Rhiwgoch Water Treatment Works:
Harlech, Gwynedd

Assessment of Potential for Analysis
Report for Phase 3 of MAP 2

GAT Project No. 2046
Report No. 887
February 2011

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Prepared for
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G2046 RHIWGOCH WATER TREATMENT WORKS, HARLECH

POST EXCAVATION ASSESSMENT: Project No. G2046

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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 a small oval, stone-built structure, probably a dwelling, with other associated timber and stone-built structures. This small settlement is provisionally dated by the few finds present to the Roman period and it fits within an extensive surviving landscape of this period. A field boundary possibly related to a nearby long hut was also investigated, but no dating evidence was found. This report presents an assessment of the potential of the collected data and is accompanied by an updated project design specifying how the post-excavation work is to proceed.

1. INTRODUCTION

Gwynedd Archaeological Trust (GAT) has 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 (Fig. 1). The work is being monitored on behalf of the local planning authority by the Snowdonia National Park Authority's (SNPA) Archaeologist. The works are sited at NGR SH 5920 3037 between Llanfair and Harlech.

This current report assesses potential for post-excavation analysis of the evidence recovered during the excavation field phase of the project as recommended in *Management of Research Projects in the Historical Environment* (MAP 2). This report includes a quantification of the data collected during the works and a statement for potential for each class of data.

The management of this project follows 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

This report is concerned with **Phase 3: assessment of potential for analysis**, which discusses the results of **phase 2: fieldwork**, with a view to recommending further archaeological works as part of **Phases 4 and 5: analysis, report preparation and dissemination**.

A project design was prepared in advance of undertaking the excavations and was agreed with the client and with the Development Control Archaeologist. It included, in section 3.2, details of the post-excavation works which would be undertaken following the completion of fieldwork (Davidson 2008). Now the fieldwork is complete, a more detailed design can be prepared which clearly states requirements for the remaining stages. This forms an essential part of the required mitigation for the archaeological work at Rhiwgoch, leading to the final publication and dissemination phase (Phase 5) (English Heritage 1991, IFA 2001, Davidson 2008, 4-6).

1.1 Phase 3: assessment of potential for analysis

The purpose of this phase is to ensure appropriate post-excavation analyses are undertaken. This involves the careful definition of academic and archaeological objectives, to ensure that 'appropriate selection is made and a publication produced which accurately reflects the value of the data collection'. All data sources have been collated, quantified and assessed for their potential to provide information of relevance. This includes all site records, made up of the written record, drawn record and photographic record, all

artefacts, and all environmental samples, including those suitable for dating purposes. Relevant specialists have assessed the potential of each artefact and ecofact category.

The current document comprises the final part of Phase 3 and is accompanied by an up-dated project design describing the proposals for the next phase.

2. BACKGROUND

See fig. 1
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, a possible burnt mound (PRN 29854) and a long hut 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) and it confirmed the presence of the two archaeological sites, and identified the presence of a field or enclosure boundary (PRN 29252), probably associated with the long hut, 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 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 did not allow full interpretation, lead to 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 was recommended in the wider area.

Mitigation in the form of full excavation of the identified archaeological features was requested by the SNPA archaeologist. The full archaeological excavation was carried out between 22nd November 2008 and 13th March 2009 with a team of varying size, but which reached a maximum of nine excavation staff.

3. 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 (Fig. 1).

- Site A: a 20.0m by 20.0m size excavation area encompassing the location of Trench 01 and the possible burnt mound identified during the evaluation stage was agreed. The principal aims of the excavation focussed on identifying the original nature or function of the site and the need to obtain a full record of all features. As the archaeology proved much more complex than initially expected the excavation area was extended in order to identify the extent of the archaeological remains, resulting in a total area of 464 square metres of excavation.

- Site B: an excavation area encompassing 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.

4. SUMMARY OF EXCAVATION RESULTS

4.1 Site A (Fig. 2, Plate 1)

(note: figures in brackets refer to the context number of the feature or layer)

4.1.1 Summary of findings

Beneath a mound of burnt and unburnt stones the remains of an oval house with other probable associated structures and yards were identified. Evidence for a complex pattern of drainage ditches was also noted. Roman pottery found on the site indicates a probable Roman for the settlement.

The removal of the stone overburden in the eastern part of the site revealed the remains of a sub-circular stone-built structure (Structure A), with six associated postholes and two possible pits, including a hearth. Three pits were identified in the northwest quadrant of the site separated from structure A by revetment walling. This area of activity may indicate the existence of another slight structure (Structure B), although no evidence of this was found.

A group of four large post-holes (up to 0.6m in diameter) with good evidence for post packing indicated a timber structure (Structure C) close to Structure A, possibly a four-post. Remains of walling to the west of the site suggested the corner of a possible rectangular structure or a small open enclosure (Structure D).

4.1.2 Overburden and upper layers of the site
(note the context numbers in this section are not shown on fig 2)

Below the turf layer, a large area of burnt stones (2001-2002) was shown to overlie a complex stony deposit consisting of rounded and sub-angular boulders (2041) and a rough level surface to the east. This stone deposit consisted partly of collapsed from the under-lying settlement and associated revetment walling. However many of the stones in these upper layers were burnt and the presence of charcoal amongst them suggests that they were burnt and used close-by and immediately dumped over the site. These upper layers had been disturbed by a modern track way and water pipe which crossed the site, and were overlain by an area of mixed unburnt and burnt stones and dumps of large stones (2004, 2005, 2016) that were probably clearance material of relatively modern date. The pre-existing presence of stony remains within the field made this an appropriate location to dump stones cleared from the field. Deposits of unburnt stone, (2008) and (2009), were also found beneath some of the burnt stone layers (e.g. 2001), but above others.

The lower deposits of burnt stone which covered much of the site were contemporary with a number of structural elements (these are not shown on fig. 2). The smaller stone was partly contained by a rough revetment wall or line of kerbing (2027) consisting of large sub-rounded stones (2010). This revetment wall was supplemented by a series of very large stones up to 0.84m by 0.5m by 0.9m (2012, 2014, and 2015). The wall overlay orange-brown silty clay which was probably a relict soil (2042) on which the revetment wall was built. Another line of stones (2027) was identified, abutting (2010) and providing support for it, though this feature was not clearly definable.

To the south-east of the large stones a spread of cobble stones in a dark brown silty clay, extending for more than 6m, 1.1m wide and with a depth of 0.44m (2025) can perhaps best be interpreted as a the fill of a drain (2043), which extended for a depth of 0.25m, with a concave profile (not shown on plan). It cut the relict soil (2026). The cut started at a large glacial boulder (2029) and ran south-east to the limit of the excavation. The feature was overlain by a ginger brown clayey silt deposit, 0.14m thick, with up to 80% medium sub rounded cobbles (2033), which was in turn overlain by a tumble of stones, in a matrix of mid brown clayey silt with small rounded cobble inclusions. This deposit may be a tumble or demolition layer, which lies beneath the subsoil overburden (2028), consisting of a mid brown silty loam.

4.1.3.1 The east side of the site: structure A (Plate 2)

The stone walled foundations of an oval structure were found on the east side of the site. The structure was cut into two parts by a modern pipe trench, which effectively cut through all stratigraphic relationships, though the southern wall (2074) clearly belonged to the same structure as the northern wall (2082). The structure was on ground sloping slightly to the south, so the north end was terraced into the natural clay,

whereas the southern side shows no foundation cut. The maximum width of the wall was 1.45m and maximum height was 0.3m. A spindle whorl was found within the wall. The wall was built on a shallow spread of charcoal and dark silt, with frequent charcoal inclusions (2026). The presence of the charcoal suggests that vegetation clearance may have taken place prior to the construction of the oval hut. This overlay the natural glacial clay.

