/Romano-British?	Clay-walled	c.7.2m	10m	c.1.4m	North-east	Ward and Smith 2001
Cefn Graeanog I	Romano-British	Stone	7.3m	10m?	1.5m	East	Hogg 1969
Graeanog, roundhouse B	Romano-British	Stone	7.5m	12m?	2.5m	East	Kelly 1998
Pant C	Romano-British	Clay-walled	7.5m	11m	1.6m	?	Ward and Smith 2001
Parc Cybi C	Iron Age?	Stone	7.6m	11m	1.6m	South-east	Kenney pers com
Bush Farm B	Iron Age	Clay-walled	7.85m	11.85m	2m	East	Longley et al 1998
Parc Bryn Cegin A1	Iron Age/Romano-British	Clay-walled	8m	9.8m	1.2m	North-west??	Kenney 2008
Parc Bryn Cegin A2	Iron Age/Romano-British	Clay-walled	8m	11m	1.4m	North-west?	Kenney 2008
Parc Bryn Cegin C	Iron Age/Romano-British	Clay-walled	8m	10.4m	1.3m	North-west or north-east?	Kenney 2008
Cefn Du, S1		Clay-walled	8.2m	12m	2m	South-east	Cutler forthcoming
Bryn Eryr A	Iron Age	Clay-walled	8.5m	12.5m	2m	East	Longley 1998
Pant B	Iron Age/Romano-British?	Clay-walled	c.8.5m	11m	c.1.2m	?	Ward and Smith 2001
Erw-wen	Iron Age	Stone	8.8m	10.5m	1m	West	Kelly 1988
Pant y Saer 1	Romano-British?	Stone	8.8m		1.8m	North-west	Phillips 1934

Roundhouse	Period	Type of house	Internal diameter	External diameter	Wall width	Door position	References
Graeanog, roundhouse G	Iron Age	Stone	9m	13m?	2m	South	Kelly 1998
Parc Bryn Cegin D	Iron Age/Romano-British	?	9m			West?	Kenney 2008
Pant y Saer 2	Romano-British?	Stone	9.1m (6.7m excluding 'bench')		1.8m	East	Phillips 1934
Parc Cybi E	Iron Age?	Stone	9.4m	c.12m	1.4m	north-west and south-east	Kenney pers com
Moel y Gerddi	Iron Age	Stone	9.4m	13m	1.25m	East	Kelly 1988
Moel y Gerddi	Iron Age	Timber	9.4m		0.3m	West and east	Kelly 1988
Erw-wen	Iron Age	Timber	9.4m		0.3m	West and east	Kelly 1988
Parc Cybi I	Iron Age?	Timber	9.6m			north-west	Kenney pers com
Parc Cybi B	Iron Age?	Stone	c.10m	14m	1.5m (2.75m)	north-west and east	Kenney pers com
Rhiwgoch	**Romano-British**	**Stone**	**10.5m**	**14.5m**	**2.4m**	**West and north-east?**	
Parc Cybi A	Iron Age?	Stone	c.11m	14m	1.6m (2.9m)	west and possibly south-east	Kenney pers com
Melin y Plas, house 2		Clay-walled	c.11.5m	13.5m	c.2m	?	Smith forthcoming

Table 2. Unenclosed roundhouse settlements and single roundhouses in Merioneth as recorded by Gresham (Bowen and Gresham 1967, 183-186)

(Sites have been added from Kelly 1982 where enough information is given. Note that the apparent precision of measurements for Gresham's sites are due to converting feet to metres. All measurements should be considered as approximate.)

PRN	Gresham's number	Parish	Internal diameter	Wall construction
1487.2	284	Llanfrothen	2.4m	Small stones laid
1118.2	289	Llanenddwyn	2.4m	Small stones laid
1020	305	Llandecwyn	2.4m	Small stones laid
1487.1	284	Llanfrothen	2.7m	Small stones laid
1044.1	286	Llandecwyn	3.0m	Small stones laid
1044.2	286	Llandecwyn	3.0m	Small stones laid
1050.2	288	Llanfair	3.0m	Large stones laid (medieval: Kelly 1982, 158)
1109.4	291	Llanddwywe	3.0m	Small stones laid
1113	317	Llanddwywe	3.0m	Earth banks only remain
4886.2	296	Llangelynnin	3.4m	Small stones laid
1025.2	285	Llandecwyn	3.6m	Small stones laid
1050.1	288	Llanfair	3.6m	Large stones laid (medieval: Kelly 1982, 158)
1118.1	289	Llanenddwyn	3.6m	Small stones laid
1111.3	293	Llanaber	3.6m	Small stones laid
4885.2	297	Llangelynnin	4.0m	Small stones laid
1015	306	Llandecwyn	4.0m	Small stones laid
1019	304	Llandecwyn	4.3m	Small stones laid
1033	311	Llanfair	4.3m	Small stones laid
1108.3	290	Llanddwywe	4.6m	Small stones laid
1108.4	290	Llanddwywe	4.6m	Small stones laid
1109.3	291	Llanddwywe	4.6m	Small stones laid
1111.2	293	Llanaber	4.6m	Small stones laid
1018	303	Llandecwyn	4.6m	Small stones laid
1025.1	285	Llandecwyn	4.9m	Small stones laid
1108.1	290	Llanddwywe	4.9m	Small stones laid
1108.2	290	Llanddwywe	4.9m	Small stones laid
4211	319	Brithdir	4.9m	A rough ring of stones
4876	320	Llanegryn	4.9m	Small stones laid
1142		Llanaber	5m	Much denuded, barely visible

1149		Llandecwyn	5m	Local slabs, cobbles and boulders
1154		Llandecwyn	5m	Carefully laid stone slabs
1488	298	Llanfrothen	5.2m	Small stones laid
1109.2	291	Llanddwywe	5.5m	Small stones laid
1112.2	294	Llanaber	5.5m	?
1004	312	Llanfair	5.5m	Small stones laid
1111.1	293	Llanaber	5.8m	Small stones laid
1037		Llanfair	6m	Ruined and robbed
1155		Llandecwyn	6m	Partially robbed
1159		Llanddwywe	6m	?
1572	287	Trawsfynydd	6.1m	Small stones laid
1112.1	294	Llanaber	6.1m	?
4886.1	296	Llangelynnin	6.1m	Small stones laid
1484	299	Llanfrothen	6.1m	Massive build
1052	313	Llanfair	6.1m	Earth banks only remain
1187		Llandecwyn	6.5m	Laid cobbles and slabs
4885.1	297	Llangelynnin	6.7m	Small stones laid
1158		Llanfair	7m	Walls of laid stones and cobbles with facing stones
1109.1	291	Llanddwywe	7.3m	Small stones laid
1528	300	Ffestiniog	7.3m	Some large orthostats
1017	301	Llandecwyn	7.3m	Small stones laid, a few orthostats
1026	302	Llandecwyn	7.3m	Small stones laid
1051	309	Llandanwg	7.6m	Massive walls of small laid stone
1047	314	Llanfair	7.9m	Thin slabs set on edge
1184		Llanenddwyn	8m	Substantial walls
1037	310	Llanfair	8.2m	Small stones laid
1045	315	Llanfair	8.2m	Massive build of small stones
1062	316	Llanbedr	8.2m	Earth banks only remain
1129	318	Llanaber	8.5m	Almost destroyed
1156		Llandanwg	9m	Substantial walls
864		Llanaber	9m	Walls of laid slabs
1179		Llandanwg	9m	Walls of laid stone with orthostats at entrance
1035	308	Llandanwg	9.8m	Massive walls
29854		**Llanfair**	**10.5m**	Large stones forming faces at foundation level

1012	307	Trawsfynydd	11m	Small stones laid

Table 3. Roundhouses from Enclosed Homesteads from Merioneth as recorded by Gresham (Bowen and Gresham 1967, 189-206)