A hearth structure (2142) measured 1.4m by 0.74m and 0.28m deep. It comprised several large stones on end, best preserved to the south, and although the northern part still had many stones present, most of these had toppled over. The cut for the hearth structure was polygonal, and was cut into the natural glacial clay, although almost certainly dates from after the relict soil deposit (2026). Within the hearth was soft very dark grey silt (2130) to a depth of 0.1m with frequent charcoal flecks, burnt bone and a sherd of pottery. The sherd has been identified as part of the shoulder of a jar of Black-Burnished ware 1, burnished, probably burnt, dating from *c*. AD 120-350 (Evans *et al.* appendix 2, 1).

An amorphous and irregular cut (2128), measuring about 2.2m by 0.3m, was noted within the oval building. It appeared to contain a post hole (2165) at its western end, although there was no notable difference in fill between the post hole and the rest of the fill, which consisted of a dark brown silty clay containing charcoal and cobbles. The amorphous character of the cut, with the charcoal, suggests that it was a burnt tree-bole, with a later post-hole (2165) cut into it. The post-hole had a diameter of 0.45m, and may be associated with post-holes (2135) and (2149) to the north, forming an internal structure or possibly roof supports (Plate 4). The post hole had two post pads, each measuring approximately 0.23m by 0.2m, one above the other in the base of the feature, with post packing of schist cobbles lining the cut.

The entrance to the building lay at the south end, 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, and the slabs were covered by a burnt rubble material (2120), which probably formed part of the overburden or demolition deposit (2007).

A capped drain (2239) ran under the south wall of the house, and pre-dated the construction of the wall. The drain was capped with an assortment of medium to large flat angular slabs, of an average size of 0.4m by 0.22m and bound by a very dark grey silt material. The drain continued to the west for some 4.2m after it emerges from the wall (this section numbered 2241). The drain had steep and straight sides with a fairly level base (0.4m wide and 0.23m deep. It was cut into the natural clay. The drain was confused where it emerged from the wall of the structure by what might be interpreted as post packing within a post hole (2279) 0.5m by 0.3m and 0.3m deep. A very large rectangular rock lined the eastern edge of the post hole, with some smaller stones lining the other two sides.

A gully, part open and part covered (2161), lay north of and outside the structure. This gully may have originally connected with the capped drain 2241, but the relationship was lost when the modern water pipe was cut through. The gully was filled by three shallow deposits (2214), (2215) and (2160), and capped by stones (2159). The base of the gully was defined by a layer of iron-panning, and the fill was a mid brownish grey sandy clay. This gully continued around and to the south of a large glacial erratic, where it was recorded as (2248), the fill of which contained a ‘melon’ shaped bead. The fill of this gully was sealed beneath the remains of revetment walling (2258), but as this gully seems to be part of the covered drain network this relationship merely shows the sequence in which the features were constructed, and they might have functioned at the same time. A small drainage channel 1.6m long ran from the large glacial erratic boulder (2131) towards gully (2248).

The fill at the south-west end of gully 2159 was cut by a large post hole (2219). The post hole had fairly large packing stones (up to 0.3m across) around its sides. The fill around the packing stones was dark brownish grey sandy clay (2234), with occasional charcoal flecks. A later fill was probably deposited after the removal of the post, as it contained disturbed packing stones.

A shallow ditch or natural linear hollow (2054) was observed to the south of Structure A. It was cut into the natural subsoil and was aligned north-south. It was 3.1m long, 0.83m wide and 0.31m deep, with a gentle break of slope to the top. It was filled by a mid orangey brown loamy silt containing both sub rounded and

sub angular stones. This feature appears to have been the outlet for the covered drains (2239 and 2159), but its fill contained sherds of medieval pottery.

4.1.3.2 Post Holes associated with or close-by Structure A
A number of post-holes were identified within and in the immediate vicinity of Structure A. Some of these may have been associated with the structure (e.g. 2135) but at least one, and possibly two, were overlain by the stone wall of the structure, and predated its construction. Descriptions of each of the postholes and other slighter features are given below.

Post hole (2061) had a diameter of 0.5m and was 0.22m deep, with a sharp break of slope. This was filled by a mid orangey brown clayey silt. Post hole (2135), with a diameter of 0.39m and 0.22m deep, contained a post packing of cobble stones (2136), and was filled by a mid orangey brown clay silt (2139).

Post hole (2149), 0.33m by 0.21m wide and 0.13m deep was located within the north- west part of the roundhouse. It was quite small and probably therefore not a structural element, but rather associated with some feature within the dwelling. It contained post-packing (2151) of sub angular schist cobbles (Plate 5), and a fill of light brown clay silt (2252).

Post-hole (2165), with a diameter of 0.45m and depth of 0.3m with steep break of slope and flat base was located in the southern half of the roundhouse, and may have formed part of some internal structure associated with postholes (2135) and (2149). It 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 before the post packing (2166), with the largest stone 0.3m by 0.6m by 0.03m. A very dark brown clayey silt (2167) with frequent charcoal inclusions filled the post hole.

Post hole (2183), with a diameter of 0.5m and depth of 0.34m, contained packing stones (2184) and a mid greyish brown clayey silt fill (2185). This post hole is cut by (2188). The post holes underlie context (2007).

Post hole (2194), 0.45m by 0.4m and 0.25m deep was lined by stones (2204), consisting of three flat upright slabs. The fill (2193), a mid greyish brown sandy clay (2193) contained stones that were probably originally part of the post packing. Post hole (2201), 0.42m by 0.3m, with sharp break of slope and somewhat concave base, contained large packing stones (2203=2222) and an orangey brown clayey silt fill (2202).

Post hole (2123) was 0.5m in diameter and 0.3m deep. A small post-hole (2223), 0.28m in diameter and 0.35m deep cut post hole (2201). It was filled with a mid greyish brown silty clay. Post hole (2205) measuring, 0.4m by 0.35m and 0.42m deep, contained good packing stones (2228). The largest stone was vertical along the southern side of the post hole, 0.4m high by 0.25m. Packing stones also survived along the eastern edge of the post hole, although these were smaller, up to 0.2m in diameter. There appeared to be backfill for the post packing (2229), and a dark greyish brown silty clay fill (2207). A possible post hole (2246), 0.4m by 0.3m and 0.3m deep was filled by a mid brown silty clay.

Adjacent to ditch [2239] a sub-circular post-hole (2269), 0.26m in diameter and 0.3m deep was located, cut into the natural subsoil. It contained a mid orangey brown silty clay fill (2270).

In the north-west of the site a small stake hole (2245), 0.23m deep, was encountered, filled with a light yellowish brown silty clay with charcoal inclusions (2244).

4.1.4 Structure B
Though no clear evidence was found for an upstanding structure a group of 3 pits and a post hole on a level plateau above and to the north of Structure A may suggest the former presence of a structure at this location. The levelled area on which it stood was separated from Structure A by two terraced walls, the uppermost of which (2096), up to 0.5m wide and 0.6m high, defined the edge of the higher ground on which the features which make up Structure B were found. A post hole (2158) 0.35m wide and 0.18m deep abutted the revetment on the upper, northern, side. One pit (2090), 0.6m in diameter, was contained burnt

stone but no evidence of *in situ* burning. The other two pits (2126 and 2153) lay to the south-west, and each was approximately 0.36m in diameter. If there was a structure in this location it is possible that the walls were of clay, and that no observable archaeological traces remained.

A number of curvilinear features (2218, 2092, and 2064) are best interpreted as natural glacial features, perhaps formed within peri-glacial conditions when permafrost created regular patterns within the glacial till.

4.1.5 Terraced walling

The two structures A and B were separated by a sequence of three terraces divided by two terraced walls (2053 and 2096) on ground sloping to the south. Both walls start at their north-eastern end against a large natural boulder (2131). This boulder, measuring 3m by 2.8m by 1.1m, was utilised as the upper end of the two terraces, and it formed a dominant feature within the site.