PRN	Gresham's number	Site name	Parish	Internal diameter	Wall construction
1053.2	335	Cefnfilltir	Llandanwg	1.8m	No details
1053.3	335	Cefnfilltir	Llandanwg	2.4m	No details
1001.3	333	Moel Goedog I	Llanfair	4.3m	Robbed out
1055.3	337	Muriau Gweddelod	Llanfair	4.3m	Massive, well-built
1490.3	322	Bron Manod	Ffestiniog	4.6m	Robbed out grass-grown bank
1024.1	328	Bryn Cader Faner	Llandecwyn	4.6m	Small stones
1024.2	328	Bryn Cader Faner	Llandecwyn	4.6m	Small stones
5515.3	329	Bwlch-y-Ffordd	Trawsfynydd	4.6m	Large set foundation stones
5515.4	329	Bwlch-y-Ffordd	Trawsfynydd	4.6m	Large set foundation stones
1075.4	344	Frongaled	Llanddwywe	4.6m	Robbed out earthen banks
1192.4	324	Tyn y Berllan	Penrhyndeudraeth	4.9m	No details
1032.1	325	Moel y Glo	Llandecwyn	4.9m	Orthostatic foundation stones on inner and outer faces
1016.2	327	Cwm Moch	Llandecwyn	4.9m	No details
5515.2	329	Bwlch-y-Ffordd	Trawsfynydd	4.9m	Large set foundation stones
1027.3	326	Coedty Mawr	Llandecwyn	5.2m	No details
1132.1	331	Merthyr	Llandanwg	5.2m	Much robbed
1192.3	324	Tyn y Berllan	Penrhyndeudraeth	5.5m	No details
1055.2	337	Muriau Gweddelod	Llanfair	5.5m	Massive, well-built
1073.2	341	Dyffryn Ardudwy	Llanenddwyn	5.8m	Much ruined and cleared
1485.2	321	Ogo Llechwyn	Llanfrothen	6.1m	Large set stones, massive construction
1032.2	325	Moel y Glo	Llandecwyn	6.1m	Orthostatic foundation stones on inner and outer faces
1001.2	333	Moel Goedog I	Llanfair	6.1m	Robbed out
1002.1	334	Moel Goedog II	Llanfair	6.1m	Massive construction but robbed
1002.3	334	Moel Goedog II	Llanfair	6.1m	Levelled shelf
1055.1	337	Muriau Gweddelod	Llanfair	6.1m	Massive, well-built
1074.2	343	Berth-ddu	Llanenddwyn	6.1m	Foundation courses of set facing stones under a mass of fallen stone
1075.2	344	Frongaled	Llanddwywe	6.1m	Robbed out earthen banks

1075.3	344	Frongaled	Llanddwywe	6.1m	Robbed out earthen banks
1064.2	338	Tyddyn Du	Llanfair	6.4m	Well-preserved, several courses of masonry
1490.2	322	Bron Manod	Ffestiniog	6.7m	Robbed out grass-grown bank
1192.2	324	Tyn y Berllan	Penrhyndeudraeth	6.7m	No details
1032.3	325	Moel y Glo	Llandecwyn	6.7m	Orthostatic foundation stones on inner and outer faces
1002.2	334	Moel Goedog II	Llanfair	6.7m	Massive construction but robbed
1490.1	322	Bron Manod	Ffestiniog	7.3m	Robbed out grass-grown bank
1192.1	324	Tyn y Berllan	Penrhyndeudraeth	7.3m	No details
1032.4	325	Moel y Glo	Llandecwyn	7.3m	Orthostatic foundation stones on inner and outer faces
1027.2	326	Coedty Mawr	Llandecwyn	7.3m	No details
5515.1	329	Bwlch-y-Ffordd	Trawsfynydd	7.3m	Large set foundation stones
1132.2	331	Merthyr	Llandanwg	7.3m	Much robbed
1054	336	Near Harlech	Llandanwg	7.3m	Much ruined
1073.1	341	Dyffryn Ardudwy	Llanenddwyn	7.3m	Much ruined and cleared
1485.1	321	Ogo Llechwyn	Llanfrothen	7.6m	Large set stones, massive construction
1114.1	345	Corsygedol	Llanddwywe	7.6m	Orthostatic construction
1114.2	345	Corsygedol	Llanddwywe	7.6m	Orthostatic construction
1064.1	338	Tyddyn Du	Llanfair	7.9m	Well-preserved
1027.1	326	Coedty Mawr	Llandecwyn	8.2m	No details
1075.1	344	Frongaled	Llanddwywe	8.2m	Robbed out earthen banks
1016.1	327	Cwm Moch	Llandecwyn	8.5m	No details
1001.1	333	Moel Goedog I	Llanfair	8.5m	Massively built walls with large stones set as foundations to the inner and outer faces
1053.1	335	Cefnfilltir	Llandanwg	8.5m	Massively built
1074.1	343	Berth-ddu	Llanenddwyn	9.1m	Foundation courses of set facing stones under a mass of fallen stone
1788.1	349	Moel Caws	Llanuwchllyn	9.1m	No details
1788.2	349	Moel Caws	Llanuwchllyn	9.1m	No details
1788.3	349	Moel Caws	Llanuwchllyn	9.1m	No details
1486	323	Cymerau Uchaf	Ffestiniog	10.0m	Robbed of larger stones, small stone bank
29854		**Rhiwgoch Water Treatment Works**	**Llanfair**	**10.5m**	Large stones forming faces at foundation level

Table 4. Roundhouses from Concentric Circles and Circular Enclosures in Merioneth as recorded by Gresham (Bowen and Gresham 1967, 210-224)

PRN	Gresham's number	Site name	Parish	Internal diameter	Wall construction	Entrance
4866	366	Pen-y-Crug I	Llangelynnin	6.1m	Grass-grown bank	?
4898	365	Cyfannedd Fawr	Llanegryn	6.7m	Platform only	?
1080	356	Egryn II	Llanaber	7.6m	Ruined and not clearly visible	?
1116	362	Ceunant Egryn	Llanaber	9.1m	Platform only	?
1028	350	Maesycaerau I	Llandecwyn	9.8m	Excellent dry-built masonry	South?
1079	355	Egryn I	Llanaber	9.8m	Only part of wall survives, but well-built	North-east
29854		**Rhiwgoch Water Treatment Works**	**Llanfair**	**10.5m**	Large stones forming faces at foundation level	

APPENDIX 6: Harris matrix for site A

Turf

Upper burnt stone layer and field clearance

Lower burnt stone layer

Oval structure and possibly later features

Roundhouse

Relict soil and possibly early features

Boulder clay and periglacial features

KEY

- Cut
- pit
- Ice wedge
- Posthole
- Ditch/gully
- relict soil
- burnt stone layer
- unburnt stone
- wall
- flat stones

Matrix for site A

FIGURES AND PLATES

Figures

Plates

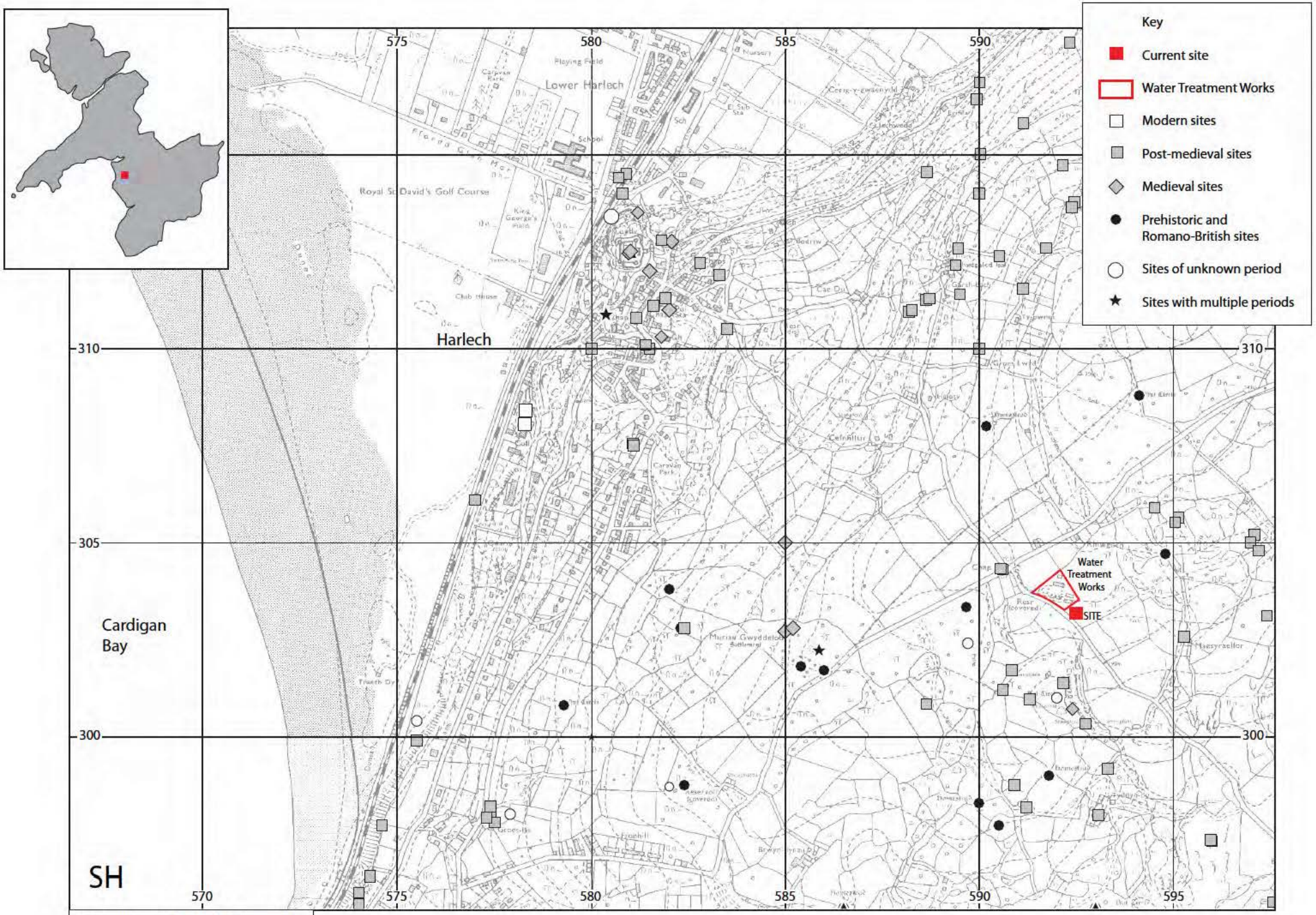


Figure 1. Location of site showing HER and RCAHMW sites in the area

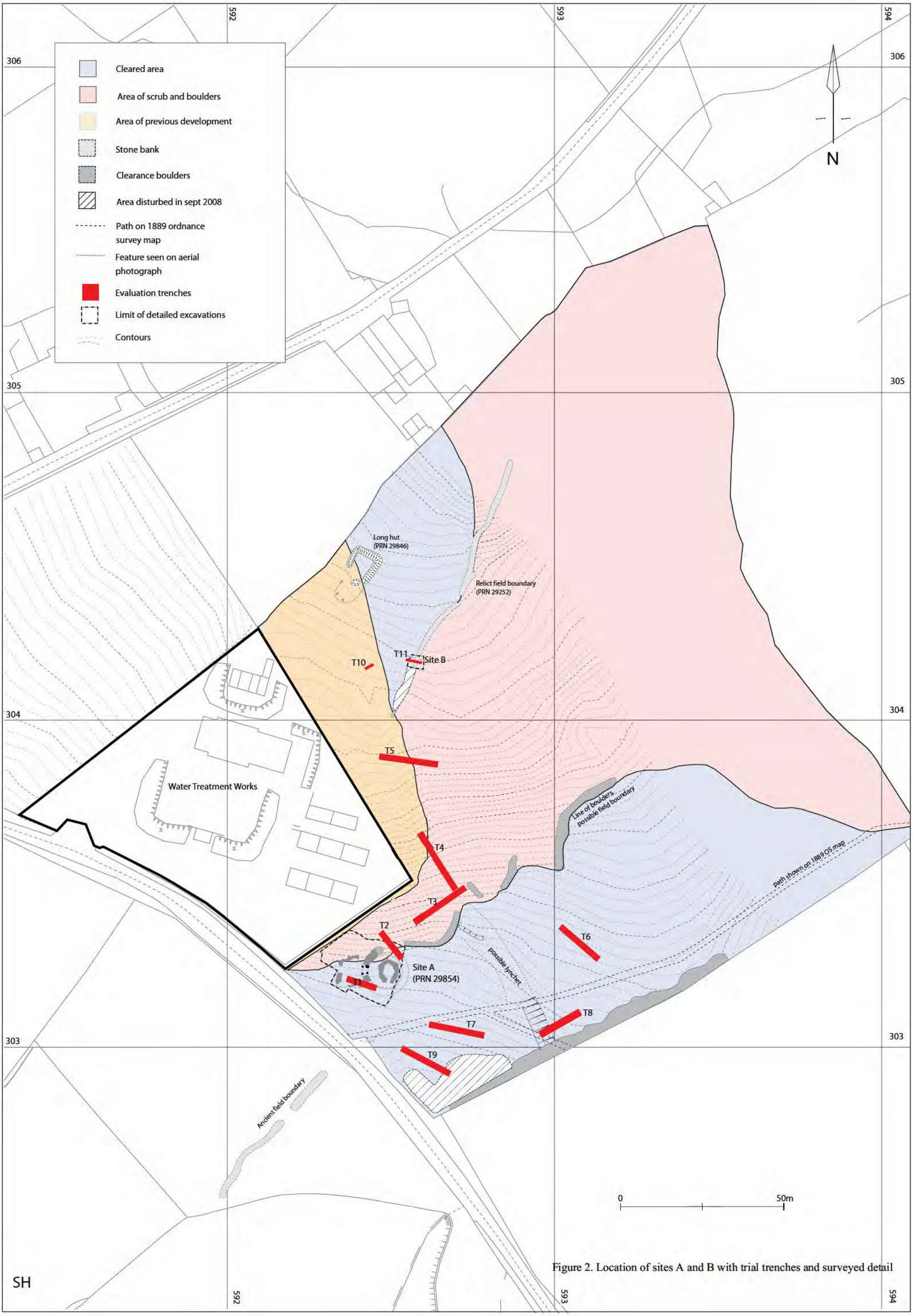


Figure 2. Location of sites A and B with trial trenches and surveyed detail

Figure 3. Plan of site A showing all features with later features shaded and peri-glacial features numbered