The lower revetment wall (2053) consisted of very large boulders laid on the ground running in three bands across the slope from the north-east to the south-west (2053, Plate 3). Between the large boulders were stones packed between the coursing. These were laid upon a mid brown clayey silt relict soil (2093=2100), which in turn overlay the natural sub soils. The upper revetment wall (2096) of medium to large boulders was some 1.5m wide.

4.1.6 Structure C

Structure C consisted of four large post holes cut into the natural subsoil to the north-west of the oval house (Structure A), forming a rectangle. These post holes are features (2121), (2164), (2206) and (2232), and they all have a diameter of approximately 0.5m and a depth of between 0.4m and 0.5m.

Post hole (2164), with a steep break of slope and slightly concave sides, contained as its primary fill 0.2m of a mid greyish orange silty clay with gravel, into which a stone lining consisting of a series of large sub rounded and angular stones of local schist up to 0.4m across, which should be interpreted as post packing. The interior of the post hole contained a fill of soft dark brown clayey silt.

Post-hole (2120), 0.6m by 0.5m and 0.55m deep was noted cut into the natural silt. It had a steep break of slope and with fairly regular sides. It contained stone packing for the post and a primary fill of an orangey yellow sandy clay (Plate 6).

Post hole (2206), with a diameter of 0.6m and a depth of 0.4m, with a sharp break of slope contained 0.4m of light orangey brown sandy silt fill without obvious evidence for post-packing, below a mid greyish brown silty clay with small to large rounded and sub angular stones within it. These stones appeared to be a backfill deposit, rather than packing stones for a post.

Post hole (2232) with a diameter of 0.6m and depth of 0.6m with a sharp break of slope and convex base was filled with a mid orangey brown silty clay, with small to large stones as inclusions. Although these stones did not appear to be post-packing, one of these was very large (0.6m by 0.45m), which protruded from the surface of the post-hole. It was cut by another smaller post-hole (2205).

The four posts (and possibly the fifth smaller one also) are thought to have formed the posts for a raised structure. This is because their large size and presence of packing stones suggest that they held substantial posts. Such sites are regularly encountered on settlements of late prehistoric and Roman date, and are usually interpreted as raised granaries.

4.1.7 Structure D

Two stone walls running approximately north-south (2051) and east-west (2050) lay level with and west of Structure A. They had been partly robbed out and disturbed, but it seems likely they formed part of a single structure, and that the two walls originally met to form a west corner. In between the walls lay remains of a rough paved surface. This overlay a mid orangey brown clay silt deposit and a light yellow silty gravel with iron pan which contained fire cracked stone. This is perhaps best interpreted as a levelling deposit for the rough stone surface above. This levelling deposit abutted the two stone walls, which were built directly

upon a relict soil (2100). The presence of a floor in this area may indicate that this was a roofed building, and the burnt clay and burnt bone in the levelling deposits suggests occupation. However this may have been the corner of an open enclosure.

A shallow cut (2076) surrounded a large stone (2045). This is interpreted as an attempt to remove the stone, although the attempt failed. However, it may just have been the result of bioturbation around the stone. A light brown clayey silt filled the cut of 2076.

4.2 Site B (Fig. 3, Plate 7)

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).

The excavations revealed a fairly wide (1.5m) wall constructed of medium to large rounded stones, with clearly evident facing stones, surviving to a height of 0.6m. It was cut into the relict subsoil to a depth of 0.45m. 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 more ephemeral wall (2021), consisting of a rubble core of sub rounded small cobbles. It was 1.2m wide and survived for 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 utilises a core of smaller cobbles than those seen in (2019), strongly suggesting that they are not contemporary. Context (2023), a soft silty sand, probably represents a soil level above the natural on which the wall is constructed.

5. SUMMARY OF SPECIALIST REPORTS

The full assessment reports by the relevant specialists are given in the appendices, and these are summarised here. All coarse and fine residues resulting from the wet sieving programme were inspected to recover finds. The number of finds found in these residues was small and they were included in the assessed material.

5.1 Pottery
Sixteen pieces of pottery were recovered and these were assessed by Dr J. Evans, Dr P. Mills, and S. Rátkai. All the material was well worn and friable. There were three sherds of Roman pottery, which suggested a date range of the mid to late second century AD, and 13 sherds of medieval material, possibly dating to 13th-15th century AD. There was also one sherd that was very rough and could date from any period from the prehistoric to medieval.

The sherds of Roman pottery are restricted to samian and black burnished ware. Medieval material was present in the form of a cooking pot jar rim recovered from (2055) and probable an import from Flintshire/ North Wales, and the base of a further vessel in a similar fabric from (2007).

A melon bead (SF 35) was recovered from the fill of a drainage gully (2257). The melon beads typically date to the 1st or 2nd centuries AD.

5.2 Spindle whorls
Two unfinished spindle whorls were recovered (SF 19 and SF 34). SF 19 was a spindle whorl blank, with no perforation, formed on a slightly irregular circular disc of shale. It was found in a relict field soil (2134) adjoining the oval house on the west side and contemporary with it. SF 34 was made from some very fine ceramic material, probably a piece of pottery, perhaps amphora, and came from the southern half of the oval house wall (2074). 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 (Smith, Appendix 1).

5.3 Utilised Stones
Twenty one possibly imported stones were collected during the excavation, nine of which have been utilised and three had been burnt. These were assessed by George Smith. The utilised pebbles are of dense, hard igneous rock, and have been used as light hammers, polishers and whetstones.

The use-wear on the stones that were worked 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.

5.4 Slag and burnt clay
A large lump of slag (SF 36) was recovered from context 2081, overburden material, and two other small fragments (SF14 and SF42) were found in other late layers. The large piece was assessed by Peter Crew, formerly Snowdonia National Park Authority Archaeologist, who concluded that it is probably a cake of smithing slag, which formed 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. 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.

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 or near the site. It strongly suggests that the slag originates from elsewhere, and that smithing was not an activity that took place on the site. Further investigation of the slag therefore has limited value.

There was also 915g of burnt clay from 16 contexts, mainly concentrated in the south-western quadrant of the site. This may have been from disturbed hearths and seems unrelated to smithing or other metalworking. Although the eroded and fragmentary nature of the pieces means that they are unlikely to be very informative they will be inspected by Tim Young of GeoArch to determine their nature and origin if possible. The contexts from which they came and their possible significance should be considered.

5.5 Flint
Four pieces of worked flint were recovered and one flint pebble. These were assessed by George Smith (GAT). He found that these were probably made on flint from local beaches. Two of the pieces were retouched, both small scrapers, possibly dating to before the 2nd millennium BC, but they are not very diagnostic. A narrow blade may indicate a Later Mesolithic presence, but all the pieces seem to have been residual and incorporated by chance in deposits relating to the settlement.

5.6 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 and no further conservation work is proposed.

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 in structure A and 2074 was the wall of this structure. The nails are presumably contemporary with the structure but require no further study.

5.7 Burnt stone
25 samples of burnt stone were collected, being retained from the coarse fraction of the wet sieving residue. However, the dump of burnt stone does not seem to have been related to the activity on the site. It seems to

have been generated elsewhere and deposited on the site, presumably during field clearance. As the original and function of the burnt stones is unknown there is little to be gained from studying types of stone selected for burning.

5.8 Animal Bone

The small collection of animal bone, amounting to 18 individual finds from 15 contexts, was assessed by Dr Nora Bermingham of Birmingham Archaeo-Environmental. All the material was unidentifiable though a range of differently-sized mammals and body parts were represented. 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 (Bermingham appendix 4).

The small assemblage size and poor preservation means that the assemblage has limited potential and no further analysis of this material is proposed but the archaeological contexts from which it came will be considered to determine whether this could be domestic waste dropped or thrown into fires.