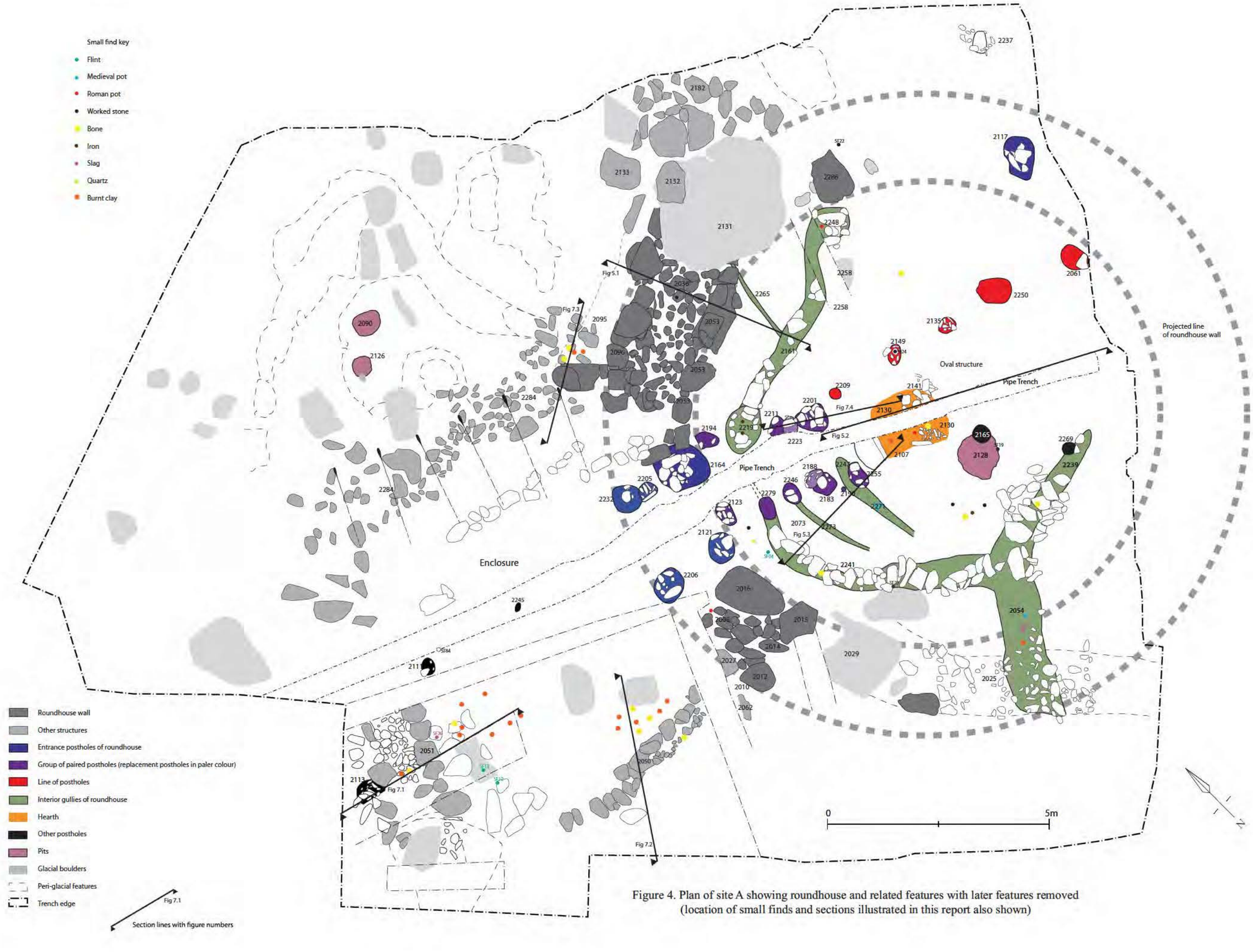


Figure 4. Plan of site A showing roundhouse and related features with later features removed (location of small finds and sections illustrated in this report also shown)

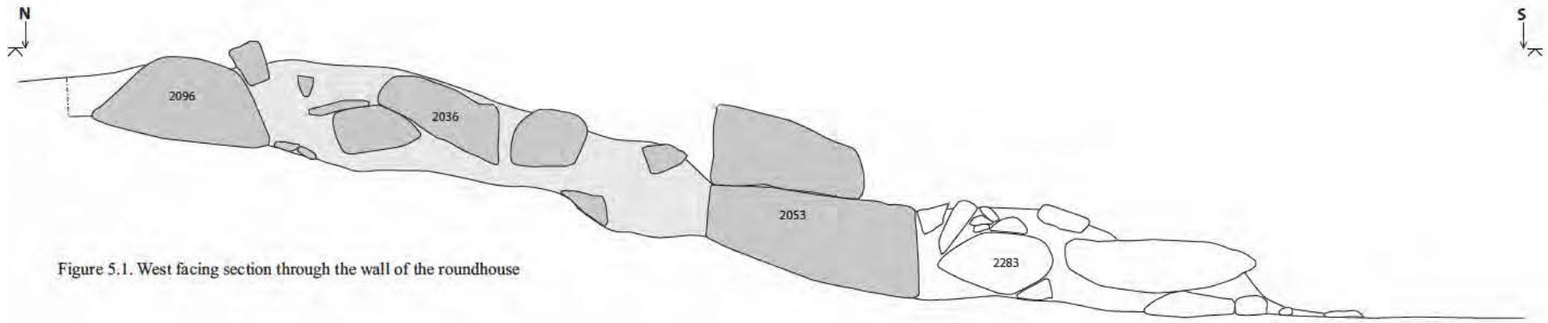


Figure 5.1. West facing section through the wall of the roundhouse

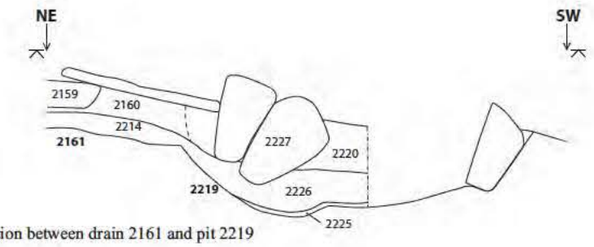


Figure 5.2. North-west facing section of the junction between drain 2161 and pit 2219

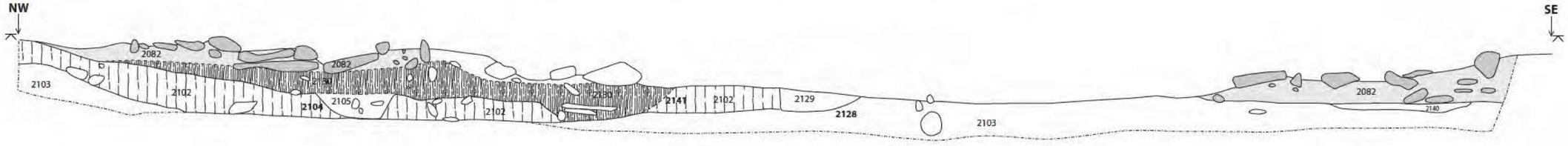


Figure 5.3. South-west facing section through the wall of the oval structure and the hearth of the roundhouse

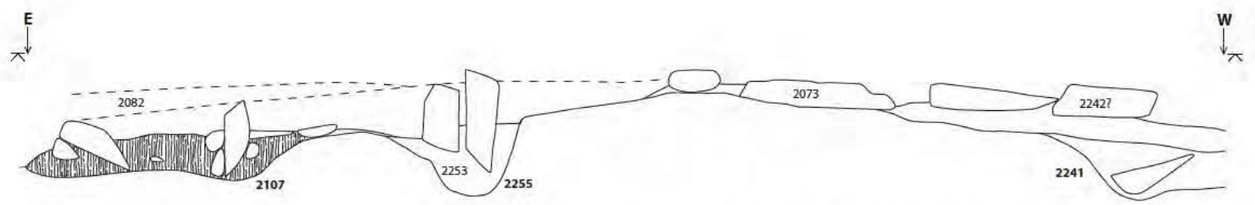


Figure 5.4. North facing section through the hearth (2107) of the roundhouse and posthole 2255, also showing the relationship between slabs 2073 and the roundhouse inner drain (2241)