5.9 Palaeoenvironmental Samples

The soil samples were processed by flotation and wet sieving and were assessed by Rosalind McKenna of Birmingham Archaeo-Environmental. Of the 91 samples recorded in the sample register 8 had been lost or discarded before wet sieving, and 3 were considered to be not worth assessment as they were from natural features and contained little or no charcoal. Hand collected charcoal samples were incorporated in with the appropriate flots for analysis. Eighty samples were therefore submitted for assessment.

The plant macrofossil material was generally poorly preserved and the assemblage was small. Cereal grains were found in samples from across the site but in very small numbers and the grains were generally unidentifiable; however oat, wheat and barley were represented. Seeds of arable weeds were found in 12 samples, including dock and goosefoot, which are characteristic of arable fields and rarely found elsewhere. Charred hazelnut shell fragments were also present but not in large numbers and may have been introduced on fuel wood branches, rather than being consumed.

Charcoal was present in all the samples, but its preservation was variable. Hazel and oak were the most commonly represented with some ash, alder and willow/poplar. Some samples were dominated by a single species, usually either hazel or oak, and it is worth considering the distribution of these across the site to determine whether this is significant. The charcoal is likely to derive mainly from fuel wood and some selection is probable, so the full range of naturally available species may not be represented (McKenna appendix 3).

The archaeobotanical evidence found in the samples shows hazelnut shell, wheat, spelt and barley were present, indicating the exploitation of these cereals. Little definitive comment may be made since the material suggests evidence for the accumulation of general domestic waste over time, rather than clear evidence of agricultural or domestic regimes (*ibid.*).

The cereal grains support the interpretation of the site as domestic and within a landscape where arable agriculture was carried out, although no significant crop processing seems to have occurred on site. Woodlands were probably fairly close to the site and were quite varied with no need to resort to poor quality shrubby species for fire wood as might be expected if woods were distant or impoverished.

The samples have been assessed, and any interpretable data has been retrieved. No further work is required on any of the samples, but their contexts should be considered to determine whether there is any spatial patterning of material.

5.10 Dating

The numbers of diagnostic finds are few and cannot be used to firmly date the site. The presence of medieval pottery indicates some later activity and there is a potential for activity in periods not represented by diagnostic finds. Dating is therefore a high priority, particularly as the site might have been used into the

post-Roman period, a period from which very few settlements are known in Wales. It could also have originated earlier in the Iron Age and may aid the understanding of changes into the Roman period.

The charred plant remains are an important source of samples for radiocarbon dating. Material is spread across the site and sufficient identifiable items of short-lived species are available to allow a good choice. The research design and methods for the dating programme are discussed in the accompanying up-dated project design, but it is proposed to submit a total of 12 samples for AMS dating from carefully selected contexts.

6. CONCLUSION AND RECOMMENDATIONS

6.1 Site A

The excavation of Site A showed the archaeology to be complex. The burnt stone deposit (2001) was shown to overlie a complex stony deposit consisting of rounded and sub angular boulders and a rough level surface to the east. These consisted of collapsed revetment walling to the north west of the site, and also material relating to a demolished settlement. The remains of an oval house with associated other structures was subsequently identified. Evidence for a complex pattern of drainage ditches was also noted.

The main structure appears to have been a small stone-walled building measuring about 10m by 8m externally. It contained a hearth and several postholes, which probably supported internal structures but may have been roof supports. The building was drained by a covered drain that ran under its southern wall and also seems to have been protected by a drain on its north-western side.

A group of substantial postholes with packing stones indicate that there was a four-post granary to the west of the building. There are good parallels for these structures on Iron Age sites elsewhere, in particular a good example was identified on the western side of the enclosure at Moel y Gerddi, with four post-holes of a similarly rounded shape and profile and maximum diameter of 0.6m (Kelly 1988, 111 and 132, features 21-24).

To the north-west there may have been another much slighter structure associated with some pits, but no convincing traces of a structure were recovered. This activity area was separated from the main building by a terrace wall.

Traces of a possible rectangular structure or enclosure were found to the south-west of the main building. A slab floor and disturbed remains of possible hearths suggest that this may have been another small structure, possibly with a specific function. On other Romano-British sites such as Din Lligwy and Ty Mawr, South Stack, there is evidence that rectangular buildings were used as smithies, but there was no trace of this on the present site.

The site seems to have been a small settlement in a fairly upland location, although fields and larger settlements continue at much higher levels. The site is difficult to date it by its morphology alone, although the combination of sub-circular and rectangular buildings is suggestive of a native settlement of the Roman period. A small sherd of pottery (SF 30) from within the hearth (2130) inside the building has been identified as being Black Burnished Ware 1 of between 2nd and 4th century in date (Evans, Appendix 1). Another sherd of Black Burnished ware was recovered the base of a stony deposit (2009) in the southeast quadrant (Evans; Appendix 1; SF74), and a small fragment of samian ware was found in a less secure context. The spindle whorls are also consistent with a Roman date, and the melon bead supports a first or second century AD date.

The medieval sherds came from a linear hollow (5054) under the stone spread south of the building and a layer of stones (2007) overlying the building. All could have been deposited long after the settlement was abandoned and the sherds could have worked their way down through the loose stones.

The most likely date for the settlement from the artefact evidence is therefore Roman, possibly 2nd century AD, but this may not indicate the full duration of the settlement. To test the duration of the site radiocarbon dates will be necessary.

6.2 Site B

The section excavation cut across the north-south field boundary 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 that was built upon a reddish brown relict soil, and is considered to be later in date. No dating evidence was found and whether this boundary can be related to the long hut or to the earlier activity in the area is not clear. It could have been in use over a long period of time.

6.3 Recommendations

The site narratives will need expanding and the site needs to be discussed in its landscape context. Full appropriate drawings to accompany the narratives are necessary. No further study of the pottery is recommended, but Sherds SF74 and SF15 will be drawn, and the rest will be recorded by photography. The melon bead should be drawn and submitted for a detailed report. All the worked flint will be illustrated, but no further work is proposed on this material.

The 9 utilised stones will be illustrated but no further work is proposed on this material. Both spindle whorl blanks will be illustrated and the pottery disc will be inspected by a Roman pottery specialist to identify the fabric and confirm whether it originates from a Roman amphora.

No further work is proposed on the slag, but the burnt clay will be studied in more detail and the contexts of these will be considered. No further work is proposed on the iron objects, but the implications of the presence of nails within structure A should be considered. Further analysis of the bone fragments and plant macrofossils is not recommended, but the available information will be used in interpreting the function of features. It is not proposed to further study the burnt stone.

It is proposed to submit 12 samples for radiocarbon dating and the details of this are given in the up-dated project design.

All information gathered at this stage of the project will be included in the final archive report as well as any further work.

7. QUANTIFICATION OF RESULTS

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		**5 bags**
Burnt clay		**10**
Ceramics		**5**
	Prehistoric pottery	0
	Romano-British pottery	2
	Medieval pottery	3
	Post-medieval pottery	0
	Others	1
Flint/Chert		**6**
Iron objects		**5**
'Melon Shaped' Bead		**1**
Metalworking		**0**
Slag		**2**
Stone objects		**19**
Total		**54**

The quantification of results will form the basis of the research aims for **Phases 4 and 5: Analysis, report preparation and dissemination.** A project design for Phases 4 and 5 will be submitted with this report.

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APPENDIX 1: Lithics Assessment

George Smith 11th May 2010

WORKED FLINT

Four pieces of worked flint were recovered and one flint pebble.

Raw Material
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.

Technology
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. 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 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 considering the small number of pieces from the area excavated.

Two of the pieces, the scraper SF81-1 and the blade SF81-2 were from unstratified contexts. The small broad blade SF4 came from the paving layer in the house while the other two finds came from (secondary?) dumping material between walls 2050 and 2051.