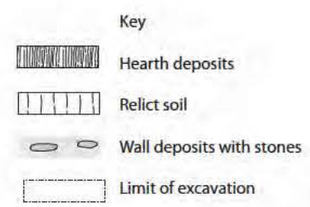


Figure 5. Selected sections across site A

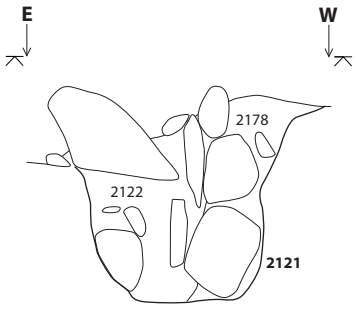


Figure 6.1. North facing section of posthole 2121

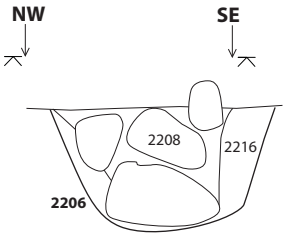


Figure 6.2. South-west facing section of posthole 2206

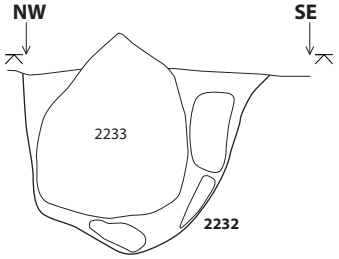


Figure 6.3. South-west facing section of posthole 2232

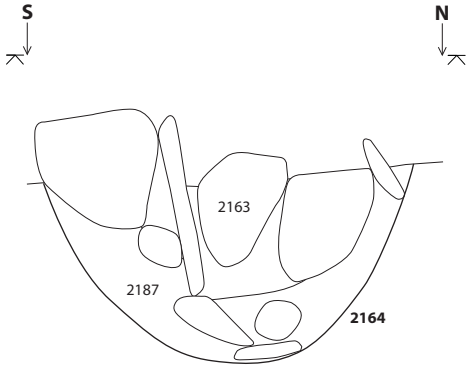


Figure 6.4. East facing section of posthole 2164

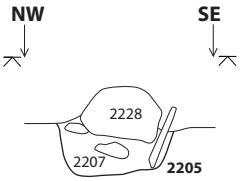


Figure 6.5. South-west facing section of posthole 2205

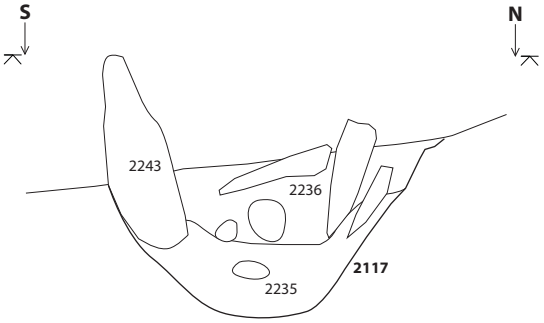


Figure 6.6. East facing section of posthole 2117

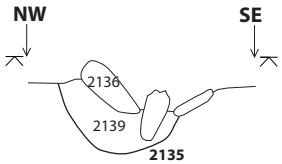


Figure 6.7. South-west facing section of posthole 2135

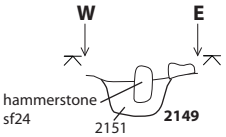


Figure 6.8. South facing section of posthole 2149

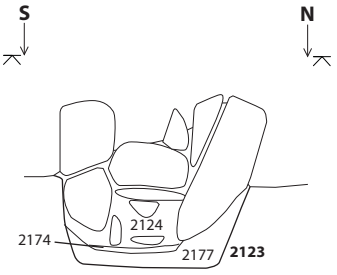


Figure 6.9. East facing section of posthole 2123

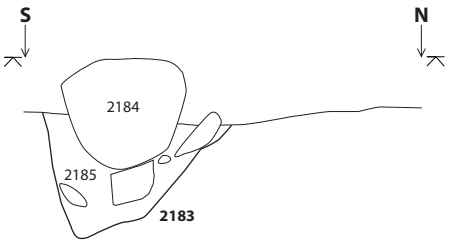


Figure 6.10. East facing section of posthole 2183

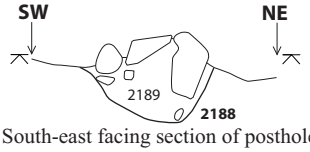


Figure 6.11. South-east facing section of posthole 2188

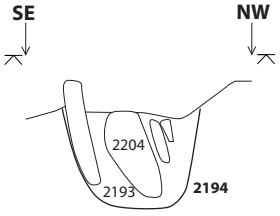


Figure 6.12. North-east facing section of posthole 2194

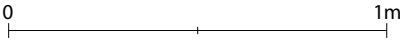


Figure 6. Sections of postholes

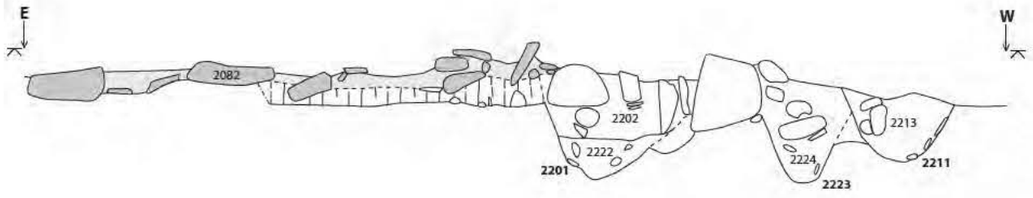


Figure 7.1. North facing section through postholes 2201, 2211 and 2223 and wall 2082

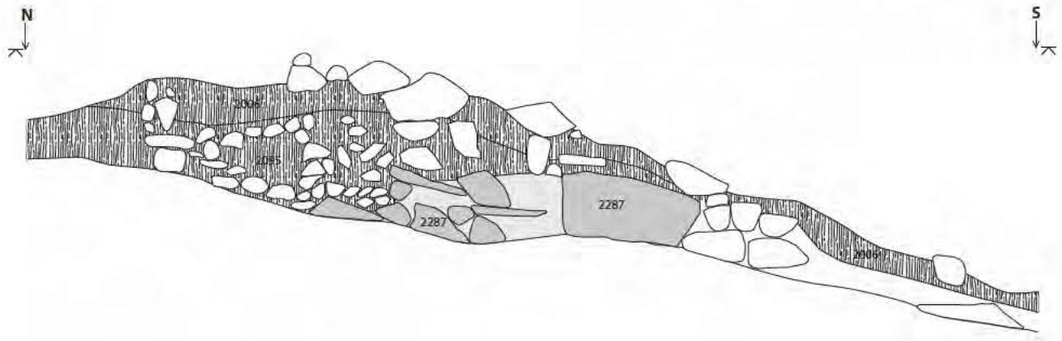
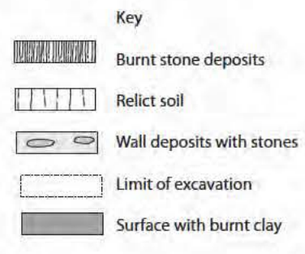