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 that was incorporated by chance during construction of the house or later dumping over it. There seems nothing about the site location to suggest why it should have been chosen for flint working although it 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 the Dyffryn Ardudwy Neolithic chambered tomb (Lynch 1969) and at a Bronze Age cairn below Moel Goedog (Lynch 1984) and 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.). 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.

SPINDLE WHORLS

SF19 is a spindle whorl blank, with no perforation, a slightly irregular circular disc of shale, between 46-47mm diam. and 9-12mm thick. 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 diam. and 13mm thick, with a central drilled hole of ‘hour-glass’ profile that only just perforates the disc. 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 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 made from some very fine ceramic material, probably a piece of pottery, perhaps amphora. 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.

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 a relict field soil adjoining the oval house on the west side and contemporary with it. SF 34 came from the southern half of the oval house wall, perhaps because the top of the low wall, under the roof, would have provided a useful shelf for the storage of small items.

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) and Braich y-dinas hillfort (Iron Age and Roman period). 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 doesn't imply any economic specialisation.

UTILISED STONE AND IMPORTED BUT UNWORKED STONE

Description

Possibly imported stones
Of the 21 pieces collected 2 are small natural pebbles, one of white quartz SF56, and one of red, possible jasper (not ochre) SF7, and were perhaps collected and brought to the site as curiosities.

One piece is a large quartz single crystal, SF5, which has been crushed at one end and may have used as a strike-a-light.

Imported and utilised or possibly utilised stone
17 pieces are imported beach pebbles of which 9 have been utilised, 5 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. There is also one piece of imported but non-pebble stone that has been utilised.

Table Summary of imported stone objects and their contexts

Description	***Unstrat***	***Upper stone deposit***	***Burnt stone deposit***	***Below Burnt stone deposit***	***Tumble***	***Paving layer***	***Post hole***	***Wall***	***Drain***
Utilised pebbles									
Light hammer stone	1		1				1	1	
Hammer/polisher			1					1	
Hammer/whetstone			1						
Rubber/polisher			1						
Possible polisher						1			
Palette								1	
Imported non-utilised pebbles		1	1	1	1				1
Imported burnt	1		1	1					

pebbles									
Quartz crystal						1			
Other imported pebbles	1						1		

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. The polishing evidence occurs on the flat faces of the pebbles and the one case of use as a whetstone on the side of an elongated stone.

One stone 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.

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 were most numerous (6, including 4 utilised pieces) in the burnt stone deposit, which post-dated the house. The presence of others in earlier contexts suggest that those in the burnt stone deposit were in fact re-deposited. Of those more closely associated with the house one possible polisher was found in the paving layer, one hammer in a post-hole and three objects were found in the house wall, being a hammer, hammer/polisher and the palette. The latter location seems odd but such the tops of such walls formed a natural shelf below the roof within the house and so would have been useful for placing small items. One of the spindle whorl blanks (SF34) was found in the same place.

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. The house itself is also somewhat different to the typical lowland roundhouse. The latter typically belong to settlements associated with probable mixed farming, including arable. Perhaps the house here had no access to cereals, possibly depending on or being part of a stock-keeping economy instead.

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APPENDIX 2: The Pottery

Dr J. Evans, Dr P. Mills, and S. Rátkai with a contribution by Dr G. Monteil (16/06/2010)

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. All the material recovered as small well worn sherds, in a very poor and friable state.

Roman material comprised two sherds of Dorset BB1 (Tomber and Dore 1998 DOR BB), including a jar rim, and a small fragment of Central Gaulish samian. 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 recovered from (2005) and probable an import from Flintshire/ North Wales, and the base of a further vessel in a similar fabric from (2007). Also present was some pottery from (2006) which it was not possible to assign any clear date better than Prehistoric – Mediaeval.

Catalogue

(2130) SF30

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

(2009) SF74

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

(2055) SF15

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%.

(2006) SF39

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.

(2007) SF 8

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

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 13th-15th century date range, but again in this small collection absence of evidence does not amount to evidence of absence.

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APPENDIX 3: An Assessment of the Palaeoenvironmental Potential of Deposits
Rosalind McKenna

Introduction
A series of twenty nine samples from deposits excavated at the Rhiwgoch, Harlech were submitted in April 2010, followed by a further fifty one samples in December 2010. These were submitted for an evaluation of their environmental potential. The excavation was carried out by Gwynedd Archaeological Trust between 22nd November 2008 and 13th March 2009. The samples came from field boundaries, ditches, pits, postholes, gullies and a possible hearth. The samples range in date from the Romano British period to the medieval period.

A programme of soil sampling from sealed contexts was 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 initial material was submitted to Birmingham Archaeo Environmental and the latter to the author in a processed state. It was processed by staff at Gwynedd Archaeological Trust using their standard water flotation methods. The flot (the sum of the material from each sample that floats) was sieved to 0.5mm and air dried. The heavy residue (the material which does not float) was not examined, and therefore the results presented here are based entirely on the material from the flot. 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 Table 3 below. 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 One below 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 below. 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 below 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.

Recommendations
The samples have been assessed, and any interpretable data has been retrieved. No further work is required on any of the samples.

Archive
All extracted fossils and flots are currently stored with the site archive in the stores at Birmingham Archaeology, along with a paper and electronic record pertaining to the work described here.

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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. Context No. Feature No.	1 2013	2 2024	3 2006	4 2009	5 2042	6 2048	7 2038	9 2086	10 2084	11 2055	13 2093	15 2089	16 2065	17 2063	18 2069	19 2125	20 2139	21 2152
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 macrofossiles (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. Context No. Feature No.	22 2151	23 2270	24 2129	25 2167	26 2162	27 2130	28 2187	29 2191	30 2189	31 2184	32 2122	34 2137	35 2120	36 2112	37 2055	38 2193	39 2084	40 2215
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 macrofossiles (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. Context No. Feature No.	41 2160	42 2208	43 2216	44 2220	46 2211	47 2202	48 2222	49 2210	50 2207	51 2233	52 2236	53 2263	55 2244	56 2108	57 2109	58 2256	59 2253	60 2252
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 macrofossiles (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. Context No. Feature No.	62 2262	63 2086	64 2148	65 2169	66 2257	67 2172	68 2261	69 2260	71 2224	72 2275	74 2074	75 2278	76 2277	77 2240	78 2188	79 2065	80 2199	81 2091
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 macrofossiles (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. Context No. Feature No.	82 2074	84 2230	85 2217	86 2074	88 2074	89 2240	90 2095	91 2234

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 macrofossiles (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)** 100+ fgts. max. siz-9mm	**Sample 66 (2257)** 500+ fgts. max. size-9mm	**Sample 71 (2224)** 200+ fgts. max. size-22mm	**Sample 72 (2275)** 100+ fgts. max. size-18mm	**Sample 74 (2074)** 17 fgts. max. size-10mm	**Sample 75 (2278)** 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

APPENDIX 4: Assessment of Animal Bones

Dr Nóra Bermingham (April 2010)
Birmingham Archaeo-Environmental Report GAT-2067-2010

Summary
This report represents an assessment of a small amount of burnt bone which was recovered from the soil samples recovered during the excavations at Rhiwgoch, Wales. The assemblage is extremely small and of little interpretable value. No further analysis is recommended although it should be considered in light of the other finds from the site.

1. INTRODUCTION

A small collection of animal bone, amounting to 18 individual finds from 15 contexts, was submitted for assessment (Table 1). 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.

2. 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.

3. 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 (Table 1).

4. 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. However, additional information on the archaeological context of the assemblage would be needed to explore this possibility further. Final interpretation may be inconclusive as assemblage size and preservation has limited analysis.

5. RECOMMENDATIONS FOR FURTHER ANALYSIS

No further analysis of this material is required. Consideration of the assemblage in relation to its archaeological context is recommended.