Figure 7.2. South facing section through wall 2051 and related deposits



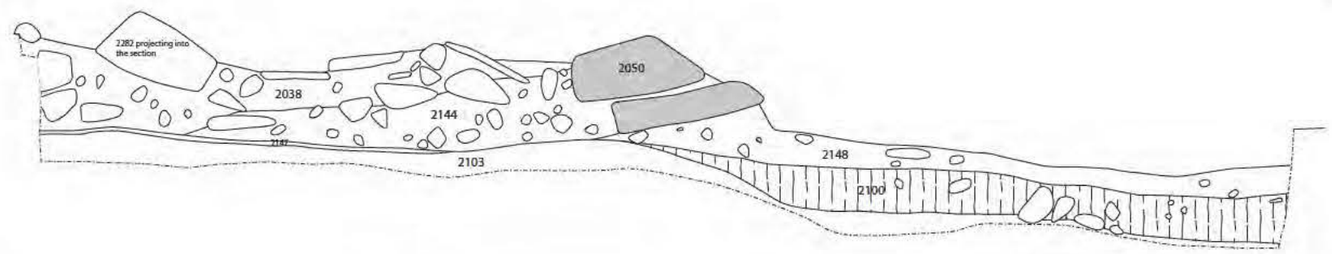


Figure 7.3. West facing section through wall 2050 and related deposits

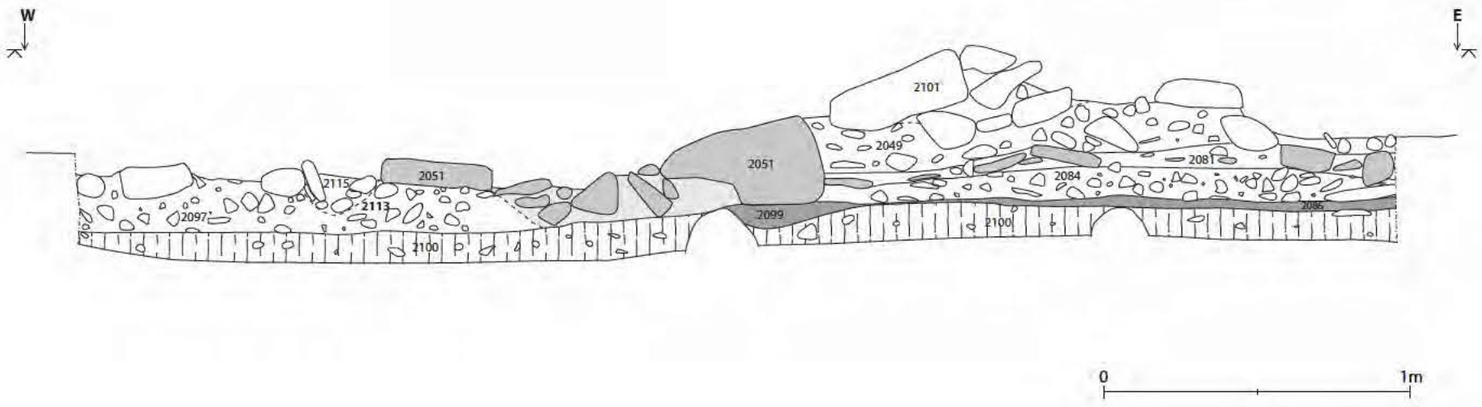


Figure 7.4. South facing section through wall 2051 and related deposits

Figure 7. Selected sections across site A

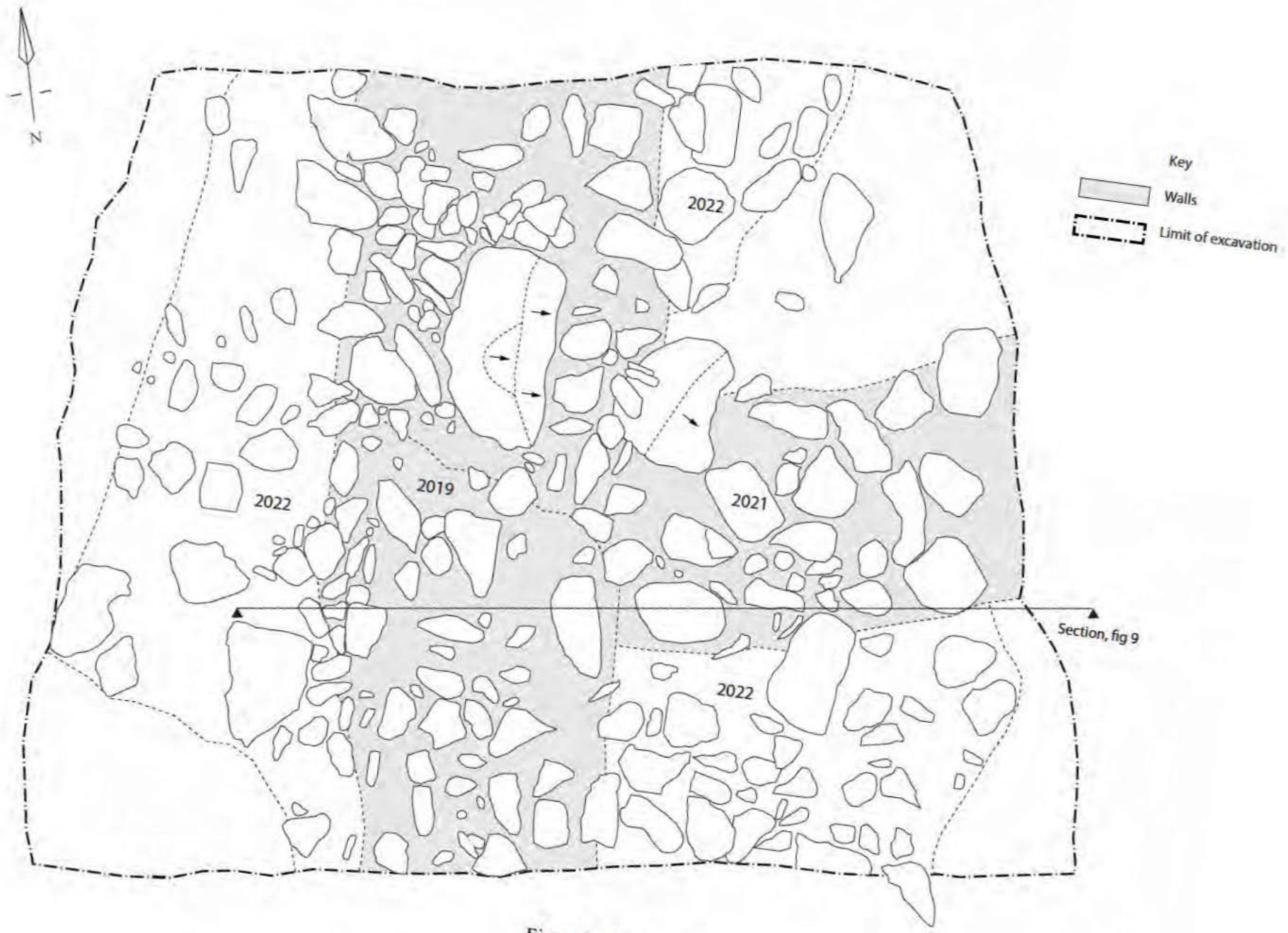


Figure 8. Plan of site B