Table 1: Assessment Results

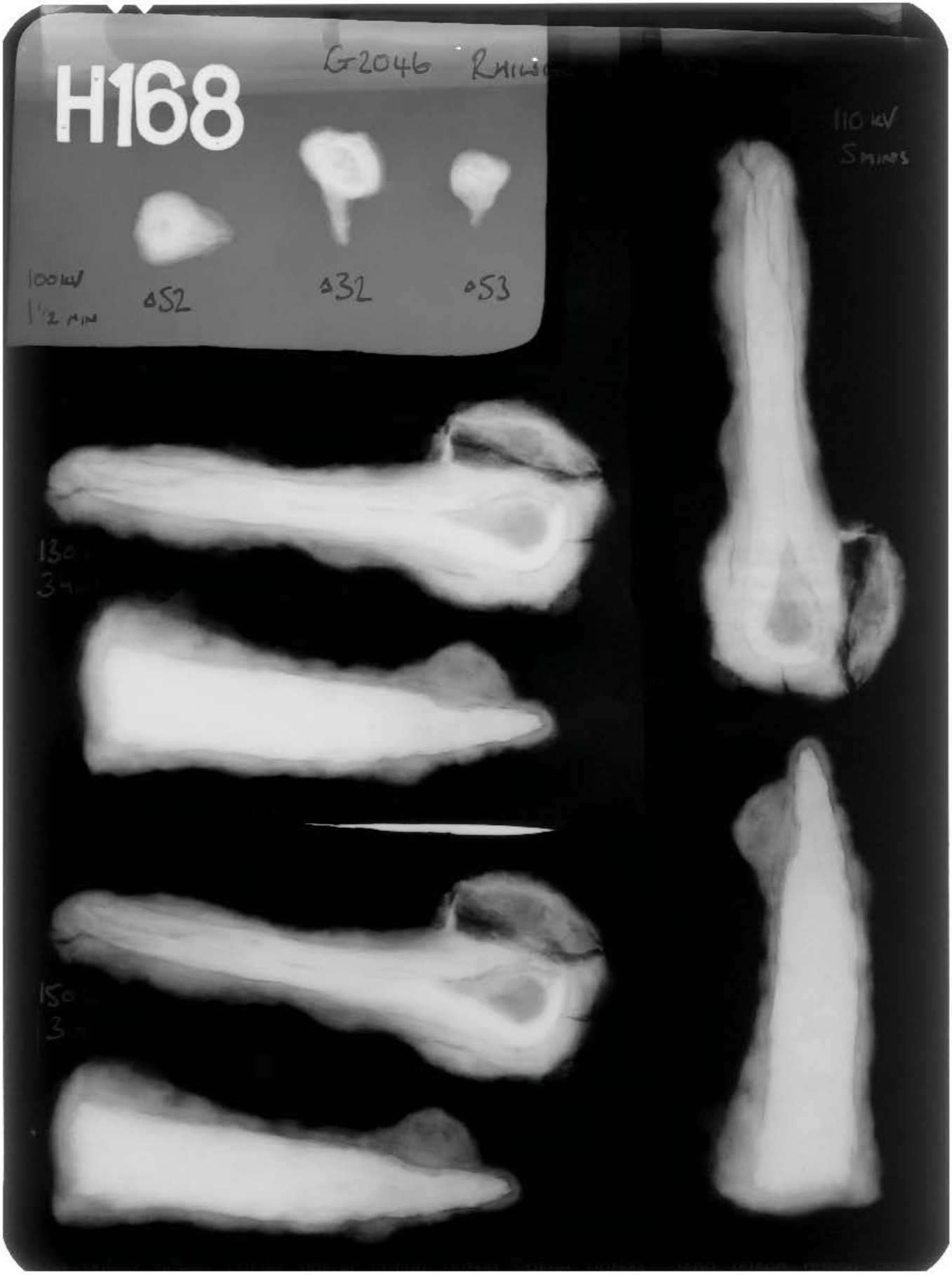
Find No.	Context No.	Sample No.	Description	Frag. Nos.
3	2130	\	Burnt bone. Unidentifiable. Post cranial. Medium to large mammal	1
16	2040	\	Burnt bone. Unidentifiable. Post cranial. Large mammal	1
27	2095	\	Burnt bone. Unidentifiable. Post-cranial medium mammal	10
40	2006	\	Burnt bone. Unidentifiable. Post-cranial medium mammal	4
43	2095	90	Burnt bone. Unidentifiable. Post-cranial & cranial medium mammal	34
44	2038	7	Burnt bone. Unidentifiable. Post-cranial, mammal	1
45	2038	7	Burnt bone. Unidentifiable. Post-cranial, mammal	2
45	2148	64	Burnt bone. Unidentifiable. Post-cranial, mammal	3
46	2084	39	Burnt bone. Unidentifiable. Post-cranial medium-large mammal. 1 Tibia frag. Poss. Sh/gt	15
47	2277	76	Burnt bone. Unidentifable. Post-cranial. Medium mammal.	1
48	2240	89	Burnt bone. Unidentifable. Post-cranial. Medium mammal.	1
49	2074	86	Burnt bone. Unidentifable. Post-cranial. Medium mammal.	2
50	2006	3	Burnt bone. Unidentifable. Post-cranial. Medium mammal.	7
51	2083	83	Burnt bone. Unidentifable. Post-cranial. Medium mammal.	1
65	2048	\	Burnt bone. Unidentifable. Post-cranial & cranial. Medium- large mammal	2
66	U/S	\	Burnt bone. Unidentifiable. Post-cranial. Small-medium mammal	1
73	2099	\	Burnt bone. Unidentifable. Post-cranial. Large mammal	1
75	2262	62	Burnt bone. Unidentifable. Post-cranial. Small-medium mammal	1
			TOTAL (APPROXIMATE)	**88**

APPENDIX 5: X-RAY AND ASSESSMENT OF IRON OBJECTS

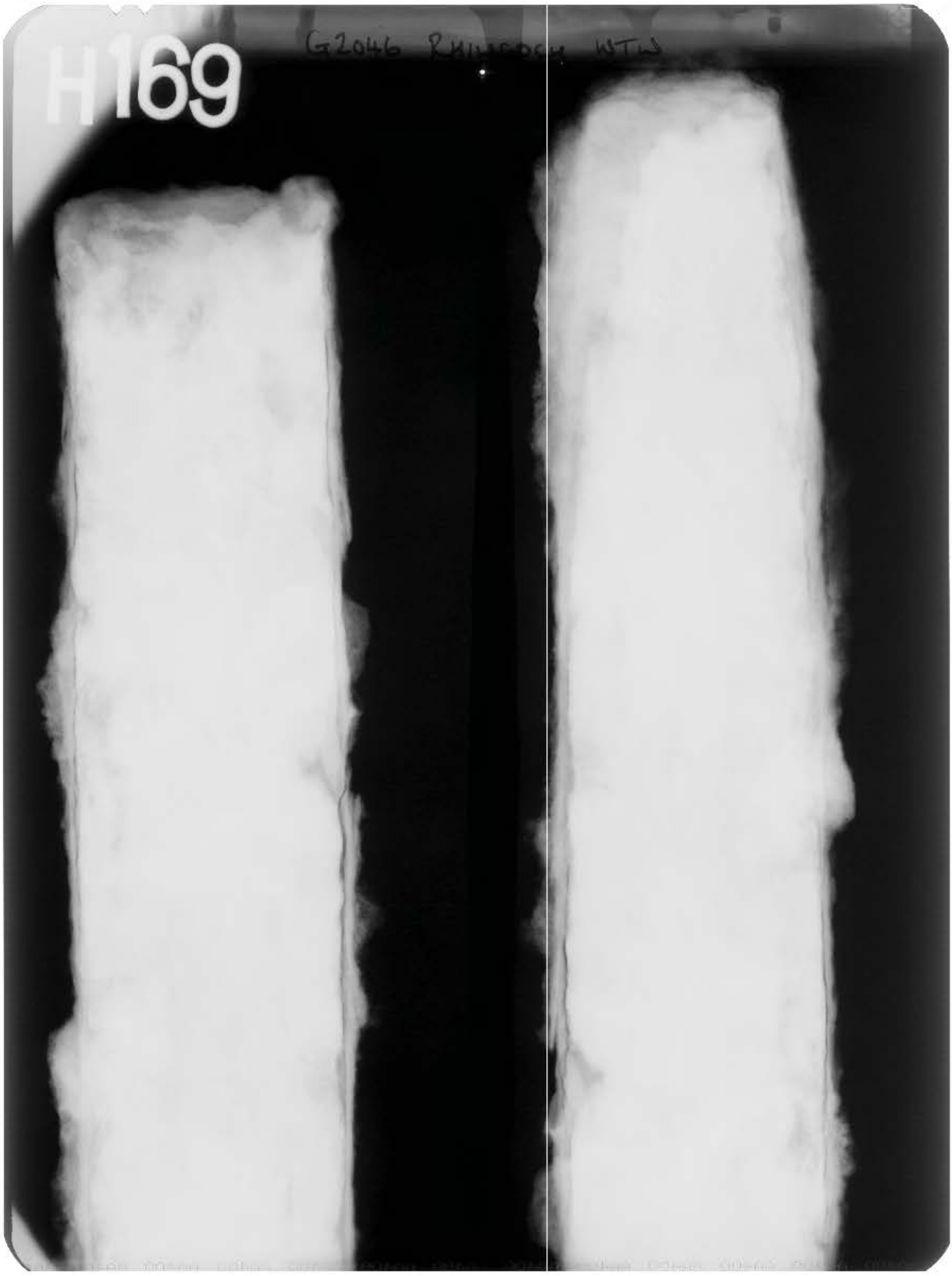
Phil Parkes, Cardiff Conservation Services (Report No. Dev 514/1)
3/5/10