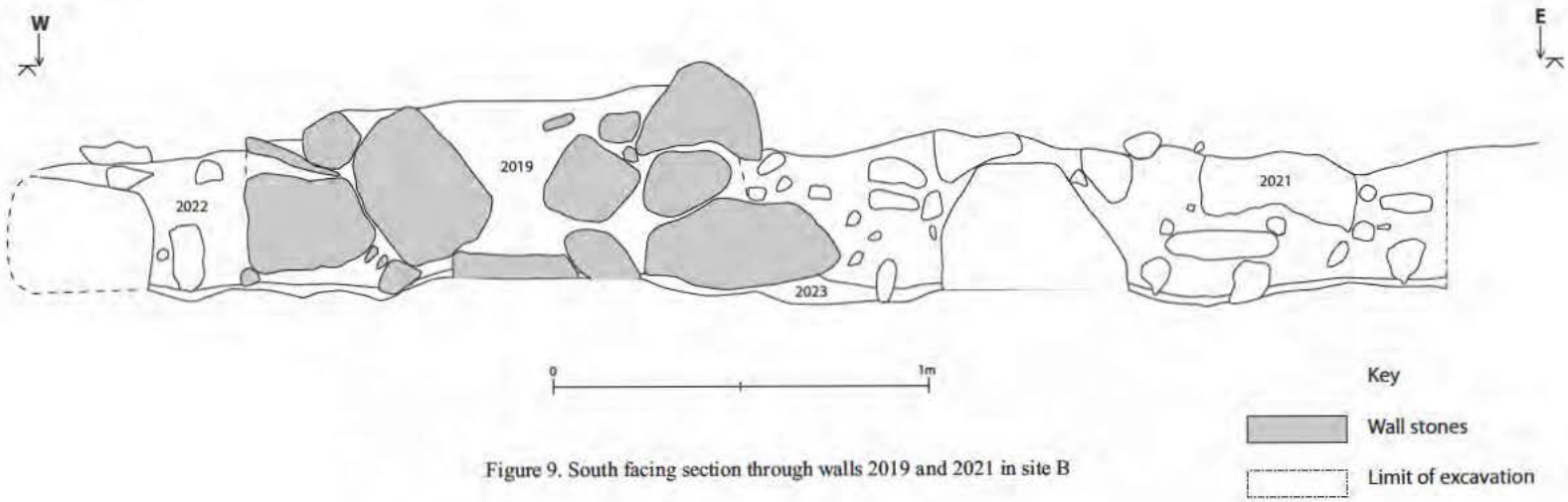
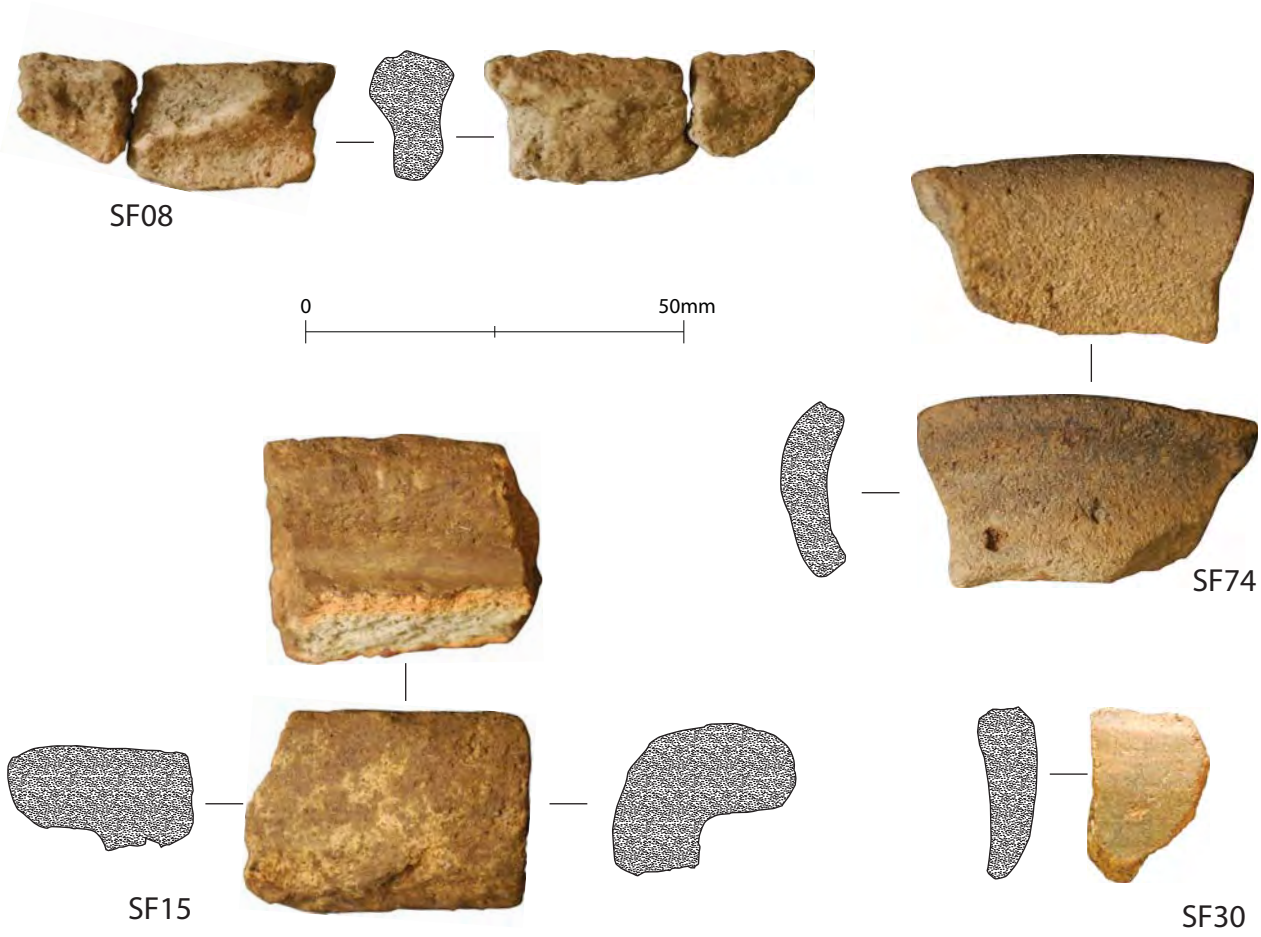


Figure 9. South facing section through walls 2019 and 2021 in site B



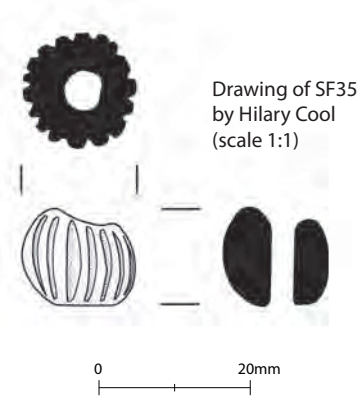


Figure 10. Photographs and illustrations of pot sherds and the melon bead
SF08: medieval sherd; SF15: sherd of medieval cooking pot rim;
SF30: Roman Black-burnished Ware sherd, shoulder;
SF74: Roman Black-burnished Ware sherd, rim
SF35: Roman melon bead