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 number	**X-ray number**	**Notes**
20	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	H168	Nail head and part shaft
38	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	H168	Nail head and part shaft
53	H168	Nail head and part shaft



X-rays of finds 32, 38, 52 and 53



X-ray of find number 20

APPENDIX 6: ASSESSMENT OF BURNT CLAY
Jane Kenney

915g of burnt clay was collected from 16 contexts. 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.

The majority of the burnt clay came from the SW quadrant of the site, related to potential structure D. If this is burnt daub it suggests a wattle and daub structure has burnt down, but there is insufficient charcoal and other evidence of burning to support this. The burnt clay may be from clay hearths, and the less oxidised colour of the clay may support this, although few surface pieces seem to be present. There is no trace of vitrification or any other evidence that the clay was related to a smithing hearth or furnace.

The burnt clay will be sent to Tim Young of GeoArch for more detailed study, and the contexts from which the pieces came and their possible significance will be considered.

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	Ditch	SE
63	2084	burnt clay	19	leveling/floor	SW
60	2084	burnt clay	21	leveling/floor	SW
58	2086	burnt clay	241	occupation deposit	SW
64	2086	burnt clay	178	occupation deposit	SW
72	2086	burnt clay	44	occupation deposit	SW
25	2095	burnt clay	7	tumble	NW
29	2095	burnt clay	1	tumble	NW
28	2096	burnt clay	5	revetment	NW
37	2099	burnt clay	196	foundation trench	SW
84	2108	burnt clay	8	Pit	NE
62	2148	burnt clay	4	Layer	SW