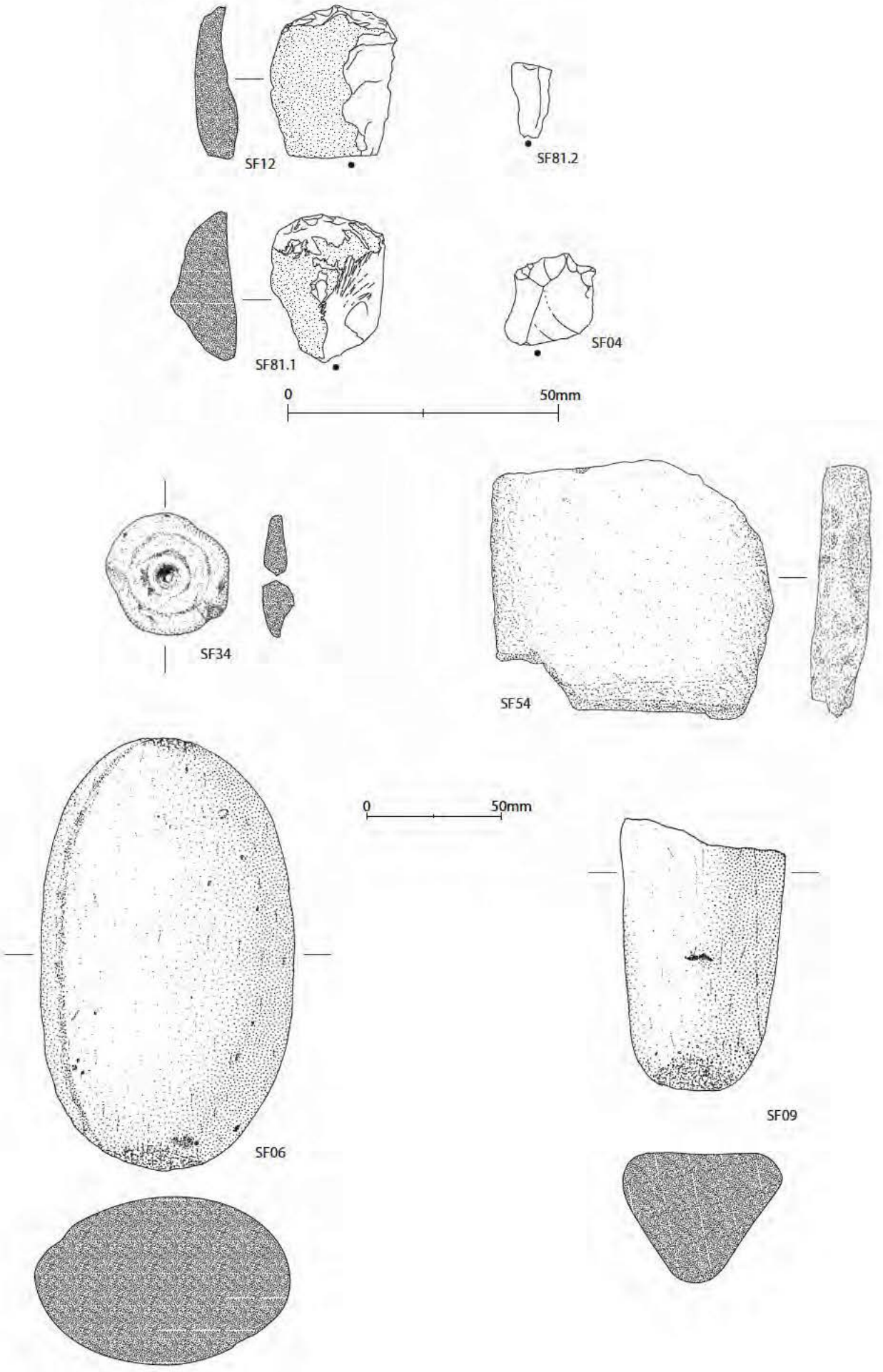


Figure 11. Drawings of flint and stone objects: flints (SF04, 12, 81.1, 81.2), spindlewhorl (SF34), stone pallet (SF54), a representative hammerstone (SF06) and a hammerstone/whetstone (SF09)

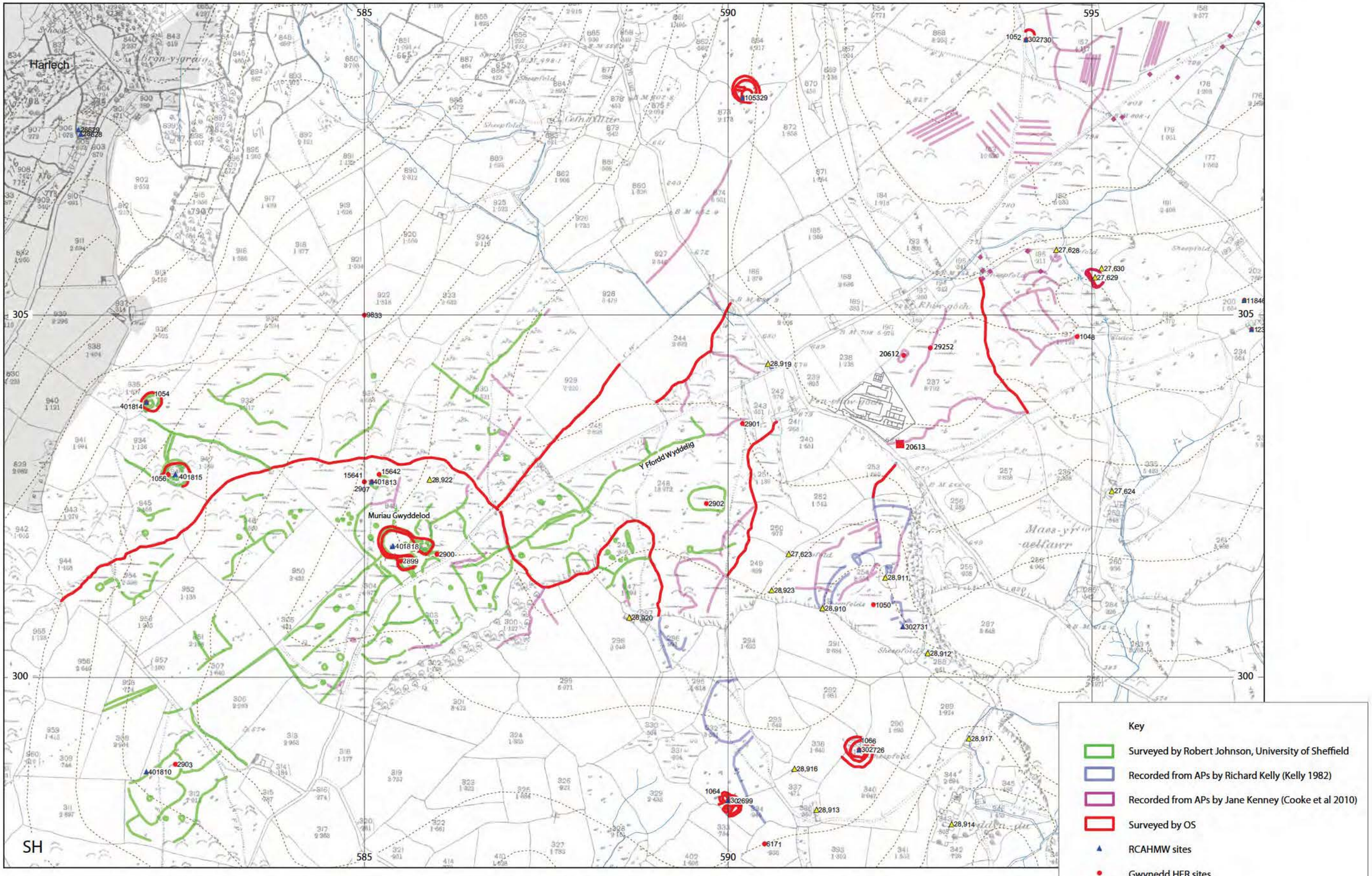


Figure 12. The ancient landscape around the Water Treatment Works site, overlain on First Edition OS map (1889)

Plate 1. General view of site A from SW

Plate 2. North-west corner of the site showing peri-glacial features (2116, including 2064), from the north

Plate 3. Part of roundhouse wall (2053), with section across, from NE

Plate 4. Monoliths 2012 and 2015 forming part of roundhouse wall, projecting through other deposits, from S

Plate 5. Section of junction of drain 2161 and pit 2219 showing stones wedged to block the drain.

Plate 6. Capping stones over drain 2241, with large stone in modern pipe trench cutting across it.

Plate 7. Packing stones in posthole 2121

Plate 8. Packing or filling stones in posthole 2164.

Plate 9. Deposit 2025, possibly the base of a wall.

Plate 10. Posthole 2135

Plate 11. Packing stones in posthole 2279

Plate 12. Posthole 2194

Plate 13. Stone 2287 with possible core stones to left and burnt stone deposit (2095) built up against left side

Plate 14. Small enclosure defined by walls 2050 and 2051, from the east. Also showing large boulders 2045 and 2282 in the middle of the enclosure

Plate 15. Part of stone surface 2073.

Plate 16. Oval structure from E

Plate 17. Possible threshold stones (2119) in entrance to the oval structure

Plate 18. The site as first exposed and cleaned, from NE

Plate 19. Site B, trench across field boundary, showing wall 2019.

Plate 20. Section across field boundary wall 2019.

Ymddiriedolaeth Archaeolegol Gwynedd
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