Figures and Plates

Figures

Plates

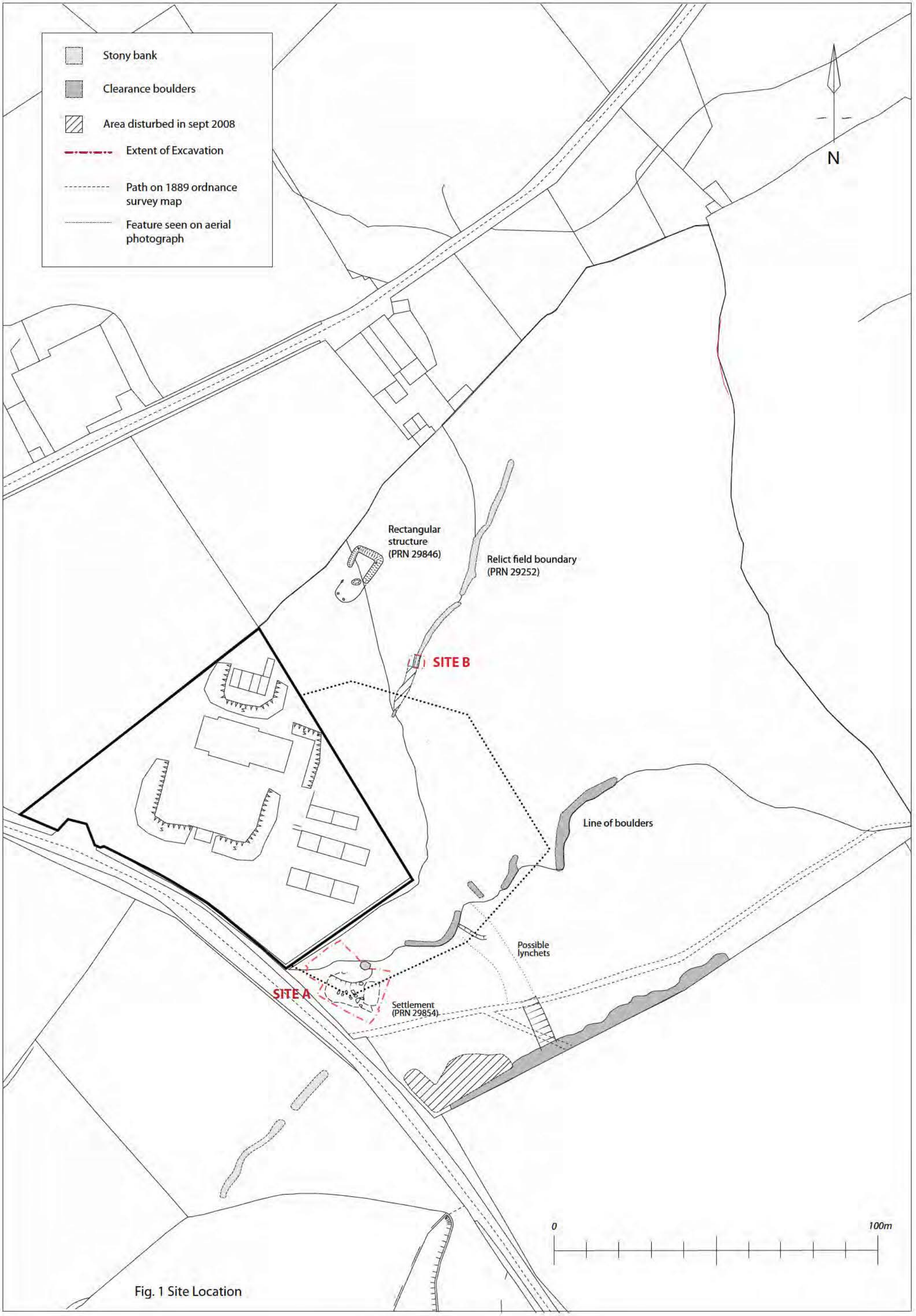


Fig. 1 Site Location

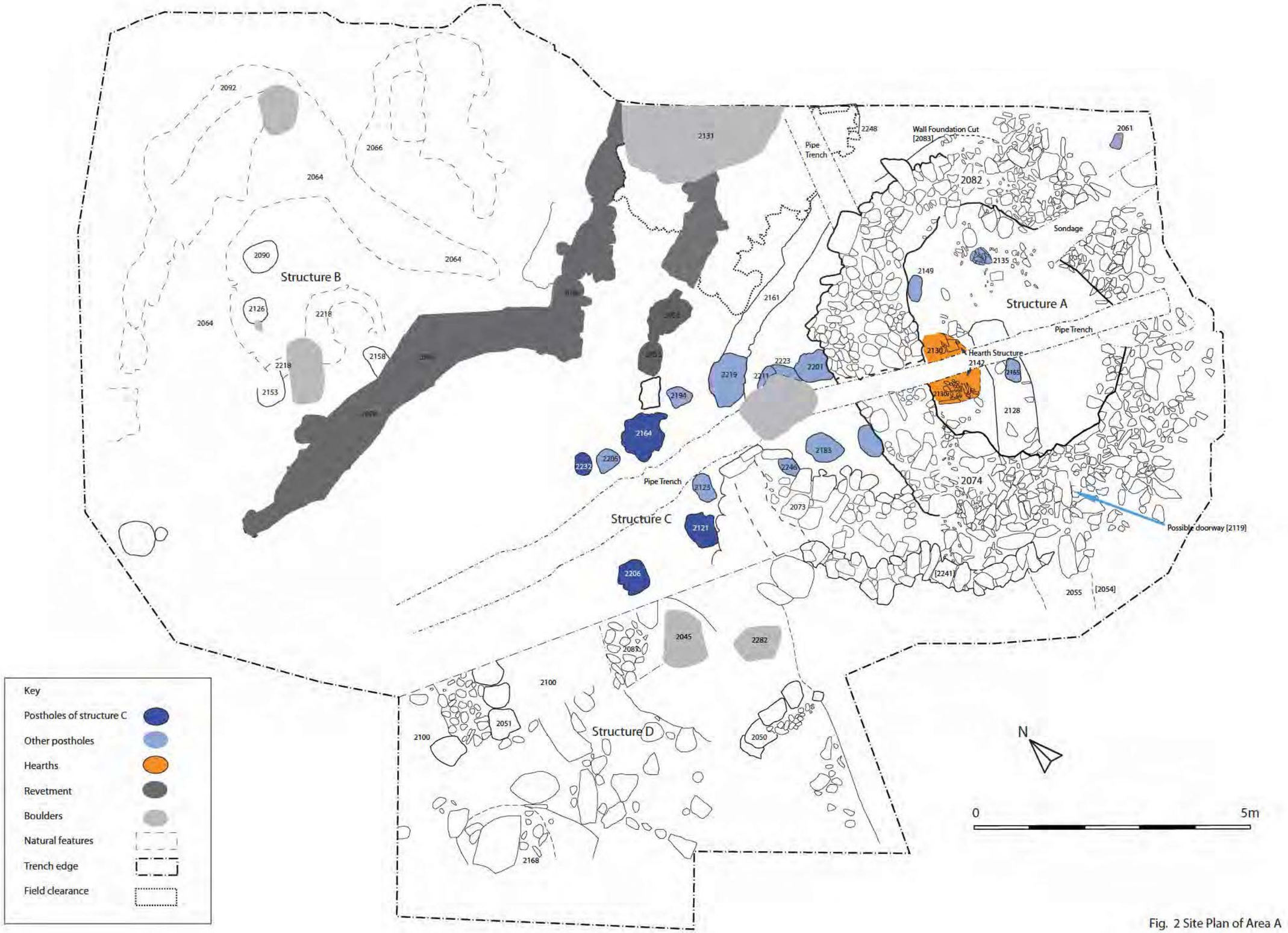


Fig. 2 Site Plan of Area A

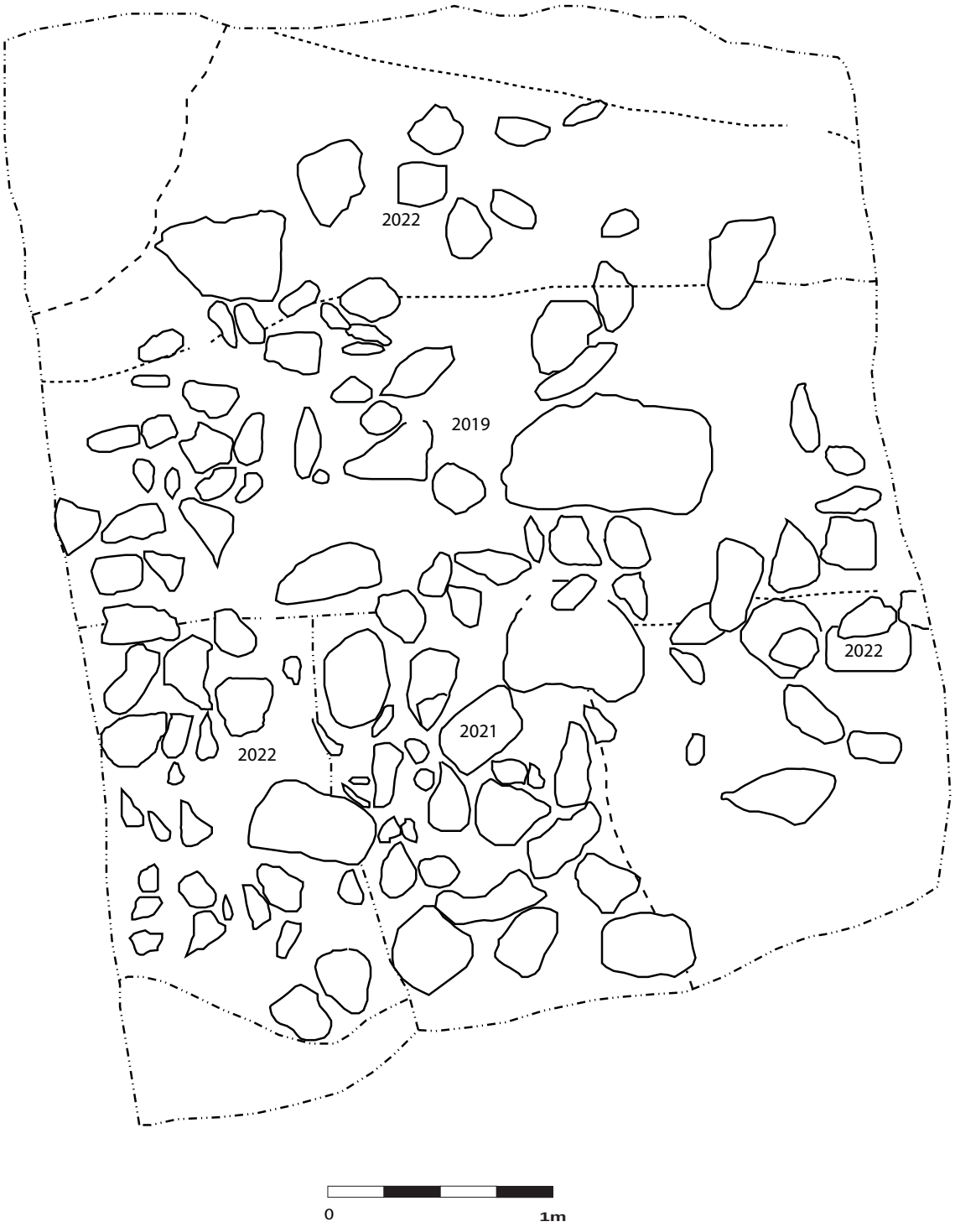


Fig. 3 Site B

Plate 1 Aerial View of Excavations in Progress

Plate 2 The oval house [2074] during excavation

Plate 3 Revetment walling [2053]. Scale 2m

Plate 4 Internal oval house post hole [2135]. Scale 30cm

Plate 5 Post hole [2251]. Scale 0.5m

Plate 6 Post hole [2121], from possible four post structure, part excavated with post packing. Scales 0.5m and 0.3m.

Plate 7 Site A from the west. Scales 2m and 1m

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